

TEUNIS WILLEM VAN HEININGEN

**THE CORRESPONDENCE OF  
CASPAR GEORG CARL  
REINWARDT  
(1773-1854)**

**Part One: 1802-1819**

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*To my wife Paula, who never stopped encouraging me.*

## INTRODUCTION

This book is based on the analysis of the correspondence of Caspar Georg Carl Reinwardt (1773-1854). The documents of the ‘Hollandsche Maatschappij der Wetenschappen’ (‘Dutch Society of Sciences’), founded in Haarlem, 1752, are preserved in the ‘National Archives of North-Holland’ (‘Rijksarchief van Noord-Holland’ in Haarlem) and coded ‘NA-RANH-HMW ... etc.’, their further notation follows the one which was introduced in 1999.

*Teunis Willem van Heiningen*  
*Losser, 13 September 2010*

## CODES OF THE LOCATIONS OF PROVENANCE

- AC Archieven van Curatoren (Archives of the governors of Leyden University), Leyden, The Netherlands.
- ASF Archieven van Senaat en Faculteiten (Archives of the Senate and the Faculties of Leyden University), Leyden, The Netherlands.
- ATS Archieven van 'Teylers Stichting' (Archives of 'Teylers Foundation'), Haarlem, The Netherlands.
- BM 'British Museum' (including the 'Natural History Museum', NHM), London, UK.
- BNF 'Bibliothèque Nationale de France' ('Bibliothèque François Mitterrand'), site Tolbiac, Quai François Mauriac, Paris, France.
- BPL 'Bibliotheca Publica Latina', Leyden University, Leyden, The Netherlands.
- CHAN 'Centre Historique des Archives Nationales' ('National Archives'), Paris, France.
- GAU 'Gemeente-archief Utrecht' (City Archives) Utrecht, The Netherlands.
- GNM 'Germanisches National Museum' ('German National Museum'), Stuttgart, Germany.
- HMW Archieven van de 'Hollandsche Maatschappij der Wetenschappen' (Archives of the 'Dutch Society of Sciences'), preserved in the 'National Archives of the Netherlands' (RANH), site: Haarlem, The Netherlands.
- IDF 'Institut de France' (Archives and Library of the 'French National Academy of Sciences'), Paris, France.
- KB 'Koninklijke Bibliotheek' ('Royal Library'), The Hague, The Netherlands'.
- KNI 'Koninklijk Nederlandsch Instituut van Wetenschappen, Letterkunde en Schoone Kunsten' ('Royal Netherlands Institute of Sciences, Literature and Arts'), Amsterdam, The Netherlands.
- MNHN 'Muséum National d'Histoire Naturelle' ('National Museum of Natural History'), Paris, France.
- NAT 'Naturalis' ('National Museum of Natural History'), Leyden, The Netherlands.

- RANH 'National Archives, North-Holland' (Rijksarchief Noord-Holland), Haarlem, The Netherlands.
- UBA Universiteitsbibliotheek Amsterdam (Library and Archives of the University of Amsterdam), Amsterdam, The Netherlands.
- UBL Universiteitsbibliotheek Leiden (Library and Archives of the University of Leyden), Leyden, The Netherlands.
- UBU Universiteitsbibliotheek Utrecht (Library and Archives of the University of Utrecht), Utrecht, The Netherlands.

*Remark:*

If the code of a document ends with an 'R' it means that a report on a treatise is discussed. In the case of the 'KNI', the members of the jury wrote their combined report. The members of a jury assessing a treatise for the 'HMW' wrote individual reports.

## ACKNOWLEDGEMENTS

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Finally I want to thank Professor Harm Beukers (Scaliger Professor, Leyden) and Professor emeritus Rob Visser (Doorn) for their valuable advice.

## **ABBREVIATIONS OF THE DISCIPLINES**

ANA	Anatomy and anthropology;
AGR	Agriculture, Fertilization Science and Plant breeding;
ARC	Archaeology;
ART	Arts and Literature;
BOT	Botany, Systematic Botany and Plant physiology;
CHE	Chemistry;
COB	Collection building;
ETN	Ethnology and Ethnography;
GEO	Geology and Palaeontology;
HMW	Dutch Society of Sciences;
KNI	Royal Netherlands Institute of Sciences, Literature and Arts;
MED	Medicine;
MIN	Mineralogy;
MME	Military Medicine;
PAA	Pathological Anatomy;
PHA	Pharmacy;
PHY	Physics;
TEC	Technology;
UNI	University;
ZOC	Zoology and Comparative anatomy.



**Caspar Georg Carl Reinwardt**  
(Lüttringhausen, 3 June 1773 –  
Leyden, 6 March 1854)

## CHAPTER 1

### A SHORT BIOGRAPHY

This short biographical note is among others based on the necrology written and addressed by Willem Vrolik, at the time secretary of the ‘Eerste Klasse’ of the ‘Koninklijk Nederlandsch Instituut van Wetenschappen, Letterkunde en Schoone Kunsten’ (‘First Class’ of the ‘Royal Netherlands Institute of Sciences, Literature and Fine Arts’), founded in May 1808 in Amsterdam by H.M. King Louis Bonaparte, as well as on W.H. de Vriese’s ‘Ons streven naar waren roem – Eenige woorden van dankbare herinnering bij het afsterven van den hoogleeraar C.G.C. Reinwardt, gericht tot de kweekelingen van Leydens Hoogeschool, op 13 Maart 1854’ (C.G. van der Hoek, Leyden, 1854). In 1854, Vrolik’s obituary notice was published in the *Verslagen & Mededelingen*, of the ‘Instituut’ (deel 2, pp. 214-231).

Caspar Georg Carl Reinwardt was born on 3 June 1773 in the village of Lüttringhausen (situated between Elberfeldt and Lennep, in the region of Düsseldorf, Germany), as the son of Johann Georg Reinwardt and Catharina Goldenberg. Shortly after Caspar was born, the family moved to the nearby village of Lennep. At a very early age this boy – the youngest of the four children – lost his father, whom he was very fond of, as he was of his mother. His elder brother, Johann Christoph Mathias travelled to Holland, and found a place to live in Amsterdam, where he had some relatives. One of them taught him the principles of pharmacy. Caspar had two sisters, Arnoldine and Caroline. After his father had died, an uncle – known as a man of high moral standard and in the possession of excellent pedagogical qualities – was appointed Caspar’s guardian. Not only did this uncle occupy himself with Caspar’s moral and religious education, but also with his education in various subjects. Undoubtedly these efforts laid the foundation for his future interest in the natural sciences.

In 1787, Caspar, just fourteen years old, travelled to Amsterdam, invited by his older brother, who had been put in charge of a pharmacy meanwhile. It went without saying that Caspar was to be educated as a pharmacist. At the time, pharmacists mostly occupied themselves with botany and chemistry. Young Caspar acquired a special preference for these fields of study, a predilection, which would last for the rest of his life. By day busy as a pharmacist’s apprentice at the ‘Lauriersgracht’, Caspar and his brother attended lectures of botany, given by Gerard Vrolik at the

‘Athenaeum Illustre’ and chemistry, given by Van Rhijn, while studying at home late at night by candle-light. As a student he made such a progress, that it did not escape notice. More and more his inquisitive, bright and quick mind were appreciated by those who met him and got to know him well. Morally and mentally, Caspar was very strong. Later on these qualities would turn out to be of great help to him, every time when he had to encounter and to overcome major difficulties. In spite of his delicate health he always did his duties. (De Vriese, 1854, 6-8)

When in 1800 professor Schacht – teaching botany in the ‘Hoogeschool’ of Harderwijk – had died, Caspar Reinwardt’s name was the first to cross the mind of those who were to decide in this matter. This fact made him decide not to leave for Göttingen, where he wanted to complete his studies. He was considered the right candidate to fill the vacancy. However there was a minor problem, Reinwardt had not taken his doctorate yet. He certainly owed this recommendation to his friends in Amsterdam. On 26 February 1800, the nomination was submitted to the board of governors of the ‘Hoogeschool’. So, in order to smooth the way for him two honorary doctorates were conferred to him, after which he could be appointed ordinary professor. On 10 June 1801, at the age of 28, he assumed his duties by delivering his inaugural address, entitled *De ardore historiae naturalis, et imprimis botanices cultores in studia feruntur* (Harderovici, E. Tyhoff, 1801). In this oration he pointed at the following statement, made by Bernard le Bouyer de Fontenelle (1657-1757):

‘La recherche de la nature n’est pas une science sédentaire et paresseuse, qui se puisse acquérir dans le repos et dans l’ombre d’un cabinet, comme la géométrie et l’histoire, ou qui, tout au plus, comme la chimie et l’astronomie, ne demande que des occupations d’assez peu de mouvement. Elle veut qu’on coura les montagnes et les forêts, que l’on grave contre les rochers escarpés, que l’on s’expose aux bords des précipices. Les seuls livres, qui peuvent nous instruire à fond dans cette matière, ont été jetés au hasard, sur toute la surface de la terre, et il faut se résoudre à la fatigue et au péril de les chercher et de les ramasser’.

Caspar Reinwardt was to keep this motto in mind for the rest of his life. At the occasion of his oration, the audience was deeply impressed by his passionate words and his eloquence.

During the academic year of 1802-1803 he was in office as rector of the ‘Hoogeschool’. When he laid down this office in 1803 he delivered a speech, entitled: ‘Over de voortreffelijkheid der nieuwere scheikunde ter verklaring van de

verschijnselen van natuur en kunst' ['On the perfectness of the new chemistry, with respect to the explanation of the phenomena of nature and of the art (of producing new substances)'] In this speech he also expressed his warm feelings of friendship towards Johannes Mario Kemper, professor of law in Leyden university. (De Vriese, 17). Reinwardt kept his professorate in Harderwijk until 1808, when H.M. King Louis Bonaparte decided that a 'Koninklijke Botanische Tuin' ('Royal Botanical Garden') and a 'Koninklijke Dierentuin' ('Royal Zoo') had to be founded in Haarlem and that Reinwardt had to become the director of these new institutions. These gardens had to become at least as beautiful as the 'Jardin des Plantes' in Paris. Later on the zoo was transferred to Amsterdam, where it was added to the botanical garden, at the location, where 'Artis' is established now.

On 9 July 1810, Holland was incorporated in the French empire. Several days before – on 1 July – Reinwardt was appointed extraordinary professor of chemistry and pharmacy (at an annual salary of 500 guilders) and ordinary professor of natural history (at an annual salary of 1.000 guilders) in the 'Athenaeum Illustre' of Amsterdam. On 5 September 1810 he assumed his duties. With respect to the teaching of chemistry he was adjoined to the aged professor Van Rhijn.

In his necrology Willem Vrolik underlines the fact that during his years of professorship in Harderwijk and Amsterdam Reinwardt did not have the wind in his sails. Holland – after having been exploited by the French republic and by the French empire – had to practise an extreme economy, even after the kingdom of Holland had been founded. So there was little chance for a flourishing development of the various sciences. Things had got even worse after the incorporation of Holland in the French empire. Not until 1815 new opportunities presented themselves: new plans were developed and new institutions were called into existence, for example the 'Hoogeschool' of Utrecht and the 'Rijksmuseum voor Natuurlijke Historie' ('National Museum of Natural History', in Leiden).

In his time, Reinwardt was quite familiar with the new trends in botany. He had read very attentively the works on systematic botany, written by De Jussieu and De Candolle. The same goes for the anatomical and physiological aspects of botany, especially those, which had been made public by Kieser, Brown and Mirbel. He fully agreed with the most renowned botanists, that the 'building of science' could only be based on a thorough knowledge of the anatomy of the various organs of the plants. (De Vriese, 75)

Undoubtedly the exploration of nature, carried out by English scientists in the Dutch East Indies, prior to the moment in which the Dutch government regained this archipelago, has been an inspiring example for those who wanted to create a new scientific approach of the exploration of nature. (De Vriese, 3). One of these naturalists was Thomas Horsfield, who, between 1802 and 1818, carried out extensive zoological and botanical research on the island of Java. Horsfield collected numerous zoological specimens and other objects of natural history, and prepared these collections for shipment to England. (De Vriese, 74)

H.M. King Willem I was well aware of the enormous importance of the colonies in the East and West Indies for the improvement of welfare of the Netherlands. Furthermore he was convinced of the necessity of taking the benefactions of western civilization to the East Indies. Anyhow, after all – in a contemporary view – the enlargement of the natural and ethnographical sciences has largely and in many aspects contributed to the prosperity of the inhabitants of these islands. (De Vriese, 4)

In Amsterdam, as it has been the case in the rest of the Netherlands, as well as abroad, Reinwardt was a very renowned scientist. In the view of Anton Reinhard Falck, the Minister of the Interior, Reinwardt was the man, who was, more than any other scientist, suited for the position, which the government had in mind with respect to the scientific exploration of the East Indian Islands as well as to their development and commercial exploitation. Not only was he skilled in the various fields of science, he was also very perseverant and full of energy.

Late 1814 already, Reinwardt was invited by H.M. the King, through Minister Falck, to leave for Batavia. Very soon after he had received this invitation, Reinwardt answered that he was eagerly willing to accept this honourable appointment. He expressed his feelings of gratitude and enthusiasm. (De Vriese, 26) On 15 January 1815 already, Reinwardt received a meticulously conceived and detailed description of his various tasks. It turned out that he had to find the answers to numerous questions in the fields of commerce, agriculture, geology and mineralogy, education, healthcare, ethnography and technology. (De Vriese, 36). One of his major tasks was to explore and to develop the agricultural and mineral resources, in order to further the prosperity both of the Netherlands and of the native population of the East Indian Islands. Naturally, priority had to be given to the furtherance of national prosperity.

Initially Reinwardt was going to set out to Batavia in January 1815. However, this departure had to be postponed for almost 10 months, because of the last convulsions of the empire of Napoleon Bonaparte, which took place late spring and early summer of 1815. After these days of war had gone by, Reinwardt was summoned to prepare his leave. He was allowed to select a couple of assistants – A.J. Bik, a draughtsman, and Willem Kent, the gardener of the botanical garden of Harderwijk. Later on, when he was already working on Java, he invited the draughtsman J.Th. Bik (the younger brother of A.J. Bik) and Antoine Payen (a landscape painter) to come to Batavia, in order to work for him. (DeVriese, 49, 50)

Finally on 29 October 1815, after having been forced to wait for favourable winds in the roads of Texel for almost three weeks, the six warships set sail for the Cape of Good Hope. The squadron was commanded by the rear admiral A.A. Buyskes. It consisted of the following vessels: the flagship H.M. ‘Admiraal Evertsen’ (having aboard the recently appointed Governor General of the Dutch East Indies, Mr. Van der Capellen and his wife, the two Commissioners General – Cornelis Theodorus Elout and J.C. Baud – and the rear admiral A.A. Buyskes), H.M. ‘Amsterdam’ (under the command of captain Hofmeyer), H.M. ‘Braband’ (commanded by captain Van der Hart, having aboard the major-general De Kock), H.M. ‘Admiraal De Ruyter’ (under the command of captain ’t Hooft, having aboard the lieutenant-general Anthing, commander of de troops, to be sent to Batavia, together with his family), the frigate H.M. ‘Maria van Reijgersbergen’ (commanded by captain Van der Niepoort), H.M. corvette ‘Iris’ (under the command of captain Pool) and finally H.M. barquentine ‘Spion’ (commanded by captain Van der Loeff). (DeVriese, 51)

The many friends who stayed behind in the Netherlands were very sympathetic towards the zealous Reinwardt. They deeply feared the many dangers which hung over him. Like the government, they had high expectations of his efforts. In contravention to the original plans – staying in the East-Indies for four years – he stayed there for more than seven years. In Holland, Martinus Van Marum and Coenraad Jacobus Temminck decided about how to divide the various tasks, which had to be carried out in behalf of the ‘Koninklijk Kabinet van Natuurlijke Historie’ (‘Royal Cabinet of Natural History’), in Amsterdam. They were assisted by D’Ailly junior, while Dr. M. van Rossum took care of the lectures of chemistry at the ‘Athenaeum Illustre’, previously delivered by Reinwardt.

Of course all kinds of physical and chemical instruments were sent to Batavia, like thermometers, eudiometers, an air pump, instruments for measuring time, depth-meters ('bathometers' or 'zeepeilders', devised and constructed by A. van Stipriaan Luiscius, town physician and chemist in Delft), as well as drawing paper, glassware for chemical experiments and analyses and of course the most needed books. (De Vriese, 49, 50). However barometers, necessary for the altimetry to be carried out, were missing in this collection. It turned out that a royal decree, needed for the acquisition of these instruments, had never been made. So it was decided that on behalf of the new Indian government, Reinwardt should finally decide with respect to the acquisition of these instruments, after his arrival in Batavia. [See: NA 2-21.204(10): J. Goldberg (The Hague) to the Commissioners General (Batavia); 24 January 1816] These experiments were carried out by Reinwardt in the course of his various travels through Java and to the other islands. Furthermore it appeared that not until his return to Holland, Reinwardt had the opportunity to carry out the experiments with the above mentioned 'bathometer', as appears from the correspondence between Reinwardt (Batavia) and Gerardus Vrolik, secretary of the 'Eerste Klasse' of the 'Koninklijk Nederlandsch Instituut van Wetenschappen, Letterkunde en Schoone Kunsten', in Amsterdam (the 'First Class' of the 'Royal Netherlands Institute of Sciences, Literature and Arts'). [See: NA-RANH KNI 175-36.59: 13 September 1821, NA-RANH KNI 175-45: 28 June 1821, NA-RANH KNI 175-45: 9 July 1821 and NA-RANH KNI 175-45: 23 August 1821] On 21 September 1821, Van Stipriaan Luiscius expresses his feelings of gratitude towards the secretary of the 'Eerste Klasse' for the interest, it has shown for his instrument. He is eager to agree with the experiments to be carried out by Reinwardt, although he wants to observe that his colleague and fellow member should be warned previously about the possible failure of these experiments in the case of corrosion of the various parts of this instrument. [See: NA-RANH KNI 175-28(67).141: 15 September 1821] Unfortunately a previously written advice sent by Vrolik to the Dutch government, had been lost. As a consequence, the Minister of the Navy and the rear admiral Buyskes were ignorant about its contents. Anyhow, he decided that Reinwardt has to be informed, before he will return to the Netherlands.

On Wednesday 23 October 1816, about six months after the arrival of the squadron in the roads of Batavia, the Governor General informed the residents of the various districts of the Dutch East Indies that through his royal decree His

Majesty the King had appointed professor Caspar Georg Carl Reinwardt 'Director of Agriculture, Sciences and Arts of the Dutch East Indies' and that he had been given numerous specific tasks. Because of the large distances between Batavia and the residences of the various addressees of this letter, most of the communication will have to be carried out through correspondence. This letter was been co-signed by J.Chr. Baud, Commissioner General, who is also acting as secretary general of the Governor General Van der Capellen.

Although in certain respects Reinwardt got ahead – for example with regard to the foundation and development of a botanical garden in Buitenzorg, designed for research and for the cultivation of plants, he was less successful in other areas of special attention, for example with respect to the practising of zoology. The new botanical garden was baptized 'Hortus Bogorensis' or 's Landsch Plantentuin'. The ideal location was found up in the hills, about a 12 hours walk from Batavia, at an altitude of about 800 feet, close to the residence of the Governor General. This region was one of the most beautiful and delightful sceneries of Java, with its view on the 'Salak'-volcano. It had been decided that this garden had to give a presentation as complete as possible of the vegetation of the East-Indian islands. It should contribute to the furtherance of botanical knowledge, as well as to the improvement of agriculture and gardening. Furthermore it was the site, where acclimatization experiments should be carried out. Blume, Reinwardt's assistant and successor, has largely contributed to the extension of this botanical garden. In order to be successful in this aspect, Blume maintained contacts with the gardens of Rio de Janeiro and Calcutta, which had been initiated by Reinwardt. Furthermore, Reinwardt occupied himself with the development of primary education and with the organization of a healthcare system. In the Autumn of 1816 he had entered his proposals with respect to this task. In the Spring of 1817, the Indian government decided about these regulations. These measures not only concerned the civil medical practice, but also the improvement of all aspects of the administration and functioning of the various hospitals and infirmaries in the Dutch East Indies. Reinwardt regularly inspected these institutions, or ordered to do so. In June 1822, after had had left Batavia, the Governor General appointed a new supervisor, Dr.J. Bourier, his personal physician. Only a few months later, Bourier died, after which his task as a supervisor was conferred to Blume. (De Vriese, 65-66) De Vriese stated that the 'VOC' ('Verenigde Oost-Indische Compagnie') had largely neglected the maintenance of a decent healthcare system during its decline

in the last decades of the eighteenth century (De Vriese, 2). All in all, Reinwardt's governmental activities were numerous. Towards the end of his second term, the government expressed its discontent about the fact that hardly any publications had appeared, while several foreign scientists, who had the opportunity to spend more time on collecting and research, appeared to cut the ground from under his feet. Of course Reinwardt had a valid excuse, although he never wanted to use it: In his own view he had been burdened too much with administrative and organizational tasks. These duties took him far from the exercise of the more scholarly activities, activities he loved most of all.

His friends immediately and unconditionally made a stand for him, as soon as he had made some cautious complaints in his letters to them. After the Governor General had been informed indirectly about these facts, Reinwardt ran into difficulties. So he deeply regretted his openheartedness. Of course he wanted to do his duty, although it kept him from his preferred scientific activities. The messages, received in the Netherlands, which also brought the news about the diseases Reinwardt was suffering from now and then, always gave rise to concern. His friends went in fear for his life.

In his commemoration of Reinwardt his biographer Willem Vrolik once more spoke in his defence. Reinwardt simply did not have the chance to do more scientific work than he did. He did his very best to achieve valuable results: climbing dangerous mountain slopes, craving for the observation of spectacular natural and sometimes very dangerous phenomena and acquiring interesting collections of natural history.

The fact that Reinwardt had to fulfil so many governmental tasks of an administrative nature makes a simple comparison with the great Alexander von Humboldt, who has had so many opportunities to explore nature during his long journey through South-America – impossible and unfair. Von Humboldt had the privilege of being allowed to devote himself completely to the scientific study of nature in all its aspects and for several years, without any interruption. The exercise of scholarly activities, Reinwardt had been allowed to devote himself to from time to time, was a practical science, meant for the benefit of the nation. Only for that reason he had been joined to the two Commissioners General. (De Vriese, 56, 57).

On 18 December 1818, Elout and Baud decided to set out for a scientific journey through Java. It would be a very expensive trip, because they would be accompanied by Reinwardt (who had already made a couple of smaller excursions through Java), by the Bik brothers, Antoine Payen, Landré and Kent and about

130 bearers (coolies), in order to carry the numerous pieces of luggage and further equipment. After the successful conclusion of this expedition several other journeys followed. The most impressive one was carried out between late 1821 and March 1822. During that voyage Reinwardt travelled to the Moluccas and the other eastern islands of the archipelago. The experiences and observations were kept in a journal. Regularly he informed his Dutch friends, especially Van Marum (Haarlem), De Vries (Amsterdam) and Van Lennep (Amsterdam), about his many perilous adventures. These reports were read and discussed in the broader circles of his many friends in Holland, for example during the sessions of the 'Vrijdagsch Gezelschap' and they evoked both horror and excitement. Van Marum – secretary of the 'Hollandsche Maatschappij der Wetenschappen' ('Dutch Society of Sciences') until his death in 1837 – was one of his closest friends. Reinwardt also kept up a regular correspondence with his colleagues abroad, especially with those living in France and Germany, who, of course, were eagerly looking forward to receiving interesting botanical presents. Furthermore he corresponded with his mother and his two sisters, living in Lüttringhausen. In her letters his sister Arnoldine often discussed their precarious financial situation. During Reinwardt's stay in the tropics, Van Marum promoted his financial interests in the Netherlands. Because Reinwardt regularly showed his concern about the problems of those he felt closely related with, he offered them his material assistance. As a consequence he got into straitened circumstances himself now and then. Nevertheless, his affairs were well promoted by Van Marum, so at the end of his service on Java it turned out that he was in the possession of a considerable fortune.

After his return to the Netherlands in the Spring of 1823, he again set out on several journeys abroad, for example to Paris. His last journey was made in the early Summer of 1853, just a year before he died. Everybody who knew Reinwardt, commended his knowledge of foreign languages. He was a passionate man with various interests, generous and amiable and always willing to help others. This attitude won him many friends. In the late summer of 1819, some weeks after Brugmans had died (in the night of 22 July), the royal decree was issued which appointed him Professor in Botany at Leyden University.

On 9 August 1820 – when Reinwardt was still in the East Indies – the royal decree was made, through which he was appointed professor of botany at Leyden University, in order to fill the vacancy, caused by the sudden death of Sebald Justinus Brugmans in the night of 22 July 1819. The ministerial letter, through which he was informed about his appointment, was dated 16 September 1820. On 15 August

1820 already, H.M. the King had expressed his satisfaction about Reinwardt's many and impressive achievements in the Dutch East Indies and he honoured him as a knight of the 'Order of the Lion of the Netherlands'.

Reinwardt, who still did not like the idea of leaving behind his friends in Amsterdam, especially De Vries and Van Lennep, only reluctantly accepted these decisions. Several months before, Reinwardt had formally objected – through a very extensive letter – against the decision, made by his superiors to send him back to the Netherlands, after his four years term would have been completed. He argued that a possible decision with respect to his return should be founded on a positive answer to the question if he had completed his various tasks to an acceptable extent, yes or no. Of course his superiors were well informed about his activities and even better about the results of his efforts, for which purpose Reinwardt pointed at his many letters, reports and so on, submitted by him to the judgement of the Governor General and the Commissioners General. Reinwardt himself took the view that his tasks had not been brought to an acceptable end yet. If the government would decide to send him to the Netherlands immediately, he would not have the opportunity to enjoy a feeling of satisfaction, because the results of his many scientific efforts would absolutely turn out to be insufficient. Therefore he begged the Governor General to continue his appointment at least until the end of 1821. And indeed, on 15 January 1820, the Governor General, who was not at all unwilling to fulfil Reinwardt's dearest wish, sent a letter to Falck, the Minister of Public Education, National Industry and Colonies, in which he asked to prolong Reinwardt's contract until the end of 1821. The royal decree, granting Reinwardt's wish, was made on 16 July 1821. (De Vriese, 85) That decision made it possible for Reinwardt to return to the Netherlands not until early 1822 and to assume his position as professor in Leiden about September 1822. On 27 July 1820, Falck sent the copy of the royal decree to the Governor General in Batavia. Thereupon, the Commissioner General Baud had a copy of these documents delivered at Reinwardt's, who had every reason to feel satisfied.

On 15 June 1822, Reinwardt left Batavia and set out on the return trip to the Netherlands. He was given a send-off by his many friends, among which were Baron Van der Capellen (the Governor General) and his wife and J. van der Vinne, school inspector and secretary of the 'Bataviaasch Genootschap van Kunsten en Wetenschappen'. On 26 June 1822, the 'Elisabeth' set sail and left the roads of Batavia. Four months later, on 31 October 1822 already, the vessel arrived in the roads of Texel. Reinwardt had returned to the Netherlands, after having been away for exactly seven years. (De Vriese 86-90)

The fact that the government of the Dutch East Indies had overloaded Reinwardt with simple organizational and administrative tasks, as a consequence of which he had only spare time for scientific investigations, which he had been so much striving for, was, in De Vriese's view, due to the lack of a scientific tradition of making exploratory expeditions, discovering nature and collecting objects of natural history and plants, which were still unknown to mankind.

On 3 May 1823, Reinwardt assumed his duties as professor of botany, natural history, chemistry and geology in Leyden University. In his inaugural address, delivered on 22 May 1823, he expressed his thoughts about the importance of a thorough research of the rich natural resources of the Dutch East-Indies. His speech was entitled 'Over de aanwinsten, welke de natuurlijke geschiedenis heeft verkregen door het onderzoek van Indië' ('On the acquisitions, made by natural history as a result of the exploration of the Dutch East Indies'). It was translated from the Latin version by the Leyden professor Matthias Siegenbeek. (De Vriese, 86-88)

With enthusiasm Reinwardt plunged into his various tasks. His inbred modesty made him hesitate to act as an authority with respect to certain questions, relative to the application of scientific knowledge. In his own view - because of his absence of seven years in the East Indies - he had to brush up his knowledge first of all, as science had made considerable progress meanwhile. Nevertheless his lectures in geology and mineralogy were well attended. In Reinwardt's discussions Von Humboldt, Von Leonhard, Beudant, Von Buch and Lyell were the most preferred authors. In his lectures in mineralogy he made use of the textbook of crystallography, written by Häuy, at which occasions he demonstrated his broad experience in that field. (De Vriese, 92) What has been said about his lectures in geology and mineralogy also goes for his lessons in chemistry. In De Vriese's view, Reinwardt was a skilled experimenter. This fact enabled him to illustrate his lectures in an excellent way. Enthusiastic students were gaining practice in the chemical laboratory, in spite of its material limitations. Soon afterwards - in 1825 already - Reinwardt ended his lectures in natural history. He was succeeded by the 24 years old Jan van der Hoeven. His former student A.H. van der Boon Mesch took over his chemistry lessons, although Reinwardt reluctantly gave up these lectures. (De Vriese, 92) Reinwardt provided his lectures in botany with many examples and illustrations. In this field his theoretical knowledge and practical experience were unrivalled.

Physically Reinwardt was not very strong. His physical limitation (respective to walking) made it difficult for him to participate in botanical excursions. Yet he knew how to make his students enthusiastic for this field of study.

Reinwardt only published a few treatises, but no textbooks. The older he grew, the more he postponed the preparation and publication of more comprehensive works. (De Vriese, 93-95) At various occasions Reinwardt delivered interesting speeches, for example in the meetings of the 'Eerste Klasse' of the 'Instituut'. In these readings he always went back to the former experiences and observations, made by him in the Dutch East-Indies. At the occasion of his retirement as rector of the Leyden Hoogeschool – on 8 February 1833 – he delivered an impassioned speech on the progress of geology, which was characterized later on as a 'masterpiece of style and language'. (De Vriese, 94)

Shortly after his return to the Netherlands - in 1824 - he married the widow Calkoen, born J.H.C. van IJsseldijk, whom he got acquainted with during his stay on Java. He behaved like a good father to the daughter of his wife's first marriage. He showed the same love towards the four children of this daughter. His niece Caroline, his brother's daughter, was married to Jacob Geel, professor in Leyden University and one of his close friends.

From the beginning of his scientific career – when he delivered his first lectures in Harderwijk, he decided that geology and botany had to go hand in hand, just like Alexander von Humboldt had suggested. This most important general principle of plant geography marked his various botanical writings. He also tried to find out the close relationships between the animal kingdom and the vegetable kingdom. (De Vriese, 58-60) Reinwardt collected many rock samples. The most important of these objects were inserted in the collections of the 'Rijksmuseum', after they had been arranged systematically by A.H. van der Boon Mesch. The rest of what he had collected remained in his private collection. After his death, most of it was bought by the 'Hoogeschool'. (De Vriese, 61-62).

In his memorial address on Reinwardt, Willem Vrolik especially pointed at a peculiar experience made by Reinwardt in Berlin, on 20 September 1838, at the occasion of a meeting of the 'Verein der Naturforscher'. In the evening Reinwardt had to deliver his speech. That very morning the great Alexander von Humboldt asked to give him a copy of his speech. When he started to deliver his speech,

Reinwardt was very surprised to see that Von Humboldt had this text already printed and handed out among the audience.

Zealously and passionate Caspar Reinwardt carried out his various tasks, connected with his membership of the 'Hollandsche Maatschappij der Wetenschappen', the society of which he was a member since 1805. He attended many of its meetings, he devised numerous prize-contests, which were officially organized and published in the annual programmes and last but not least he judged many – often very sizeable – manuscripts, which had been entered to these contests. These activities must have been the main reason for not publishing many manuscripts. Most of the time his actions were motivated by his sense of duty.

### **The relatives, living in Lüttringhausen**

In the course of Reinwardt's stay in the Dutch East Indies, a lively and regular correspondence developed between Van Marum and the relatives in Lüttringhausen (in the vicinity of Remscheid), in which in the first place the need for a constant flow of news from the East Indies was discussed. His mother and sisters were convinced that their son and brother Caspar, living in that far away tropical country, was exposed to all kinds of known and unknown perils, which might endanger his health. Therefore they were very happy about the reception of the first letter from their brother, dated 15 January 1816, as well as of a covering letter, added by Van Marum. It is the second letter, which they have received from their brother. An important reason for the family in Lüttringhausen for maintaining regular contacts with Van Marum was its delicate financial situation, among others as a consequence of the fact that the mother was old and had a weak constitution, while the two sisters were suffering from frequent nervous brake-downs, especially the elder sister, Arnoldine. Mr. Morian, an acquaintance of the family, living in the same village, and Mr. Ohm, a cousin on the maternal side (living in the village of Barmen), were also acting in the regular flow of letters between Lüttringhausen and Haarlem. On 30 October 1816, Arnoldine Reinwardt expressed her feelings of disappointment of not having been informed directly by Van Marum about Reinwardt's safe arrival in Batavia. Regretfully she happened to learn that important news through a letter from her niece Caroline (living in Amsterdam). [NA-RANH 529-20b: A. Reinwardt to M. van Marum; 30 October 1816] So she was eager to learn many more details about the second part of Caspar's voyage from the Cape of Good Hope to Batavia and she begged Van Marum to send her this news immediately

after its arrival. On 7 March 1817, Arnoldine Reinwardt asked Van Marum to inform her if he was still in the possession of the letter written by her on 12 February 1817, or that he had already sent it on to Batavia. At this occasion she also asked Van Marum for the first time to give her, her sister and her mother financial support. Of course her brother was well aware of their delicate financial situation. And therefore he would certainly agree with a proper financial arrangement in behalf of his next of kin. Arnoldine proposed to pay her from her brother's capital, which – as she knew – was administered by Van Marum. The two sisters were well aware of their brother's prosperity and they knew that he would be willing to share his affluence with them. Their daily costs of living were high and besides they had to spend a lot of money on doctors and pharmacists. Meanwhile, their mother was advanced in years and she (Arnoldine) herself was suffering from 'asthenia' [see also: NA-RANH 529-20b: A. Reinwardt to M. van Marum: 5 July 1817, NA-RANH 529-20b: A. Reinwardt to M. van Marum: 16 September 1817 and NA-RANH 529-20b: C. Fr. Morian (Lüttringhausen) to M. van Marum: 20 September 1817. Through Arnoldine Reinwardt's letter, dated 1 December 1818 (NA-RANH 529-20b) Van Marum was informed about the death of Caspar's mother. Arnoldine, at the time being ill herself, had not been able to inform him until now. In her letter she thanked him for sending the jars of ginger. This gift was really compensating the loss of the shipment of coffee. Between the lines she informed him that she has learned through her niece Caroline and through Mr. Morian, that her brother Caspar was ill. So for obvious reasons they were eagerly looking forward to receiving more favourable news from their brother. They also expressed their hope that meanwhile Van Marum would have informed Caspar about the death of his mother. Shortly before the end of December 1818, Arnoldine was again begging for financial support. Her mother's funeral still had to be paid. Van Marum informed Mr. Morian – who was taking care of their business – by return, that he was willing to send the money immediately, but that at the same time he had to decide to deduct this advance in four terms from the trimestrial remittances of 200 guilders each. [NA-RANH 529-20b: late December 1818]. Of course it was most regrettable that he could not consult Reinwardt before making this decision. On 18 March 1819, Arnoldine Reinwardt thanked Van Marum, also on behalf of her sister, for his generosity and for adding a letter from her brother. They were worrying about his weak pulmonary condition. Most regrettably she had to stress again that it was almost impossible for her to pay the pharmacist from the trimestrial remittances, which they were receiving at the time. This fact brought her into a precarious situation, as Van Marum had to believe.

### **Bonds of friendship with persons living in the Netherlands**

Besides Martinus van Marum Cornelis Theodorus Elout, Jeronimo de Vries and David van Lennep were important links between Reinwardt and the large circle of friends, living in the Netherlands. Elout regularly informed Van Marum about the situation in Batavia and its surroundings and of course also about Reinwardt's health and about his many adventures. In the Netherlands there was general amazement about the fact that Reinwardt had to carry out too many different tasks, which had nothing to do with the practice of science and which might easily be carried out by much less educated persons, such as the secretarial work and other paperwork, which he had to carry out during the first couple of years. So his friends decided that Reinwardt was very dissatisfied with this situation and that he obviously needed the support of his most important friends, who wanted to initiate the improvement of his personal situation. Without consulting him, they had decided to settle this affair once and for all, by addressing a letter of protest to the Governor General. After having being informed about their action, Reinwardt fumed at their unasked interference. Of course Reinwardt harboured such feelings, but he would never have expressed them, because of his overwhelming feelings of devotion and gratitude towards the Governor General and the two Commissioners General for the many great services and proofs of friendship these men have done to him. This unfavourable situation was distinctly improved when a clerk was appointed, J. van der Vinne, who would later on rise to be school inspector and secretary of the 'Bataviaasch Genootschap'.

On 28 December 1820, De Vries and Van Marum again expressed their concern about Reinwardt's health. Everybody was missing him very much. Fortunately, according to plans his employment as director of Agriculture, Arts and Sciences would soon be terminated after which he would return to the Netherlands. De Vries did not understand why his friend did not receive the official letter of appointment as professor in Leyden, until then.

In the Spring of 1822, Van der Vinne informed Van Marum that in the view of Petit, Reinwardt's physician, he was still suffering from a severe catarrhal and biliary fever, after having returned from a last voyage. The repeated bloodlettings had sedated him and he was still very weak. Van der Vinne added the last life certificate to his letter and assured Van Marum that until then all his letters had been received in good order. He hoped that the same went for the letters, which had been sent from Batavia to Haarlem.

On 10 July 1822, Van der Vinne informed Van Marum that Reinwardt – who had left for the Netherlands meanwhile (he embarked on 26 June 1822 on the ‘Elisabeth’, under the command of captain Fakes) – was still suffering from catarrhal pulmonary complaints (‘short-windedness’). Therefore his friends in Batavia had decided – before he set out to the Netherlands – to have drawn up a notarial protest, including an inventory of all his personal belongings. This document had been added to this letter. Van der Vinne also observed that Reinwardt’s health had not improved at the time when the vessel was passing through the ‘Sunda Strait’. By drawing up this protest and by sending it to Holland, it would be possible to claim Reinwardt’s possessions from captain Fakes, if their friend might die meanwhile. The Indian government also sent a copy of this document to the Minister of Colonies (The Hague), together with a copy of the inventory (although it was incomplete, because a couple of living monkeys and living buffalos had not been mentioned) in it. Van der Vinne hoped that Reinwardt would return to the Netherlands safely. Furthermore he mentioned the fact that he had enclosed a bill of exchange, worth 10.000 guilders. [NA-RANH 519-20b, dated 10 July 1822]

### **Reinwardt’s contributions to various scientific societies**

Reinwardt was a member of a number of scientific academies, among others of the ‘Academia Caesarea Leopoldini Carolini Naturae Curiosorum’, who honoured him by giving him the epithet ‘Rumphius’ on its membership list. Furthermore he was a member of the ‘Naturforschende Gesellschaft’ (Halle), of the ‘Zoological Society’ (London), of the ‘Linnean Society’ (London), of the ‘Rheinische Gesellschaft der Naturwissenschaften’, of the ‘South-African Literary and Scientific Society’, of the ‘Schlesische Gesellschaft für Vaterländische Kultur’, of the ‘Wetteravische Gesellschaft für die gesammte Naturkunde’, of the ‘Garten-bau Verein’ (Berlin), of the ‘Société de Médecine et de Pharmacie de Bruxelles’, of the ‘Société Philomatique’ (Paris) and of the ‘Koninklijke Academie van Wetenschappen’ (Antwerpen). From 1808 on, he was a member of the ‘Eerste Klasse’ of the ‘Koninklijk Nederlandsch Instituut van Wetenschappen, Letterkunde en Schoone Kunsten’. In his service to this institute he wrote the following treatises – mostly being the texts of speeches delivered by him during the monthly meetings of the ‘Eerste Klasse’:

- ‘On the qualities and the usefulness of the Canadian poplar, *Populus monilifera* Ait.’ (*Verhandelingen der Eerste Klasse*, deel 3, 1817, pp. 171-192);
- ‘On the stones contained in the stomachs of quadrupedes, more in particular in those of the horse and the hippopotamus’ (*Verhandelingen der Eerste Klasse*, deel 4, 1818, pp. 13-27);
- On ‘The natural fertility of the soil of the East-Indian islands, especially of the isle of Java and on its possible causes’ (address, delivered at the occasion of the public general meeting of the ‘Eerste Klasse’ of the ‘Instituut’, 12 October 1827, pp. 1-22).
- ‘Observations relative to the condition of the soil of the island of Aruba, and to the gold found there’ (*Nieuwe Verhandelingen der Eerste Klasse*, deel 1, 1827, pp. 265-281);
- ‘On the formation of lime and the growth of the shells and coral reefs in the seas of the hot regions’ (*Berichten Nieuwe Verhandelingen der Eerste Klasse*, deel 3, 1831, p. XXXIII);
- ‘Additional remarks about a horn and fragment of the skull of *Bos primigenius*, found near the ‘Eem-bridge’ in February 1825’; made by C.G.C. Reinwardt (*Nieuwe Verhandelingen der Eerste Klasse*, Vol. 5, 1831, pp. 20 and following);
- ‘On the peat ashes, especially resulting from the incineration of the long bricks’ (*Berichten Nieuwe Verhandelingen der Eerste Klasse*, Vol. 7, 1838, pp. XV and following);
- ‘On the character and origin of edible bird’s nests from Java’ (*Berichten Nieuwe Verhandelingen der Eerste Klasse*, Vol. 7, 1838, pp. XXX and following);
- ‘On Platinum, found on the island of Borneo’
- ‘On the tree of Boerhaave’, 1845, pp. 118-126);
- ‘On the peculiarities and the distribution of the vegetation in the Magellanean regions’ (*Tijdschrift der Eerste Klasse*, deel 2, 1849, pp. 33-47);
- ‘On the gold-bearing (auriferous) soil of the north-eastern coastal regions of Celebes’
- ‘Observations regarding the volcanic grounds in the Menado district on the island of Celebes’
- ‘Description of a Mannah-ash (‘Pluim-esch’), engrafted on the common ash’
- ‘On the peculiarities and the character of the wild figtree woods in the East Indies’

Reinwardt delivered the following inaugural speeches:

- *Oratio de ardore, quo historiae naturalis et imprimis botanices cultores in sua studia feruntur* (Harderovici, 1801);
- *Oratio de chemiae et historiae naturalis recte instituendis* (Amstelodami, 1810);
- *Oratio de augmentis, quae historiae naturalis ex Indiae investigatione accesserunt* (Lugduno-Batavorum, 1823);
- *Oratio de geologiae ortu et progressu* (Lugduno-Batavorum, 1823).

In de *Nova Acta physico-medica Academiae Caesarea Leopoldino Carolinae naturae Curiosorum*, the following papers appeared:

- ‘Spiridens, novum muscorum diploperistomiorum genus detexit Dr. C.G.C. Reinwardt, A.C.N.C.S. descripsit Dr. C.G. Nees ab Esenbeck, Acad. h.t. Praeses (c. tab. aenea picta)’; Vol. XI, 1823;
- ‘Hepaticae Javanicae, editiae conjunctus studiis et opera Reinwardti, Blumii et Neesii Ab Esenbeck; A.C.N.C.S. (cum tab. pict.)’, Vol. XII, pars 1, 1824;
- ‘Ueber den Charakter der Vegetation auf den Inseln des Indischen Archipels’, speech delivered on 20 September 1828, at the occasion of his presence in the ‘Versammlung deutscher Naturforscher und Aerzte’ in Berlin;
- ‘Observatio de Magniferae semine polyembryoneo, auctore C.G.C. Reinwardt et Dr. Hornschuchii’, A.C.N.C.S. (cum. tab. tribus acri insculptis)’, Vol. XIV, pars 2, 1829.

On 27 January 1851, the first draft of a text, relative to the announcement of the fiftieth jubilee of Reinwardt’s professorate, was made public. N.C. Kist (rector of Leyden University), Jacobus Geel (professor and librarian of Leyden University), J.H. Molkenboer (botanist, Leyden), Willem Hendrik de Vriese (zoologist, Leiden) and Jeronimo de Vries (Amsterdam) decided together about the final text of this official document. They also had to propose the text to be engraved on the gold medal to be minted in honour of their friend and colleague. The anniversary was celebrated on 10 June 1851, exactly 50 years after Reinwardt had delivered his inaugural address at the university of Harderwijk. [See: KB 121 B 8/28: 27 January 1851]

Caspar Georg Carl Reinwardt died on 6 March 1854, at the age of almost 81 years. His death was considered a great loss to the fatherland. He was one of the founders of the ‘modern’ natural sciences, which developed and diversified in the

course of the nineteenth century. Several friends commemorated him in their memorial speeches, for example: A.H. van der Boon Mesch, Jan van der Hoeven and the already cited Willem Vrolik. In the view of his numerous friends and of his colleagues Reinwardt was one of the most meritorious scientists of his era. He had devoted himself unconditionally and completely to the benefit of the Netherlands, the country which had always been as dear to him as his motherland was: 'Omnes caritates una patria est'. This love has always been the leading principle in his exercise of scholarly activities, the 'altar', on which he sacrificed the best of himself. In De Vriese's view, Reinwardt was a most respectful citizen. He was always on the look for the truth, without any bias. He penetrated to the very heart of the matter and continued until he fully understood its secret, or until he had to conclude that for the time being it was still impossible to unveil it completely. He had the rare talent of explaining the most complex scientific problems in the most simple way, so that even a layman could understand his explanation and became fascinated by it. (De Vriese, 12)

Reinwardt kept up a lively correspondence with the most renowned colleagues in the Netherlands and abroad, like Adrien Gilles Camper (Franeker), Martinus van Marum (Haarlem), Sebald Justinus Brugmans (Leyden), Dietrich Georg Kieser (Jena), Christiaan Georg D. Nees von Esenbeck (Bonn), Johann Friedrich Blumenbach (Göttingen), Theodore Horsfield (London), Georges Cuvier (Paris), Christian François Brisseau De Mirbel (Paris), Jean Decaisne (Paris) and Alexander von Humboldt (Berlin).

### **Representing Reinwardt in the Netherlands**

In his letter, addressed to Coenraad Jacob Temminck (Amsterdam), dated 7 February 1816, Van Marum stresses that Reinwardt has always expressed his opinion towards him that he and not Temminck should act as his successor. So as a consequence he (Van Marum) has the right to occupy the post of director of the 'Nationaal Kabinet van Natuurlijke Historie' (Amsterdam). As a matter of fact he has decided to leave this post to Temminck. He underlines that he did only take it temporarily because of his friendship for Reinwardt. Temminck should take his responsibility with respect to the ornithological collections, while he (Van Marum) wants to take care of the collections of insects and other objects of natural history, as he had done before. Of course D'Ailly junior should go on assisting them. Still waiting for Temminck's answer he wants to make clear that this affair has already given him enough unpleasantness. (NA-RANH 529-20b)

One week later already Temminck confesses to Van Marum that he has been unaware of the existence of an arrangement between Van Marum and Reinwardt about the directorship of the 'Kabinet', until he received Van Marum's letter. At the time of Reinwardt's departure to the East Indies he was in France. Temminck adds that in his view the final arrangement of Reinwardt's succession has considerably been delayed, because it took Repelaer Van Driel, the Commissioner General of Public Education, so much time to inform him about the situation. On the other hand, Van Marum has never shown much interest in the post of director. Temminck only wanted to serve his teacher and he has never aspired to run the administration of the collections of minerals, fossils, molluscs and zoophytes. In his view Van Marum is really exaggerating, when he is speaking of 'unpleasant conversations' between the two of them. He hopes that Van Marum is willing to patch up the dissension between them. Only by doing so it will be possible to realize the foundation of a national museum. (NA-RANH 529-20b).

Another problem, Reinwardt was confronted with during his stay in the East Indies, was the fact that the Minister of the Interior had obliged him to send life certificates, authenticated by a notary and a couple of witnesses, to the Netherlands regularly, in order to get his Dutch salaries paid to Van Marum, his caretaker in the Netherlands. On 10 June 1817, such a life certificate is mentioned for the first time. Not until 1 October 1817 this document was sent to the Netherlands in behalf of Reinwardt. [see also: NA-RANH 529-20b: G. Drost (Batavia) to M. van Marum (Haarlem): 1 December 1818]] More than once, Van Marum had to remind Reinwardt's former Dutch employers that the payments of his salaries were in arrears. This goes especially for his professorship in the 'Athenaeum Illustre', which has to be paid by the municipality of Amsterdam. Furthermore Van Marum had to wait very long for the payment for Reinwardt's cabinet of natural history, purchased by the 'Athenaeum Illustre'. [see: NA-RANH 529-20b: 21 July 1816: M. van Marum (Haarlem) to Van Boetselaer (Amsterdam), NA-RANH 529-20b: M. van Marum (Haarlem) to Van Boetselaer (Amsterdam): 22 July 1816, NA-RANH 529-20b: M. van Marum (Haarlem) to Van Boetselaer (Amsterdam): 26 July 1816] and NA-RANH 529-20b: M. Van Marum (Haarlem) to the Minister of Public Education (The Hague); 31 January 1819.

On 5 September 1820, after having been informed already by word, Van Marum is informed by mail by Minister Falck, that H.M. the King has decided to purchase

Temminck's excellent cabinet of natural history in order to join it with the collections, which are already present in Leyden and with Reinwardt's collection of natural history which is still kept in Amsterdam. In this way a new 'Koninklijk Museum van Natuurlijke Historie' will be founded, which is worthy of the nation and of 'our hoogeschool'. Its direction has been offered to Temminck. [NA-RANH 529-7]

### **Taking care of Reinwardt's finances in the Netherlands**

Van Marum maintained a regular correspondence with Reinwardt and other persons about payments, which he had to carry out on his behalf, relative to the settlement of debts and about the collection of sums, which had to be paid to Reinwardt after he had left the Netherlands. One of these problems was caused by the Amsterdam bookseller J.H. van der Hey, who used to send specimens of recently published books to Reinwardt in Batavia, without having been asked to do so. Another problem was related to the conversion of bills of exchange, sent to Holland by Reinwardt. [see: NA-RANH 529-20b: 21 July 1817, NA-RANH 529-20b: 28 July 1817 and NA-RANH 529-20b: 15 September 1820; see also: J. de Vries (Amsterdam) to M. van Marum (Haarlem): 5 December 1817, in which also the news of the terrible massacres in the Dutch East Indies was discussed, as well as the uncertainty about the question if Reinwardt would survive these terrible events]. These rumours were received in Holland through the English newspapers. A regularly recurring problem was Willem Kent's unwillingness to send money to Leyden from time to time, in order to keep his needy family alive. [see: NA-RANH 529-20b: Van Pottum (Leyden) to M. van Marum (Haarlem): 22 June 1817]

### **Reinwardt's commercial escapades**

On 11 December 1817, J. de Vries informs Van Marum about the shipment of a large quantity of wine to Batavia (see: NA-RANH 529-20b), after having expressed his worrying feelings with respect to Reinwardt's well-being. Other ventures, carried out by Reinwardt, were the shipment of coffee and rice to the Netherlands. The last shipment was sent to the Calkoen Brothers. It brought Reinwardt a considerable loss. Once arrived in Holland, it had lost so much of its quality that most of it turned out to be unsaleable. [see: NA-RANH 529-20b: J.G. Landré (Amsterdam) to M. van Marum (Haarlem): 29 October 1818, NA-RANH 529-20b: ?? Calkoen (Amsterdam) to M. van Marum (Haarlem): 14 June 1819] The wine trade turned out to be profitable. Even less risky was the shipment of

jars of ginger to his relatives and friends in the Netherlands and Germany. These presents were very wanted. The Reinwardt sisters, who were fond of this delicacy, even asked their brother to repeat this gesture.

### **Mining and economy**

The activities relative to mineral sources and mining were most important for the government, for example those, relative to the availability and quality of coal, sulphur and gold and the production of saltpetre from bat manure. Reinwardt maintained a lively correspondence with several residents, with administrative officers and higher government officials, such as the Commissioners General, the Governor General and the National Audit Office. The major question was if there could be made any profit from these mining ventures, yes or no. Anyhow, the quality of the coal from Madura turned out to be rather poor and it appeared to be impossible to recover large quantities of it. Furthermore it was decided that it would be impossible to sell refined sulphur, produced on the island of Java, at a profitable price, because the necessary refining processes would be too expensive. Reinwardt was able to advise about how to raise the annual yield of sulphur and saltpetre, by examining the common technological procedures and by advising about their possible improvement. [see: NA 2-21.204(7): P. von Lawick von Pabst (Surabaya) to the Governor General: 9 April 1817, NA 2-21.204(7): ?? Parvé (Semarang) to the Governor General: 19 November 1817, NA 2-21.204(7): Resident of the Preanger regencies (Jagal) to the Governor General: 27 November 1817 and NA 2-21.204(7): Lieutenant General Anthing (Batavia) to the Governor General: 3 October 1818]

### **Volcanism and earthquakes**

About half a year after Reinwardt's arrival in Batavia the rumours and reports about volcanic eruptions, earthquakes and landslides began to pour in. Directly or indirectly Reinwardt was informed about these amazing events, which were unknown in the Netherlands. He had to analyse these reports and to advise the government about how to act. On 20 December 1815, the first of these reports, preserved in the 'Nationaal Archief' (The Hague), was sent on 20 December 1816 to Parvé (at the time interim resident of Semarang) by C. Meiners, surgeon major in that town, who had been charged with the surveillance of a part of the military health service. In his report Meiners informed the resident about the chemical qualities of mountain water, containing among others sulphuric acid and

hydrogen sulphide. [NA 2-21.204(7); see also NA 2-21.204(7), Blommenstein to the Governor General: 26 December 1816, as well as the reports from several other correspondents, residing in the Banjouwangie region, sent to the Governor general (in which the eruption of the 'Idjen' volcano is described.)] From these reports it appeared that a rain of volcanic ashes had lasted for days, that the fishes in the river had died and that the vegetation and of course the cultivation of rice had been severely damaged. As a consequence of that, most probably starvation will follow. At one of these occasions the government was even asked to send ships in order to evacuate the population.

The part of the 'Nationaal Archief', coded '2-21.204' preserves more documents on similar events and reports from the period 1817-1818, for example: NA 2-21.204(7): 28 January 1817, NA 2-21.204(9): 30 January 1817, NA 2-21.204(9): 2 February 1817, NA 2-21.204(9): 4 February 1817, NA 2-21.204(9): 11 February 1817, NA 2-21.204(9): 18 February 1817 and NA 2-21.204(9): 1 March 1817. All these reports and letters are discussing the eruption of the 'Goenoeng Idjen'. In his report, dated 8 March 1817, W.N. Servatius (Semarang) informs the Governor General that the 'Goenoeng Loentoer' has partially collapsed as the consequence of an earth quake and not as the result of an eruption [NA 2-21.204(9)]. Several other earthquakes have been reported to the Governor General or to the Commissioners General between early May 1817 and the end of 1818, for example from the Preanger regencies on 10 May 1817, on 23 October 1817 (about the eruption of the 'Goenoeng Goentoer', in the Bandung region) and from Surabaya, on 10 January 1818, in which report heavy thunderstorms and torrents, accompanying earthquakes were mentioned.

**The relationship between the government of the Dutch East Indies and the 'Bataviaasch Genootschap van Kunsten en Wetenschappen' on the one hand and the 'Hollandsche Maatschappij der Wetenschappen' (Haarlem) on the other hand**

The fact that from 1795 on the inhabitants of the Dutch East Indies had to do without regular contacts with the Netherlands for a considerable number of years, highly hampered the scientific contacts between the Dutch scientific societies and communities on the one hand and the culture minded upper class of the Dutch East Indies on the other hand. In the spring of 1816, after almost twenty years, J. Siberg, one of the directors of the 'Hollandsche Maatschappij der Wetenschappen', received a letter from Van Marum, in which he was reminded to pay the sum of

1.000 guilders (for overdue membership's fees). On 23 May 1816, Siberg promised to pay as soon as possible, holding out the prospect of giving Reinwardt objects of art as a present, objects, which were to serve the enrichment of the collections of the 'Koninklijk Kabinet'. He also thanked Van Marum for sending him several volumes of the transactions of the 'Maatschappij' through Reinwardt. [NA-RANH HMW 444-95] On 14 December 1816, the Commissioner General Elout proposed two prominent members of the Dutch community of Batavia for directorship of the 'Maatschappij': Mr. H.W. Muntinghe (president of the National Audit office of the Dutch East Indies) and A. de Wilde (superintendent of the vaccination in the Dutch East Indies). Furthermore he proposed the naturalist Dr. Th. Horsfield, who started to explore the natural resources of Java under the English government of the Dutch East Indies. Unfortunately, Horsfield did not publish any important scientific works until now. In order to prevent disappointments, the Commissioner general Elout had decided not to sound Horsfield on this membership until he would have received Van Marum's answer. [See: NA-RANH HMW 444-95]

Many years later, more than a year after Reinwardt had returned to Holland, J. van der Vinne – secretary of the 'Bataviaasch Genootschap van Kunsten en Wetenschappen' – expressed his need to underline the good relationship between the two societies and explains the inevitable breakdown of the correspondence during the years of English occupation. Of course he was eager to serve the 'Maatschappij'. Therefore he offered the volumes 7, 8 and 9 of the *Verhandelingen* of the 'Bataviaasch Genootschap', which had been published since 1793. In return he asked Van Marum to do him the favour of sending him the volumes of the *Verhandelingen* of the 'Maatschappij', which have been published since that year, because these works are important sources of knowledge to the 'Genootschap'. [See: NA-RANH HMW 444-102: J. van der Vinne (Batavia) to M. van Marum (Haarlem): 8 April 1824]

### **The relation between the 'Bataviaasch Genootschap van Kunsten en Wetenschappen' (Batavia) and the 'Koninklijk Instituut' (Amsterdam)**

As a matter of fact the relation between the 'Bataviaasch Genootschap van Kunsten en Wetenschappen' and the 'Koninklijk Instituut van Wetenschappen, Letterkunde en Schoone Kunsten' (Amsterdam) has always been far less frequent and less profound than the connection Batavia has maintained with the 'Hollandsche Maatschappij der Wetenschappen' (Haarlem). This fact is undoubtedly due to the position held by Reinwardt in Batavia between 1816 and 1822, as well as it has been a consequence of his deep friendship with Martinus van Marum.

## **Epilogue**

After Reinwardt had died on 6 March 1854, his heirs – together with the executors – decided to offer his scientific collections to H.M. the King and through that to the fatherland. It was decided that these collections had to be joined to the academic collections of Leyden and to its botanical garden. At the advice of the Minister of the Interior H.M. had decided to order W.H. de Vriese (Reinwardt's friend and protégée) to carry out this task. Reinwardt's collections were joined to the 'Museum Splitgerberianum'. Thereafter, De Vriese had made these collections accessible to the scientific public. He had performed his task in consultation with the 'Koninklijk Instituut voor Taal, Land- en Volkenkunde', which at the time had its seat in Delft, as well as with J.Chr. Baud, Minister of State and former Commissioner General of the Dutch East Indies. Looking back, in De Vriese's view this task had been a rush job, because it had already been decided that he would be asked by His Majesty to leave for the East Indies for some time. In order to accomplish his job with regard to Reinwardt's botanical collections he had asked F.A.W. Miquel, professor of botany in Amsterdam, to assist him. Acknowledging Reinwardt's enormous achievements and his importance for the advancement of the various natural sciences, De Vriese had to admit that much of what had been achieved by Reinwardt had already become dated at the time of his death.



## CHAPTER 2

### MESSAGES REGARDING THE SHIPMENTS OF OBJECTS OF NATURAL HISTORY, PLANTS, OBJECTS OF NATIVE ART AND TOOLS, WHICH HAVE BEEN LOST AS A CONSEQUENCE OF VARIOUS SHIPWRECKS DURING THE PASSAGE FROM BATAVIA TO THE NETHERLANDS

#### A. **Message, published in the *Bataviaasche Courant* of 5 September 1818, n° 36**

First of all an account is given of the consequences of the loss of H.M. 'Amsterdam'. As a consequence of this catastrophe the first shipment of objects of natural history from Batavia to the Netherlands was lost. This meant a severe loss to the Kingdom of the Netherlands and therefore to the 'Koninklijk Kabinet van Natuurlijke Historie'. The major part of these collections had been brought together on the Island of Java at the expense of a great deal of efforts, while the rest had been collected in the Cape Province. Unfortunately, much of what has been lost, was irreplaceable. Besides, the preparation of several objects had taken much time and great efforts. Furthermore, many objects were essential for the advancement of our scientific knowledge of the East Indian islands. As a matter of fact, the loss of the collection of Moluccan shells is less painful than the loss of those rare objects of natural history, collected with respect to the advancement of comparative anatomy, because these objects can only be collected in the higher and less accessible woodlands of Java. Moreover, several rare plants have been lost, among others 80 different species, cultivated in the garden of Bogor.

Among the objects of art, which have been sent to Holland aboard the 'Amsterdam', was also a beautiful painting, made by Antoine Payen, representing a landscape near Buitenzorg, up the Tjiliwong river, nine beautiful drawings, made by A.J. Bik, a couple of sculptures, among others a representation of the goddess 'Doerga', a carved representation of an elephant's head and a full-scale sculpture of a bull. (De Vriese, 223-228)

**B. *Bataviaasche Courant*, 17 April 1819**

A second article, also published in the 'Bataviaasche Courant' (on 17 April 1819), describes the shipwreck of the merchant vessel 'Ida Alyda'. Early 1818, it ran aground in the neighbourhood of the 'Cape of Good Hope', when it tried to put into the 'Simonsbaai'. And again a most important collection of objects of natural history and art has been lost, among which were several beautiful native garments, Hindustani sculptures, weapons, domestic tools and furniture. Much of this collection had been brought together by Reinwardt personally, in the course of 1817. In spite of this second disaster, there was still hope for future successful shipments of precious collections to the Netherlands. Besides, meanwhile the government had decided to organize a scientific journey. Reinwardt was allowed to take the draughtsmen A.J. and J.Th. Bik, the landscape painter A. Payen and the gardener W. Kent with him. Furthermore, another long-term trip has been planned to the Moluccas and the other eastern islands. The lieutenant colonel Fr.A. Treffz will be in command of the travel company. The Governor General has already ordered to make all the necessary arrangements. The colonial corvette 'Zwaluw' has been placed at Treffz's disposal. This officer has already proved his capability of making such a trip and of contributing to the advancement of natural history, through the beautifully prepared crocodile skeleton, a monster of more than 17 feet length, offered by him to the Indian government. This shipment is really a most important acquisition in behalf of the kingdom of the Netherlands and of the 'Koninklijk Kabinet van Natuurlijke Historie' in particular. (De Vriese, 228-230)

**C. *Algemeene Konst- en Letterbode*, 1823**

In 1823, the 'Algemeene Konst- en Letterbode' published a report on the shipments of objects of natural history and art, which had been lost during the passage from Batavia to the Netherlands, between 1818 and 1822. It spends a few words on the losses of the warship 'Amsterdam', the merchant vessel 'Ida Alyda' (lost in the 'Simonsbaai', east of the Cape) and the warship 'Admiraal Evertsen'. The last vessel wrecked in the neighbourhood of Diego Garcia, in the Indian Ocean. Its crew and passengers were saved by the U.S. 'Pickering' and the 'Cadmus' (an English man of war). Furthermore it describes the safe arrival in the Netherlands of the merchant vessels 'Johanna' and 'Schoon Verbond'. These two vessels brought home an important collection of natural

history, intended for being inserted in the collections of the ‘Koninklijk Kabinet van Natuurlijke Historie’) and a collection of living plants, destined for the Leyden Hortus. Unfortunately, another important shipment, taken to the fatherland aboard the merchant vessel ‘Arinus Marinus’, was lost, when this vessel was wrecked in January 1822, about 60 miles south of the ‘Strait of Sunda’. Most fortunately, Reinwardt did not stick to his initial decision to return to the Netherlands aboard this vessel, as he had announced through his letter to Van Marum, dated 25 February 1822, a letter which has been lost in later years. Not until three days before his intended departure, Reinwardt decided to postpone his leave for the Netherlands for some time (De Vriese, 230-231). Initially it was supposed that the warship ‘Zeemeeuw’ was wrecked too in the neighbourhood of Cape Town, but fortunately it brought home another shipment of natural history. It set sail from Batavia early 1819. The news, regarding the ‘Zeemeeuw’, was not mentioned in the ‘Letterbode’.

Meanwhile there have been four more successful shipments to the Netherlands: aboard the warship ‘Admiraal Buyskes’ (which left the roads of Batavia on 30 December 1818), aboard the warship ‘Maria Reijgersbergen’ (which left Batavia in January 1819), aboard the merchant vessel ‘Henrietta en Betsy’ (which set sail from Batavia on 6 January 1820) and aboard the merchant vessel ‘Jan en Cornelis’ (which set sail on 2 March 1820). Several other vessels, not mentioned until now, have also been wrecked, events, which have caused significant hiatuses in the correspondence between Reinwardt and Van Marum, which, as a consequence, led to unwanted entanglements between the two good friends.

The ‘Prins Frederik’, after having set out to the Netherlands, early 1819, arrived at the Cape, after having sustained serious damage. After a considerable delay it finally arrived in the Netherlands.



## CHAPTER 3

### A COUPLE OF REINWARDT'S SPEECHES AND TREATISES, EXAMINED MORE CLOSELY

#### D. The saltpetre production in Soetjie (near Grissee, In Java)

*[Memorandum, sent to the East Indian government in 1817; see also Reinwardt's correspondence with the government.]*

In this memo, Reinwardt gives a detailed account of the various steps to be taken, in order to obtain pure saltpetre. The base material for the production of saltpetre consists of the excrements of insect- and worm-eating bats. These substances are found on the floor of the caves, where these animals are hiding during the daytime. Its fundamental chemical component is saltpetre. Furthermore this raw material contains a lot of lime. First of all, this lime has to be extracted, for which an excessive amount of potash is needed. Finally, as a result of several repeated and time-consuming treatments with mould a pure nitrous earth is produced. It is known by experience that the whole course of procedures takes about three years. If in the future the need for saltpetre will be growing, the productive capacity in Soetjie will turn out to be insufficient. So, in that case other sites will have to be found. Reinwardt is already aware of the fact that elsewhere in South-East Asia saltpetre can be produced cheaper, for example in Bengal. In his extensive report he concludes that large quantities of mould of the finest quality are needed. This mould can be produced at several locations, for example in Grissee, Surabaya and Sidayeo. After having been produced the raw nitrous earth has to be transported to the saltpetre works of Soetjie. A second factory has to be built there, provided with a large copper kettle or pan. Finally, technical instructions will have to be given, among others with respect to the production site of potash in Gossari. This plant has to be put under surveillance. If all his instructions are followed, it will be possible to double the annual production of pure saltpetre from 39.000 pounds to 78.000 pounds. (De Vriese, 181-186, 191-196)

**E. On the altitude and composition of the mountains in the ‘Preanger Regencies’**

*[Paper, read in a meeting of the ‘Bataviaasch Genootschap van Kunsten en Wetenschappen’, held in Batavia]*

De Vriese blows the trumpet of this most interesting document, in which Reinwardt has demonstrated a new method of determining the heights of mountains, which is different from the methods, applied until then. In De Vriese’s view, the new approach was based on the use of a barometer. The determinations, carried out by Reinwardt produced more reliable results, than former ‘measurements’ had done. The essential of Von Humboldt’s method – based on the assumption of a linear decrease of the air temperature, when climbing a mountain slope, combined with a linear decrease of the atmospheric pressure – seemed to be a reliable foundation of these measurements. Reinwardt has carried out many of these determinations in the various mountain regions of the Dutch East Indies. In this way he has been able to determine the probable heights. Reinwardt used both Dutch and English barometers. In his lecture he also paid attention to the relation between the condition of the atmosphere and the vegetation of the mountain slopes. (De Vriese, 210-213)

**F. On the Areng sugar and the Areng palm**

*[Part of a lecture, delivered at the occasion of a meeting of the ‘Genootschap voor Kruidkunde en Landbouw’ (‘Botanical and Agricultural Society of Utrecht’). Reinwardt has dealt with a similar subject during a meeting of the ‘Eerste Klasse’ of the ‘KNI’ (‘Royal Netherlands Institute of Science, Literature and Arts’, Amsterdam)]*

The Javanese sugar tree (*Arenga saccharifera*, *Gomutus*, *Saquerus Rumphii*, or *Saqueer*) is growing on the islands of the East Indian archipelago, especially in eastern Java and on the Moluccas. After the sap, extracted from these palms, has been boiled, it changes into a thickening paste, which finally turns into a solid mass. This substance is called ‘Javanese sugar’. Reinwardt extensively describes the way in which the natives are producing their sugar from these ‘breads’. Only simple tools are needed. During the course of the drying process the colour of this substance finally turns into deep brown. Areng sugar is much cheaper than cane sugar is. Unfortunately it is very

susceptible to fermentation, like other unrefined sugars are. In his view it is possible to produce alcohol, acetic acid and brandy from this product. (De Vriese, 101, 102)

**G. On the natural fertility of the soil of the East Indian Islands, especially of the island of Java and on its probable causes.**

*[Speech, delivered on 12 October 1826, at the occasion of the public meeting of the 'Eerste Klasse' of the 'KNI']*

Reinwardt explains the obvious relation between the composition and quality of the soil and the vegetation, growing on it. In this way he is practising scientific botany in a modern way. He also describes the vegetation girdles, which are characteristic for the various altitudes of the mountain slopes. He has found that the fertility of the Javanese soil – especially the one of the western part of Java – is very good. Its superficial layer is completely consisting of eroded lava. As a matter of fact, the whole island is one gigantic volcano. The various other rock formations are also easily eroded, because they are always containing minerals like feldspar (or ortoclase) and hornblende. The process of erosion and disintegration of the rocks, which have been expelled by the volcanic eruption is even increased as a consequence of the hot vapours of sulphuric acid and hydrochloric acid, expelled by the working volcano. This process only takes a few years. Because of these facts the Javanese soil never gets exhausted. In Reinwardt's view its quality is really unsurpassed. He knows that the natives do not have to manure it. Besides, water is sufficiently available and the atmosphere is extremely humid, while the nights are rather cool and the land wind and sea wind are blowing alternately. Finally the soil is enriched by the nutrients produced by decaying and disintegrating plants and animals. Additional manuring would even spoil this very profitable situation, because it would give rise to the growing of many unwanted weeds.

## H. On the origin of coral reefs

*[Speech, delivered at the occasion of a public meeting of the 'Eerste Klasse' of the 'KNI', held in 1831]*

Reinwardt gives a physico-geographical description of the condition of the various coastal regions of the Dutch East Indies, in which he makes use of what already has been written by other authors. With respect to the continuous growth of the coasts he observes that for that reason several fast growing plants have been created (by God), which can hold the soil particles, washed down from the thickly grown mountain slopes by the abundant rain showers and river water, such as the herbs *Convolvulus maritimus* and *Dolichos maritimus*, the shrubs *Guilandina Bonduc* and *Bonduccella* and the trees *Acanthus ilicifolius* L. (the 'djeroedoe'), *Acanthus ebracteata* Vahl, *Nipa fruticans* L. (the 'beach palm', or 'atap') and finally the 'mangi' or 'mangroves' (*Rhizophora* and *Brugiera*). According to the reports, received by him, these plants are among others growing on the beaches of the islands of Java and Borneo.

During their long history, the Indian islands must have been subjected to considerable changes. Reinwardt is convinced that in the course of time several islands have merged, as a consequence of the supply of large quantities of alluvial soil particles from the steep slopes, which are ending close to the beaches. In this way the island of Borneo has originated from several islands. Thereupon, Reinwardt discusses the origin of the coral reefs. All islands, except the ones, which have to be regarded as young volcanoes, are surrounded by a more or less circular coral reef, which protrudes into the sea. As a consequence of the continuous formation and deposit of the 'vormende stoffe' ('formative substance'), the maze of coral continues to grow on. The recently developed coral organisms produce a petrifying hull, after which the living organism starts to die. This process goes on for ages and ages. Several islands are more than 200 meters high. Reinwardt knows that other authors have witnessed this phenomenon on the Bermudas, while he himself has had the opportunity to observe it on the islands of Madura, Solor, Timor, Kesser, Groot-Banda and Amboina. The scientists and travelers Peron and Baudin, who have also studied the formation of coral islands, have established these facts, or at least they have succeeded in making these assumptions very plausible. In Reinwardt's view, it is inevitable to accept the

theory of an upheaval of the islands in the course of their formation. The subterranean forces are really inconceivable strong. Finally, these coral rocks are transformed into pure limestone by the compression forces and by the subterraneous heat. In this way, even the highest limestone mountains are of an animal origin, as they have been formed in the sea. In Reinwardt's view Linnaeus did an excellent job, by explaining the origin of these coral islands and limestone mountains in the right way. (De Vriese, 130-173)



## CHAPTER 4 – THE ‘HARDERWIJK’ – PERIOD (1801-1810)

### 1. **C.G.C. Reinwardt (Harderwijk) to the Secretary of the ‘Provinciaal Utrechtsch Genootschap’ (Utrecht); 3 February 1802**

Reinwardt thanks his friend Van Toulon for his kind letter, dated 19 January, through which he is informed that the directors of the ‘Provinciaal Utrechtsch Genootschap van Kunsten en Wetenschappen’ had made the honorary decision to accept him for full membership. He asks Van Toulon to convey his feelings of sincere gratitude and his wishes to serve the ‘Genootschap’ by all his means. Because of his many occupations he is not sure that he will be able to finish his contributions in time. Therefore he asks Van Toulon to consider him to be a subscribing member. Yet he promises to prove himself a worthy member, as far as his occupations will enable him to do so. Furthermore he promises to send him the membership fee (‘inkomstpremie’) as soon as possible. Underlining his sincere esteem, he ends his letter, signing as ‘C.G.C. Reinwardt, A.L.M., Phil. Dr., Chemiae, Botan. & Hist.Nat. Professor ordinarius’.

[GAU 713-11.89]

### 2. **C.G.C. Reinwardt (Harderwijk) to M. van Marum (Haarlem); 28 January 1805**

Reinwardt thanks Van Marum for having been elected member of the ‘Hollandsche Maatschappij der Wetenschappen’ through his intercession. To him it is a new proof of Van Marum’s friendship for him. He informs him that meanwhile two baskets of living plants have been prepared for being sent to Haarlem. They will be sent as soon as a barge will be leaving for Haarlem. He knows that at the moment its captain is taking cargo in the town of Elburg, only a few hours from here. He ends this letter by giving his title: ‘A.L.M., Phil. Dr. Chemiae, Botanices et Histor. Natur. Professor ordinarius’. He would already have sent his answer, if he would not have been elsewhere.

[NA-RANH HMW 444-83; BOT]

**3. C.G.C. Reinwardt (Harderwijk) to M. van Marum (Haarlem); 20 December 1805**

Reinwardt reports on two treatises sent to him by Van Marum. In his view the one dealing with ‘warmth’ is not good enough. The other treatise, discussing the regenerative forces of plants, has a far better quality. It has been well written. Nevertheless it cannot be awarded, because it does not give any new important observations, it has a very fragmented character and it only discusses the subject very superficially. Besides, Reinwardt has many objections against the author’s ideas. He thanks Van Marum for sending him a copy of the *Catalogus Horti Parisientio*. After having examined it, he will return it to Van Marum. If it suits him, he will pay him a visit within the next few days.

[NA-RANH HMW 444-83; PHY, BOT]

**4. C.G.C. Reinwardt (Harderwijk) to A. Thouin (Paris) and L.A.G. Bosc d’Antic (Paris); 20 February 1806**

In the upper left corner of the letter – in Thouin’s handwriting – is marked: ‘Reçu avec cette lettre 68 esp. de gr. Le 28 Février 1806. Env. pr 2d ens 31 esp. de Gr. Demandées par la liste ci-derrière’. In the lower right corner has been written: ‘Reçu 68 gr. de bota.’

After having examined the rich inventory of plant species of the ‘Jardin de Paris’, Reinwardt concludes that several (important) species are lacking. He has added their names and promises to send the seeds, as soon as ‘our garden’ will yield enough seeds. He wants Thouin to regard this gesture especially as a sign of recognition for the very beautiful and rich collection, which he has received last year and not as an equal gesture made in return. Furthermore, as the quality, richness and dimension of Thouin’s garden largely surpasses all other botanical gardens, his colleagues will not easily rival him. Because he does not want to bother Thouin too frequently, he has restricted his choice to the genera mentioned in the catalogue, about which he is preparing a publication at the moment. He also asks the addressees to send him seeds of the species, which are not yet in his possession. Thouin will also find the names of the species marked on the list, which at least have to be present in an academic garden. [See also the list of species, Reinwardt wants to receive from the Paris’ garden]. [The original letter is written in French]

[MNHN Ms 1982a; BOT]

**5. C.G.C. Reinwardt (Harderwijk) to M. van Marum (Haarlem); 15 April 1806**

Reinwardt thanks his friend for sending him a collection of cuttings. He will send him several potted plants in return, which Van Marum has marked on the list of cuttings Reinwardt has sent him. Recently he has added seeds of *Asclepias cussusarium* [perhaps *Asclepia curassavica?*] for Sandberg (living at 'Oosterduin'). At the moment he is in Amsterdam, but he hopes to return to Harderwijk within the next few days. Sunday, after having returned, he will leave for Arnhem. Because his activities are becoming more and more extensive, he will not be able to see Van Marum. He knows that Gall, who at the moment is making a trip through Holland, has promised Van Marum to inform him about the day on which he will carry out a *dissectio cerebri* again. In Reinwardt's view this man is very much in 'ore omnium'. However he has not had the opportunity to discuss the contents of Van Marum's letter with Hesselink. Meanwhile he has received a letter from Hesselink, but not his dissertation. In his opinion everybody is satisfied by Gall's memoirs. He is aware of the fact that many scientists, among others Deiman and Van Swinden, are opposed to Van Marum, a consequence of their inclination towards Hesselink. Until now he has not had the opportunity to exchange ideas about their point of view. Again the illness of his brother is getting more severe, although there is still hope of recovery. Once again he thanks Van Marum for the demonstration of his friendship and for the hospitable welcome Van Marum prepared him at a previous occasion.

[NA-RANH HMW 444-84; ANA]

**6. C.G.C. Reinwardt (Harderwijk) to M. van Marum (Haarlem); Spring of 1806**

The author of the treatise has borrowed the list of nutritional plants entered by him completely from the works of other authors, especially from Linnaeus's *Amoenitates Academicae*. Unfortunately he did not discuss the circumstances under which these plants might be cultivated most successfully on a large scale. If the author had consulted a few other sources – among others Kerner's book – he could easily have added numerous other species. Probably the 'Maatschappij' has already received similar meaningless treatises in the past. It would have been better if the author had confined himself

to a few useful plants – species which really deserve to be generally known for their nutritional value. By doing so, he would have had the opportunity to explain their importance. Furthermore he should have carried out experiments to prove the usefulness of these foreign nutritional plants for food. He should also have mentioned the various nutritional constituents, as well as their cost price, because the ‘Maatschappij’ wanted the answer to the question to be aimed at possible cheap nourishment. The author did not discuss these aspects. Reinwardt ends his report by pointing at several useless ingredients for the production of bread: *Lolium tementulum*, *Spergula arvensis* and *Trifolium pratense*. The author did not at all substantiate these suggestions. The ‘Maatschappij’ should not award this treatise, all the more because apparently it has not been written for this prize contest initially.

[NA-RANH HMW 444-399.76 R; BOT, AGR]

**7. C.G.C. Reinwardt (Harderwijk) to M. van Marum (Haarlem); Spring of 1806**

Reinwardt only needs a few words to give his judgement on this treatise on salmon fishery. First of all the author has made the unforgivable mistake to unveil his identity and to violence the laws of the ‘Maatschappij’, by saying that about twenty years ago, in 1787, he did already enter a treatise on the same subject. Regrettably his new treatise is only a supplement to the old entry. Again he does not furnish new proofs for his statements. He has only added two notarized testimonies, from which it appears that the witnesses have been told by fishermen that they are using young salmons for the eal catch. The author does not deserve to be awarded the first prize, because the ‘Maatschappij’ wanted to receive new discoveries and new facts, through which previous statements would be given a solid basis. It had also demanded new investigations, which might provide an explanation for the observed decline of the salmon stock in our rivers. Furthermore, the author did hardly pay any attention to the natural history of these fishes.

[NA-RANH HMW 444-405.105 R; ZOC]

**8. C.G.C. Reinwardt (Harderwijk) to J. de Vries (Amsterdam); 20 December 1807**

Reinwardt expresses his sincere gratitude for the beautiful present – a printer’s proof of the work produced by pupils of De Vries. Although it still

shows the untrained hand and the inexperienced eye here and there, he wants to congratulate his friend for this result. Furthermore he expects a productive continuation of these activities.

[KB 121 D 8]

**9. C.G.C. Reinwardt (Harderwijk) to M. van Marum (Haarlem);  
Spring of 1808**

Already in his previous entries the author of the agricultural treatise under the maxim 'Simplex ... , etc.' has made himself known as a man of minimal knowledge and poor expertise. Although he discusses various constituents of the manure, like oils, acids, salts, etc., all his statements are conflicting with the actual state of our knowledge of the natural history and chemistry of plants. Neither does he prove that fertilizers do really contain these substances. His notions are too disturbed to expect a correct explanation of the effects. He is speculating at the level of the quack, who explains the action of culvert sap (= opium) by putting that it induces sleep, because it possesses a 'sleep inducing force'. Of course he may possibly be in the possession of some knowledge of manuring, meant for the improvement of waste lands. However the fertilization of these lands, starting from the more modern knowledge of plant physiology is completely absent. Besides, the author does not give valuable information about the effects of fertilizers on plant growth. All things considered, this treatise does not deserve to be awarded.

[NA-RANH HMW 444-402.91(4) R; BOT, AGR, CHE, PHY, MED]

**10. C.G.C. Reinwardt (Harderwijk) to M. van Marum (Haarlem);  
Spring of 1808**

Reinwardt opens his report on the treatise on the chemical backgrounds of agriculture by putting that undoubtedly the contribution of the applied natural sciences to the most important and most useful activities of mankind really produces the most splendid result which one might be hoping to collect. As a matter of fact agriculture is the most important source of our prosperity. Experience has proved the advantages of putting it into practice. Therefore the 'Maatschappij' has once again held a prize contest on this subject. Of course it might have expected that an author, who dares to compete, is well educated in physics and chemistry and that he is well

informed about their application to agriculture. The author – although he is well experienced in agriculture – does not at all fulfil this condition. Neither does he know the best rotation of crops. He only puts that the types of leaf mould, which produce black straw, also contain the most carbon dioxide and potash, while the cereals – producing white straw – exhaust the fields. Reinwardt does not understand the chemical terms the author has used, for example: ‘kalkzuren’ (‘lime acids’). The author does not explain the origin of the substances, which are passed on to the soil by the plants. Furthermore he does not reason logically, nor does he prove his statements with respect to the most important agents of plant growth. This peculiar treatise does not at all match with the actual state of the art. Thorough investigations and experiments and an explanation of the results, based on modern physics and chemistry, are indispensable for a well-founded explanation of the best crop rotation, of plant growth and of the science of fertilization. Although the author is familiar with the composition of the soils of Friesland, Groningen and Guelderland, as well as with the best way of exploitation and improvement of waste lands, he has left too many questions unanswered. [NA-RANH HMW 444-407.118 R; BOT, PHY, CHE, AGR]

**11. C.G.C. Reinwardt (Harderwijk) to M. van Marum (Haarlem);  
Spring of 1808**

The author of the treatise under the maxim ‘Principiis opta ...’, written in German, has performed very well. Reinwardt admires its systematic order, its concise and graceful style and also the fact that every redundancy has been left out. Fortunately the author has based himself on a combination of experience and profound knowledge of the organization (‘structures’) of plants and on their life and growth, particularly of fruit trees. The treatise is pervaded with this expertise. The author has discussed the various diseases of fruit-trees. He has briefly characterized these diseases and their causes, aptly and judiciously. He has also indicated how to detect these causes. In his research he has gone as far and as deep as possible. Often these diseases have their roots in the cultivation processes. Such an expert approach is really uncommon. Furthermore the author has increased the value of his treatise by adding important new prescriptions (formulas) for the cultivation of healthy and abundantly fruit-bearing trees: he has given his ideas about saving, multiplication, planting out and pruning. Finally he informs the

‘Maatschappij’ about the results of his investigations with regard to the prejudices nourished by arboriculturists. He has also advised about how to treat trees which have already been affected. In every way the author did come up to the requirements made by the ‘Maatschappij’.

The author of the treatise, entered under the motto ‘Nisi utile est quod ...’, has performed badly, although he gave many useful advices and although he described the most common diseases of fruit trees as well as their causes. He also gave the various means for preventing these diseases as well as different methods of treatment. Unfortunately, on the other hand this treatise is pervaded with verbosity. It also shows a lack of scientific knowledge, especially with regard to the discussion of the causes of the diseases. The author’s ideas are inconsistent with the starting points of science, or with what is known from experience. His suggestions about the way in which the trees have to be treated and cured, are meaningless. Nevertheless, this treatise also has its good sides, because the author has discussed the most common diseases of fruit trees.

The other two entries do not deserve any attention at all. The author of ‘De waarheid is eenvoudig’ (‘The truth is simple’), has previously entered another treatise under the motto ‘Veritas’. He did interpret the concept ‘fruit tree’ rather widely, as is proved by his definition: ‘all trees that produce fruits, containing seeds’. The author is ignorant of the modern scientific concepts. His answer is incomplete and defective. Finally the author of the treatise entered under the maxim ‘Sine labore nihil’ completely lacks the scientific knowledge needed with regard to this subject. His style is rude, unclear and long-winded. His presumptions regarding the growth and the other phenomena of plant life are inconsistent with the generally known results of earlier observations and with the fundamental principles of the natural sciences as well. The same goes for the treatments suggested by him. In Reinwardt’s opinion he must be a well-experienced arboriculturist. He proposes to award the first entry the gold medal and the second one the ‘accessit’, after the author has made a few corrections.

[NA-RANH HMW 444-407.120 R; AGR, BOT, PHY, CHE]

**12. C.G.C. Reinwardt (Harderwijk) to M. van Marum (Haarlem); 13 May 1808**

Reinwardt informs his friend that during the last few weeks several activities have forced him to stay in Guelderland. Therefore he has not had the opportunity to thank him for the plants, sent to him from Haarlem, until now. Unfortunately he did only receive a part of the promised collection. He sincerely hopes to attend the next meeting of the 'Maatschappij'. By then he will be in Amsterdam again. Furthermore he proposes his colleague Jan ten Brink for membership: 'He is really one of the most outstanding literators!' Finally he proposes two prize contests. The first question is if the loss of oxygen of the atmosphere by animal respiration, by burning, by absorption, etc. is compensated by the air exuded by the living plants, yes or no. The second question is if the determination of the natural families and orders of plants can be sustained by the results of a chemical examination and analysis, yes or no. As his carriage is waiting, he must end this letter now. Most probably he will visit Van Marum next week at the same time and he hopes that he will not be intruding.

[NA-RANH HMW 444-86; BOT, CHE]

**13. H.M. King Louis Bonaparte ('The Loo', Apeldoorn) to C.G.C. Reinwardt (Harderwijk); 19 July 1808**

H.M. King Louis Bonaparte orders Reinwardt to go to Utrecht, where several interesting exotic animals are shown at the occasion of the annual fair. He wants him to examine these animals, to make his choice and to buy the most interesting specimens, which will be accommodated in a menagerie. Reinwardt has to hand over the accompanying letter to the Intendant General Mr. van Lamsweerde, who will provide Reinwardt with the necessary means. His Majesty is convinced of Reinwardt's success with respect to this operation. In a postscript he expresses his wish to take advantage of this opportunity and to realize his plans with respect to the establishment of a menagerie and a botanical garden, both planned in Soestdyk. He allows Reinwardt to act as he considers him to be most profitable.

[De Vriese (1854, pp. 18-19); ZOC]

**14. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Harderwijk); 22 August 1808**

Vrolik informs Reinwardt that by Royal decree he has been appointed member of the 'Eerste Klasse' of the 'Koninklijk Hollandsch Instituut van Wetenschappen, Letterkunde en Schoone Kunsten' (Amsterdam).

[NA-RANH KNI 175-43; KNI]



## CHAPTER 5 – THE ‘AMSTERDAM’-PERIOD (1810-1815)

**15. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Amsterdam); 17 December 1808**

Vrolik asks Reinwardt to report on a treatise on an agricultural question.  
[NA-RANH KNI 175-34.24;AGR]

**16. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Amsterdam), P. Driessen (Groningen) and A.G. Camper (Klein Lankum, near Franeker); 31 January 1809**

The addressees are informed that they have been appointed members of a commission, which has been charged to judge the treatise, entered by G. Troost, entitled ‘Beschrijving van eenen nog niet behandelden kristalvorm van het Fer arsenical (‘Description of a crystalline form of the Fer arsenical, which has not been discussed until now’).  
[NA-RANH-KNI 175.34.38; CHE, PHY]

**17. A. Thouïn (Paris) and L.A.G. Bosc d’Antic (Paris) to C.G.C. Reinwardt (Amsterdam); 1 February 1809**

[‘Billet de la main de Thouïn’] ‘A M. Reinwardt, Dr. et Dir. Du Jard. Royal de Bot. à Haarlem; 931 Esp. de Gr., choisies au juger; expéd. Le 1<sup>er</sup> fév. 1809’.  
[MNHN 1982d; BOT, COB]

**18. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Amsterdam), M. van Marum (Haarlem) and A. van den Ende (Haarlem); 14 February 1809**

The addressees are invited to advice on a schedule of lectures, to be delivered by the members of the ‘Eerste Klasse’ of the ‘Instituut’ and to give their opinion on treatises, investigations and observations, etc.  
[NA-RANH KNI 175-34.44]

**19. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem); Spring of 1809**

Reinwardt discusses three treatises, entered in response to the contest about the lead poisoning of water. These treatises have been entered under the maxims ‘Felix qui potuit ... etc.’ (‘A’), ‘Ratione et experientia’ (‘B’) and ‘Non

fingendum, aut ex cogitandum ... etc.' ('C'). Only the first of these entries deserves to be considered. The two other treatises are incomplete and not at all important. The treatise marked 'B' even lacks the most common and most generally known chemical principles. The treatise 'A' is not perfect either. For example, the author did not comply with the requirement of being brief. His treatise shows an unnecessary lengthiness and a forced and mannered style. In the author's view the causes of the lead poisoning of the water are a 'heat substance', oxygen, water (itself), carbon dioxide, a vegetable acid, lignin acid, phosphoric acid and finally hydrochloric acid (as a constituent of the atmosphere), while he also thinks that the glazing of the roofing tiles is also poisoning the water. All in all, the author gives a very comprehensive explanation of the chemical aspects, even more comprehensive than most chemical textbooks do.

However, he erroneously puts that each of these causes is able to dissociate the lead in water. Reinwardt is sure that this only happens if at least several of these causes are concurring. Several of the author's statements have not been proved; they are only suppositions. The author should have carried out experiments. This goes for example for the dissociation of carbon dioxide, which – in the author's view – is the consequence of its immediate action on the lead. Furthermore the author supposes that the atmosphere also contains phosphoric hydrogenium, which is responsible for the dissolution of the lead. He also describes a few experiments, carried out by other scientists: Lead – if exposed to the air – is affected soon, after which its particles mix with the water, especially on places, where rotting and fermenting animal substances are present, where the atmosphere contains hydrochloric acid and where sunshine and rain are alternating with each other. The author makes several suggestions: The slightly sloping roof gutters should be cleaned regularly, the gutters should be covered with planks and they should be painted with copal varnish. In his view unglazed roof tiles should be preferred.

In the second part of his treatise the author does not give any useful advice. In spite of these defects, this treatise will be useful to many readers, after it has been cut short and after the author has improved his style of writing. Thereupon he should be awarded the silver medal. Reinwardt advises not to hold this contest again, because several other chemists have already profoundly discussed the subject and because they have already warned the public about the danger of using lead roof gutters, lead water butts and badly

glazed pottery.

[NA-RANH HMW 444-405.103(2) R; CHE, MED, PHY]

20. **G. Vrolik (Amsterdam) to M. van Marum (Haarlem), A.G. Camper (Klein Lankum, near Franeker) and C.G.C. Reinwardt (Amsterdam); 30 July 1809**

The addressees are invited to give their opinion with regard to various minerals, sent to the 'Instituut' especially on pseudo diamonds from the 'Lochemsche Berg'.

[NA-RANH KNI 175-34.80; GEO, MIN, CHE, PHY]

21. **G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Amsterdam), P. Driessen (Groningen) and M. van Marum (Haarlem); 8 August 1809**

Vrolik wants to receive a judgement about the treatise entered by G. Troost, entitled 'Natuur- en Scheikundige Beschrijving van den Fer arsenical' ('Physical and chemical description of the arsenic iron')

[NA-RANH KNI 175-34.95; MIN, PHY, CHE]

22. **G. Vrolik (Amsterdam) to M. van Marum (Haarlem), P. Driessen (Groningen) and C.G.C. Reinwardt (Amsterdam); 8 August 1809**

Vrolik asks the commission to advise him about the factory of A. Ijpelaar.

[NA-RANH KNI 175-34.96; TEC]

23. **G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Amsterdam), P. Driessen (Groningen) and A.G. Camper (Klein Lankum, near Franeker); 21 September 1809**

As G. Troost did not succeed in improving his treatise on the 'Fer arsenical' (arsenic iron) to the satisfaction of the commission, the 'Eerste Klasse' has decided to submit this entry once more to the commission.

[NA-RANH KNI 175-43; CHE, PHY]

24. **G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Amsterdam), P. Driessen (Groningen) and A.G. Camper (Klein Lankum, near Franeker); early October 1809**

Vrolik repeats his demand to be informed about the opinion of the jury with regard to the treatise of G. Troost on the 'Fer arsenical'.

[NA-RANH KNI 175-34.117; PHY, CHE]

**25. S.J. Brugmans (Leyden) to C.G.C. Reinwardt (Amsterdam); 30 November 1809**

With the barge, leaving on 30 November 1809, Brugmans has sent the drawings of the bones, found in 1805, after the bursting of the dike of the river Waal, near Weurth, in the neighbourhood of Nijmegen, to Reinwardt. These bones are now in his collection. Dr. A.C. Bonn, who has died meanwhile, has made the drawings on one third of the full size. They are a tangible memory of this outstanding friend, who died at such an early age. The skull has been drawn in a frontal view and in a view from below. It seems that it is a part of the remains of an aurochs (*Bos primigenius*). Bonn has also made drawings of the tibia and femur of an elephant species. Brugmans informs him that he has in his possession the major part of the humerus of an elephant and one of its hindmost molars. In his view the bones of the elephant proved to be of the Asiatic 'race'. All these bones have been washed out at the occasion of the bursting of the above mentioned dike. New attempts to find more remains, made in the early summer (of 1809) have been in vain, although a few horse's molars were found, which have been hidden in the soil for a very long time. In Brugmans's opinion it is remarkable that most of the Aurochs bones are found in the neighbourhood of rivers, together with those of elephants and horses. He would like to describe these bones in cooperation with Reinwardt and he wants to combine the drawings and bones which are in the possession of his colleague with Bonn's masterpieces. In return he allows him to use his drawings for a lecture. Reinwardt will probably know that Cuvier has already written about these Aurochs bones in volume 12 of the *Annales du Muséum*. With respect to these drawings Reinwardt should not let his authority slip. Unfortunately Brugmans will not have the opportunity to attend Reinwardt's lecture coming Saturday. He hopes to see him next week. He commends himself in Reinwardt's constant friendship and signs as his obedient servant and friend, expressing his high esteem.

[UBL BPL 609-2; ZOC, GEO]

**26. C.G.C. Reinwardt (Amsterdam) to A. Thouïn (Paris) and L.A.G. Bosc d'Antic (Paris); 17 December 1809**

[In the upper left corner Thouïn has added: 'Reinwardt, Tout excepté les triviales; Au Palais Royal à Haarlem en Hollande, ce 17 Décembre 1809.']

Reinwardt informs Thouïn and Bosc that His Majesty the King of Holland



Sebald Justinus Brugmans (1763-1819)

has decreed that a 'Botanische Tuin' ('Botanical Garden') and a 'Museum van Natuurlijke Historie' ('Museum of Natural History') will be established in the neighbourhood of Haarlem and that he has been appointed Director of these two establishments, a very honouring position. Meanwhile he has left the University of Harderwijk, where he has been professor of chemistry and natural history, as Thouin knows. Since several years, Thouin is honouring him by his correspondence. He has also received considerable sendings of seeds for his garden. He has made exact notes of all these shipments. Because His Majesty has put him in charge of the laying out of a large garden, he hopes that Thouin is willing to continue his correspondence with him and that he will allow him to take again advantage of his generosity. Thouin would oblige him endlessly if he would let him share in the latest harvest of seeds of his rich collection of living plants. For his part he underlines that in the future he will be able to meet his obligations to Thouin more than he has been able to, until now. As soon as the new garden has been completed, he will inform him and Thouin should let him know with what he may serve him. [The original letter is written in French]

[MNHN 1982b; BOT, COB]

**27. S.J. Brugmans (Leyden), J.A. Bennet (Leyden) and C.G.C. Reinwardt (Amsterdam) to G. Vrolik (Amsterdam); 21 January 1810**

On behalf of his colleagues Brugmans answers the question, asked by the Minister of the Interior, regarding the production of sea salt by the evaporation of sea water at the coast near Katwijk. The quality of this product has to be compared with the common edible salt, available at the merchant's. The question is if the government has to promote this production, yes or no. Some information regarding its chemical and physical properties are given, resulting from several analyses. A list of impurities has also been added. This salt is harmless to health, although it still has to be purified. The sea salt from Katwijk has almost the same qualities as the salts from Lisbon and Saint Ubes. The other members of the jury fully endorse to his judgement. A second question, asked by the Department of the Interior, remains unanswered.

[UBL BPL 609-2; PHY, CHE]

28. **G. Vrolik (Amsterdam) to the members of the ‘Eerste Klasse’ of the ‘Koninklijk Nederlandsch Instituut’ (Amsterdam); 27 January 1810**  
Van Barneveld’s treatise on medicinal (or therapeutic) electricity will be submitted to the judgement of A. Paets van Troostwijk, M. van Marum and C.G.C. Reinwardt.  
[NA-RANH KNI 175-43; MED, PHY]
29. **A. Thouin (Paris) and L.A.G. Bosc d’Antic (Paris) to C.G.C. Reinwardt (Amsterdam); 15 February 1810**  
This note [‘Billet de la main de Thouin’] bears the text: ‘Graines demandées par S. Ex. l’Ambassadeur de Hollande, pour le Jardin Botanique de S. Majesté; 306 esp. désignées par un catal. de demandes; Exped. le 15 février 1810.’  
[Notice of a shipment].  
[MNHN Ms 1982e; BOT, COB]
30. **G. Vrolik (Amsterdam) to the members of the ‘Eerste Klasse’ of the ‘Koninklijk Nederlandsch Instituut’ (Amsterdam); 3 April 1810**  
On behalf of its members Camper, Van Marum and Reinwardt, Vrolik informs the other members of the ‘Eerste Klasse’ about a variety of rock, found on the ‘Lochemsche Berg’.  
[NA-RANH KNI 175-43; GEO, MIN]
31. **G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Amsterdam) and J.A. Bennet (Leyden); 7 April 1810**  
Vrolik asks the addressees to inform the members of the ‘Eerste Klasse’ about Camper’s proposal for the improvement of the classification of the Reptilia, known as lizards and snakes.  
[NA-RANH KNI 175-34.180; ZOC]
32. **C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem); Spring of 1810**  
Reinwardt reports on two entries to a prize contest, which has been held by the ‘Maatschappij’. First of all he discusses the entry, entered under the maxim ‘Natuur door kunst en vlijt ...’ and secondly the entry, entered under the motto ‘Mest sterkt de plant op klei, veen en zand’. Both treatises do not offer any valuable instruction. Undoubtedly the authors are experienced

agriculturists. Regrettably they did not provide any new information about the fertilization, development and manuring of waste lands. Both entries lack a theoretical physical foundation. The author of the first treatise devised his own strange and incomprehensible manuring theory, in which he only explains the formation of manure substances like ammonium salt and 'caustic acids' as a consequence of the digestion of grass by herbivores. He did not explain or elucidate any aspect, nor did he carry out any experiments. Furthermore he repeatedly contradicted himself. Reinwardt sincerely hopes that a rehearsal of the contest will yield a new entry, which is acceptable from a scientific point of view, for example written by a scientist of the same calibre as Theodore de Saussure. He rejects both entries.

[NA-RANH HMW 444-402.91(5) R; AGR, CHE, BOT]

**33. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem);  
Spring of 1810**

The author of the well written treatise, entered on the contest about harmful insects demonstrates – after having given a definition of these category of animals – his expertise in this field and explains why insects, which are not harmful at the time, might develop into harmful species in the future. He also stresses that certain species, which are not harmful in Holland, but are so in the surrounding countries, might turn into harmful species. His descriptions of the natural history of these insects are clear and well-considered. They include everything what could possibly be told about their reproduction and metamorphosis. The author has given both the German and Latin names and has added 11 beautiful drawings in black and white. His use of words is perspicuous and concise. Furthermore he has also described the circumstances under which these insects multiply rapidly and informs his readers about the best way to fight them. Once more it turns out how important it is to be well informed about the natural history of the insects. Nevertheless, these animals have also their share in the provisions made by the 'Creator', in order to guarantee the continued existence of all creatures. The author correctly warns about the extinction of insect-eating birds and he mentions moral reasons like ignorance, superstition and prejudice. He underlines the importance of the measures taken by nature itself, measures which prevent a too strong reproduction, like natural enemies and the weather conditions during the period of reproduction. Men should apply this knowledge well.

Only by doing so, the natural equilibrium can be maintained. In order to be successful, the measures should meet with the requirements. Fortunately the author does not think much of prescriptions which cannot stand the scientific test. Reinwardt accepts the fact that it is impossible to offer new means, which have been kept secret until then. All the suggestions made by the author are based on a profound knowledge of the harmful insects ('So all these means have been indicated by Nature itself!') Reinwardt admires the pity and the author's charming style of writing and the clearness of his explanations. Perhaps the only objection against this treatise might be that it cannot be applied completely to our country, because the author is living in Germany. Several insects, still not harmful in Holland, have already caused enormous havoc in Germany and in the North-European countries. This excellent treatise absolutely deserves to be awarded the gold medal. Besides it could constitute a splendid entity with the treatise on the diseases of fruit trees, which has been awarded the gold medal two years ago.

[NA-RANH 444-406.109 R; AGR, BOT, ZOC, PHY]

**34. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem);  
Spring of 1810**

Having been invited to examine two treatises on the production of salt from seawater, Reinwardt pays most attention to the entry under the motto 'Tot nut en voordeel'. Rightly, the author has concluded that it makes no sense to isolate salt from seawater, when both refined salt and salt, imported from abroad, are cheaper. The humidity of the air and the low temperature make its production – simply by evaporation – impossible. Formerly, the government could afford to refine the rough salt, imported from elsewhere, not in the least because of the flourishing commerce and sea-going. Meanwhile things have changed. Therefore this subject has to be discussed again. The price of salt – an indispensable food article – is so high, that it might make sense to produce it ourselves, in order to tap a new source of prosperity and industry. Therefore the author did propose to build salt huts ('zoutketen' or 'graderhuizen') along the coast of Holland and to produce enough salt to cover the domestic demand and even to export the surplus. Unfortunately the atmospheric humidity and the low temperatures obstruct the salt production. At least artificial heat is needed to produce enough salt. The details, given by the author, prove that he has considered every aspect

of his design. Reinwardt discusses the technical details (among others those of the water mill, which is needed to supply the seawater). Correctly, the author prefers fires of oak, just like they are used in the malt-houses. By doing so the evaporation of seawater and the precipitation of the sea salt will be facilitated. Of course the modern 'gradeerhuizen' can be provided with a steam engine ('fire engine'), if desired in combination with a windmill. In Reinwardt's view the best fuel is the pit coal from England and Sunderland (Scotland).

The treatise excels in scrupulousness, clearness and acumen. Its concept is bright. If the government should decide to build salt huts, this treatise will do the government a good office.

All in all, the author did not answer the question completely. First of all he should have calculated the cost price (Will the salt produced in the salt huts be cheaper than the salt offered from elsewhere?). Secondly the author did not pay attention to the fact that the water from the various German sources contains more salt than the seawater along the Dutch coast does. Thirdly the author should have mentioned the fact that the salt produced in the salt huts still has to be refined, before it can be used. All in all, the treatise cannot be awarded yet. The author has to be informed that he still has to complete his entry.

The other treatise (under the maxim 'Quidquid agio, prudentes agus, et respice finem') is far more superficial and does not deserve to be considered. The author has paid most of his attention to the description of the analysis of seawater, once carried out by the famous Gaubius (see: 'Adversaria varii augmenti') and to a few other experiments, among others with respect to the specific density of seawater at various depths along the Dutch coast. Reinwardt keeps his doubts about the exactness of the experiments carried out by the author, because his results do not correspond with Gaubius's results. Finally the author also has his objections against the establishment of salt huts along the Dutch coast. He expects more from the use of simple salt pits, dug in the beach, in which the seawater can evaporate, or from the use of receptacles. This treatise does not deserve to be discussed any further. [NA-RANH HMW 444-408.125(1) R; CHE, PHY]

35. **A.C. Paets van Troostwijk (Amsterdam), M. van Marum (Haarlem) and C.G.C. Reinwardt (Amsterdam) to the members of the 'Eerste Klasse' of the 'Koninklijk Nederlandsch Instituut' (Amsterdam); 12 July 1810**

Although Van Barneveld's treatise on the medicinal use of electricity is still incomplete, it deserves full marks, at least if a few aspects will be completed. [NA-RANH KNI 175-43; MED, PHY]

36. **G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Amsterdam), C.H. à Roy (Amsterdam) and J. Kops (Utrecht); between 25 and 28 July 1810**

Vrolik asks advice about the letters, which Driessen (Groningen) has sent to him about a couple of agricultural and chemical subjects (and about their economic aspects).

[NA-RANH KNI 175-34.196; CHE, AGR]

37. **G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden) and C.G.C. Reinwardt (Amsterdam); 28 July 1810**

Vrolik wants to be advised about the treatise discussing the salt production from seawater, entered by S. Kress, director of the water purification works, which has been conveyed to him by the Ministry of the Interior.

[NA-RANH KNI 175-34.202; CHE, PHY]

38. **G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden), M. van Marum (Haarlem), A.G. Camper (Klein Lankum, near Franeker) and C.G.C. Reinwardt (Amsterdam); 8 September 1810**

The Minister of the Interior is acquainted with the fact that the 'Eerste Klasse' of the 'KNI' is occupying itself with the affair of the Lochemsche Berg' and with the question if the exploitation of the quartz lumps will be profitable, yes or no. In his covering letter Vrolik asks to be informed soon.

[NA-RANH KNI 175-34.223; GEO, MIN, PHY, CHE]

39. **C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem); 20 September 1810**

For the moment, Reinwardt has no opportunity to write a meaningful document on the control of the May-beetle. In his view it will take at least one or two more years before research has made enough progress. At least all

stages of the metamorphosis must be well-known, as well as the duration of each developmental phase. Only after that it will be possible to determine the effectiveness of the applied pesticides. So Van Marum will have to wait. Reinwardt hopes to see him today at the 'Instituut' (Amsterdam). At that occasion he will inform him about his decision. He adds his greetings to the ladies and expresses his feelings of friendship.

[NA RANH HMW 444-88; ZOC, AGR, CHE, PHY]

**40. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Amsterdam), C.H. à Roy (Amsterdam), J.N. van Eys (Amsterdam) and J. Kops (The Hague); 22 November 1810**

Vrolik asks the addressees to assess a treatise, written by Mr. Siegens van de Weerde on the experimental cultivation of coffee near Amersfoort.

[NA-RANH KNI 175-34.234; AGR, BOT]

**41. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Amsterdam), M. van Marum (Haarlem) and A.G. Camper (Klein Lankum, near Franeker); 22 November 1810**

Vrolik informs his colleagues that the Minister of the Interior has asked to inform him more specifically about certain minerals found in the soil of the Veluwe.

[NA-RANH KNI 175-34.235; GEO, MIN, CHE, PHY]

**42. A. Thouïn (Paris) and L.A.G. Bosc d'Antic (Paris) to C.G.C. Reinwardt (Amsterdam); 30 January 1811**

['Billet de la main de Thouïn'] Note of a shipment, sent to Reinwardt: '(Au) Jardin de Botanique de Harlem; Reinwardt Prof.: 364 Especies choisies au juger, Exped. le 30 janv. 1811'.

[MNHN 1982f; BOT]

**43. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem); 7 February 1811**

Reinwardt informs his friend that meanwhile his sight has improved again. Yet he has to act carefully, especially when he is reading and writing in the evening hours. As a consequence he is running into arrears more and more. Unfortunately there is a lot of work to do. Regrettably he has received a

second treatise from Van Marum. He would be pleased if his friend would allow him to return this document later. Initially he had decided to return it together with a covering letter, because it really needs to be assessed thoroughly and without delay. However, now he has decided to keep it, because Van Marum would absolutely be disappointed and the subject is really challenging. He will try to return it in time.

[NA-RANH HMW 444-89]

**44. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem); 13 February 1811**

Only reluctantly Reinwardt has succeeded in completing the assessment of the treatise on the classification. These last days the judgement of treatises has taken too much of his time. He had to work until late in the evening. He will add his report to the next treatise to be judged by him. Nevertheless this treatise turned out to be excellent. He ends by adding the well meant words of gratitude, sent by Gay-Lussac and Thenard. He asks his friend to accept his apologies for the late return of the treatise.

[NA-RANH HMW 444-89; CHE]

**45. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem); 20 February 1811**

At the moment when the 'Maatschappij' organized the prize contest on the 'principia remota' of the animal body, it was still unknown to her in which way these principles are produced in the animal body. Besides it was still impossible to explain the presence of many of these elements by a simple comparison with the constituents of their nutrition. Therefore the 'Maatschappij' wanted to receive an explanation, which would confirm what was already known and which would also provide new facts and new proofs. In Reinwardt's view the author only repeated what has already been brought forward by other scientists, especially with regard to the presence of the elements oxygen, hydrogenium and nitrogen. The author has kept silent about the origin of phosphorus, sulphur, sodium carbonate, iron and calcium, although the concentration of these substances in the animal body is much higher than can be explained from the analysis of their nutrition. In the author's view some of these elements are produced by the animal body itself. Yet he does not bring forward any proof. He did not pay sufficient attention to the objections to these ideas made by other scientists.

The author's argumentation is defective and confused. He simply states that the iron is born in the animal body by a special power! Contradictions and prejudice are characterizing this treatise. Although he only proved the production of one element – calcium – he has fulfilled the conditions made by the 'Maatschappij'. The animal body is richer of calcium than can be explained from the results of the chemical analysis of the animal body. Reinwardt has strong doubts about the reliability of the chemical analysis, as well as about the correctness of the author's presumptive suppositions. Even if the author should carry out new and more precise experiments, he would not deserve to be awarded, because virtually he only repeated the question. [NA-RANH HMW 444-406.108(1) R; ZOC, CHE, PHY]

**46. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Amsterdam); 27 March 1811**

Vrolik has received a letter from G. Wttewaal about a collection of ploughs, which are kept in the 'Natuurkundig Kabinet' ('Physical Cabinet') in Amsterdam. Wttewaal has proposed to hold a contest about the mathematical determination of the most appropriate shape of ploughs. Vrolik has sent a copy of this letter to Kops and Van Marum. [NA-RANH KNI 175-34.260; MAT, AGR]

**47. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem); 19 April 1811**

Reinwardt returns several treatises on the subject of water treatment together with his reports. Van Marum will probably be surprised by the contents of his judgements, although he will undoubtedly understand his arguments. The Dutch entry is not able to touch the French treatise. Most regrettably the assessment of these two treatises and writing the preliminary report has taken too much of his time. The final report has become more extensive than he had hoped. After his last conversation with Van Marum he had decided to justify the grounds for the rejection of the two treatises. Finally he hopes to be in good health again tomorrow. [NA-RANH HMW 444-89; PHY, CHE, MED]

**48. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem);  
Spring of 1811**

The author of the treatise on the watering of plants has the opinion that the effect of rain on plants is much more favourable than any other way of watering (for example by using river water, well water or rainwater). Any way of watering immediately washes away the invisible nutritious particles, which are present in the soil. Furthermore he mentions the possible crustation of the soil and the fluctuations of the temperature as possible causes of the less favourable effect of watering. In the author's view it is possible to improve the effect by digging small trenches in the ground and by filling these with rainwater. Perhaps river water is even more fertile than rainwater, because of its 'richness'. Regrettably the author did not carry out a chemical analysis of fresh rainwater, nor did he compare its components with those of the other types of water. The same goes for the investigation of the atmospheric changes by rain and for the possible changes of the structures and physiology of plants as a consequence of the various types of watering. All in all, the question if the rain changes the growth of plants, yes or no, has not been answered.

[NA-RANH HMW 444-410.135(1) R; BOT, PHY, CHE]

**49. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem);  
Spring of 1811**

Reinwardt sends his friend the report on three treatises on the subject of leaven (yeast), used for the production of bread. These three entries have been marked 'B' (under the maxim: 'Met het beste oogmerk'), 'C' ('Leyden, 9 Juny, 1809') and 'L' (under the motto: 'Non fingendum ... etc.'). Only the third entry deserves any attention, while 'C' is the worst, and 'B', although it gives a few good ideas, lacks any new points of view, not even with respect to the baking process. Because the 'Maatschappij' had asked to produce a physical and chemical consideration of the fermentation process, Reinwardt could focus on the treatise, marked 'L'. It has been very difficult to give his judgement, not only because of the size of this entry, but also because – in the voluminous supplement – the author did retract several statements or actually most of his treatise. This does not only apply to his theoretical views, but also to the results of his experiments. In the author's view the chemical change caused by leaven is an ordinary type of fermentation. In

this respect he differs from Fourcroy. In Fourcroy's view the fermentation of leaven has to be ranked between the fermentation producing acetic acid and the fermentation occurring in decaying processes. The author has decided to reject this idea. His explanation of the fermentation process is far too concise and far too superficial. Although he has demonstrated that the fermentation is in fact a 'vegetalo-animalic' process, he wrongly states that it needs nitrogen. Reinwardt does not know if wine and vinegar do contain any nitrogen, although the experiments carried out by the author seem to prove that supposition. He also knows that the experiments carried out by Tromsdorff and Rose did prove the contrary. In the author's view the fermentation of leaven is only a less advanced fermentation of wine. Reinwardt does not believe that this fermentation process, if carried out in a closed bottle, will clearly produce drops of alcohol, nor does he believe that the fermentation of leaven is passing off automatically and that it is possible to distinguish different stages. Reinwardt does not agree with the author that these stages can be stopped by changing the circumstances. On the other hand the author's explanation of the changes occurring in the sap of indigo plants are acceptable to him. Unfortunately the author did not pay enough attention to the ideas of Fourcroy. In Reinwardt's view the fermentation of leaven is not at all an example of wine fermentation ('alcoholische gisting'). The author should have analyzed these processes more meticulously. All in all, he did not answer the first question to the complete satisfaction of the 'Maatschappij'. Although he did answer the other parts of the question more satisfactory ('He proved that the fermentation process does not need air'), the part of the question regarding the changes of the 'principia proxima' of the substances, which are subject to the fermentation process, has been well elaborated. In the author's view the fermentation process has only left behind the 'principia remota'. In order to prove that, he proposes a destructive distillation. Reinwardt is fully aware of the fact that the author has borrowed this idea from Fourcroy. So he did not prove anything by experiment. The 'Maatschappij' cannot content itself with this result. So it is impossible to award this entry, although the author has made several valuable observations. In spite of this failure, he is obviously an experienced chemist. [NA-RANH HMW 444-410.138 R; BOT, CHE, PHY]

**50. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem); Spring of 1811**

Reinwardt opens his report on a treatise on magnetism under the maxim 'Magnetismus est anima mundi', by observing that he does not think much of the mental legacy of the 'Natuurfilosofen'. They are not at all true scholars, because they do not practise experimental physics and physiology. The same goes for the author of this treatise, who adheres to the so called 'transcendental natural philosophy'. Reinwardt does not at all understand why the author considers each plant as a kind of 'amphibion' with its own polarity. One of the two poles sticks in the soil, while the other pole is directed upwards into the atmosphere. Everything the author observes is completely incomprehensible nonsense to Reinwardt. He completely dislikes this entry. The 'Maatschappij' should not pay any attention to this treatise and reject it without further delay.

[NA-RANH HMW 444-400.83(1) R; MED, CHE, PHY]

**51. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Amsterdam); 3 June 1811**

Vrolik asks Reinwardt and two other members of the 'Eerste Klasse' to judge several documents in which the usefulness of various types of cinchona, the indigenous 'Kastanje cinchona bark' (Chestnut bark) and the West-Indian cinchona, are discussed. The 'Intendant-general' Baron D'Alphonse wants to be informed, especially with respect to the question if the Chestnut bark could replace the cinchona of the West-Indies.

[NA-RANH KNI 175-34.271; BOT, MED, CHE]

**52. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem); 6 September 1811**

Reinwardt is very honoured because he has been invited to judge this treatise on the water purification. He has ascertained that the author has only answered the first and third parts of the question, asked by the 'Maatschappij'. He must be an experienced scientist who has occupied himself for many years with this question. He is well informed about what other scientists have already written about the subject. He has also realized the importance of the question for the health of mankind. Therefore his treatise deserves full attention of the 'Maatschappij'. In spite of all these facts, the entry is still

capable of improvement. The author will have had the same feelings, since he has indicated already that he had to write his contribution in a hurry. Lack of time and a period of disease have kept him from carrying out all the experiments himself. Nevertheless his treatise really excels, for example with regard to the physical and chemical properties of charcoal and to its capacity to absorb vapours. The author also describes its power to purify polluted fluids.

This first part of the treatise is really of high quality. In its second part, which is experimental, the author has given two possible explanations for the purification of water and the removal of harmful and stinking substances and vapours. He has investigated the qualities of charcoal, prepared from different kinds of wood, in order to learn if these various kinds of charcoal do possess different absorptive powers, yes or no. He deduces that the charcoal made of hard wood is better than the one made of soft wood and he even adds a table of the results of these comparisons.

In the third part of the answer the author has discussed the various ways of purifying water, needed for drinking water and for preparing meals. The power of extraction of impurities from the water is limited. For example it is impossible to get rid of selenite (which causes the hardness of water). The difference between 'clarification' (making the water clear) and 'purification' (removing the impurities and harmful substances) should be noticed well. The author also points at the various means, which can be applied in combination with charcoal, such as sand beds (sand filters), gravel beds, sponges, filtering stones and so on.

In the fourth part the author has discussed several filtering appliances. He has proposed several technical improvements. Reinwardt is really impressed by the news that the author has recently been involved in large scale water purification processes in Paris, among others in the project of making the Seine water drinkable. In an irrefutable way the author has proved the advantages of his procedures and he is apparently familiar with the works of those scientists, who have occupied themselves thoroughly with this important question. Unfortunately, the author seems to have restricted himself to the reading of French publications on this subject. Therefore he does not know the excellent treatise, written by Van Stipriaan Luïscius, So he did not examine the possibility of combining his procedures with those, designed by Van Stipriaan Luïscius. Finally Reinwardt regrets that the

solutions, the author came out with, are especially focused at the situation of Paris. In spite of these remarks, Reinwardt decides that this treatise should be awarded the gold medal.

[NA-RANH HMW 444-403.99(1) R; CHE, PHY, MED]

**53. C.G.C. Reinwardt (Amsterdam) to J.H. van Swinden (Amsterdam); 17 October 1811**

While preparing the lecture, to be delivered by him today in the meeting of the 'Eerste Klasse' of the 'Koninklijk Nederlandsch Instituut van Wetenschappen, Letterkunde en Schoone Kunsten', he has been informed that he has to leave Amsterdam, because of an urgent business. So he will not be able to meet his obligations towards the 'Instituut'. He asks Van Swinden to inform his fellow members and to convey his compliments to the 'Eerste Klasse'. At the first possible occasion he will rectify this omission.

[NA-RANH KNI 175-28(66).59]

**54. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem); 19 November 1811**

Reinwardt returns the treatise on the purification of water, together with his report. He expects Van Marum to agree with him that this entry cannot rival the French treatise. He apologizes for having entered his report too late. He is convinced that he has sufficiently founded its rejection.

[NA-RANH HMW 444-89; CHE, PHY, MED]

**55. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Amsterdam); 10 December 1811**

Vrolik asks for an advice with respect to the application by A. Rookes (Rotterdam) for a patent on the export of artificial coffee for a period of 15 years.

[NA-RANH KNI 175-34.298; AGR]

**56. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem); probably the end of 1811**

Although the modest treatise, entered by Jandin (Düsseldorf), entitled 'Theorie der Pflanzenkultur', offers some general knowledge of botany and also a few fundamental rules for the cultivation of plants, it does not

give any new facts. Obviously it has been written by someone who has the knowledge of the average farmer. The author did not at all study the modern physical and chemical backgrounds of the cultivation and growth of plants, or of the fertility of the soil. Although Reinwardt wants to show his appreciation of this simple attempt to compete in a prize contest held by the 'Maatschappij', this entry cannot be awarded.

[NA-RANH HMW 444-89; BOT, CHE, PHY, AGR]

**57. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem); 28 February 1812**

Reinwardt wants to postpone the return of his report on a treatise. These last few days he has spent too much of his time on his duties as a member of various juries. These activities will end early next week. Does Van Marum know if there is a geological or geographical map available of a country or a region in Europe, which has already been explored by geologists? Perhaps the Hartz-region? He would like to borrow a larger map, in order to use it for a lecture, to be delivered by him next week in 'Felix Meritis'. Yesterday the 'Grand-Maître' of the 'Université Impériale' has assured him that the 'Athenaeum Illustre' will be continued as 'École Secondaire'.

[NA-RANH HMW 444-90; GEO, UNI]

**58. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem); Spring of 1812**

Reinwardt expresses his admiration for the treatise under the maxim 'Luther und der liebe Gott ... etc.', in which the fertilization and maintenance of the fertility of various soils have been described. The author has meticulously analyzed the fertilizers and other soil improving substances. He has also discussed the way in which the various soil improving substances should be added. He has opened his treatise by giving a survey of the various soil types, based on their chemical properties (the presence of the 'principia proxima'). He founded his suggestions on the same facts. He took the achievements of the new physics and chemistry for his starting point. By doing so he really did an excellent job. However, after having tested the treatise against the intention of the 'Maatschappij', it appeared that the author did not provide a new and complete fertilization theory, entirely based on the new chemistry and the new plant-physiology, although he did not centre his thoughts on

its secrets. He aimed too much on the fertilization problems and too less on the analysis of the vegetation, growing on the various soils. Although he indicates that different plants should be grown on different soils, he does not explain why. These facts exclude the award. The second treatise – marked ‘B’ – does not deserve any consideration at all.

[NA-RANH HMW 444-402.91(6) R; AGR, BOT, CHE, PHY]

**59. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem);  
Spring of 1812**

With respect to the two entries judged by him, Reinwardt decides that only the treatise entered under the motto ‘Ratione et experientia’ deserves some attention. The author is really familiar with the construction of the ‘salt huts’ or ‘gradeerhuizen’, as well as with the problems and principles of extracting salt from seawater. He advocates the construction of these salt huts along the Dutch coast and he gives many details about how to build these huts. He also calculates the quantities of seawater, needed for the production of a certain quantity of salt. Reinwardt regrets the fact that this treatise cannot be awarded, because a part of the question remained unanswered, perhaps because the author did not have the opportunity to collect the necessary information. The fact that he is a German scientist is the main cause of the incompleteness of the entry. He is not familiar with the peculiarities of the Dutch coastal region and he did not foresee the problems. Furthermore he is not familiar with the average salt contents of the seawater. This fact has its consequences for the profit to be expected. Finally the author did not pay attention to the fact that the impurities of the German rock salt are quite different from those contained in the sea salt. These impurities might complicate the evaporation of the seawater and its gradation (purification).

[NA-RANH HMW 444-408.125(2) R; PHY, CHE]

**60. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem);  
Spring of 1812**

Reinwardt rejects the treatise on the question if the amount of oxygen, produced by the vegetation, equals the amount of oxygen, used up by the respiration of animals, by combustion, by absorption, etc., which has been entered under the maxim ‘Si l’altération de l’air ..., etc.’, yes or no. The treatise is defective and it does not give the results of observations

and experiments. The author has tried to introduce the effect of sunlight on various chemical substances, for example deoxidations. Reinwardt does not fully understand the badly founded explanations given by the author. Anyhow, as far as observations and experiments have been carried out, they did not produce reliable and understandable results. He has not been able to prove that water is decomposed by light, which would yield much oxygen. He ends his writing by giving an abstract of the work, written by him on the phosphorescence of substances exposed to light, which has nothing to do with the subject of this contest. The 'Maatschappij' should reject this entry. [NA-RANH HMW 444-408.126(1) R; PHY, ZOC, CHE]

**61. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem);  
Spring of 1812**

In Reinwardt's view, the author of the treatise on the system of Linnaeus rightly puts that a good taxonomy should offer a quick and easy survey (outline) of the vast variety of anatomical structures ('bewaterktuigingen') and physiological processes ('levensverrichtingen') within the animal kingdom. This outline should mainly be composed of characteristic, constant and clear identification marks. The variable and coincidental (accidental) marks are not important. Reinwardt appreciates that the author has supposed that the 'Maatschappij' did not only want to receive a proposal for a simple identification system of the animal kingdom. He tried to achieve more, by trying to design his own system on the basis of the most recent zoological discoveries. At the same time he wanted to pay honour to the great Linnaeus. Reinwardt agrees with the author, who does not think much of the division of the animal kingdom in Invertebrates and Vertebrates. This splitting up would not support the idea of the 'scale of beings' (or 'gradation of natural beings'). Reinwardt thinks that if the vertebral column would have been an important concept for the Vertebrata, the Invertebrata would not exist. Only a division based on the various classes of animals, founded on the nutritive fluids, might satisfy as a general starting point. For example, one could try to divide the animal kingdom on the basis of the various types of blood, or more generally spoken, on the basis of the humours, because they are determining the existence and function of these animals.

Fortunately the author has proposed what Reinwardt considers the best way to answer the question. The result is a splendid representation of the

continuous progressive development within the animal kingdom – or so to say a modern version of the ‘scala naturae’ – from the simple drop of slime to the most ingenious (most complicated) body of the mammals and of man. This gradation forms the basis of the division of each phylum.

In Reinwardt’s view this splendid treatise deserves to be awarded. The author did even more than the ‘Maatschappij’ had asked (‘to give an outline of a new taxonomy of the animal kingdom’). Besides, he did not reject which should not be rejected. He proved that the system of Linnaeus does no longer meet completely with the needs of modern science. His new system shows an uncommon solidity and simplicity of characteristics. Furthermore it is a natural system as well, comprising the whole animal kingdom and it is a very useful tool to the more advanced student. This treatise must absolutely be awarded the gold medal.

[NA-RANH HMW 444-408.128 R; ZOC]

**62. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem);  
Spring of 1812**

In his report on a treatise on botanical systematics, Reinwardt first of all points at the two most important criteria: microscopic anatomy (‘the internal structures’), especially of the ‘celwijs weefsel’ and the arrangement of the ‘spiral vessels’, as well as the chemical composition of plants.

Although the author has collected a lot of information, the entry is still incomplete. The ‘Maatschappij’ wanted to receive an answer to the question which chemical properties could turn out to be constant’ – in other words: Is there a relation between certain constant characteristics of the internal structures of a plant family and their chemical properties, yes or no? As a consequence of such a relationship certain solitary plant species or genera might find a new position within the accepted taxonomy. It would also facilitate the discovery of new medicinal plants or of other plants, which could be of help to the domestic science (house keeping), to factories and to agriculture. Especially agriculture could benefit from this new taxonomy. This fact should be an incentive to many scientists to carry out new painstaking experiments. Unfortunately the author did not take this opportunity. He stuck to a strict botanical approach. All the chemical facts brought up by him, are of no use for a new distinction between the families. Once more Reinwardt elucidates the important questions which had to be

answered. The author has analysed 54 plant families. Of none of these he has examined the chemical properties. He did not carry out any chemical experiments. So this treatise cannot be awarded.

[NA-RANH HMW 444-410.140 R; BOT, CHE, TEC, AGR]

**63. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem); Spring of 1812**

The author of this beautiful treatise has proved concisely and in a brilliant way that several kinds of small lower creatures like Infusoria, Fungi, intestinal worms and so on, are created (produced) without being the result of a reproductive act of similar creatures. The author, who has demonstrated his great knowledge of the works of other scientists, has convincingly proved the untenability of William Harvey's thesis 'Omne vivum ex vivo'. As Reinwardt knows already, most of his fellow scientists agree with regard to this rejection of Harvey's statement. The author did even more than he had to. He also gave an acceptable explanation of the possible development of these animals (and plants). Nevertheless he should have paid more attention to the 'generatio aequivoca' concept, as far as it concerns the more complex animals and plants, as it has been proposed by a few scientists. The author has not been able to devise and carry out appropriate experiments. Perhaps it is impossible to find a definitive answer to that part of the question. All in all, he wrote an excellent treatise and made a very valuable contribution to the natural history of reproduction and of the development of organized bodies. The author absolutely deserves to be awarded the gold medal.

[NA-RANH HMW 444-411.149 R; ZOC, BOT]

**64. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem); 5 June 1812**

Reinwardt thanks his friend for sending him a collection of plants as well as for the warm welcome he gave him at the occasion of his last visit. Today he will send a letter to Professor Krause. Unfortunately he has not had the occasion to see Van Eys before his departure. Now Van Eys has invited him for a visit, which he will pay him today. Regrettably he has to cancel his offer to translate the two awarded treatises. This job is a 'modus acquirendi' and the payment is too scant. Is it not possible for Van Marum to ask Vosmaer? Furthermore he adds the notes (receipts), regarding the two treatises.

[NA-RANH HMW 444-90; BOT, MED]

**65. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Amsterdam); 29 August 1812**

Vrolik asks Reinwardt, Paets van Troostwijk and Van Barneveld to assess Driessen's treatise, entitled 'Eenige wenken over natuur- en scheikundige onderwerpen'.

[NA-RANH KNI 175-34.336; PHY, CHE]

**66. C.G.C. Reinwardt (Amsterdam) to A.G. Camper (Klein Lankum, near Franeker); 21 December 1812**

A long time has gone since Reinwardt has sent a letter to Camper. So his fellow member has every right to accuse him of negligence. He intended to send him an extensive letter, together with two printed copies of his 'amphibiological' treatise. This turned out to be impossible, because the rivers had frozen over. Meanwhile his treatise has been published in his (Reinwardt's) *Journal*. He is sure that Camper's article will be read with satisfaction by the colleagues. He thanks him emphatically for his contribution. He hopes that he will be satisfied and that he will appreciate the rest of the contents of the journal. The parcel is still at the bookseller's, waiting for the occasion to be sent to Franeker. Because of his many occupations he has not got the time to pay any attention to the publication of his journal. For the time being the preparation of part 5 is out of the question. Another activity, which is taking much of his time, is delivering his many lectures. So there is hardly any time left for studying and research, a most regrettable situation.

Anyway, he is doing well. Meanwhile the municipality of Amsterdam has paid the first part of his overdue salary. The collection of natural history will remain stored at the attic of the 'Royal Palace' at the 'Dam'.

He has sent a part of the copies of Camper's 'Museum' to Franeker. He regrets what has happened to Camper's whale and wonders if his contribution might be suited for publication in the *Annales du Muséum* (Paris). Cuvier hardly gives any signs of life, although he has recently informed Van Swinden about the future of the 'Athenaeum Illustre' (Amsterdam).

Furthermore he discusses several transfers of professors, among others the one of Ypey from Harderwijk to Groningen and later on to Leyden. Chemistry is in need of a writer, or even more a compiler, who, 'although lacking judgement or sufficient knowledge, has compiled massive volumes'. He does not hold the 'Instituut' in great esteem: 'From time to time an essay

is read in the meetings, which is most of the time of the worst quality’.

Mr. Van Kinsbergen has left his library to the ‘Instituut’, together with a considerable sum of money, a fact which undoubtedly will please Camper. He wants to know if Camper still enjoys his inspectorate. Brugmans has not given a sign of life for a long time, nor did he give any information about the reorganization of the universities, in spite of his promises! Of course Brugmans is rather occupied. He hopes that his many occupations will not keep Camper from his beloved studies. Only studying gives someone the strength to forget the unpleasantnesses or to scorn them. He wishes Camper and his family a good and happy life and expresses his feelings of esteem and friendship.

[UBL BPL 247 95c; GEO, ZOC, MED, UNI]

**67. C.G.C. Reinwardt (Amsterdam) to A.G. Camper (Klein Lankum, near Franeker); 31 December 1812**

Not until today, Reinwardt has received the letter, in which Camper asks him several questions about the whale, dissected by him. Reinwardt is eager to answer these questions. Unfortunately he is not able to explain the results of all the observations made by him, because he still has to elaborate his notes. Besides, several drawings still have to be made. He really hopes that Camper’s work will be published soon, although he knows that many of the drawings made by him have to be redrawn by the artist, because they had been stained by oil. Perhaps Camper will be able to start his writing next spring. If he wants to ask him some questions, he will be pleased to answer them, even before he has finished his own treatise on the whale. Furthermore he has read in the *Journal de l’Empire* that Cuvier’s long-awaited magnum opus on the fossil bones has been published recently (in quarto). It also gives several geological contemplations. Reinwardt fears that the *Annales du Muséum* (Paris) will refuse Camper’s treatise. Now – at the end of this year – he wants to express his feelings of gratitude and friendship by citing Ovidius: ‘Delibi dent annos a te nam eaetera sumus’. He asks Camper to convey his greetings to his wife and children.

[UBL BPL 247 95c; ZOC, GEO]

**68. C.G.C. Reinwardt (Amsterdam) to J.G.S. van Breda (Franeker); 18 March 1813**

In this letter the exchange of ideas with respect to the comparative anatomy of whales is discussed – especially regarding the similarities between the two specimens, dissected, described and drawn by Reinwardt and Van Breda. In their attempt to determine the species, they based themselves on the species described by Lacépède and on the description given by Hunter in the *Philosophical Transactions*. Reinwardt supposes that the animal, dissected by him, belongs to the genus *Balaena*, but that it differs from the various species, which have been described until now. He bases himself on the *Dictionnaire des Sciences Naturelles* (Volume 3, p. 344). The specimen, dissected by him most resembles the animal of which Brugmans only possesses the head. So it is identical with the species described by Blumenbach in his *Abbildungen natürlicher Gegenstände* (Tab. 74), although he is still not quite sure. These contemplations are followed by a detailed osteological description. Again the differences between the drawings made of his specimen and those, made of Van Breda's whale, are becoming noticeable. In his view, Van Breda's specimen belongs to *Balaena rostrata*. He asks Van Breda to see him, in order to examine his whale and the respective drawings. Doing so would be very helpful.

[BTS 2273; ZOC]

**69. C.G.C. Reinwardt (Amsterdam) to A.G. Camper (Klein Lankum, near Franeker); 28 March 1813**

Reinwardt apologizes for having kept silent for such a long time. Regrettably, he has not had the occasion to answer Camper's letter until now, in which he has asked for further information on the whales examined and dissected by him. He hopes that Camper will be well-disposed to read his letter to the end, before he gives his verdict. First of all he has taken the bones of a skeleton completely apart. Thereupon he has made drawings of each of these parts, after which he has put them together again. This reconstruction has taken much more time than he had thought. He promises to send Camper his drawings. He has also tried to answer the other questions asked by Camper. He assures him of his unconditional obligingness. Meanwhile his friend will probably have received the various notes as well as the second issue of his journal. Camper has already been informed that the parcel, meant for

him, has been prepared for delivery, but that the barge could not leave since December last year.

Because he could not pay the *Annales du Muséum* for the year 1811, he had to end his subscription provisionally at the end of 1812. Therefore he asks Camper to send him copies of his contribution to the *Annales*. He needs this information for the description of his own whale, as well as for the formulation of his conclusions. Furthermore he makes a few remarks regarding Cuvier's treatise on fossil bones, which has not been published in the *Annales du Muséum*. In a few months – during the summer holidays – he is going to make a trip to Paris, or perhaps another one, during which he will have the opportunity to make several observations in the field of natural history.

All in all, the prospects for the future with respect to the university are not good at all and the Academic government is far from being perfect, as Camper will have experienced. He really hopes that his friend will be able to see him soon and that they will have the opportunity to examine his whale together.

He ends his letter by adding his kindest regards for Camper, his wife and children and calls himself his true and devoted friend.

[UBL BPL 247 95c; ZOC, GEO, UNI, KNI]

**70. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem); 14 April 1813**

Reinwardt judges two entries with respect to the purifying effects of charcoal. In the past, the author of the first entry – written in French – had already performed well by proving completely its purifying power. However, in Reinwardt's view the author did not carry out any new experiments himself, since then. He only added the results of experiments and observations carried out by other renowned scientists like Théodore de Saussure. Obviously De Saussure's explanation did not satisfy the author, because this scientist stated that absorption means 'condensation of vapours or emanations', which causes the disappearance of all impurities. Nevertheless, the author's conclusions should be published, although all hope for a positive outcome has been lost. The other treatise should not be considered.

[NA-RANH HMW 444-403.99(2) R; CHE, PHY, MED]

**71. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem);  
Spring of 1813**

Since his entry has been judged for the first time, the author of the treatise on the lead poisoning of drink-water under the maxim ‘Felix qui potuit ... etc.’ has completely met the strict requirements of the ‘Maatschappij’. He deserves full marks because he has completed what was missing or what had not been proved yet. He has founded his statements on observations and on the results of experiments. He has also paid attention to the circumstances under which free hydrochloric acid is present in the atmosphere from time to time. Now Reinwardt is completely satisfied. This time the ‘Maatschappij’ should award the entry.

[NA-RANH HMW 444-103(3) R; CHE, PHY, MED]

**72. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem);  
Spring of 1813**

Reading the entry under the motto ‘Jemand, der die Theorien ... etc.’, Reinwardt observes that the ‘Maatschappij’ – by holding this contest – has urged many scientists to think hard about this important issue. Unfortunately, the author has not given any results of new experiments he has performed. He has only made several suppositions. Nevertheless this contribution to science deserves an honourable mention, because the author has developed a shrewd theory, which is both simple and comprehensible, for example with regard to the nutrition, digestion and transformation of substances (‘de verwisseling der stoffen’). The author even dares to denounce the inadequacies of modern chemistry. Reinwardt really appreciates this daring. His ideas and conclusions put things in a different light. Anyhow, the ideas and observations of other scientists have to be reconsidered. The author has really proved that the substances, which are present in nature, are continually submitted to the process of transformation. This also goes for substances which have been regarded as elementary substances (‘enkelvoudige stoffen’), until now. These processes are only occurring in living beings (‘bewerktuigde wezens’). Reinwardt is fully satisfied about the way the author describes these gradated sequences of processes. Besides, he has made sensible statements about the production of the ‘principia remota’. He has proved that certain of these principia cannot be explained from the substances which constitute nourishment (because of the different concentrations of these elements!). Therefore these substances must have been produced by the organs of the

living being. Unfortunately it is impossible for the time being to prove the correctness of this statement. Because the author still bases too often on suppositions, the treatise cannot be awarded the gold medal.

[NA-RANH HMW 444-406.108(2) R; ZOC, CHE]

**73. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem);  
Spring of 1813**

In Reinwardt's view the treatise on the migration of birds, entered under the maxim 'Est enim vis et natura ... , etc', absolutely deserves to be examined more closely. The author appears to have a strong belief in the influence of the obvious changes of seasons on animal behaviour with respect to migration and especially on the behaviour of birds. The author has succeeded in separating certainties from unverifiable presumptions. Unfortunately he did not fulfil his promises. He did not dig deep enough in his investigation of the years in which the early autumnal migration was succeeded by a severe winter. He also changed his opinions in the course of his treatise: At first he did not regard the migration of animals as a phenomenon which predicts the change of seasons, but further on in his treatise he did so. The same goes for other changes of animal behaviour. Unfortunately most of these changes could not be proved. The author often exaggerated in his argumentations and explanations. The jury should be unrelenting in the judgement of this treatise, especially because the author did not present his own observations. Furthermore the author did not prove himself a real physicist and natural scientist. Apparently he is not capable of deriving a universal law from the results of his observations. All in all, this treatise is an incomplete answer to the question put by the 'Maatschappij'. It does not deserve to be awarded yet. Therefore Reinwardt proposes to give the author the opportunity to complete his entry.

[NA-RANH HMW 444-407.119(2) R; ZOC, PHY]

**74. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem);  
Spring of 1813**

Fortunately the author has understood that the only solution of the question asked by the 'Maatschappij' is a thorough investigation of the genesis of rain. He has examined each of the current explanations and he realized how difficult it is to make the right choice. The author outran this dilemma in

a masterly way. In the explanation adopted by him, atmospheric electricity plays a major role. The rainwater is stimulated by this special force. The author – a fairly good painter – has represented the various aspects of his explanation in a colourful painting. After having expressed his appreciation of this painting, Reinwardt decides that it's up to the 'Maatschappij' to pass its judgement.

[Strangely enough Reinwardt does not denunciate the ideas of the author this time, although his representation is completely based on 'natural philosophy', ideas which have been rejected by him as a pseudo science about two years ago; see: 'Reinwardt (Amsterdam) to Van Marum (Haarlem); Spring of 1811: NA-RANH HMW 444-400.83(1) R; 'Report on a treatise on magnetism'.]

[NA-RANH HMW 444-410.135(2) R; PHY, BOT]

**75. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem); Spring of 1813**

The treatise – entered under the maxim 'Ins Innere der Natur dringt kein erschaffener Geist; sehr glücklich wenn sie nur die äussere Schale weisst!' – has been written by an author who is guilty of a woolly use of words as well as of a wasting style. His statements are inconsistent with the principles and laws of physics and chemistry. It is impossible for Reinwardt to follow the lines of thought, developed by the author. Furthermore he did not prove his arguments.

The author of the second entry, under the motto 'Observandi discimus' strongly believes in the effect of electricity on rainwater. In his view rainwater is always more or less electric. The author even dares to present the 'results' of his observations made in the northern regions of Germany (1805) and in the southern part of that country (1810). Usually the fall of rain is accompanied by striking changes of the atmospheric electricity. These changes cause the growth of plants. The author has also given the results of experiments with seedlings. If exposed to electricity, these seedlings will develop better and faster than other seedlings do. Reinwardt does not understand why the author still endorses several ideas which have already been rejected by greater minds like Ingenhousz, Van Marum, Van Breda senior, Paets van Troostwijk and Krayenhoff. Furthermore, the results of the experiments carried out by other scientists often turned out to be opposite

to those produced by the author.

[NA-RANH HMW 444-410.135(2) R; PHY, BOT]

**76. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem);  
Spring of 1813**

Reinwardt complains about the fact that he has been ordered to assess a trashy note of four pages on the reproduction of fishes in the Dutch rivers. This epistle, discussing the propagation of fresh water fishes in Austrian rivers, is not an acceptable answer to a prize contest, held by the 'Hollandsche Maatschappij der Wetenschappen'.

[NA-RANH HMW 444-410.139(1) R; ZOC]

**77. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem);  
Spring of 1813**

The Dutch treatise on the dissociation of gasses and vapours, released through the disintegration of cadavers, entered under the motto 'Tentasse ... etc.' is unacceptable. The author did not distinguish the various vaporous emanations from cadavers, sick and healthy people clearly from each other. His treatise has been larded with unwanted items. He did not carry out any chemical analysis, nor did he inform the jury about the properties of the remedy recommended by him: the use of quicklime and various acids, for example sulphuric acid, in order to dissociate those vapours. The same remedy is suggested after having discussed the question why corpses should be buried outside the church. He advises to cover these corpses with a mixture of sand and clay. The author has carried out his experiments with the cadavers of cats and fishes. Obviously he did not understand the question, because explanations based on modern chemistry are completely absent, although he calls himself a 'chemist' more than once. In spite of what the author has suggested, the emanations are not always hydrogen sulphide rich. The second Dutch treatise, entered under the maxim 'Nos ubi decidimus ... etc.' has obviously been written by an author who appeared to be more modest and much more precise in his writings than the author of the first entry has been. This author has decided that there is no effective remedy. Therefore he proposes a combination of remedies. Unfortunately, he did not carry out any experiments. Nevertheless, this treatise deserves to receive an honourable mention.

[NA-RANH HMMW 444-412.156 R; CHE, PHY, MED]

**78. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem); 10 May 1813**

Last Saturday, Reinwardt travelled through Haarlem, accompanied by several friends and colleagues. Unfortunately he had no time to see Van Marum. Therefore he sends him a letter and asks him to propose two scientists for membership of the 'Maatschappij': J. de Vries (president of the 'Tweede klasse', of the KNI) and J. Cappelle (member of several scientific societies and author of the *Quaestiones Mechanicae*). His colleagues Florijn, Van Swinderen, Kraijenhoff and Kops have asked him to repeat this request. Reinwardt counts on Van Marum's support.

[NA-RANH HMW 444-91; KNI, PHY]

**79. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem); 22 May 1813**

In his treatise on the production of indigo in the West-Indies the author describes the production of this pigment and discusses its colour and quality as a consequence of the differences between the various soils and of the manufacturing process. He also describes the possible falsifications, such as the addition of ground slate, cinder powder or starch. He also mentions pastel indigo, but gives no results of experiments or analyses. This treatise is incomplete and superficial.

[NA-RANH HMW 444-412.154 R; BOT, AGR, MIN, CHE]

**80. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem); probably end of May 1813**

As agreed, Reinwardt did send Van Marum several concepts of prize contests, among others on (vegetable) charcoal. Lack of time has kept him from devising more proposals. Having read Van Marum's yesterday's letter, he wants to observe that he cannot agree with Brugmans's judgement just like that. This time he is much more positive about this treatise than he has been about the one which was entered about ten years ago and of which he (Reinwardt) had proved the defects and the many inaccuracies, while Brugmans was more positive at the time. He does not understand why Brugmans is rejecting this treatise now. He wants to see Van Marum about it next Friday. He is willing to hold back his judgement until then. Perhaps he can confine his judgement to those aspects of which he is almost sure

that there will be no difference of opinion with the final judgement to be expected. Could Van Marum not be so kind to inform the other members of the 'Maatschappij' that he has not yet entered his report?

[NA-RANH HMW 444-91; CHE, PHY, BOT]

**81. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem); 29 May 1813**

Reinwardt proposes a modification of the French version of the concept of a prize contest about lighting coals. He has no comments on the other proposed questions and finally asks Van Marum not to forget the treatises of 'Teylers Tweede Genootschap'.

[NA-RANH HMW 444-91; CHE, PHY]

**82. G.Vrolik (Amsterdam) to the members of the 'Eerste Klasse' of the KNI (Amsterdam); 10 July 1813**

Vrolik informs the members of the 'Eerste Klasse' of the KNI that the addressees – C.G.C. Reinwardt (Amsterdam), J.N. Van Eys (Amsterdam), J. Kops (The Hague) and M. van Marum (Haarlem) – will receive several documents and books on the subject of the production of indigo from the Pastille plant ('pastelplant'). These documents have been sent to Vrolik about 28 April 1813.

[NA-RANH KNI 175-44; BOT, CHE, AGR]

**83. G. Vrolik (Amsterdam) to J.N. van Eys (Haarlem), J.F. Serrurier (Zwolle) and C.G.C. Reinwardt (Amsterdam); 12 July 1813**

The addressees are asked to assess the treatise entered by J. Kops (The Hague) on the effects of the weather on the condition of plants.

[NA-RANH KNI 175-35.87; BOT, PHY]

**84. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden), J.A. Bennet (Leyden) and C.G.C. Reinwardt (Amsterdam); 19 July 1813**

As Van Marum has recently delivered a lecture on the vegetable origin of coal, the addressees are invited now to assess this contribution.

[NA-RANH KNI 175-35.90; BOT, GEO]

**85. C.G.C. Reinwardt (Amsterdam) to G.Vrolik (Amsterdam); 24 July 1813**

On behalf of the commission, appointed by the 'Eerste Klasse' of the KNI in order to assess the documents, dealing with the production of indigo from the Pastille plant, Reinwardt informs its secretary that the commission has accepted its appointment.

[NA-RANH KNI 175-44; BOT, CHE, AGR]

**86. G.Vrolik (Amsterdam) to the members of the 'Eerste Klasse' of the KNI (Amsterdam); 5 March 1814**

Vrolik informs his fellow members of the 'Eerste Klasse' of the KNI that Reinwardt and Kops are occupying themselves with the possible purchase of a couple of thermometers, the acquisition of which is considered by the 'Eerste Klasse'.

[NA-RANH KNI 175-44; PHY]

**87. G.Vrolik (Amsterdam) to the members of the 'Eerste Klasse' of the KNI (Amsterdam); 5 March 1814**

Vrolik informs his colleagues that Reinwardt has been appointed representative of the 'Eerste Klasse' at the occasion of the prize giving ceremony by the 'Stads-Teekenacademie' ('City Academy of Arts'), Amsterdam.

[NA-RANH KNI 175-44; ART]

**88. G. Vrolik (Amsterdam), A.C. Paets van Troostwijk (Amsterdam) and C.G.C. Reinwardt (Amsterdam) to G. Vrolik (Amsterdam); 19 March 1814**

Several years ago the commission has been asked to give its opinion about the quality of the Amsterdam artificial cement, produced by the cement factory, owned by De Booy, Aschenberg and Cazius. They are the patentees of the production of this artificial cement. The Commissioner General of the Interior wants to know if this cement has a superior quality. The commission, having examined its chemical and physical properties, takes the view that its quality is really superior. So it holds its ground and agrees with the conclusions of the commission, installed in 1809 (Vrolik, Paets van

Troostwijk and Blanken Jansz), as well as with the tenor of the preliminary advice, proposed by N.C. de Fremery.

[NA-RANH KNI 175-56(130).25 R; PHY, CHE]

**89. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem); 31 March 1814**

Reinwardt discusses the treatise, entered under the motto ‘Possum multa tibi Veterum praecepta ... etc.’, answering the question if the vegetation produces enough oxygen to compensate what is used by various natural processes (respiration, combustion, and so on), yes or no. The contents of this entry shows a striking similarity with the contents of a treatise, written by G.W. Muncke, which has been published about 1809 in Gilbert’s *Annalen der Physik*. Reinwardt concludes that by doing so, the author has violated the regulations of the ‘Maatschappij’, among others by abandoning his incognito. Perhaps he has hoped that the previous publication would remain unknown to the ‘Maatschappij’.

From a historical reconstruction, Reinwardt has learned that almost four years ago Muncke had decided to hold back his treatise. Nevertheless, because of the major importance of his contribution to science, the ‘Eerste Klasse’ should be informed. On the other hand Muncke’s first treatise does not correspond completely with the contest. In his new treatise, entered in 1813-1814, Muncke has really tried to complete his entry. The quality of the conclusions has been improved. He has deleted what was less important and he has improved his experiments as well. This time he has come to the conclusion that the vegetation is producing more than enough oxygen to compensate what has been lost [Reinwardt is especially intrigued by this result, because it is contradictory to the conclusions, drawn by the author in 1809]. The author has also added new experiments, among others with green plants – seedlings – and flies in closed glass jars. These animals stayed alive. He has repeated these experiments by using mice and sparrows. The author has shown to be well aware of the limited value of the outcome of his experiments. Reinwardt regrets that he did not carry out his experiments more meticulously. So in a certain way the calculations based on these results remain uncertain. All in all, the author has not discussed every aspect of the prize contest. On the other hand he has paid attention to the ideas of the most prominent scientists (although in their view the living plants do not

produce enough oxygen). Because the answer is still incomplete, Muncke's entry cannot be awarded. The fact that his treatise has been published already several years ago should not be concealed.

[NA-RANH HMW 444-408.126(2) R; BOT, ZOC, PHY]

**90. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem);  
Spring of 1814**

Reinwardt shows his aversion to a treatise on the agricultural aspects of soil improvement by improving its structure and by manuring. The author is obviously a disciple of 'natural philosophy' and besides he is more a farmer than a scientist. His conviction that the main constituents of a plant are oxygen, hydrogen and carbon, that the complete need of carbon supply of the plant is provided by the absorption of carbonate through its roots and that this carbon has become available by the rotting fermentation of manure, is based on suppositions. The author clearly illustrates that he is a farmer. He does not give any propositions, based on modern plant physiology. So, this treatise does not deserve to be awarded.

[NA-RANH HMW 444-402.91(7) R; BOT, CHE, AGR]

**91. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem);  
Spring of 1814**

The author of the treatise on the different qualities of brickwork made by using shell lime cement and lump lime cement is not at all a chemist. That is why he is presenting very unusual ideas – absurd concepts – which he cannot prove. His chemical ideas are completely inconsistent with the experiences of the true chemists. Once again an award is out of the question.

[NA-RANH HMW 444-411.145(2) R; CHE, PHY]

**92. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem);  
Spring of 1814**

The author of the treatise under the motto 'Rerum Naturae nusquam ... etc.' (on the origin of potash in plants) is well-informed about modern chemistry. His contribution absolutely deserves the particular attention of the 'Maatschappij'. It should be published after its completion. Rightly the German author has saved the experiments carried out by Markgraf and Wiegleb from obscurity. Wiegleb had proved already that the potash is

present in the plant before the incineration process is carried out and that it is not the result of processing, nor that its contents has been increased by this treatment. Through new experiments the author has proved that after the incineration of the plants has been completed, the different contents of potash have not changed. Furthermore the author has discovered that the medulla of plants always contains more potash than the rest does. On the other hand Lichenes are iron rich and do not contain any potash, although the trees on which they are growing do not contain any iron at all. Unfortunately, the author does not explain the origin of the iron. The question is if the potash, present in plants, is produced in the roots, yes or no. Or is it absorbed from the soil? The author does not give any proof. In the author's view the 'Maatschappij' was not especially interested in the results of experiments! He thinks that the process of decaying (dissociation) raises the contents of potash, if it precedes the incineration process. So in his view the potash is produced by the dissociation: 'First dissociation and then incineration'. Reinwardt questions why the author did not take into account the influence of the composition of the soil! Finally he emphasizes that the reliability of the experiments also depends on the quantities of the ingredients used. He proposes to make further demands to the author.

[NA-RANH HMW 444-412.163(1) R; BOT, CHE, PHY]

**93. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem); 17 May 1814**

Reinwardt has not had the opportunity to think up appropriate questions. Nevertheless he wants to propose a few contests. Furthermore he wants to propose two colleagues for membership: Florentius Jacobus van Maanen, Med. Doct., Chem. et Pharm. Lector in the Hague (among others author of the Dutch translation of Blumenbach's work on the natural variation of mankind (*Over de aangeboren verscheidenheid van het menschelijk geslacht*, Harderwijk, 1801) and Jacob Vosmaer, Med. Doctor in Zutphen, publisher of the Dutch translation of Blumenbach's work on the natural history of man (*Natuurkunde van den Mensch*), of Hempel's work on anatomy (*Grondbeginselen der Ontleedkunde*) and of various other works in the fields of medicine and natural history (among others about the bark of the willow-tree and cinchona, about the production of sugar from potatoes, and so on).

He ends his letter by making a few remarks in which he shows his interest in Van Marum's personal situation. He hopes to see him again coming Friday afternoon.

[NA-RANH HMW 444-92; ANA, MED, TEC, AGR]

**94. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Amsterdam), G. Vrolik (Amsterdam) and A. Paets van Troostwijk (Amsterdam); 9 June 1814**

Vrolik informs the addressees Reinwardt (Amsterdam), Vrolik (Amsterdam) and Paets van Troostwijk (Amsterdam) that they have been commissioned to advise the Secretary of State on a patent application.

[NA-RANH KNI 175-44; TEC]

**95. G. Vrolik (Amsterdam) to the G. Vrolik (Amsterdam), J.H. van Swinden (Amsterdam) and C.G.C. Reinwardt (Amsterdam); 9 June 1814**

Vrolik (Amsterdam), Van Swinden (Amsterdam) and Reinwardt (Amsterdam) have been commissioned to advise the 'Eerste Klasse' on an 'areometer' (hygrometer).

[NA-RANH KNI 175-44; PHY]

**96. G. Vrolik (Amsterdam) to J. Kops (The Hague), C.G.C. Reinwardt (Amsterdam) and J.A. Bennet (Leyden); 2 July 1814**

Kops (The Hague), Reinwardt (Amsterdam) and Bennet (Leyden) have been commissioned to advise the 'Eerste Klasse' with respect to the extraction of cotton-like substances from vegetables (pot-herbs) and wild plants.

[NA-RANH KNI 175-44; BOT, AGR, PHY, TEC]

**97. G. Vrolik (Amsterdam) to J.N. van Eys (Amsterdam), J.F. Serrurier (Zwolle) and C.G.C. Reinwardt (Amsterdam); 12 July 1814**

Vrolik informs Van Eys (Amsterdam), Serrurier (Zwolle) and Reinwardt (Amsterdam) that they have been commissioned to assess Kops's treatise on the influence of the weather on the growth of the vegetation.

[NA-RANH KNI 175-35.87; PHY, BOT]

**98. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden), J.A. Bennet**

**(Leyden) and C.G.C. Reinwardt (Amsterdam); 19 July 1814**

Vrolik reminds the addressees that Van Marum has delivered a speech on the vegetable origin of coal and that they have been commissioned to assess his treatise on this subject.

[NA-RANH KNI 175-35.90; GEO, BOT, CHE]

**99. C.G.C. Reinwardt (Amsterdam), J. Kops (The Hague) and J.A. Bennet (Leyden) to G.Vrolik (Amsterdam); 21 July 1814**

The Minister of the Interior has sent a letter to G.Vrolik, covering a letter from Mr. Angelo (Triest, Italy), in which he proposes the extraction of a cotton-like substance from various plants, as appears from the enclosed document, addressed to the Austrian government. On behalf of his fellow-members Kops and Bennet, Reinwardt reports to the 'Eerste Klasse'. For further information he has sent a letter to Von Jacquin (Vienna). In his answer Von Jacquin junior has assured him that the substance prepared by Angelo is usable. However, because its production would be too expensive, it will apparently not precede any profit. So carrying on this investigation makes no sense.

[NA-RANH KNI 175-56(130).38 R; BOT, AGR, PHY, TEC]

**100. G.Vrolik (Amsterdam) to the members of the 'Eerste Klasse' of the KNI (Amsterdam); 4 August 1814**

Van Marum (Haarlem), Reinwardt (Amsterdam) and Vrolik (Amsterdam) are commissioned to advise His Majesty the King on a patent application.

[NA-RANH KNI 175-44; TEC]

**101. G.Vrolik (Amsterdam) to the members of the 'Eerste Klasse' of the KNI (Amsterdam); 4 August 1814**

During the meeting of the 'Eerste Klasse' of the KNI, held on 4 August 1814, Brugmans has delivered a speech on the phosphorescence of the sea. [A few days later Reinwardt (Amsterdam), Bennet (Leyden) and Van Marum (Haarlem) will be commissioned to evaluate Brugmans's treatise]. It's really a brand new theory, which he has committed to paper].

[NA-RANH KNI 175-44; ZOC, PHY]

**102. G. Vrolik (Amsterdam) to S.J. Brugmans (Leyden), J.A. Bennet (Leyden) and C.G.C. Reinwardt (Amsterdam); 12 August 1814**

Once again Vrolik offers the text of the lecture delivered by Van Marum on the vegetable origin of coal to Brugmans, Bennet and Reinwardt. They still have to judge this treatise.

[NA-RANH KNI 175-35.97; GEO, BOT]

**103. G. Vrolik (Amsterdam) to the members of the 'Eerste Klasse' of the KNI (Amsterdam); 1 September 1814**

Vrolik informs the members that Reinwardt (Amsterdam), Van Swinden (Amsterdam), Florijn (Amsterdam) and Vrolik (Amsterdam) have been ordered to advise the Secretary of State of the Interior about a treatise on chemical experiments, recently received from Driessen (Groningen).

[NA-RANH KNI 175-44; CHE]

**104. G. Vrolik (Amsterdam) to the members of the 'Eerste Klasse' of the KNI (Amsterdam); 1 September 1814**

Vrolik informs his fellow members that Reinwardt has been appointed president of the 'Eerste Klasse' for a period of six months.

[NA-RANH KNI 175-35.115]

**105. G. Vrolik (Amsterdam) to the members of the 'Eerste Klasse' of the KNI (Amsterdam); 15 September 1814**

Vrolik informs his colleagues that C.G.C. Reinwardt (Amsterdam), S.J. Brugmans (Leyden), P. Driessen (Groningen) and G. Vrolik (Amsterdam) have been commissioned to advise about a patent application for the production of household appliances, to be made of zinc, filed by Dozy & Comp., received through the Minister of the Interior.

[NA-RANH KNI 175-35.115, PHY, TEC]

**106. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Amsterdam), S.J. Brugmans (Leyden), J.A. Bennet (Leyden) and G. Vrolik (Amsterdam); 27 October 1814**

Vrolik wants to receive the report on the treatise, written by A. van Stipriaan Luiscius on the purification of decayed water. The request has been made

by A.R. Falck, Secretary General of State of the Interior. The results will be most important to the well-being of ship's crews.

[NA-RANH KNI 175-35.119; CHE, MED, TEC]

**107. A.R. Falck (Brussels) to C.G.C. Reinwardt (Amsterdam); 13 December 1814**

Falck – Secretary General and Minister of the Interior – expresses His Majesty's will to further the economic, social and scientific development of the kingdom. He is convinced that it is not necessary to explain these feelings and especially not how interesting the Dutch East Indies are with respect to science. During the last decades the exploitation of the East Indies has been neglected. Especially the island of Java will produce many interesting discoveries in the field of science. He underlines that in His Majesty's opinion, much will depend on the man, who will be charged with this most important task. It has to be a man experienced in the various sciences, subtle and whose diligence will not be put off too easily. It has to be a most persevering man, who will do the utmost to enlarge our scientific knowledge of the Dutch colonies in the East Indies. Falck, who knows Reinwardt already for many years, congratulates the addressee with the most honouring fact that he has been chosen by His Majesty. Reinwardt will accompany the Commissioners General, who will travel to Java in order to counsel them whenever they want him to, especially in the fields of public education, agriculture and technology and finally to study nature at the occasion of several trips, which will be made. He asks Reinwardt to answer his letter as soon as possible, assuming that the addressee will feel most honoured. The fact that at the time Reinwardt is already doing a most important job, has urged His Majesty to keep his professorate and other jobs vacant, until he will have returned from the East Indies. Of course he will be more than fully compensated for the fact that he has to leave behind a comfortable position. Falck ends by observing that the government of the Dutch East Indies will be entrusted to a couple of the most noble and honourable men, already known to Reinwardt. He is eagerly awaiting Reinwardt's answer.

[De Vriese, 1854, pp. 26-28; AGR, BOT, ZOC, COB, GEO, MIN, PHY]

**108. G.Vrolik (Amsterdam) to C.G.C. Reinwardt (Amsterdam), J. Floryn (Amsterdam), J.H. van Swinden (Amsterdam) and A.C. Paets van Troostwijk (Amsterdam); 17 December 1814**

Vrolik informs the addressees that they have been appointed members of a commission, which has to advise the Secretary of State of the Interior about the introduction of a new system of weights and measures.

[NA-RANH KNI 175-44; PHY]

**109. C.G.C. Reinwardt (Amsterdam) to A.R. Falck (Brussels); 26 December 1814**

In his answer to Falck Reinwardt expresses his mixed feelings with regard to his election as a companion to the Commissioners General, who will leave for the Dutch East Indies. He fully realizes that he will have to make sacrifices, if he agrees with his nearby appointment. Only reluctantly he will say goodbye to his many friends and acquaintances. Of course he feels very honoured and also impressed by the enormous possibilities of forwarding the various sciences. He is convinced that it will be possible to contribute to science, from the very arrival in the East Indies. Finally, his choice has been made easy by the confidence His Majesty has expressed with regard to his qualities. This fact makes him promise to do his utmost, once arrived in Batavia and to show his persisting perseverance. However, he has several wishes with respect to the financial and material facilitation of his various tasks. Furthermore he will need several assistants. He promises to inform his Majesty about their names, as soon as he will have found the men, who are the most suited for the jobs. Finally he wants to buy all kinds of instruments in the fields of technology, physics and chemistry. He also points at the necessity of collecting objects of natural history, which will be added to 's Landsch Kabinet van Natuurlijke Historie' (Amsterdam). He is convinced of the well willingness of the Commissioners General, who have already expressed their satisfaction towards him, with respect to his coming appointment. So, All in all, he is eagerly awaiting his honourable appointment and recommends himself in Falck's obliging attention and continuous friendship.

[De Vriese (1854, pp. 29-32); GEO, MIN, ZOC, BOT, PHY, TEC]

**110. A.R. Falck (The Hague) to CC.G.C. Reinwardt (Amsterdam); 12 January 1815**

Falck, Secretary of State of the Interior, informs Reinwardt that not until yesterday at a late hour the royal decree was signed by which it has been decided that Reinwardt will be sent to the East Indies. Because of that fact it has not been possible yet to make a copy of that decree. The sum of 24.000 guilders has been put aside to finance Reinwardt's new appointment as 'Directeur tot de Zaken van de Landbouw, Kunsten en Wetenschappen' ('Director of Agriculture, Arts and Sciences'), as well as the sum of 2.000 guilders for the purchase of the necessary equipment. Falck also informs him that besides all transport will be carried out free of charge. Reinwardt will keep his appointment as director of the Museum of Natural History. Falck also observes that Reinwardt will only be allowed to keep his appointment at the 'Athenaeum', if its governors do not object. Two assistants will be appointed, at Reinwardt's choice. Reinwardt will have to stay in the East Indies for a period of two years and he will have to take an option for another term of two years. His mother and sisters (living in Lüttringhausen, Germany) will receive a pension, so he will be able to prepare his move to Batavia free of concerns.

[UBL BPL 2425; BOT, ZOC]

**111. D.G. Kieser (Jena) to C.G.C. Reinwardt (Amsterdam); 5 February 1815**

Kieser thanks his friend Reinwardt for his kind letter and for the souvenir he has sent. Thereupon he briefly discusses Reinwardt's new appointments and wishes him good luck for his personal life and for his scientific career. In this last respect Kieser points at his trip to Paris. At that occasion Kieser has had the strongest feelings that having the opportunity to enlarge and deepen his scientific knowledge is the ultimate happiness, the feeling of bliss, Reinwardt must have had. He has really hoped to be invited by Reinwardt to accompany him on his voyage to the Dutch East Indies and to assist him as a naturalist, physician and botanist, especially because they have common opinions, preferences and aims, which means that they would be able to cooperate. He sincerely hopes that Reinwardt will not be leaving before the end of March 1815.

[KB 121 D 6; ZOC, BOT, GEO, MED, PHY]

**112. ?? D'Hamecourt (The Hague) to C.G.C. Reinwardt (Amsterdam); 12 February 1815**

D'Hamecourt has been ordered to inform Reinwardt about the fact that the 'Eerste Klasse' of the KNI has informed His Majesty the King about the 'fathommeter' ('zeepeilder'), designed by Van Stipriaan Luïscius (Delft). Thereupon His Majesty has ordered the Secretary of State of the Interior and the Secretary of the Navy to ask Van Stipriaan Luïscius to explain how this instrument functions. The necessary orders have to be given. [In a marginal comment Reinwardt concludes that as a consequence these experiments also have to be carried out aboard the vessels, which will be leaving for the East Indies.]

[NA 2-21.204(10); PHY, KNI]

**113. C.G.C. Reinwardt (Amsterdam) to the Commissioners General for the East Indian Colonies (The Hague); 16 February 1815**

Reinwardt complies with the wish of the Commissioners General for the East Indian colonies and answers the letter sent to him by Goldberg (State Councillor in one time service), who has been charged with the Department of Commerce and Colonies. Reinwardt makes recommendations with regard to the improvement of agriculture (in the colonies) and adds a letter, received by him from the Secretary of State of the Interior, as well as an advice written by himself in his capacity as Director of Agriculture' ('Directeur tot de Zaken van de Landbouw'). His first priority is to improve the agriculture in the East Indies. He has decided to collect as many documents and information as possible on this subject, as well as on forestry and on cattle breeding. Of course he will consider the differences with respect to the composition of the soil. Furthermore he will make a selection of agricultural machines. He will arrange their embankment when he leaves for Batavia, choosing several specimens of each useful machine. The director of the 'Collection of Agricultural Machines', who is also in office as Commissioner of Agriculture, has promised to cooperate. Reinwardt suggests that several copies of the various regulations, laws and decisions, regarding agriculture, should be taken to Batavia as well. He refers to the list of these documents, which has been added to this letter. The Secretary

of State should be asked to put these documents at his disposal. Reinwardt promises to occupy himself with the provision of the agricultural documents. [NA 2-21.204(9); AGR, GEO, TEC]

**114. C.G.C. Reinwardt (Amsterdam) to the Secretary of State of the Interior (The Hague) and the Secretary of State of the Navy (The Hague); 16 February 1815**

Reinwardt feels very honoured that he has been asked to test the fathommeter (bathometer or 'zeepeilder'), designed by Van Stipriaan Luijsius (1805). Together with the co-signatory of this report he has attended a demonstration of this instrument at Van Stipriaan's (in Delft). Elout and Buyskes, Commissioners General for the East Indian colonies, were also present. At that occasion, Van Stipriaan has extensively explained its operation. This demonstration, as well as the results of previous experiments, have proved the usefulness and quality of this instrument. It is definitely of a better quality than the other instruments, which are available at the moment. Probably this instrument will be of great help to those who are going to collect geographical data. These data will also contribute to the improvement of navigation. Experienced men aboard the vessels headed for Batavia, will have to carry out the desired depth-soundings. Reinwardt and his colleague propose that the orders to construct two of these fathommeters will be given by the Commissioners General. The same goes for the construction of a few 'voorlopers' (...) and a sufficient number of sounding leads (zinkstukken). These instruments will cost about 1.000 guilders.

[NA 2-21.204(10); PHY, TEC]

**115. G.Vrolik (Amsterdam) to the members of the 'Eerste Klasse' of the KNI (Amsterdam); 18 February 1815**

Vrolik informs his colleagues that Reinwardt (Amsterdam), Van Eys (Amsterdam) and Serrurier (Zwolle) have been invited to advise the 'Eerste Klasse' about a treatise written by J. Kops (The Hague), entitled: 'Overzicht van den staat der voornaamste gewassen in Nederland geteelt, alsmede van de gesteldheid van het weder in den jaren 1806 en 1812, aanwijzende de gevolgen en onderrigtingen, die daaruit zijn af te leiden, ook wegens den invloed van het weder op de gewassen' ('Survey of the actual state of the most important crops, cultivated in the Netherlands, and of the weather

conditions during 1806 and 1812, indicating the consequences and possible instructions with regard to the influence of the weather on the crops’).

[NA-RANH KNI 175-44; BOT, AGR, PHY]

**116. G. Vrolik (Amsterdam) to the members of the ‘Eerste Klasse’ of the KNI (Amsterdam); 12 March 1815**

Vrolik informs his colleagues that the Secretary of State of the Interior has asked Reinwardt (Amsterdam), van Marum (Haarlem), Paets van Troostwijk (Amsterdam) and Vrolik to advice about a patent application.

[NA-RANH KNI 175-44; TEC]

**117. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem); 12 March 1815**

Again Reinwardt reports on a treatise on the predictive value of the behaviour of birds with respect to the weather and the change of seasons. This time, the experienced and professional author has omitted every pointless detail. Because last time the ‘Maatschappij’ had already trumpeted forth on his treatise, the only question is now: ‘Did he correct the weak aspects of his entry?’ This time he has proved to have recognized the importance of the remarks made by the jury. Basically, his proofs have been stripped from every adornment and compelling expressions. However, the author has allowed himself to be led astray by his feelings and his prejudice, an attitude, which is incompatible with meticulous research. Nevertheless, he has done his utmost with respect to the demands, made by ‘Maatschappij’. His contribution will induce further research. Reinwardt pleads the necessity of awarding the gold medal.

[NA-RANH HMW 444-407.119(3) R; PHY, ZOC]

**118. A.G. Camper (Klein Lankum, near Franeker) to C.G.C. Reinwardt (Amsterdam); 23 April 1815**

Adrien Gilles Camper sends Reinwardt a rejected print from his father’s book on the Cetaceae, drawn in order to elucidate the shape of the hyoid bone and to explain the joining of the first and second ribs. Furthermore, he has made a drawing of the head of *Balaena mysticetus* in order to compare it with the head found in the Rue Dauphine (Paris) at the occasion of an excavation. In this way Reinwardt will be able to compare this head with

the one, which is in his possession. Camper adds many other details, among others with regard to *Balaena rostrata*. He informs him that Van Swinden is in the possession of the volume of the *Philosophical Transactions* in which Hunter's whale has been described (Volume 77, 1787). He wants to know more about Reinwardt's attitude towards Van Swinderen (Groningen). He has decided to give his library to that scientist for a present, if Reinwardt himself is not interested. He wants to know what will be the best way of evaluating his book collection. Because of the miserable war, the minerals of Mr. Hasselaer could not be shipped until now. Of course Reinwardt will select the best pieces from that collection. What about Reinwardt's transfer to the Dutch East Indies? Or has it been cancelled? He assures him that he and his family are in good health and expresses his feelings of friendship and esteem. [Four drawings, marked BPL 1804a, have been added to this letter]. [UBL BPL 1804a; ZOC]

**119. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem); Spring of 1815**

In the third round of the contest on the special properties of rain and its effects on plant growth, Reinwardt only takes notice of the entry under the motto 'Jupiter utilibus ... etc.'. Its writing style is pithy and clear. The author has carried out good and valuable experiments. He has really paid attention to the observations, made by other scientists and to the proofs they have provided with respect to the special properties of rain and to its effects on the stimulation of plant growth. Reinwardt agrees with the author. First of all he accepts that – after watering – water penetrates less deep than rainwater does. Secondly, because the rain completely changes the atmosphere, the plant evaporates less water than after having been watered. Reinwardt agrees that light and heat are not the only factors which support the influence of the rain. Other factors are the atmospheric pressure, the winds and the electric condition of the atmosphere. It is impossible to trace these last three factors, because of the actual state of physics and chemistry. Reinwardt also fully agrees with the explanation given by the author and the same goes for his statement that it is impossible to give these 'qualities' to the water which is used for watering plants. Of course it is possible to imitate – at least partially – the natural circumstances. All in all, this treatise

deserves to be awarded the gold medal. The other entries do not deserve to be considered.

[NA-RANH HMW 444-410.135(3) R; BOT, PHY]

**120. C.G.C. Reinwardt (Amsterdam) to M. van Marum (Haarlem); Spring of 1815**

Reinwardt – completely overwhelmed by a vast number of experiments (1.273 experiments) with various gasses, produced by the destructive distillation of charcoal and plants – calls this entry a ‘diary of experiments’ (a ‘log book’). In his experiments, the author has tested the influence of these gasses on living animals (titmouses and siskins). He has also carried out several experiments with other gasses and vaporous substances (‘lugtvormige zelfstandigheden’). Furthermore he has analysed the changes of the atmosphere as a consequence of lighting coals and of coals which are already lighted. He has shown his perseverance. He has really grasped the intention of the ‘Maatschappij’. The author has proved that the air – after having been brought into contact with lighting coals or with lighted coals – contains less oxygen and more carbon dioxide than fresh air does. In his view the deadliness of the changed air is caused by hydrogen and oxygenated carbon. The author is highly commendable for these important and impressive discoveries.

Most regrettably this treatise has not been presented in the structure demanded by the ‘Maatschappij’. Besides, the text shows many writing errors, for which undoubtedly a copyist has to be held responsible. This treatise has been finished in a hurry. Of course the ‘Maatschappij’ should invite the author to complete his entry and to improve its structure. He also has to cut it short. Meanwhile the ‘Maatschappij’ can promise him the award if he meets with all its wishes.

[NA-RANH HMW 444-412.167(1) R; ZOC, CHE, PHY, MED]

**121. G. Vrolik (Amsterdam) to the members of the ‘Eerste Klasse’ of the KNI (Amsterdam); 14 September 1815**

The secretary of the ‘Eerste Klasse’ of the KNI informs its members that Van Marum, Driessen, Kops, Reinwardt, Serrurier, Florijn, Ekama and Vrolik are asked to advise the Secretary of State of the Interior about the results of some experiments with the ‘botshevel’, carried out by Van den Ende.

[NA-RANH KNI 175-44; PHY]

**122. C.G.C. Reinwardt (Amsterdam) to G. Vrolik (Amsterdam); 12 October 1815**

Reinwardt emphasizes that he has really been looking forward to attend the meeting of the 'Eerste Klasse' of the KNI today (12 October 1815). Unfortunately, he has been summoned to come to the Hague. Therefore he cannot come to Amsterdam. So he has to send a letter in which he explains the reasons of his absence.

First of all he asks Vrolik to forgive him. These last few days he has not been able to do a lot for the 'Eerste Klasse'. Of course he had to make many preparations for his passage to Batavia. Furthermore, he had to accomplish several official commissions. He expects Vrolik to accept his apologies. Unfortunately, he could not finish the assessment of several treatises and fulfil his other duties. He has to leave that to his fellow members. His new position in Batavia will also bring him a new relationship with the 'Bataviaasch Genootschap van Kunsten en Wetenschappen' ('Batavian Society of Arts and Sciences', Batavia). He promises to stress Vrolik's importance to science. Of course he hopes to receive future issues of the *Verhandelingen* of the 'Eerste Klasse'. In his thoughts he will be close to his friends and colleagues in Amsterdam. These feelings will make up for this lack for the years to come. He promises to send the *Verhandelingen van het Bataviaasch Genootschap van Kunsten en Wetenschappen* in return. He hopes that these arrangements will guarantee his good relationship with the 'Eerste Klasse'. Now he has to say good-bye to his dear friends and much esteemed colleagues. For many years he has been extremely happy in their company, sharing their activities and above all because of the countless proofs of affection, indulgence and friendship. He will keep these dear recollections in his heart forever, just like his sincere feelings of esteem and recognition. He wishes them God's protection and blessings.

[NA-RANH KNI 175-28(66).119]





## CHAPTER 6 – THE JOURNEY TO BATAVIA (1815-1816)

### 123. **C.G.C. Reinwardt ('Roads of Texel') to J. de Vries (Amsterdam); 17 October 1815**

Reinwardt – already embarked on H.M. 'Admiraal Evertsen' (waiting in the roads of Texel), which will take him to Batavia – spends a few words on the friendly welcome, which he has been given aboard and on the kindness and helpfulness of the officers and of the rest of the crew. He has been informed that they will sail at the first favourable wind. He will return a couple of book cases, which have been emptied meanwhile. He still remembers the warm good-bye.

[KB 121 B 8]

### 124. **C.G.C. Reinwardt ('Roads of Texel') to M. van Marum (Haarlem); 17 October 1815**

For the first time since he has embarked Reinwardt sends a couple of lines to his friend Van Marum. Still waiting for a favourable east wind, he has got used to life aboard the 'Admiraal Evertsen' and he fully accepts the situation. Almost everybody envies him his spacious and luxurious cabin. There is little chance of sailing in the next few days. So he will have the opportunity to write a couple of letters. He will not hold the order of 175 guilders, received through Elout, one of the Commissioners General. This warrant will be payable at Bicker's 'Comptoir'. Because fitting up his cabin took some time, he has not been able to write his fellow members of the 'Eerste Klasse' a letter, until now. Tomorrow or perhaps even today, he will have the opportunity to do so. He has been given a warm welcome. The officers rival each other to be of service to him. The highest in rank – among them the colonel – has already paid him a visit. The rolling of the vessel does not bother him at all. Writing is as easy as it has been in his study in Amsterdam. He hopes that the journey will pass off quietly and successfully. He wishes Van Marum to be safe and sound. Only then, his happiness will be complete. He has to end his letter now, because the mail-boat is leaving.

[NA-RANH 529-20b]

**125. C.G.C. Reinwardt ('Roads of Texel') to G. Vrolik (Amsterdam); 19 October 1815**

Aboard the 'Admiraal Evertsen', and still in the 'Roads of Texel', Reinwardt sends an extensive letter to the 'Eerste Klasse' of the KNI. He has ordered to deliver it today in Amsterdam. He once more shows his regret for not having been able to attend the meeting and to participate in the activities of his colleagues. In a previous letter he has already proposed to offer the *Verhandelingen* of the 'Eerste Klasse' to the 'Bataviaasch Genootschap'. It was the same letter, in which he had expressed his sincere feelings of esteem and recognition. Thereupon, he has received a letter from Gerard Vrolik, the secretary of the 'Eerste Klasse', dated 13 October, informing him that it has been decided to add the name of the 'Bataviaasch Genootschap' to the list of the societies which will be informed from now on about its proceedings and to which its *Verhandelingen* will be sent. Furthermore it has been decided to make use of the opportunity, offered by Reinwardt. As a consequence, he has received a sealed parcel, addressed to the 'Bataviaasch Genootschap'. Much to Reinwardt's regret the above mentioned letter does not at all indicate, that he has been the one who has proposed to do so. Of course, the 'Eerste Klasse' will forgive his concern about the reception of his well meant valediction. He sincerely hopes to receive a few friendly lines from Vrolik, before he sails. He assures him of his feelings of lasting affection and of his trust in the prosperous results of his important adventure. Only in that knowledge he will remain perseverant and courageous enough to return to Amsterdam and to the bosom of the 'Eerste Klasse' of the KNI afterwards and to take up his duties as a member again. He hopes to receive the letter from his fellow-members, in which the reception of his letter is acknowledged, before he will leave.

[NA-RANH KNI 175-28(66).126]

**126. C.G.C. Reinwardt ('Roads of Texel') to M. van Marum (Haarlem); 19 October 1815**

Reinwardt – still in the 'Roads of Texel' – has decided to submit his letter, addressed to the 'Eerste Klasse' of the KNI, to Van Marum's judgement. Did he act precautiously enough? If so, he allows his friend to present this letter to the 'Eerste Klasse'. Perhaps the assemblee will decide – after having read the 'Minutes' – that the reception of his letter had to be confirmed. If so, he

wants to receive the answer as soon as possible, anyhow before the 'Admiraal Evertsen' will set sail. Furthermore, he sends his friend a survey of his stockholding and of the annual account of his income and expenses. He has added a few remarks on the necessary changes with regard to his financial situation. Did Van Marum already receive the amount of 175 guilders, meant for Mrs. Kent? Because several necessary payments still have to be made, he had in mind to return 100 or 200 guilders of the amount of 1.100 guilders, which he has taken with him. Unfortunately he could not do so, because he had to give a considerable amount of money to Kent, who appeared to have no means of support at all. He has decided that Elout is the only person to whom he can entrust such a large sum of money, but he has not had the chance to do so until now. He assures Van Marum that he will compensate him for his financial service, at least partially, if he is willing to take care of his silver forks and spoons. Finally, a couple of creditors will have to be paid, although they might be willing to postpone their claims for some time. Meanwhile the box, containing the treatises, has arrived, but another crate, containing other necessities, did not. Regrettably, the keys of four other boxes that had arrived already, were in a still missing box.

He feels quite at home aboard the 'Admiraal Evertsen'. He still does not bother about the freshening wind or about the more violent rolling of the warship. The barometers are swinging so very intensely that he is not able to carry out any observations. Unfortunately he has not taken a sea-barometer with him. Until now, he did not leave the ship. If there had been an opportunity to house Van Marum, he would have invited him aboard. Meanwhile, the rear admiral has ordered to set sail at the first east wind. If the English books do arrive, Van Marum should send them to Batavia. The 'Instruction for the West Indies', which has been added to this letter, has to be sent to Bennet. He wants to know if Van Marum has already had the opportunity to ask Dufour (Amsterdam) if volume III of Thénard's work has already arrived. He doubts if the essay-instruments, ordered in Paris, have arrived already.

[NA-RANH 529-20b, CHE, PHY, KNI]

**127. C.G.C. Reinwardt ('Roads of Texel') to G. Vrolik (Amsterdam); 19 October 1815**

Reinwardt – still waiting in the 'Roads of Texel' – reminds Vrolik that already a week ago he has sent him a letter in which he has explicitly asked to discuss its contents in the meeting of the 'Eerste Klasse'. On 13 October he has received Vrolik's answer, informing him about the decisions made with respect to the exchange of transactions (*Verhandelingen*) between the 'Eerste Klasse' of the KNI and the 'Bataviaasch Genootschap'. He does not understand why Vrolik's letter did not mention the fact that he – Reinwardt – had personally proposed to do so, nor did it mention the reception of his letter. He hopes that the 'Eerste Klasse' will understand his eager to be informed about the reception of his valedictory letter. Only reluctantly he misses the well meant wishes of the members of the 'Eerste Klasse', because these wishes would have given him the strength and faith so needed for believing in the prosperous outcome of this perilous adventure. Therefore he once again asks him to answer his previous letter, an answer which would oblige him.

[NA-RANH 529-20b; KNI]

**128. C.G.C. Reinwardt ('Roads of Texel') to M. van Marum (Haarlem); 20 October 1815**

Today Reinwardt – still waiting in the 'Roads of Texel' – has written a letter to D'Ailly, to which he has added a letter addressed to his relatives in Lüttringhausen. Perhaps he will have the opportunity to fulfil their wish – to receive a letter, which has been sent from the 'Admiraal Evertsen', after having put out to sea, because a couple of friends will stay on board and will return on the pilot's ship. Because he usually gives one guilder, two pennies (or one guilder, eight pennies) to the carrier quarterly, he has asked DeVries to keep on doing so. Furthermore, he asks D'Ailly to continue the acquisition of the new volumes of the *Annales du Muséum d'Histoire Naturelle* (Paris) and of Gilbert's *Annalen der Physik*. He also wants to know if Van Marum has the opportunity to ask Schröder to buy these volumes at a coming auction. Of the first series the volumes 1 to 20 ('20' included) are in his possession, of the second series he possesses 48 volumes. Furthermore, he reports on his recent conversation with Repelaer van Driel, the Commissioner General for public education, about the future of the 'Kabinet van Natuurlijke Historie'

(Amsterdam). Repelaer has expressed his wish to receive a complete and up-to-date inventory of the collection. Reinwardt has ascertained him of having already sent such a list to the Minister of the Interior. So it must be present in the archives! Probably this confusion is due to the fact that Repelaer has recently succeeded Roëll and that he has not been able to throw a glance at the available documents yet. Furthermore many official documents, among others several catalogues and reports, are still kept at the 'Trippenhuis'. Now he has to end his letter, because Elout will take it to Amsterdam.

[NA-RANH 529-20b, ZOC, GEO, MIN, ZOC, KNI]

**129. C.G.C. Reinwardt ('Roads of Texel') to M. van Marum (Haarlem); 21 October 1815**

With satisfaction Reinwardt informs his friend that he has succeeded in having shipped a number of cases of glass ware, left behind in the 'Oost-Indië Huis' (Amsterdam) aboard the 'Arinus Marinus' (captain Varkenvisscher), which will sail to Batavia. The expenses, which have been made, have to be reimbursed to Mr. Vollenhoven. Furthermore he has given an extensive letter, written by Vollenhoven and meant for Van Marum, to Elout, who has left for Haarlem. He hopes to receive one more letter from his friend before setting sail. He asks Van Marum to inform him about the expenses, advanced by Vollenhoven.

[NA-RANH 529-20b; ZOC]

**130. C.G.C. Reinwardt ('Roads of Texel') to J. de Vries (Amsterdam); 22 October 1815**

Still waiting in the 'Roads of Texel', Reinwardt has meanwhile received the two letters sent to him by De Vries. He has also corresponded with Van Marum. The letter meant for Van Marum has been added to the letter, addressed to De Vries. He stresses the importance of the true friendship between him and the many friends, who are so close to him. He will absolutely need a double lifetime in order to serve his many friends and to prove himself worthy of these friendships. Meanwhile he has already welcomed several guests aboard the 'Admiraal Evertsen'. Everybody has complimented him with the furnishing of his spacious cabin. In order to please De Vries, he encloses a drawing of his cabin plan. Only once he has left the ship in order to pay a return visit to Mr. and Mrs. Van der

Capellen. He is still awaiting the arrival of the last box, containing several goods, needed by him. The wind is still coming from the wrong direction. Maybe it will take several days before they can set sail. Everybody is very kind to him – ‘A professor aboard a warship is a peculiar phenomenon!’ He adds a list of friends who might be willing to receive a copy of his portrait. Furthermore he has received – through the addressee – a letter from Van Brée (M.I. van Brée), in which the sender is complaining about the fact that Reinwardt has left Amsterdam without answering his letter. By now, he has sent letters to Van Marum, to his mother, to D’Ailly and to Van Lennep. He asks him to convey his greetings to a band of relatives.

[KB 121 B 8; ART]

**131. M. van Marum (Haarlem) to C.G.C. Reinwardt (‘Roads of Texel’); about 22 October 1815**

Van Marum informs Reinwardt about the results of his efforts – made in his behalf – with respect to his relation with the ‘Eerste Klasse’ of the KNI. Van Marum is really satisfied about the situation (in particular about the relation with most members), especially after having had a conversation with Kops, Florijn and a few others. However, the conflict with Van Swinden still exists. He has also had a conversation with Bonn and Serrurier, but most regrettably not with Van den Ende and Bennet. Bonn and Kops were very astonished that Reinwardt’s letter had not been answered properly until then. Vrolik, the secretary, explained that he had good reasons for his minimal answer. Other members have underlined that this affair still has to be settled properly. Van Marum has also advocated the necessity of an extensive answer, because Reinwardt has not learned from Vrolik’s letter that his goodbye letter has been received. After having taken notice of the contents of Reinwardt’s letter, the members present in the meeting have decided that this letter should have been answered. A commission was appointed (Kops and Bangma) to write a preliminary answer. Furthermore, Van Marum gives a few details about the conflict between Van Swinden (the president of the ‘Eerste Klasse’) and the Minister of the Interior. Van Swinden refuses to return as president, until this conflict has been solved. Actually Reinwardt has played a role in this conflict by giving as his opinion that Vrolik and Van Swinden (being Vrolik’s father-in-law) were not suited for being appointed members of the same commission. Such an appointment would not be ‘agreable’ (acceptable) to

the government. It is obvious that the 'Eerste Klasse' wants to do its utmost to retain Van Swinden for the 'Instituut'. Van Marum has been asked to mediate. If this action will turn out to be successful, Van Swinden is willing to bury the hatchet. As a consequence, Reinwardt will be asked (by Van Marum) to write a new statement. Therefore Van Marum asks him to write such a letter now, before he sets sail to the East Indies. [Indeed this letter is written, and countersigned by Van Marum and Van den Ende]  
[NA-RANH 529-20b; KNI]

**132. C.G.C. Reinwardt ('Roads of Texel') to M. van Marum (Haarlem)  
25 October 1815**

Regrettably, Reinwardt did not receive a message from his friend, until now. He really hopes that Van Marum has meanwhile received his letters, dated 17 and 21 October, as well as the third letter, addressed to Vollenhoven. He recalls his previous proposal, made to Repelaer van Driel, in which he asked him to prepare a couple of boxes of water bottles and corks, destined for the various colonies. In that same letter he has also asked Goldberg to lend his support to the collection of objects of natural history and to the shipment of these collections. Yesterday he has received Goldberg's answer. He encloses a copy of it. He feels very sorry for being forced to ask Van Marum to arrange these affairs. In his view six boxes – three boxes, containing larger bottles and the other ones containing medium sized bottles – will do. Furthermore he needs a certain quantity of preservative and also wax to seal the bottles [see Temminck's 'Instructions', p. 10 and 15]. Van Marum knows already that each box will cost about 30 guilders. Two of these cases have to be sent to the East Indies, two others have to be sent to Surinam and the last two have to be shipped to Curaçao. To each of these three cargos several of the above mentioned 'Instructions' have to be added. These are kept in the 'Kabinet'. Van Marum should ask D'Ailly to assist him. Repelaer van Driel has to give his authorization, so all statements of expense have to be submitted in duplicate to him, together with the respective documents. He asks his friend to act according to circumstances and to ask D'Ailly to help him as much as possible.

Meanwhile he has received Van Marum's letter, dated 22 October. He promises to number his letters to him. He has received all the necessities for his journey to Batavia and for his stay in the tropics. He has already sent

four cases filled with household goods to Batavia. He asks Van Marum to compensate Kops, who has advanced the freight charges and to thank him for the note he has sent to him (Reinwardt). Vollenhoven has informed him that the boxes have been shipped meanwhile and that an amount of 11 guilders has to be reimbursed to him. He also asks Van Marum to make several payments on his behalf and to convey his best wishes to various friends.

Because the wind direction is still unfavourable, they will have to wait in the Roads. He is feeling good. He hopes that Van Marum has received the documents regarding the various commissions of the 'Instituut', which he has sent to him. He is waiting for a message and sends his regards to him, to Mrs. Van Marum and to Betje and Mietje.

[NA-RANH 529-20b, ZOC, CHE, KNI]

**133. C.G.C. Reinwardt ('Roads of Texel') to M. van Marum (Haarlem); 28 October 1815**

First of all Reinwardt observes that he still has to make arrangements with respect to his private collection of objects of natural history. He has also gone through the valuation lists. He wants to submit his procedure to Van Marum's judgement. Naturally this affair has to be dealt with in a delicate way. He underlines that he has not acted for selfish reasons or for personal financial benefit. He asks Van Marum to convey this expression of his personal feelings to the government. He wants to know if it is necessary to consult Repelaer van Driel, Falck, or even H.M. the King. Anyway, there's no rush! He commends this affair to Van Marum's attention. He has to hurry in order to send this letter with D'Ailly, who will be able to inform Van Marum more extensively. He ends his letter by expressing his feelings of sincere friendship.

[NA-RANH 529-20b; ZOC, COB]

**134. C.G.C. Reinwardt (aboard the H.M. 'Evertsen', set sail) to G. Vrolik (Amsterdam); 29 October 1815**

Reinwardt – meanwhile being on the high seas – reminds Vrolik of the backgrounds of the conflict with him and with Van Swinden. It had everything to do with the fact that during his term of office as president of the 'Eerste Klasse' he had to carry out the royal decree in which His

Majesty had decided to draw a list of candidates of the northern and southern provinces of the new Kingdom of the Netherlands, who could be considered suited for the membership of the 'Koninklijk Nederlandsch Instituut'. At that occasion the members of the 'Eerste Klasse' became divided when a commission had to be appointed to select the candidates. Vrolik wisely suggested that he himself should better not become a member of that commission of which his father-in-law – Van Swinden – had already decided to be a member, because according to the laws of the 'Instituut' this would be less recommendable and the majority of its members would most probably resist. Reinwardt himself – being president – also objected against the nomination of both Vrolik and Van Swinden. However, Van Swinden rejected all these objections. In his view they were nonsense. By writing this new declaration, Reinwardt has tried to solve the still remaining problems. He sincerely hopes that he has settled this affair once and for all and that the unpleasantnesses will be over now. He has kept his feelings of esteem for Van Swinden and Vrolik. He asks Vrolik to convey this sincere declaration to Van Swinden.

[NA-RANH KNI 175-28(66).127]

**135. C.G.C. Reinwardt (on the North Sea) to J. de Vries (Amsterdam); 29 October 1815**

It is Sunday evening. A few hours ago the vessel has set sail and left the roads of Texel. A very powerful wind is blowing in the sails. The heavily rolling vessel is ploughing through the rough sea. He is still going strong, while the other passengers and a part of the ship's crew are sick. So he has had the opportunity to send a last farewell to his friend Jeroen and his wife Mietje, a farewell which is very important to him. He thanks his friend for sending him such a kind letter, for arranging several affairs on his behalf and for his sincere interest with regard to his niece Caroline. De Vries really serves him very well. Reinwardt loves his niece very much and he asks his friend to convey these words to Caroline and to ask Landré to continue his German lessons. He hopes that Caroline will send him a letter. Once more he asks him to thank Siegenbeek for his nice lines of poetry. De Vries must give him and De Fremery (Utrecht) a copy of his portrait for a present. He finally asks De Vries to send him an extensive letter and to inform him about himself and his relatives. He ends his letter by expressing his feelings of love

and friendship and he prays God to allow him to keep on cherishing these feelings. [Probably Van Marum has kept this letter in his personal archive]  
[KB 121 B 8]

**136. C.G.C. Reinwardt (on the North Sea) to J. de Vries (Amsterdam);  
29 October (a few hours later)**

In very expressive words Reinwardt describes the first impressions of his journey on the high sea. The North Sea is turbulent. Almost everybody is seasick, only he is not. He is still going strong! This letter will bring his last words of farewell.

[KB 121 B 8]

**137. C.G.C. Reinwardt (on the North Sea) to M. van Marum (Haarlem);  
29 October 1815**

This is really the last letter, which Van Marum will receive through the pilot, who will go ashore tomorrow, as soon as the 'Admiraal Evertsen' will have reached the Channel. He hopes that his friend will receive his second letter, which has been given to the first pilot, together with a claim of expenses. He is satisfied about the arrangement with Van Swinden and Vrolik and especially because he has been promised an answer to his letters. He thanks Van Marum for his dedication.

The 'Admiraal Evertsen' has left the 'Roads of Texel' at two o'clock in the afternoon, together with the 'Amsterdam', the 'Ruyter', the 'Iris', the 'Spion', the 'Braband' and the 'Maria Reijgersbergen'. All the vessels have been stuck on a sandy ridge near Kijkduin. Soon the 'Braband' and the 'Maria Reijgersbergen' were lost out of sight. They have all been sailing swiftly, even with only one sail set. Not until yesterday Mr. and Mrs. Van der Capellen have embarked from their yacht. He has not been seasick until now. Assisted by Kent, he has lashed down, or nailed down every object. According to the rear admiral Buyskes and the other naval officers, the 'Admiraal Evertsen' sails very well, so they will soon break away from the other vessels. He does not understand where the documents relative to the zinc have gone (the advices received from the 'Institut', Paris), together with the answers given by Dozy and Co. These documents pro and contra have also been published in the *Annales de Chimie*. He is sure that he has left them in the front room of the 'Trippenhuys' (Amsterdam), joined together in a bundle. Perhaps they

are still in the possession of Van Rossum or Davids.

The treatise written by Van Stipriaan Luiscius on the purification of drinking-water is already in Van Marum's possession. Reinwardt fully agrees with his fellow members of the jury. He promises to pay more attention to this affair during the first part of his journey, because Van Stipriaan has been so kind to send him all the documents, after he had embarked. He thanks Van Marum for arranging the auction of his furniture. He has never agreed with Vinkeles to engrave his portrait, although Van Brée had informed him that this artist was willing to produce the engraving for 75 guilders. In the end he has decided to have the prints made. He asks Van Marum to forbid Vinkeles to beg his friends for payment. If Van Marum and De Vries should decide that Van Brée has to paint his portrait, this artist has to do that on his own free will and he has to keep it for himself, although he has declared that they can acquire it at a low price. Reinwardt decides that 100 guilders will be the maximum. Van Marum and De Vries might also see Kemper and Apostool about this question. In his view Temminck is making too much use of the servant Reinders. At the moment Bik, his artist, is making a drawing of the cabin, which will be sent to De Vries. He promises to ask De Vries to give him (Van Marum) a copy of it. He very much regrets not having received Van Marum's letter until now. So he is ignorant of his reaction to the offer he has made with respect to his cabinet. He asks him to convey his greetings to Mrs. Van Marum, to Betje and to his many friends. He has enclosed the letter, destined for his mother, in the letter meant for De Vries.

[NA-RANH 529-20b; ART]

**138. C.G.C. Reinwardt (on the North Sea) to M. van Marum (Haarlem);  
31 October 1815**

During the night the wind has been strong. At the moment – it's 9 o'clock in the morning of 30 October – H.M. 'Admiraal Evertsen' is sailing already in the Channel, between Calais and Dover. Reinwardt feels well, but he could not sleep, because the vessel had been rolling violently. Elout and his son are doing well. At 5 o'clock in the afternoon the 'Admiraal Evertsen' sails off the Isle of Wight. The violent wind keeps the pilot from going ashore on the English coast.

In the continuation of his letter – dated 31 October – Reinwardt reports that he is slightly seasick. He has lost his appetite and is a bit languid. The

ship is still sailing well. Perhaps tomorrow they will leave the Channel. The pilot has to stay aboard until they will arrive at the Canary Islands.

[NA-RANH 529-20b]

**139. C.G.C. Reinwardt (on the North Sea) to M. van Marum (Haarlem);  
8 November 1815**

Because the chief pilot is still aboard, Reinwardt has once again had the opportunity to send a letter to Van Marum and to entrust its expedition to this man. Most likely the pilot will change to a brig, which will take him to Madeira. Meanwhile it has been decided that the 'Admiraal Evertsen' and the other vessels will not cast anchor before arriving at St. Jago (Cape Verde Islands). The rear admiral wants to take advantage of the favourable winds as long as possible. Today the 'Admiraal Evertsen' will arrive at the latitude of Madeira, so as a matter of fact they have already reached Africa and it is really tangible. It is 60° F in the shade! Everybody is staying on deck until late at night, in order to admire the beautiful starry sky. While almost everybody has recovered meanwhile, seasickness has got hold of him at last. Now he has almost recovered, but he still feels languid and has no appetite. Elout and his son are in good health. Because he has decided to add a letter destined for his mother, Van Marum will not have to send her a message himself. Furthermore he will add a letter meant for Van Eys. He promises his friend to look for aloes. Furthermore he hopes that the second shipment of letters will bring him news from Van Marum as well as from other friends and colleagues. Van Marum must ask Temminck to send his 'papers' to him (Reinwardt).

[NA-RANH 529-20b; BOT]

**140. C.G.C. Reinwardt (Port Praya, St. Jago) to Van Marum (Haarlem);  
28 November 1815**

Eight days ago, Reinwardt arrived at the island of St. Jago. The journey took only 21 days. So it has been very successful. Unfortunately, he has been seasick for a rather long time. Now he has recovered again. St. Jago is a rather poor island, but the weather is fairly good. They have already made several trips. The island is completely volcanic, consisting of lava and only scarcely covered with grasses and other plants. The vegetation of the valleys is very peculiar. The orange trees are very beautiful, especially at Ribera Grande. He

has also discovered a beautiful specimen of *Adansonia digitata*, a tree which divides its stem into two branches, just above the ground. One of these trees has a diameter of 39½ feet. Bananas, pineapples and gojavas are the most common fruits, although he personally prefers the fruits of *Laurus persea*. It is very peculiar that the vegetation is rich of American wild plants, while European wild species are rare. In the river beds *Canna indica* is found. At the beaches they have discovered specimens of *Convolvulus haliliensis*. There are also giant specimens of *Tamarindus indica*. He has never seen a more beautiful vegetation than the woods, consisting of *Poinciana pulcherina*. Between the rocks, on which the town of Praya is situated, *Aloë vulgaris* (or is it *Aloë barbadensis*?) is growing in huge numbers. These plants are easily visible from the vessel. The inhabitants of the island are poor and go almost naked. The climate is rather dry, although the soil might be improved if the natives would not be so indolent.

[NA-RANH 529-20b; BOT, GEO, MIN]

**141. C.G.C. Reinwardt (aboard the H.M. 'Evertsen', Cape Town) to J. de Vries (Amsterdam); 10 January 1816**

Reinwardt sends his friend a letter from Cape Town. He informs him that he has mailed a letter to Van Marum from the island of St. Jago. The 'Admiraal Evertsen' is doing very well, but he has been awfully seasick for a long time. Major accidents did not happen. Only one of the cadets has died, after a terrible fall. During the stopover at St. Jago he has been in contact with his companions aboard the other two vessels, which are sailing together with the 'Admiraal Evertsen' to Batavia, the 'Amsterdam' and the 'Admiraal De Ruyter'. In his view, Cape Town is extremely prosperous. The town is well built and the houses are very expensive. It is also a very clean town. The ships have been welcomed at their arrival. He has also made the acquaintance of the reverend Berranger. Within the next few days he is going to make a trip to Stellenbosch. He sends De Vries Elout's greetings. He hopes to receive extensive letters from his friend as soon as he will have arrived in Batavia. He wants to know how Caroline is doing. The same goes for Apostool and for 'his' Museum.

[KB 121 B 8; ART]

**142. C.G.C. Reinwardt (Cape Town) to M. van Marum (Haarlem); probably about 12 January 1816**

Because of his terrible seasickness Reinwardt had to do without the many merry pleasures aboard. Apart from that he has not been troubled too much by inconveniences. With respect to the journey itself, he wants to stress that all went well. The relationship between the passengers is really excellent. There have been no diseases of any importance. There were two deaths. Besides, a cadet fell overboard and was drowned. At St. Jago they have made several trips. In spite of the poverty and the lean soil, it has been worth while to be in such an exotic region. In his view the island must have come into existence as a consequence of the subterranean fires. It is very extraordinary that the deep valleys are so fertile. The company has arrived at the right moment and in the right season. Sometimes the period of drought lasts about nine months. The Portuguese priest, who lives there, has entertained them royally.

Of course Van Marum will understand that because of his illness he has not had the opportunity to keep a journal. The many hours spent at sea did not bring much news. He has not been able to make many notes about Cape Town. It is very prosperous and life is expensive there. Its inhabitants are very welcoming. He had to rent a room and he has already been offered midday meals for free. Although the company is so far from home, God has not stopped looking after it. So there is a good reason for being \grateful. They have especially been touched by the cheerfulness of the inhabitants of Dutch origin. Among others he has made the acquaintance of the reverend Berranger and of Mrs. Rijnveld. He has told her about Holland and about her relatives and friends. She cannot get accustomed to the life at the Cape, until now. The summer is really splendid and the dining table is overloaded with the most delicious fruits. The marvellous surroundings, such as the shady lanes and the slopes of the 'Tafelberg', dotted with flowers, make him feel very happy.

[NA-RANH 529-20b; BOT, AGR]

**143. C.G.C. Reinwardt (Cape Town) to M. van Marum (Haarlem); 15 January 1816**

Reinwardt wants to economize on writing paper and to keep his letters concise. He encloses two other letters: one is meant for De Vries and the

other has to be sent on to his mother. He asks his friend to read the letter to his mother and to send it on to her as soon as possible. He hopes that he has received the letters which have been sent from St. Jago. As soon as he has arrived in Batavia, he will take as many walks as possible in the neighbourhood. Undoubtedly the good 'genius' has already informed Van Marum that he (Reinwardt) is constantly mumbling 'Mr. Van Marum should see that!' Every time he sees a beautiful plant he wants to dig it out in order to send it to 'Plantlust', Van Marum's country estate. Kent, who is constantly in his company, will surely confirm this. The vegetation is really beautiful, although he has been told that most plants have already withered and shrivelled up. It is still easy to find the withered leaves and flower stalks of the *Bulbosa* and to collect many bulbs. Specimens of *Erica*, *Lobelia*, *Passerina*, *Pelargonium tuberosum*, *Polygala*, *Crassula* and many other species are abundantly in bloom now. Every day they are collecting many plants and they will need many days to analyse and to identify the many objects. Regrettably most of the flowers are withered at return. In order to prevent excessive damage, more than one assistant is needed. Well trained and experienced botanists are very difficult to find. Yet, the superficial observations made by him, have been of great value. This value could even have been greater if he would have had the opportunity to share these delights with his friend, or if he could at least send a part of this collection to Holland.

Next, he discusses Van Marum's request for Aloes. It is impossible to find these plants in the vicinity of Cape Town. One has to travel hundreds of miles in order to find some. Furthermore, nobody is cultivating these plants. Anyhow, he promises to lay his hands on a few specimens for Van Marum and for the Count Van Salm. Soon he will undertake an eight days journey on which he hopes to collect several plants. He still does not know in which way these plants have to be shipped to Van Marum in order to guarantee their survival. Everybody, even the secretary of the government, advises against their shipment through England. This might cause too many problems at the Custom houses of Cape Town and England. So they will have to wait for a ship, sailing directly to Holland. He is not sure if such an occasion will present itself within the next two or three weeks. Probably he has to entrust this shipment to the secretary of the government. He will ask him to send this collection (of plants and other objects of natural history) to Van Marum. He is convinced that most people in Holland (or even in

Europe) cannot imagine how difficult and how expensive it is to compose such a sizeable collection of natural history. An average porter or a guide usually costs about 8 to 10 guilders a day. Renting a wagon even takes about 100 guilders a day. Many of the plant species growing here have not been described until now. If he would have the opportunity to ship plants to Holland in an easy way, he would do so, for example specimens of the many fleshy species of Euphorbia and Crassula. Unfortunately, he does not know anybody who can attend such a collection, pack it in crates and ship it to Holland. During this hot and dry season, plants cannot be replanted. He prays that God will allow him to put in at the port of Cape Town on his home passage, during a more favourable season. He promises to make a great effort, in order to collect many plants in behalf of Van Marum, so that 'Plantlust' will be enriched considerably. He is afraid that the Dutch vessels will more and more sail around the Cape and that their captains will prefer to anchor in Rio de Janeiro. The major reason for that new strategy may be that everything in Cape Town is so very expensive. Nevertheless he does not give up hope. Perhaps the occasion to ship a collection to his friend will still present itself in the short run. Furthermore he still has to visit a number of gardens and country estates and to see several lovers of plants.

He really longs for a letter from his friend and asks to be informed about his health. He also wants him to send his greetings to his relatives and to his many friends in Holland. Because of the postal charges, he cannot afford to send separate letters to each of them. He also asks Van Marum to inform Mrs. Kent (Leyden), that her husband is doing well and that he (Reinwardt) expects a lot from him. He hopes that Van Marum will inform him among others about his relatives, about 'his' Cabinet, about the 'Maatschappij' and about the 'Instituut'. He promises to collect some objects of natural history for 'Teylers Stichting' (Haarlem) also, although he did not discover anything interesting at St. Jago, or at the Cape, until now. He hopes that Van Marum will also inform him about the scientific novelties and that he is willing to send him recently published books, like Römer's *Systema Plantarum*. [Johann Jacob Roemer (1763–1819) was a professor of botany in Zurich, Switzerland. With the Austrian botanist Joseph August Schultes, he published the 16<sup>th</sup> edition of Carolus Linnaeus' *Systema Vegetabilium*.] Reinwardt has already received the first volume of Thunberg's *Prodromus Florae Capensi*. Now he is looking forward to receiving its second volume. [must be: *Prodromus*

*Plantarum Capensium* (Uppsala, vol. 1: 1794, vol. 2: 1800); the *Prodromus Florae Capensi* was a book published in 1768 by N. L. Burmann]. He is really surprised that there is no better flora of this interesting region. He knows that Barrow and Lichtenstein were no botanists. Finding interesting specimens of zoology seems to be even more difficult. Yesterday he has received a specimen of *Talpa amata*, while Kent has been able to shoot a small specimen of *Certhia*. He hopes to discover more interesting objects during the trip into the mountains, to be made by him together with Elout, Elout's son, Bik and Kent. They are also going to visit 'Hottentotsch Holland', Stellenbosch, Drakenstein, Parel and perhaps also Tulbach and the 'Brandvallei'. After his return to Cape Town he will try to send Van Marum one more letter. He also hopes to receive letters from Temminck. Furthermore, Brugmans has promised to send him a list of the physicians, who will be sent to Batavia. He ends his letter by expressing his wish that Van Marum will soon receive this letter through Teisset, which first of all it has to be mailed to an English 'Comptoir' (in London). He wishes him good luck and hopes that he will not forget his true friend.

[NA-RANH 529-20b; ZOC, COB, BOT]

**144. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 18 January 1816**

On New Year's Day, Van Marum has received a letter from his dear friend Reinwardt and he has really felt delighted. He was eager to be informed about his health, because of the persisting rumours about its infirmity. These rumours are based on the information sent to the Minister by Buys after which His Excellency has informed him through Van Lennep. It has even been told that Reinwardt has already undergone three bloodlettings and that he has been coughing up blood. So Van Marum was really pleased by Reinwardt's reassuring letter, 'that favourable sign of life', from which appeared that he has only been seasick off Madeira. This will be his first letter to Reinwardt, since his friend has left for the East Indies. He hopes that the continuation of his passage to Batavia will be as successful as the first part of his journey. Of course Reinwardt – once having arrived in Cape Town – has to rest there as much as possible. Van Marum wants to be informed about all kinds of interesting subjects. He promises to read all these messages in the presence of their many common friends, as he has done before with

the contents of Reinwardt's last letter. He has asked Caroline to send her uncle a letter. It is still impossible to impart the successful outcome of the conflict with the 'Instituut' to him, although Reinwardt's explanation will work out positively. Reinwardt's letter has not only been sent to the 'Eerste Klasse', but also to the Ministers Roëll and Falck. Besides, Repelaer van Driel has been informed about its contents and several friends have received a copy. The 'Van Swinden affair' has taken much of his time. Meanwhile Van Swinden has retaken his position in the 'Eerste Klasse'. Unfortunately the documents, which have been in Reinwardt's possession, are still untraceable. In Van Marum's view this is all due to Reinwardt's sudden departure. The auction of his furniture has yielded more than 366 guilders. Kemper has promised to pay the settled price of several objects, which he has kept back. Even Vinkeles has received his 75 guilders, which Reinwardt still owed him, according to Van Brée. The negotiations about the candidates for membership of the 'Eerste Klasse' are still dragging on. He has succeeded in making a favourable agreement with Repelaer van Driel about the take-over purchase of his cabinet of natural history, which will be transferred to the 'Instituut'. After having mentioned the forwarding of several letters from Lüttringhausen (through De Vries), he discusses the fact that several presents have not arrived until now, but that a certain amount of money will be sent to Lüttringhausen. He informs Reinwardt that his financial claim, laid to the municipality of Amsterdam, has not been paid yet. Several of his friends were very pleased by having had the opportunity of sending a letter to him through Van Marum. As it has turned out to be impossible for Reinwardt to send letters to Holland from St. Jago, Van Marum hopes to receive a message from Cape Town. He is eagerly looking forward to that and he really misses his friend. He is also very eager to learn more about the aloes, which his friend will undoubtedly have found there. He ends his letter by observing that a catalogue, written by Count Salm, will be translated into French and German by the author. He hopes to be able to send a few copies of this book to Batavia, together with his second letter.

[NA-RANH 529-20b; BOT, ZOC, ART, KNI]

**145. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Amsterdam); 28 January 1816**

Vrolik sends this letter – addressed to Reinwardt – on purpose to his former address in Amsterdam. It discusses the applicability of sublimate (mercury chloride) for protecting the wooden ship's sides against dry-rot. This treatment has been invented and described by J. Howard Kyan. On 11 January 1816, the documents relative to this procedure have been sent to the secretary of the 'Eerste Klasse' by the Director-General of the Navy and on 13 January 1816 by the Minister of the Interior. Now Vrolik asks the commission, consisting of C.G.C. Reinwardt, J.G.S. van Breda and N.C. de Fremery, to report as soon as possible, in order to comply with His Majesty's request. If the commission should have special wishes with regard to the possibility of carrying out certain experiments, it should, depending on the nature of their request, address itself to the Department of the Navy or to the Ministry of the Interior.

[UBL BPL 609-2; PHY, CHE]

**146. C.G.C. Reinwardt (Cape Town) to M. van Marum (Haarlem); 4 February 1816**

In his last letter – dated 15 January 1816 – Reinwardt has already written about his safe arrival in Cape Town. This letter will be sent to Holland through Teisset (London), like the last one. He also adds a life certificate, in order to enable Van Marum to receive his quarterly salary. He reminds his friend of the fact that his Indian salary has been due on the day he left Holland (29 October 1815). Van Marum will receive one eighth of it, in order to pay several expenses made on Reinwardt's behalf. Perhaps it is sensible to show a life certificate also when he is going to collect Reinwardt's salary as a professor and as Director of the 'Koninklijk Kabinet van Natuurlijke Historie' (Amsterdam). Therefore he will send another copy to Haarlem, through Mr. Tobias, who has planned to leave for Holland within the next few weeks. He still has to update his log book (journal), among others with respect to his trip to the inland. He hopes that it will be possible to leave the letters for his friends and a parcel of seeds behind in Cape Town, for being sent to Holland. Besides, he enjoys good health, in spite of the many fatigues and the extremely changing types of weather. His health has really improved. Everybody is still awaiting the safe arrival of the 'Amsterdam'. Perhaps it

had to make the port of Rio de Janeiro, because of damage. A few days ago the 'Iris' arrived in Cape Town. This means that only three out of six vessels have arrived in 'False Bay' until now. Because of leakage the 'Maria Reijgersbergen' and the 'Braband' had to make a stop-over in England. Furthermore he describes his trip to 'Hottentotsch Holland' and to several other regions of the inland. Everywhere they have been given a hearty welcome. They were overwhelmed by the enormous wealth. One of the most important sources of prosperity of the Cape Province is wine growing. This really yields lots of money. Drought and heat make it impossible to maintain grasslands and to practise cattle breeding. Hiring workmen is very expensive, because a well built slave yields about 20.000 to 60.000 guilders, and sometimes even more. Furthermore there are no Northern Europeans who want to become day labourers. Many farmers are possessing more than 100 slaves. Unfortunately they do not work very hard.

Reinwardt – amazed by the landscapes – has ordered Bik to make several drawings. Even in the driest regions one can still find species of Erica and Protea. Most plants are found in the narrow valleys and crevices and at the feet of the mountains. As a botanist he has preferred to visit these spots. To his regret he is not able to inform Van Marum in detail. He has not had the opportunity yet to collect many plants for him, although he has succeeded in drying a few flowering branches.

Once more he expresses his wish to visit Cape Town on his home passage and to collect as much as possible for his friend. The plants Van Marum has been asking for are all withered. On the other hand he succeeded in collecting a couple of insects, birds and lizards. He still has to climb the 'Table Mountain'.

A couple of days ago he has had dinner at the estate of Lord Somerset, the Governor of the Cape Colony. There are not many literary men in Cape Town. One of them is the Lutheran reverend Hesse (rather experienced in natural history). Another one is Mr. Poleman, a naturalist, who has also some knowledge of chemistry. They both collect and sell objects of natural history. Perhaps they can sell him a collection at the occasion of his next visit to Cape Town and maybe they will also be able to send Van Marum a collection of succulenta and other plants, although they do not have a garden of their own, where they can keep these plants alive until their shipment to Holland. He knows that Lichtenstein has taken advantage of knowing these

gentlemen. Anyhow, Hesse has sent several interesting objects to Blumenbach (Göttingen). Most likely he can do the most profitable business with Hesse, for example by exchanging objects from the East Indies against curiosities from South-Africa. Meanwhile he has discovered a new species of Aloe. Unfortunately he cannot serve his friend any better, although Hesse has told him that he has got a few very interesting plants for Van Marum's garden. Therefore he adds a list of 20 species of Aloe. He is not quite sure about the correctness of their determination. Anyhow, they will be shipped to Holland as soon as a vessel, arriving from Batavia and headed for Holland, will anchor in Cape Town. He promises to double his efforts in behalf of Van Marum, as soon as he has arrived on Java. A vessel arriving from Batavia yesterday has brought the news that they will be most welcome there. He asks Van Marum to inform him about the whereabouts of Mr. Persoon. Where is he at the moment? Maybe Van Marum should ask Cuvier (Paris) or Slingeland (also residing in Paris). He has decided to send a couple of letters, written by Persoon's relatives and by himself, and asks his friend to convey his greetings to all his loved ones. The next day (5 February) he adds a remark, indicating that the parcel of letters and seeds will be taken to Holland the following day and that he will be leaving for Batavia very soon.

[NA-RANH 529-20b; BOT, ZOC, COB]

**147. C.G.C. Reinwardt (Cape Town) to C.H. Persoon (Paris); 6 February 1816**

Just before setting sail to Batavia, Reinwardt sends this letter to his colleague Persoon. He is very pleased to have made the acquaintance of Persoon's sister and his other relatives. He has spent many happy hours 'in the circle of her family'. The letters destined for Persoon, which have been entrusted to him, will be sent on by Van Marum. Perhaps Persoon's address in Paris has been changed meanwhile. He knows that Persoon's relatives are longing to see him, as is shown by the enclosed letters. To please them, he has done some research in order to find out if it will be possible for Persoon to acquire an appointment at one of the South-African scientific institutions. Anyhow, the English government will not lift a finger for Persoon's sake. Furthermore, there are only a few scientists living in South-Africa. There is no botanical garden and there are no collections of natural history. So Persoon will not have any support at all. Nevertheless, Reinwardt cannot advise against a

return to Cape Town. Of course Persoon's relatives will give him a hearty welcome. On the other hand he is too much a renowned scientist to work beneath his level. Of course he could teach botany, set up a botanical garden, cultivate exotic plants for shipment to Europe, or collect peculiar objects of natural history, which might be of interest to the English naturalists passing through Cape Town. Generally these objects are well paid for. Reinwardt begs him to send his answer to these proposals directly to Batavia. He offers to collect cryptogams for him, once he has arrived in Batavia.

The season in Cape Town is still very hot. So collecting plants makes no sense. In spite of these inconveniences he has had many opportunities to admire the African flora. Many species of *Erica*, *Protea*, *Dioscorea*, *Lobelia*, *Gnidia*, etc. are blooming. The climate seems to be very healthy. The stormy south-easterly winds are even worse than the heat. During his home passage he wants to stay in Cape Town much longer, in order to collect as many objects of natural history as possible. Perhaps Persoon will have the opportunity to accompany him on his excursions. He wishes him all the best and bids him farewell. He hopes that Persoon will remember him and that he will send him a letter soon (if possible containing a few botanical novelties). [In a postscript he asks Persoon to convey the enclosed letters to Van Marum (Haarlem)].

[UBL BPL 243; BOT, ZOC]

**148. C.G.C. Reinwardt (Cape Town) to M. van Marum (Haarlem); 7 February 1816**

Reinwardt – still in Cape Town – hopes that Van Marum has meanwhile received the letters which have been sent to him through Teyssset (London). There is only little time left for preparing the parcel mentioned in his last letter. He adds a few lines meant as a farewell. Of course Van Marum will have learned already that his journey to Cape Town has been successful and that he has enjoyed his stay. Most probably they will set sail tomorrow and as a consequence he does not have the opportunity to send an account of the rest of his stay in Cape Town. He has already informed D'Ailly about his trips and has asked to impart this news to Van Marum. He encloses a collection of seeds of beautiful plants and he hopes that the reception of this present will please him. He is not sure about their names. A duplicate of a

life certificate has also been included. Finally he sends Van Marum and his relatives his greetings and assures him of his unchangeable devotion.

[NA-RANH 529-20b; BOT]

**149. M. van Marum (Haarlem) to C.G.C. Reinwardt (at sea); 23 February 1816**

With both hands Van Marum seizes the opportunity to send Reinwardt a letter. He also encloses a copy of his first letter, which has been kept too long by Vollenhoven. He has no important news to report. The affair of Reinwardt's overdue salary (to be paid by the municipality of Amsterdam) has not been arranged yet. He hopes that Reinwardt will soon be able to inform him about the favourable completion of this affair. Since Reinwardt has left, he has received several agricultural journals, which will be sent on to Batavia. The bearer of this parcel has asked him to recommend him (to Reinwardt's attention). Van Marum decides that it would be better to send this package to the East Indies through the Minister of Colonies. He continues by giving some details on the 'Kabinet van Natuurlijke Historie' and on the death of Vinkeles. Van Marum is eagerly looking forward to receiving news from the Cape of Good Hope.

[NA-RANH 529-20b; ZOC]

**150. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Amsterdam!), J.H. van Swinden (Amsterdam), J. Florijn (Amsterdam), A.C. Paets van Troostwijk (Amsterdam) and G.Vrolik (Amsterdam); 17 April 1816**

Vrolik informs the addressees that they have been appointed members of the commission for the Salt, and that it has been decided that Reinwardt will be replaced by P. Driessen (Groningen).

[NA-RANH KNI 175-35.264; CHE, PHY]

**151. C.G.C. Reinwardt (near Batavia) to M. van Marum (Haarlem); 23 April 1816**

Reinwardt informs his friend that – thank God – the 'Admiraal Evertsen' has almost arrived in the Roads of Batavia. It has often been windless and they have also been hampered by head winds. Apart from his sickness he has always been fine, like Mr. Elout and his son and the other travellers

have been. Mr. Nahuys has just been aboard to see them. He told him that an English vessel – being on its home passage – will anchor in the Roads tomorrow. He will send a letter to his friend with this ship, informing him about his safe arrival in the Roads of Batavia. The ‘Amsterdam’, which has left Cape Town on 22 March, will soon arrive in Batavia too. The ‘Admiraal Evertsen’ is sailing in the ‘Strait of Sunda’ now and the weather is very hot, but not unbearable. Meanwhile Mr. IJsseldijk has offered to accommodate him. He is too busy to write a detailed letter. Therefore he asks Van Marum to be so kind and inform his mother and his many friends about his safe arrival. He promises to send them a letter as soon as possible. He ends his letter by signing with his cordial greetings and underlines his feelings of friendship.

[NA-RANH 529-20b]



Recitatorij den 3 Januarij 1817.

Amice!

Wat ik hoop, en wat ons niet eerder twee brieven  
van my naar U bevinden, Uyn Verhaal nog een paar dagen  
ingezonden hebbende, zal het U de hier ingeladen Kopie  
nog kunnen verspreiden, en ook naar de brieven en  
myne moeder naar het U kunnen ~~af~~ in gezonden  
brengen! Den juffr van Keyserkele ik, om de Bekering,  
omstandende te doen blyven, daarvan afgelaten, die kon  
toe op een volgende. Indien de heer de Vries eenige  
blyfende voor haeren, wanneer ik hem verzoekt heb,  
den meent, wilt hem die dan verspreiden.

Waarde heb ik niets liever te zeggen, dan myne  
oprecht dankbetuiging voor alle Uwe Lieve die  
U tevens my U laat megevallen, myne gracie  
en liefde, en hetgeen en myne heete wenschen  
voor Uwe Noordnederlandsche Welvaart

C.G.C. Reinwardt

## CHAPTER 7 – THE DUTCH EAST-INDIES (PART 1)

### 152. C.G.C. Reinwardt (Rijswijk and Tjilodong, near Batavia) to M. van Marum (Haarlem); 24 May 1816

Reinwardt strongly hopes that Van Marum has meanwhile received his short letter, sent from the ‘Strait of Sunda’. A month ago he arrived on Java (on 26 April 1816). This letter will be sent to Holland with the ‘Spion’. The Governor-General has ordered its captain to return to Holland. Except for a short period of seasickness he has felt well during the passage to Batavia. Between Holland and Java several children were born. Their mothers are well. Food and drink aboard have been of a good quality. He has received several offers for housing and he has accepted the offer made by Mr. and Mrs. Van IJsseldijk. One of their houses is situated in Rijswijk, in the hills, one hour from Batavia. This region has a healthy climate. He has been given a warm reception. His health is excellent. Every day the temperature is fluctuating between 78° Fahrenheit in the morning and 84° in the afternoon. The atmospheric pressure even fluctuates less. Everybody has to adapt one’s way of life and – for example – to take an afternoon nap. There are moments when the climate is as healthy as in Europe. He has already made a short trip to Buitenzorg, where Van IJsseldijk is spending much of his time with his family at a magnificent estate.

Reinwardt has great plans with regard to the research he has planned to carry out. He has also met Mr. Engel, whose brother is the first clerk of the ‘Instituut’. Reinwardt is overwhelmed by the beauty of the ‘bovenlanden’, words are failing him – ‘the lush vegetation (thanks to the fertile soil) and the beautiful mountains are most impressive’. The soil is really very rich in humus. All the plants are gigantic: the towering ferns, the huge trees, the many kinds of climbers and twining plants, epidendra, Piper species and so on. The highest mountain tops are completely covered with woods. At the moment they are preparing to climb one of these mountains. It will be necessary to cut out a path. Along the trail, bamboo huts have already been built. Several security measures have to be taken. Horsfield and Raffles did already climb one of these mountains. Until now, the other mountain has not been climbed, as far as he knows. Raffles has made many observations and he has collected numerous objects of natural history. He

has also brought together many antiquities, drawings and manuscripts. He has taken the whole collection with him. Actually he has come out with all the material needed for the publication of a *Flora Javanica*. He has also drawn a physical map of Java and a complete mineralogical description of the island of Banka. As a matter of fact the eight issues of the *Verhandelingen van het 'Bataviaasch Genootschap van Kunsten en Wetenschappen*, are completely filled with contributions written by Horsfield and Raffles.

Nevertheless, Reinwardt still hopes that Horsfield may be of service to him; although the 'Genootschap' is complaining that he is not very communicative. Perhaps he has thought that making these efforts would only be casting pearls before swine. Probably many of the members of the 'Genootschap' have not been able yet to estimate the value of his contributions. Most of these members do not play an active role in science, although there are a few among them, who might be of help to him (Reinwardt). For example, he has already been able to collect original botanical letters (from L.), dealing with the plants of Java and also a few drawings of Hindu temples of East Java, large and solidly built. Westerman, a Danish naturalist, has shown him a beautiful collection of Javanese insects, an admirable collection! Besides, only Horsfield and Engelhard seem to equal him. He has learned that the collection, once owned by the 'Genootschap', has perished meanwhile. He thinks that it will be easy to collect many insects. It will be far more difficult to preserve these animals (because they will be falling apart as a consequence of moisture and vermin). Westerman has told him that he had to throw away the oldest part of his collection. Meanwhile this naturalist has returned to Europe.

Because of his many social obligations, there is not much time left for his work. The same goes for his official duties with respect to the government, because the Commissioners General have not been authorized yet to assume power. First of all they have to receive instructions from Bengal. He prays that these will soon arrive. Meanwhile, everybody is eager to see the English leave. Five vessels have arrived until now: the one Reinwardt has been on board of, the 'Admiraal Evertsen', the 'Amsterdam', the 'Admiraal De Ruyter', the 'Iris' and the 'Spion'. The troops are bivouacking at 'Meester Cornelis', about an hour from Batavia. The troops, which arrived aboard the 'Admiraal De Ruyter', about a month ago, have disembarked yesterday. There are many sick persons. Mr. and Mrs. Van der Capellen, who are doing

fine, are living in a beautiful house, next to the one where he has been accommodated. During its passage the 'Admiraal De Ruyter' has been anchored for about a month near San Salvador, because of repair. Mrs. Van der Capellen has been so kind to collect and dry plants for him.

The Dutch community has been gravely concerned about the fact that General Anthing and many others have not arrived yet. It was already known that off the coast of Sumatra a number of crew members had disembarked and changed to a schooner, specially bought for that purpose and that it has set course to Batavia. The bad quality of that vessel, the unreliable crew and a tempest must have caused many problems. In Reinwardt's view these problems must have resulted from a conflict between General Anthing and the commanding officer of that ship.

Unfortunately he has been informed too late about the near departure of the 'Spion'. Otherwise he would have added some seeds and a few plants to this letter. Soon a new opportunity will present itself, he thinks. Besides, he did not find any succulents here. He knows that they do not grow on humus soils. Nevertheless he will not forget that Van Marum and De Graaf are especially interested in these plants.

From the *Staatscourant* (read by him until the issue of 28 November 1815) he has learned about the reorganization of the academies (universities) and athenaeums and of course about the gift of the collections of natural history, which have been brought back to Holland from Paris, by Brugmans, to the University of Leyden. When he was still in Amsterdam, he has thought already that it would be decided in that way, when he learned that Brugmans had been charged with its reclamation. However, he expects frequent controversies between the 'Kabinetten' of Amsterdam and Leyden. Of course it is fair that Leyden will have a 'Museum van Natuurlijke Historie'. He has also learned with pleasure that several meritorious men have been appointed governor or professor, like Bennet, Kops and Vosmaer. He asks Van Marum to send them his congratulations. He is especially happy about the nomination of Bennet. He asks Van Marum to send him more news about his many friends. The uncertainty about their destiny and health alarms him. Of course Van Marum will be occupied by his many activities in behalf of the 'Maatschappij'. He would really like to attend tomorrow's meeting. He asks Van Marum to send him this year's programme. Meanwhile, the 'Bataviaasch Genootschap' has accepted all the documents, which he has

taken with him from Holland, without any comment, not even by Siberg. Siberg has put that he had not received any letters from Van Marum, nor did he mention that he still owed the 'Hollandsche Maatschappij' the sum of 1.000 guilders overdue, being his contribution for 20 years as one of its directors. Reinwardt hopes that Siberg will act like he has done with respect to the 'Zeeuwisch Genootschap der Wetenschappen', by sending his 1.000 guilders just like that. How is the 'Kabinet' doing? How is the relationship between Van Marum and Temminck? How do D'Ailly and Landré behave? How has Van Swinden reacted at his statement, sent just before he left? How does he behave now? Is it possible for Van Marum to convey his greetings to the members of the 'Vrijdagsch Gezelschap' and also to L'Ange, Van den Ende and De Rhoer, as well as to the Directors of 'Teylers'?

Probably Java almost completely exists of volcanic material, so it will not yield much in the field of mineralogy, as he has learned from Raffles's messages and notes. The soil is mainly composed of clay, which contains much iron and even more of volcanic lava. There are no original rocks and mountains. The other islands seem to exist mainly of granite, for example the island of Sumatra. This phenomenon has to be examined. He has already received several samples of rocks (agates from Cheribon) and also mercury. These facts give him hope that his efforts will not be completely fruitless, although his journey through Java will have to be postponed until after the colony will have been transferred by the English. Such a long journey has to be prepared well. Nevertheless, he expects a lot from the investigations of nature, because it has been told that Java is one of the most beautiful countries on earth.

Furthermore he really likes his stay here. His life is quiet, undisturbed and close to nature. There are many opportunities for research. Getting to know what is simply at hand really pleases him. Most probably he will also have the opportunity to practise zoology and comparative anatomy. Soon he will order to send his draughtsman Bik to Batavia. He is an excellent drawer of landscapes, who has already proved his talents during their stay in Cape Town and its surroundings. Perhaps a second artist should be sent to Batavia from Holland, if Elout keeps on giving orders to Bik. Again he has enclosed a life certificate, of which he will send a few copies afterwards. He has also enclosed a bill of exchange, to be used for paying Mr. C. (Calkoen), on whose behalf he has sold several maps, as well as a letter to his mother and

another one written by Kent, addressed to his wife. Reinwardt knows that his mother is longing for news from him. This longing for his letters and her hope that he will return safely, is keeping her alive.

Kent has still a lot to learn, but he is willing to do so. They will really have to cooperate for the sake of mutual benefit. He asks to give his sincere greetings to Mrs. Van Marum and Betje. He hopes to hear soon from them and he promises to send many extensive letters. Finally he observes that he has written these last few words in Tjilodong and that he has sent this letter from there.

[NA-RANH 529-20b; BOT, ZOC, GEO, MIN, ART]

**153. C.G.C. Reinwardt (Tjilodong, on Java) to J. de Vries (Amsterdam);  
25 May 1816**

Reinwardt – still at Tjilodong – gives this letter to Mr. Van IJsseldijk (Mrs. Calkoen's father), who will board on the 'Spion', which will set sail for Batavia. He repeats what he has already written – that the passage from Cape Town to Batavia took 11 weeks, but that it has gone well. He stands the climate of Java very well. He has been staying at Van IJsseldijk's, partly at his house in Batavia and for the rest at his country estate in Tjilodong in the mountains. Nature is splendid here. Although he is missing his friends, he will not get bored, not in the least because of the many invitations and his eager to do research. Furthermore he has to decide about a place of his own. It is up to him, he has a free choice. This activity has to wait until after the cession of the colony by the English, which has been obstructed until now. He has not been working regularly, yet. He wonders if the Dutch ladies, living in the Netherlands, would like to surround themselves by male and female slaves like they do here. He has also been advised to do so, a suggestion at which he felt annoyed. He is also happy that the Van IJsseldijk family and their inmates do not practise the bad habit of chewing sirih, to which many ladies surrender themselves. Elout, Van der Capellen and their wives are really enjoying their stay. They like it better than staying at the Keys ('Kei-eilanden'). Until now, they have only seen a minor part of Java. He is very eager to meet the 'unknown'. From the journals he has learned about the various appointments at the 'Academy' of Leyden and at the 'Athenaeum' of Amsterdam. He is very pleased to have read the names of Kops, Bennet and Vosmaer, Schröder and Weiland (?). He hopes to receive

many letters from De Vries and to be informed about the major events in Holland. He would like to receive the important new literary publications. He has asked Van Marum to reimburse the freight to De Vries. Probably he will be rather occupied (in the near future), because he will also have to pay attention to the languages and antiquities of Java. Meanwhile he has also learned a few words of malayan ('maleisisch'). He ends his letter by greeting his friends and asks De Vries to apologize him for not having sent any letters to Van Eys, D'Ailly, Kemper and many others, until now. Within short he will rectify this omission.

[KB 121 B 8; BOT, ETN]

**154. C.G.C. Reinwardt (Campo Macassar) to M. van Marum (Haarlem);  
21 June 1816**

Because he has just returned from the country estate of the rear admiral Buyskes and the vessel, which will take his letters to Holland, is leaving tomorrow, he can only write a few lines. He has already informed Van Marum about his safe arrival and his good health. He has also sent him a life certificate, as well as a few letters (for De Vries, for his mother and so on). Nothing else has happened since then. The cession by the English representatives is continually postponed. Meanwhile, other orders have been received, so this important affair will soon be arranged. He has almost continually been in Tjilodong at the estates of the Van Ijsseldijk family. There he has grasped the opportunity to devote himself completely to botany. Every day he has made new discoveries. The vegetation is very rich of species. Furthermore he has been given a living orang outan(g) for a present. This animal indeed misses the thumb nails of his feet. Immediately after his arrival in Batavia he has asked the 'Weeskamer' to inform him about Mrs. Waardenberg. He adds its answer, the originals of a couple of official documents and a copy of his second life certificate to this letter. He asks Van Marum to inform his friends that all is well and he asks him to convey his greetings to Mrs. Van Marum and Betje. He has not got the time to write more letters. He eagerly hopes to receive letters from his friend (whose last letter, received by him, was sent on 25 December 1815).

[NA-RANH 529-20b, BOT, ZOC, COB]

**155. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 21 June 1816**

Van Marum is very pleased by Reinwardt's letters, sent from Cape Town on 14 January 1815 (received at the end of April 1816) and 14 February 1815 (received early May 1816). He really enjoyed the reports about the many discoveries in the field of natural history, especially those, regarding botany. He would have liked to be Reinwardt's companion during the trip through the 'Cape Province'. He hopes to be informed more in detail after Reinwardt has returned to Holland. Yesterday, he has been told that it will be possible to send letters to Batavia with the merchant vessel 'Elisabeth' (captain Fakes). Therefore he restricts himself to the essentials. First of all he gives a survey of the various sums of money, received and spent on behalf, and in behalf, of Reinwardt. All his debts have been paid off, as far as he knows. Reinwardt's interest giving capital has increased by 2.000 guilders, thanks to the transfer of Reinwardt's personal cabinet of natural history to the municipality of Amsterdam. He is proud of having served his friend so well. He has also succeeded in making arrangements, regarding the dismissal of certain debts. Unfortunately he has not been able to see Reinwardt's niece Caroline and to ask her to send her uncle a letter.

Furthermore he has planned to make a trip to Ghent and Brussels. Meanwhile, the 'Amsterdamsch Kabinet van Naturaliën' has been transported to the 'Trippenhuys' (KNI). Van Marum has assisted in the new arrangement of this cabinet, together with Mr. Sandra. Undoubtedly this young man will prove to be a most promising and curious pupil, as Reinwardt will see, after he has returned to Holland.

As according to his calculations, Van Marum supposes that Reinwardt will have arrived on Java in the course of May (1816), he hopes to learn soon if his friend does endure the climate. He also hopes that Reinwardt has received the letters sent by him last January and February. The money, which the municipality still owes to Clifford, Apostool, De Vries and Reinwardt, has not been paid yet. There are even rumours that complaints should be addressed to His Majesty. Van Marum adds a few remarks with respect to the programme of the 'Maatschappij', which has been added to this letter. In it the honourable membership, which has been granted to Reinwardt, is mentioned and also the fact that he has been awarded a silver medal. He proposes to hand it over to his niece Caroline, in accordance with the

promises Reinwardt has made during their common trip to Lüttringhausen. He ends by expressing his wish to be remembered by his friend and adds the best wishes from his wife and Betsy.

[NA-RANH 529-20b; ZOC, BOT, KNI]

**156. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 22 June 1816**

Yesterday Van Marum was pleasantly surprised by receiving an agreeable and very extensive letter from his dear friend Reinwardt. It was dated 1 January 1816. Fortunately his previous letters have been received meanwhile, so Reinwardt will be convinced that he is grasping every opportunity to send letters to Batavia. Unfortunately, until now he did not receive any of the 12 promised pots of ginger, which must have been added to Reinwardt's last letter. Meanwhile he received a letter from Mr. Elout. From it he learned that Reinwardt had sent him a letter on that same day. Tomorrow he will leave for Ghent and Brussels. At that occasion he will also pay a visit to Mr. Parmentier (Enghien, near Brussels). This trip will take several weeks. He hopes to acquire a collection of plants for his hothouse. He has not got the time now to inform his friend in detail about this trip. However, he will discuss the most important aspects of Reinwardt's letters, dated 12 November 1815 and 1 January 1816. First of all he wants to stress that he regrets the fact that his friend is still rather occupied by his administrative tasks, relative to the organization of education, and that, as a consequence, he does not have the opportunity to devote himself completely to his most beloved activities, the studying of nature, although this was the main object of his voyage to the Dutch East Indies. Besides this, his administrative task is keeping him in Batavia. He strongly hopes that Reinwardt will not sacrifice himself completely to the unusual ideas of a couple of important government officials. His relatives and best friends would deeply regret that. Fortunately Reinwardt has a very comfortable house in Buitenzorg at his disposal. He sincerely hopes that he will refuse to carry out certain laborious tasks if the government does not appoint an assistant. Furthermore cashing in Reinwardt's salary is giving him a lot of bother. He dislikes the fact that Kent has not sent any money to the Netherlands in order to sustain his wife and children. After the money, left by Kent to Van Pottum, had been paid to Mrs. Kent, she has begged him more than once to sustain her. After having

consulted De Vries, and assuming that the money will soon arrive from Batavia, he has continued his payments to Mrs. Kent. Otherwise this family would have died of starvation. Meanwhile the third trimester of Reinwardt's salary has been paid, after the life certificate has been received. D'Ailly senior has sent the books, Reinwardt had asked for. He is very pleased by the fact that his friend has expressed his satisfaction about the way he has handled his affairs. Nevertheless Van Marum regrets the fact that he will only be able to raise a modest sum of money for his friend. Landré senior has promised to inform him about the embarkation of his son for Batavia. He warns his friend not to attach too much credence to fine promises, made to him. Besides, in order to preserve his health, he should not stay on the island of Java any longer than has been agreed. Furthermore he did not receive any more messages from Lüttringhausen. He is occupying himself most of the time with his plants. Therefore he is looking forward to receiving shipments of plants from Batavia. He adds the kindest regards from his wife and Betsy. Until now Goldberg did not pay the fourth trimester of Reinwardt's salary. He did not receive the life certificate relative to the first trimester of 1816 (the first year of Reinwardt's stay in the East Indies).

[UBL BPL 2920b; BOT]

**157. C.G.C. Reinwardt (Rijswijk, near Batavia) to M. van Marum (Haarlem); 13 July 1816**

Reinwardt hopes that Van Marum will receive the last letters, sent by him (dated 2 May and 21 June 1816). To the first one he has added a letter to De Vries, a bill of exchange and a letter to his mother. To the second one he has added a letter to Mrs. Waardenberg, a life certificate and another letter to his mother. He enjoys good health, also when he is staying at the country estates 'Tjilodong' and 'Kramat' (in the higher regions). The cession of the colony has not been carried out yet. Therefore he has to stay in Rijswijk for the moment. In the hills the nights are colder and the rainfall is more abundant than in Batavia. These facts are facilitating the cooling off. According to his own barometrical calculations, the 'Kramat' estate is situated in the mountains, about 2.400 feet above Rijswijk. Two of his barometers are still undamaged and they are still functioning, so he will be able to carry out reliable altimetries. He hopes to discover many new life forms and other objects of natural history. Therefore he has ordered Kent

to stay at 'Tjilodong'. Kent is practising hunting, stuffing birds and other animals and drying plants as well. Reinwardt has to complain about Kent frequently, because the sloppy way in which his assistant is carrying out his tasks has already caused the loss of many objects of natural history. At last Kent seems to have decided to mend his ways. Until now, collections of insects, dried bird skins, dried plants, a few snakes in liquor and a few lacertae have been built up. Although he has already had several opportunities to become more familiar with the vegetation, studying and analysing it is still very difficult. Only a minor number of plants is already known, even less have been described, often inaccurately or even incorrectly. More and more he doubts if it will be possible to acclimatize Javanese plants in Europe, especially because of the peculiar requirements of these plants, with respect to their habitat, for example those, made by the Parasiticae, Epidendra, Cymbidia, Filices and so on. Probably many of these plants can only grow in the immediate vicinity of certain other plants, or they need to grow on the trees in the woods covering the mountain slopes. Several species seem to shoot from the stems of certain trees. He promises to send his friend a monograph of one of these species. At one of the next occasions he will try to send him seeds, although he fears that they will not germinate easily in Holland. Annual plants are rare in Java. Among the succulents, for which Van Marum has shown special interest, especially *Bryophyllum calycinum* (see: Haworth, *Plantae Succ.*, p. 110) has attracted his attention. He adds a few peculiarities. It will also be possible to order this plant in England. It is the most rapidly reproducing plant he has ever seen. Even leaf fragments, if put in the soil, will produce new plants.

He continues by giving some details of Orchideae and Asclepiadaceae. Meanwhile he has understood that the Cape of Good Hope has to be regarded as the country of the succulents. He is also astonished by the tree ferns, often offering a growing place to several other species. He mentions the living orang outan, which he possesses already for some time, as well as a snake, a few monkeys and several birds. This menagerie cannot be extended, because taking care of these animals will take too much time. The Commissioners are in good health. Elout has asked him to convey his greetings to Van Marum. Because the English army will probably embark before the end of the month, the Commissioners will become increasingly busy. They will also be occupied by the arrangements which have to be

made with the two Javanese rulers. He expects Van IJsseldijk to be appointed special envoy, because he has already been serving in that capacity. He has asked him to be his companion. Reinwardt does not expect that this is going to happen, because he has to carry out other administrative duties. He is very grateful for the continuing friendship of Mr. and Mrs. Van der Capellen. They are really interested in his activities. He hopes to receive news from Holland soon. Until now, he did not receive many letters. He ends his letter by expressing his feelings of friendship and attachment. There's no time left, this letter has to be sent now.

[NA-RANH 529-20b; ZOC, COB, PHY, BOT]

**158. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 17 July 1816**

Van Marum has been informed that he will soon have the opportunity to send a letter to his friend. He promises to add a copy of his second letter (i.e. the first letter sent by him to Batavia), to which he adds a copy of Reinwardt's state of income and expenditure. This document will prove that he has strained himself to promote his friend's interests, among others with regard to his claim with the municipality of Amsterdam. Meanwhile His Majesty has ordered the immediate payment of all overdue sums of money. He has also been informed that Reinwardt's salary for the first trimester of his stay in Java will soon be paid. He explains how he has planned to put the money out. He also adds a second letter from Lüttringhausen (see also his letter, dated 21 June 1816). He expresses his appreciation for the plant exhibition, which has been held in Ghent. The 'Botanical Society' of that city has received a list of seeds from Baron Van der Capellen through the Governor of the Cape Colony. Having had the opportunity to throw a glance at that inventory, he was astonished about the fact that it gave the names of many species of *Protea* and other genera, of which he knew that they were still very rare in Holland. He wonders how Van der Capellen has managed to put together on a list so many botanical treasures. He must have been assisted by an experienced botanist. Now he is looking forward to receiving a parcel from Cape Town. [He does not mention the possible dispatching of bulbs from the Cape Province.] He is impatiently looking forward to succulents and other plants, which Reinwardt has ordered for him in Cape Town. He wonders if it will be possible to obtain beautiful

South-African bulbous plants from the experienced naturalist Hesse, at least if Reinwardt is willing to use his influence with that man in order to make a nice collection for his friend. Why not? Reinwardt speaks highly of Hesse! Undoubtedly there is someone living in the Cape Province, who has already collected these species. Perhaps Reinwardt will be able to bring him into contact with a South-African botanist, or with a bulb grower.

Furthermore he informs him that the Count Van Salm has not succeeded yet in getting published his 'Catalogue Raisonné du genre Aloë'. He has also visited Mr. Parmentier, who lives in Enghien (near Brussels). Parmentier owns a rich collection. He seems to be well disposed to complete Van Marum's collection. He has already sent him two crates, containing 49 plant species. Most of these are unknown to him, or are even new species. This shipment also contained a few shrubs. He has also succeeded in completing his collection in Antwerp and Brussels. His servant Ferdinand is becoming more and more satisfactory. An orangery is being built on his estate 'Plantlust'. As he is missing his friend Reinwardt, cultivating plants is really a balm for his feelings. Bennet is suffering from severe sciatica and immobility of his legs, as a result of which he is confined to his house. So he does not see him very often.

This letter will arrive in Batavia through the 'Soerabaya' (captain Willem Lane). He promises to ask Caroline to send her uncle a letter. He will ask several of Reinwardt's friends to do the same. He adds Jacobson's greetings. Sandra has decided to continue his studies in Utrecht.

The day before yesterday, he has received the most recent letter, Reinwardt has sent from St. Jago. He did not receive any letters from Java until now. He confesses that his friend's letters are reread many times. He hopes that Reinwardt will inform him as extensively as possible about the results of his observations in the field of natural history. The descriptions, which he has given of the vegetation of St. Jago, have fascinated him. Speaking for several of their mutual friends, he asks Reinwardt to send a small barrel of ginger, if possible not a too small one, although the freight must not be too high.

[Van Marum has added the statement of income and expenses – made in behalf of Reinwardt – relative to the period of October 1815 until 21 June 1816]

[NA-RANH 529-20b; ZOC, COB, BOT]

**159. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 18 August 1816**

Van Marum has been informed by Mr. Feysset (London) that it is possible to send a letter for Reinwardt with the 'Canton', at least if it is offered for shipment immediately. Therefore he has to write this letter in a hurry. He adds a copy of the last one he has sent (n<sup>o</sup> 3), dated 17 July 1816. Meanwhile the municipality of Amsterdam has paid Reinwardt's salary due (8 coupons, worth 200 guilders each, which will yield 4% interest until their redemption drawing in 1819-1820). The rest of the sum owed, that is to say 77 guilders, will be paid soon. The cash money has been placed as a loan against the profitable interest of 5½%. As soon as he will receive the second part of the salary due, he will put out 1.000 guilders again. He is very happy to inform his friend that Mr. Tobias (from Cape Town) has sent him the seeds of 46 different plant species and five species of bulbs. He also hopes that the succulents, which have been ordered for him in South-Africa by Reinwardt, will soon arrive. He has sown the seeds and the first plants are already germinating.

He adds an inventory of seeds, sent from Cape Town by Baron Van der Capellen to Mr. Hultheim of the 'Botanical Garden' of Ghent. A number of the species mentioned in the list, are already in his possession. He has deleted their names. He would like to receive the other species, as well as a number of seeds of each of them. His orangery has nearly been completed. It has almost completely been built of glass. He hopes to change the cold greenhouse into a hot house, next spring. The last few weeks it has been raining heavily in several provinces.

The 'Trippenhuys' had to be reconstructed because it had to house the 'Kabinet van Natuurlijke Historie'. After this reconstruction came to a standstill, it has been continued again recently.

If there had been more time Mr. Sandra and Caroline would have written letters too. They have promised to hand their letters over to Mr. Feysset directly. Three weeks ago His Majesty has told him personally that the vessel, on which Reinwardt has been sailing to Batavia, has been hailed by an English vessel, which had left Batavia on 29 March. So it is possible that Reinwardt has arrived in Batavia about early April. He expects that this information will soon be confirmed by a message, which he hopes to receive from England. Furthermore he observes that during the conversation with

His Majesty Reinwardt's fitness for the job, which has been offered to him, has also been discussed, as well as the fact that Holland has to miss him for several years.

He has to send this letter now and to deliver it at Feysset's. He is longing for the reception of Reinwardt's first letter from Batavia. A more extensive letter will soon follow. If Reinwardt promises to send his observations to him, he will inform all his friends. He wishes him good luck and he hopes that the climate will not harm his health too much. As soon as Reinwardt will notice the first signs of sickness, he should return to Holland immediately. He definitely should not stay longer on Java and so far from his friends than is strictly necessary (according to the original plans).

[NA-RANH 529-20b; BOT]

**160. R. Dozy (Batavia) to C.G.C. Reinwardt (Batavia); 13 September 1816**

This official document, written by the State Councillor, charged with the portfolio of the Department of Commerce and Colonies in The Hague, and sent to the Commissioners General for the regain of the East Indian colonies on 25 March 1815, has – at their orders – been handed over to Reinwardt by the Secretary General in Batavia. Reinwardt has accepted the task to make inquiries of several important subjects, related to the statistics of the Dutch colonies. He has asked to be informed about the details of the instructions relative to this task, in order to work fruitfully in this field. In order to serve him Dozy has made a survey of its various aspects. Of course he would have sent this document to Reinwardt immediately if he would have been ordered to do so. He would be pleased if the Commissioners General could supply him with the results of the inquiries made by Reinwardt. These questions are focussed on three types of regions: the Dutch colonies in the strict sense, the regions ruled by a sovereign (a vassal), which are depending on the Dutch administration and finally the independent regions, maintaining connections with the Dutch possessions in the East Indies. Reinwardt has to make inquiries of a geographical and a physical nature and furthermore about the inhabitants, mining, agriculture, cattle breeding, crafts, commerce – also with regard to the English East Indies, the Spanish, French, Portuguese and Danish colonies, to the trade with China and Japan, Persia, the remote islands, like New Guinea and New Holland and with Europe and North

America. He also has to make inquiries with respect to the arts and sciences, not only in the Dutch East Indies, but also in the foreign colonies. Finally he has to examine the educational system and the health care system of the Dutch East Indies.

[NA 2-21.204(9); GEO, MIN, ANA, ETN, ART, AGR, TEC, BOT, PHY, ECO, MED]

**161. C.G.C. Reinwardt (Batavia) to J. de Vries (Amsterdam); 14 September 1816**

Reinwardt is very pleased that he has received a letter from his dear friend Jeronimo DeVries. He has been very worried because he did not receive any sign of life from him until then. His happiness would have been complete, if a letter from his mother and his two sisters had been added. Perhaps they were ignorant about the departure of several ships, reason why they did not send any letters to Van Marum. He tries to call to mind the last birthday party of De Vries's wife in Amsterdam.

Reinwardt is very satisfied about his health. To his regret most people here are less hearty than in Holland. He feels especially at home at Elout's, Van der Capellen's and General Anthing's. Only very recently the government of the Dutch East Indies has been transferred to the Commissioners General. Not until now, he has been able to carry out his orders. For practical reasons he has been looking for a house in Rijswijk. Actually he has bought one, nearby the homes of Van der Capellen, Elout and Van IJsseldijk. Soon he will start the laying-out of a spacious garden. All these necessities are very expensive. So he has to economize. His draughtsman, who does not work very hard, is doing fine. Kent should also try to achieve more. Finally he sends his greetings to his family and to his many friends. He underlines that they are often on his mind.

[KB 121 B 8; BOT, ART]

**162. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 14 September 1816**

On 12 August 1816, Reinwardt has received Van Marum's letters, dated 18 January 1816 (n° 1) and 23 February 1816 (n° 2). He has been waiting for letters for a long time. He is very happy about the good messages from Holland and thanks his friend for being so kind to promote his interests.

In addition to these two letters he has also received the English books, sent to him through Madeira. Therefore he thanks Mr. Vollenhoven. Meanwhile Van Marum's letter, dated 25 February, has also arrived, together with the journals. The arrival of the 'Nassau' – a few days ago – has brought him new happiness: this time he received letters from Van Eys, D'Ailly, De Vries, Wenckebach, Dassevael, Serrurier, Van Rossum and several others. Most regrettably there was no letter from Van Marum. Until now, he did not receive any letter from his mother except for the one sent on 30 October 1815.

Today he has sent a letter to De Vries and enclosed another one, addressed to his mother. He asks his friend to arrange that there will always be a couple of letters ready to be mailed, or to be added to his own letter. He regrets not having been able to answer all the questions one by one.

The presence of the passengers of the 'Nassau' took a heavy toll. In order to allow himself enough rest and conveniences, he has decided to buy a house, together with Mr. Engel. A couple of days ago he has removed. He has to pay 7.500 'Spaanse Matten', being 50% of the purchase price. Soon he will pay half of it. The two new home owners have been allowed to hold back the other 50%. So they will have the opportunity to put it out at a very profitable 9% interest. Reinwardt has arranged that his co-proprietor is willing to take over his share and to reimburse it to him, when he will return to Holland. Nevertheless he hopes to be able to pay off his mortgage soon. In his view doing so will be more profitable than renting a house. Now he is living in a nice, spacious house, well situated in Rijswijk and nearby the homes of the families of the Commissioners General.

Finally, on 19 August 1816, the English Governor has transferred the administration of the East Indies to the Commissioners General. Waiting for this event has kept Reinwardt from making trips to inner Java. He expects to be very busy carrying out his various tasks. For example, this month he has to occupy himself with the currency system of the Dutch East Indies. With respect to that activity he really misses the equipment, ordered in Paris, among others a pair of scales. However, he has been able to carry out his experiments (assay tests), using a small oven, taken with him from Holland. He still hopes that the equipment will arrive soon.

He also has to spend much time on seeing all kinds of people. Furthermore he tries to spend as much time as possible on various scientific activities

and on assembling a collection of natural history. Although Kent is working better now, he is still missing certain qualities with respect to his character and behaviour, like precision and tenaciousness. This fact has already caused the loss of many objects of natural history. Because of that, larger animals, birds and other small animals are still missing in their collection. On the other hand they are already in the possession of many insects and dried plants. At the beginning of the rainy season he has laid out a garden for the cultivation of various plants. Bik works well, but slowly.

He has already appointed Muyskes's clerk. This man also copies various maps. There is still no printed and correct map of Java available. Did Van Marum realize his plan to have a hothouse built? At the first possible occasion he will send him seeds of various beautiful plants. If Van Marum might not want these for his own garden, he may send them to a hortus. He still hopes that in due time he will be able to send him aloes and succulents from the Cape Province. His friend Westerman – a fanatical lover of nature and collector of Javanese insects – will leave for Denmark soon. He will probably visit Cape Town and Holland on his return passage. Reinwardt could ask him to deliver a couple of objects of natural history at Van Marum's. In order to be able to do so, Van Marum should send him the catalogue, drawn by him and by the Count Van Salm. He also asks his friend to send him the monograph of the Orchideae, written by Schwartz (Swartz?), which Kops has promised to keep for him, because Java is the orchid land par excellence. This very beautiful plant family is difficult to analyze. If the monograph has not been published yet, he wants to receive the *Journal für die Botanik* (published by Schrader), because it contains a monograph on that family. More and more he realizes that Rumphius's *Herbarium Amboinensis* is still an excellent work. Before he returns to Holland through the Cape Province, he wants to have Thunberg's *Prodromus Florae Capensis* (1800), Vol. 2, at his disposal. Besides, he only possesses two volumes of Thénard's *Traité de Chimie*, although he has paid for the complete series at the occasion of his visit to Paris. Furthermore he wants to receive Römer's *Systema Vegetabilium*, at least if this book has been published meanwhile, and if possible his friend should also send him other publications, which might be important to him.

Elout and Van der Capellen have begged him to deliver lectures. He feels that he cannot refuse this request, although these activities will take much time. He has the obligation to do so, because of their benevolence towards him.

He promises to add a copy of Siberg's letter, as well as a draft (from Siberg), worth 1.000 guilders, in order to pay his contribution to the 'Maatschappij'. Reinwardt also asks his friend to send him this year's programme and other documents, which have been published recently by the 'Maatschappij'.

The farewell letter received by him from the 'Instituut' is completely satisfactory. He is happy that another unpleasant affair has also been settled successfully, thanks to Van Marum's dedication. Reinwardt underlines that his victory will be perfect as soon as Van Swinden will stop nourishing hard feelings towards him. He still has a high opinion of this scientist, although he has acted very childish in this affair. He sincerely thanks his friend for having promoted his interests so well (and mentions a couple of aspects) and he also hopes that Temminck, D'Ailly and Sandra will support him. He promises to stipulate this subject in his next letters to them and to mention this aspect also in a letter to Jacobson. This time he only has the opportunity to add letters for De Vries, his mother, Van Eys, Buys and D'Ailly (the letter to the last one will be enclosed in the one addressed to Buys).

He hopes that his friend has already received his letters, dated 25 May, 21 June and 13 July. He emphasizes that he is physically fit at the moment. He misses his friend. These feelings are so strong, because their relation is more than strictly scientific; there is also the tie of true friendship. This feeling has completely pervaded him. Almost the same goes for Van Eys and De Vries. Finally, he adds a life certificate and announces that a copy will follow. He asks if Goldberg cannot release him from the obligation of sending 12 of these testimonies annually. It should be possible to simply inform the government that he is still alive! He adds his greetings, asks to send his best wishes to his friends and promises to send further letters soon.

[NA-RANH 529-20b; BOT, GEO, ZOC, CHE, PHY, KNI]

**163. Jean-Baptiste Leschenault De La Tour (Samarang) to C.G.C. Reinwardt (Batavia); about early October 1816**

Lieutenant De La Tour sends Reinwardt the translation of a document dealing with a mercury mine on the bank of the Demak river (?). He opens his description by observing that the quicksilver is found in a soil, consisting of a mixture of clay and slate. Annually its surface is flooded for more than six months, so its exploration and the following mining activities are very difficult to carry out. Probably it will be possible to level the mountain slopes

(ending in the river bank) gradually. Digging deep holes and underground passages is out of the question. In De la Tour's view the most convenient way of mining will be to wash the fine dust of the slopes. Of course a few experiments have to be carried out, before it will be possible to decide about the exploitation. In his view the rock may be mercury oxide-rich. He proposes to carry out a certain chemical analysis, as well as the most appropriate operating procedure. He is not sure about the exact position of the mercury vein. Perhaps it has been uncovered by erosion. Maybe this deposit is only resulting from alluvial erosion. In his view the miners will not be affected, because they will be working in the open fields. He hopes to have complied with Reinwardt's request. He expresses his feelings of deep respect and signs as Reinwardt's obedient and faithful servant.

[NA 2-21.204(7); MIN, CHE, GEO, PHY]

**164. C.G.C. Reinwardt (Batavia) to J. de Vries (Amsterdam); 10 October 1816**

In this short letter enclosed in the one addressed to Temminck (Amsterdam), Reinwardt promises to send a more extensive letter soon. At the moment the Commissioners General are organizing their activities. He himself is busy organizing the educational system, the medical police and the organization of agriculture. Unfortunately De Vries did not send him a letter until now. He is eagerly looking forward to making a trip again. He is also jealous of Elout and Van der Capellen, who are really snowed under with letters from Holland, while he is not even receiving the shortest notes from his numerous friends, not even a sheet of paper with a few words on it, a few lines of poetry or a copy of Kemper's oration.

[KB 121 B 8; AGR, MED]

**165. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 10 October 1816**

On 14 September 1816, he has written his last letter to Van Marum. Since then he has been rather occupied. Now he is waiting for the departure of the 'Cornelia', which will take this letter to Holland. His various tasks, like organizing the educational system, agriculture and the medical police have kept him from the investigation of natural phenomena until now. Again he

adds a life certificate, a letter from Siberg and a 'death-cedule', relative to Mr. Killermann, requested by D'Ailly.

Because Temminck has informed him that his friend Van Marum will probably have the opportunity to buy a collection of shells, he wants him to know that Siberg has already given him a comparable collection for a present. Besides he will be able to collect many beautiful shells himself. Of course these objects are not the most important items of a collection of natural history. He has asked Temminck to send him the description of the Gallinae (from De Buffon's *Book of the Birds*). Now he asks his friend to convey this request to Temminck and to ask him if he would be so kind to wrap and mail it himself. He also wants to receive a copy of the book of Cramer and Stoll on the Butterflies, Bugs and Grasshoppers. He hopes to make a large profit by selling these books at the occasion of his return to Holland. Furthermore he asks Van Marum to send him several notes, written by Fabricius, together with a number of other documents, which in Van Marum view are important for him. Of the *Annales du Muséum* he only has 20 volumes in his possession. Anyhow, he has asked Schröder already. He wants to know if Van Marum has not forgotten to buy the works of Gilbert for him. He apologizes for his short note and underlines that he is longing for a letter from his mother since a long time. He wishes his friends, his relatives and his housekeeper all the best.

[NA-RANH 529-20b; AGR, MED, BOT, ZOC]

**166. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 21 October 1816**

Reinwardt informs his friend that he has sent his last letter on 10 October 1816, to which he had added several documents. He hopes that these documents will be duly received in Haarlem. Unfortunately he has to postpone the correspondence with his friends for a while, because he has to skeletonise a crocodile and to mount its skeleton afterwards. This creature is about 15 to 16 feet long. Kent is not able to assist him, because he is staying at 'Kramat'. The crocodile was still alive, when it was offered to him. Because the skin of his hands has been injured, he will probably have been affected and may contract the smallpox. The armpit glands of those who have been assisting him are swollen. The same goes for him. Meanwhile, the orang outan(g) has died. It has been prepared and its skeleton has already been

mounted. He has also succeeded in catching a wouwou (*Simia leucisia*). Because his office work takes much time, it is almost impossible to spend a few hours on the research of natural phenomena. He promises to send Van den Ende a letter next time. He hopes to be able to offer him some information about the educational system of the East Indies. Medical affairs are also occupying him. From the official messages sent to him by the various residents, it appears that the vaccination programme among the Javanese inhabitants is going well, although prejudice had to be put aside. He asks Van Marum to send him the 'Geneeskundige Verordeningen'. He is sure that Dr. Bernard will help his friend. He has also sent a letter to Kemper, added to the drawings promised by him to Kemper's daughter. All these documents have been put in a box and they have been sent to Mr. Engelberts (Amsterdam). Actually Reinwardt does not believe that these drawings have been made by Bik. Perhaps Van Marum will have the opportunity to examine them in Leyden. If Kent would have performed his duty, and if he would have collected enough seeds of the various Javanese plants, he would have been able to add a collection of seeds to this letter. He also encloses a letter meant for Landré senior, this highly esteemed and high-principled man. He calls to mind that Landré has asked him to take his second son Willem with him to Batavia. Although initially he could not comply with this request, he is now prepared to do so, among others because Landré has to support a large family. A talented young man will really be of great help. Willem is already so experienced, that he can serve him from the very moment of his arrival. He would also be pleased by the constant company of someone, whom he is interested in, whom he can trust and to whom he can feel tied too by doing him a favour. He hopes that Willem Landré can assist him in a certain way with the preparation of his coming journey and especially with getting together the needed outfit. If necessary, Van Marum is allowed to give him 100 to 150 guilders from his account. Maybe he has not signed the last copy of his life certificate sent by him to Van Marum.

A few days ago Westerman – about whom he has already written – has left for Cape Town. This naturalist has offered to take a collection of succulentae to Holland, as soon as the occasion will present itself. Maybe his home passage to Denmark will take him to Holland. Reinwardt recommends him to Van Marum. He is a high-principled man, who is in the possession of a beautiful and exquisite collection of plants.

He has decided not to send a letter to his mother, because there is no news. He recommends his niece Caroline to his care. Is it possible for Van Marum to pay attention to the old Mrs. Luckmeyer now and then? He is longing for news from Lüttringhausen and of course from Van Marum. The last letters received by him were dated 23 February and 26 March 1816. All the Dutchmen, who have arrived lately here, are fine, although most of them did not find a suitable housing yet. Van der Vinne has been added to the commission, which has been ordered to chart the coastal region of Batavia. Van der Vlugt will be appointed secretary of the resident of Banka. His own service has not been completely organized yet. A good secretary is still missing, so he has to do most of the paperwork himself. He also regrets that the payments are still due. Only once he has received 4.000 rupiahs, which of course has run out already. He ends his letter by expressing his feelings of friendship and he adds his affable greetings to the ladies.

[NA-RANH 529-20b; ZOC, COB, BOT, GEO, MED]

**167. J.Chr. Baud (Buitenzorg) to C.G.C. Reinwardt (Batavia); 23 October 1816**

Through a transcript (from the 'Register of the decisions, made by the Governor-General') the secretary of the government informs Reinwardt that having taken into account that the Director of Agriculture, Arts and Sciences will be authorized immediately to enter into correspondence with the various residents and other government officials in the Dutch East Indies (especially on Java) about the major subjects, and referring to the royal decree of 11 January 1815, n<sup>o</sup> 28, the above mentioned officials will be sent the list of questions, devised by Reinwardt. They will be ordered to answer these questions as soon as possible and to return the documents to Reinwardt.

[De Vriese (1854, pp. 290-291); MED, AGR, GEO, MIN, ETN]

**168. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 1 November 1816**

Van Marum thanks Reinwardt for his amiable letter, dated 21 June 1816, sent from Campo Makassar, which proves so clearly that his friend has arrived safely in the Dutch East Indies. Reinwardt's letter has even arrived two weeks earlier than expected, as Mrs. Elout has told him. He is happy

to know that Reinwardt is enjoying good health and he hopes that this favourable situation will continue. He also prays that his friend will return safely to Holland. The day after he had received this letter, he has informed Reinwardt's relatives in Lüttringhausen about its contents. According to the agreement made with his friend, he has also informed them about Reinwardt's decision with respect to their financial support. A few weeks ago he has received a letter in return. He hopes that meanwhile Reinwardt has received his letters, dated 18 January 1816 (n° 1) and 23 February 1816 (largely a duplicate of n° 1). Perhaps he has even received the letters dated 21 June (n° 2), 17 July (n° 3) and 18 August (n° 4). To each of these letters he has added a copy of the preceding one. Now he encloses a duplicate of the most important part of the letter sent by him on 18 August 1816. He has nothing to report with regard to Reinwardt's financial situation. He only mentions the fact that for the time being 5% is the highest possible interest. In his next letter he will inform his friend exactly about his financial position and also about his expenses and receipts. Furthermore he has conveyed the life certificate immediately to Goldberg. He has asked to arrange the payment of Reinwardt's salary of the second trimester. He is still looking forward to receiving Reinwardt's extensive letter, promised to him on 24 May and he refers to his letter, dated 21 June. Meanwhile he has informed De Vries, Van Eys and Vosmaer about its contents. Once again he underlines the importance of making duplicates of the letters, before sending them. He sincerely hopes that his friend will do so.

The Van Marum family is in good health. Most regrettably Van Eys has suffered from an apoplexy, from which he has only partially recovered. After having spent a few days at 'Plantlust', he has died on 28 October, a most regrettable loss! Young Mr. Sandra is studying in Utrecht at the moment, so probably Mrs. Jacobson will soon decide to move to that town. He hopes to be informed soon about the transfer of the colony to the Commissioners. He underlines that the English government has a very bad reputation in the Netherlands. Probably for that reason this transfer has been postponed for such a long time. This fact will undoubtedly have hampered Reinwardt. Fortunately his friend has been offered a comfortable accommodation at the country estate of the Van IJsseldijk family. Of course he will seize the opportunity to botanize and Van Marum praises him for his amiable character. If necessary, it will not be difficult to find another accommodation.

By doing so he will be able to economize on the expenses relative to his own household. These expenses will take the major part of his income. Van Marum apologizes for having taken the liberty of writing down these words. [NA-RANH 529-20b; BOT]

**169. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 1 November 1816**

Receiving Reinwardt's letter (sent on 21 June 1816 from Campo Macassar) on 24 October 1816 has made Van Marum very glad. Meanwhile he had already been informed roughly through a letter, sent to him by Mrs. Elout. On 27 October he has received Reinwardt's letter, dated 23 April, through which his friend informs him about his successful crossing. Meanwhile he has informed Reinwardt's relatives in Lüttringhausen about his safe arrival. He hopes that his friend will have received his letters, dated 18 January, 23 February, 21 June, 17 July and 18 August 1816. He adds a duplicate of the last one. He suggests not to reinvest more of Reinwardt's capital, because it is not possible to ask more interest than 5%. He has sent the life certificate immediately on to Goldberg. He is eagerly looking forward to receiving the extensive letter, Reinwardt promised to send him on 24 May 1816. Meanwhile their friend Van Eys has again received a letter from Batavia. In midsummer Van Eys has had an apoplexy. Recently Van Marum has paid him a visit in Amsterdam. Van Eys has also stayed at his estate 'Plantlust', near Haarlem, for several days. Mrs. Jacobson seems to be doing rather fine. Fortunately Van Ijsseldijk has offered his friend a decent accommodation on his country estate and he is pleased to know that he has seized the opportunity to herborize, which of course will have made him very happy. Reinwardt should absolutely prevent the larger part of his income from being spent on a household. He wishes him to live in an unconcerned and agreeable way, after having returned to the Netherlands.

[UBL BPL 2922]

**170. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 10 November 1816**

Van Marum has marked this letter 'n° 5b' He is happy to know that it will be possible to send his letter (dated 1 November), as well as another one, with the vessel, which will set sail soon. He has decided to add a letter from

Lüttringhausen too, as well as one, written by De Vries. A few days ago the 'Spion' has arrived from Batavia. This ship has brought him letters from Siberg and Parvé, but none from his friend Reinwardt. Perhaps he has tried to save on postal charges by adding his letters to the governmental mail. This procedure may cause a certain delay. Until now he did not receive Reinwardt's salary for the second trimester of 1816. Mrs. Jacobson is doing fairly well; she has decided to settle in Amsterdam soon, like young Mr. Sandra will. Meanwhile he has received Reinwardt's letter, dated 21 May 1816. He asks to send him more letters as soon as there is any news to report. He promises to inform Reinwardt's friends about his experiences. He ends by expressing his well meant feelings and adds his cordial greetings to everyone in Batavia.

[NA-RANH 529-20b]

**171. C.G.C. Reinwardt (Buitenzorg) to M. van Marum (Haarlem); 12 November 1816**

Since yesterday Reinwardt is staying at the country estate of the Governor-General, who has informed him that he has been allowed to send letters to Van Marum with the governmental mail. He has been very busy with the organization of the educational system. Perhaps it will be possible to finish this job during the rainy season, when it is impossible to travel. Kent is still staying in the mountain region. So he had to mount the crocodile skeleton himself. He has also stuffed several small animals: *Simia leucisia*, *Nycticebus javanis* Geoffr., *Mophus javanicus* and *Viverca mangko* (?). In between he is collecting plants (to be dried), insects and birds. If he wants to collect plants meant for cultivation, he has to restrict himself to the higher regions, which is impossible for the moment. In Batavia it is the dry season now, so provisionally the laying out of a garden is impossible. Its irrigation will be very expensive. In Buitenzorg the situation is quite different. Soil and climate are much more suited for gardening and for cultivating plants. He will start to cultivate plants and ship these to Holland in due time. The Governor-General himself has already sent several boxes to Brazil, containing plants and fruit trees, among others *Garcinia mangustana*, *Mangifera* and several other plants. At the time it is raining in Bogor every afternoon. Regularly there are violent torrential rains and heavy thunderstorms. After such a shower the air is clean, cool and fresh again. One can make pleasant

botanical trips and larger strolls in the surroundings of Buitenzorg. He has already decided to stay here as often as possible. Mr. and Mrs. Van der Capellen keep on showing their friendship and affection. They even have given him a couple of rooms. Much to his regret he has to postpone his trip to the 'Salak' mountain for the time being, because in the high mountains the rainy season has already started, so the roads are absolutely impassable. Kent will soon return, he thinks. He is getting more and more satisfied about the results of Kent's activities. Meanwhile his assistant has finished the preparations of the skins of more than 40 birds. He is working more regularly than before and he performs better. His draughtsman Bik also works well, but slowly. However, Reinwardt's portfolio already contains many interesting drawings. If he would have been in Batavia, he would already have sent a new life certificate. He hopes that his salary has been paid meanwhile. On Java almost all payments are overdue. Until now, he has only received 4.000 rupiahs, which is inadequate to pay all the necessities. This fact has forced him to borrow money from several friends and acquaintances. Besides, he has to pay 9% interest for the money, borrowed by him in order to buy a house. The bookkeeping of the government is still not out of chaos. The Commissioners General are occupied by many (other) affairs and the Finance Department ('Raad van Finantiën') seems to function very slowly. Everybody is suffering from the shortage of money. Many have not been appointed definitively until now. Life in Batavia is very expensive. In spite of all this, the government tries to ease the life of the people. If necessary they are being provided with free board and lodging. Reinwardt is eagerly looking forward to receiving letters from his friend and of course from his relatives in Lüttringhausen. In the meantime it has been more than a year since he has received the last news from his native village.

Because the 'Maria Reijgersbergen' has anchored in the Roads of Batavia on 29 October (after having left England in May 1816), he is longing for the arrival of other Dutch ships. Dr. Horsfield is still staying in Solo. This man has recently sent him a letter to inform him that he has decided to see him in Buitenzorg, after the rainy season will have ended. He has already been told that Horsfield has scraped together tremendous collections of natural history, the major part of which has already been sent to Europe. This fact is bringing Horsfield much profit, so it has been told. Reinwardt is eager to see him, because this man has become quite an expert with regard to the resources of this island.

In his last letter he has asked Van Marum and – through him also his friends Temminck and D'Ailly – to send him books. Furthermore he has asked him to order D'Ailly to send him paper for the preservation of dried plants. Next time he will send Van Marum several objects of natural history, if possible. He hopes to receive many extensive letters. Soon he will have the opportunity to send many elaborate letters from Batavia. He expresses his feelings of friendship and attachment.

In a postlude he reports that he has just received the message that again a few natives have been dragged away by tigers and that a Javanese vessel has been raided by pirates, on which occasion a certain Mr. Beth and his son have been killed and eaten.

[NA-RANH 529-20b; BOT, ZOC, COB, ART, AGR]

**172. H.W. Muntinghe (Batavia) to C.G.C. Reinwardt (Batavia); 14 November 1816**

Muntinghe (president of the 'Council of Finance') has the honour to inform him that on 11 November 1816 the Secretary of State (or Governor-General) has decided to order Mr. Prediger through him (Muntinghe) to keep 18 cases and 4 casks at Reinwardt's disposal. They will be handed over to him, as soon as he wants Prediger to do so. The same goes for several instruments/machines.

[NA 2-21.204(10); BOT, ZOC, COB, TEC]

**173. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 16 November 1816**

Van Marum gives an account of the meeting of the 'Vrijdagsch Gezelschap' and adds a message dealing with Reinwardt's relatives in Lüttringhausen. Meanwhile Caroline has been informed about her uncle's safe arrival in Batavia. Van Marum supposes that Reinwardt's letter, dated 24 May 1816 has arrived aboard the 'Spion', which has put in a couple of days ago, assuming that Reinwardt has succeeded in adding this letter to the ministerial mail. Goldberg has not spent a word on the disbursement of Reinwardt's salary as a Director of Agriculture, Sciences and Arts on Java, until now.

[UBL BPL 2922]

**174. G. Drost (Batavia) to C.G.C. Reinwardt (Batavia); 2 December 1816**

Declaration by the notary public in the presence of two witnesses – Wouter Hendrik van IJsseldijk and Joost Carel Romswinkel – that Reinwardt, living in Batavia, is still alive. Reinwardt has co-signed the deed, written in triplo. [NA-RANH 529-20b]

**175. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 15 December 1816**

Reinwardt adds a letter to De Vries to the one he is sending to Van Marum now. He is very sad about the scarce correspondence between the two of them. The last letters he received were sent in January and February 1816, while most of his acquaintances have received more recent letters. The vessel 'Exchange', which sailed directly from Amsterdam to Batavia, has even delivered letters, which had been sent late June 1816. He does not understand why. Perhaps Van Marum has not been informed in time about the possibility of sending letters to Java. Meanwhile it has been more than 13 months, since he received the last letter. On the other hand he has sent letters on 24 May, 21 June, 12 July, 14 September, 10 October and 17 November 1816. The last one has been sent from Buitenzorg. Because nothing important has happened, he only encloses a life certificate and two cases, containing jars of ginger. Two jars must be given to De Vries, two more are destined for D'Ailly and the last two are destined for his mother, at least if Frowein is willing to take care of their delivery in Lüttringhausen. If Van Marum is interested too, he is willing to send him a couple of jars of ginger next time.

Until now he hardly had an opportunity to botanize. Because his collection of seeds is still modest, he cannot send a selection to Haarlem now. He has already ordered Kent several times to come into action. Generally his own trips are short, especially when he is staying in Buitenzorg. The last time he was there, he made a short trip to the 'Tjampia', a limestone mountain, west of Buitenzorg. This promontory of the 'Salak' is surrounded by lava formations. He had intended to go there because of the edible bird's nests, which he wanted to see.

He continues by giving a geological description of the region of limestone mountains. In his view the chemical properties of the constituents of the nests will probably remain a secret forever. Perhaps the birds using these

nests are producing the glue-like building material by digesting insects. He would be very pleased if Van Marum would send him paper, suited for the drawing of geographical maps. He hopes that his friend will receive this letter soon and that he will have the opportunity to combine the shipment of paper with the sheets of paper needed for drying the collected plants. He asks Van Marum to send him as many letters as possible. He adds his greetings to all his friends and assures him of his unchangeable appreciation and friendship.

[NA-RANH 529-20b; BOT, GEO, CHE, ZOC]

**176. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 18 December 1816**

Van Marum informs his friend that he has succeeded in sending a letter to the East Indies with 'De Hoop en het Fortuin'. He has added a couple of literary works. He could only add letters from Reinwardt's niece and from Van Eys.

[UBL BPL 2922]

**177. M.A. Parvé (Semarang) to C.G.C. Reinwardt (Batavia); 28 December 1816**

Letter, covering a report giving a chemical analysis of a water sample collected high on the 'Oenarang' mountain in the region of Samarang. This water sample has been delivered by the resident of Samarang, Kiag Depattu. Several persons, who had been invited to taste the water sample, told that it tasted like 'vitriole' or sulphuric acid. After the analysis had been completed, the report and its covering letter will be sent to Reinwardt. In Parvé's view this subject is important enough to draw Reinwardt's attention. He ends his letter by expressing his obedience.

[NA 2-21.204(7); GEO, CHE]

**178. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 31 December 1816**

Van Marum confesses that he had to write his previous letter (dated 18 December 1816) in a hurry, because it had to be delivered at Mr. Vollenhoven's, in order to be sent to Batavia with 'De Hoop en het Fortuin'. However, this vessel has to wait for favourable winds. So this letter will

be sent with another vessel. On 20 December he has had the pleasure of receiving Reinwardt's pleasant letter, dated 13 July 1816. Undoubtedly Reinwardt's stay at 'Kramat' ('a cool mountain region') has contributed to his good health. Therefore he hopes that his friend will spend most of his time in that region. His health should always come first and it should even prevail over his governmental and scientific activities! The last letters sent to him by Reinwardt have really pleased him. So he has informed their mutual friends about their contents. The reproduction of *Bryophyllum calycinum*, as has been observed by Reinwardt, is really interesting. He is eager to plant this species in his hothouse, which will be completed next March or April. Of course Reinwardt will send him many seeds. The Count Van Salm and he himself are eagerly looking forward to receiving many succulents. He reminds his friend of the deplorable financial situation of poor Mrs. Kent. In order to relieve her distress, he has decided to give her two guilders a week, until he will have received an acceptable financial arrangement from Batavia. He has also added the financial survey of 1816, together with a list of Reinwardt's possessions, which are constantly increasing. He promises to put the money out as soon as possible.

[NA-RANH 529-20b; BOT, ZOC; see also: UBL BPL 2922: 31 December 1816: identical letter]

**179. C.G.C. Reinwardt (Buitenzorg, Java) to M. van Marum (Haarlem);  
1 January 1817**

On 14 December 1816, Reinwardt has sent his last letter to Haarlem. He also added a number of jars of ginger. Meanwhile he has received Van Marum's letter, dated 17 July. It has removed his sadness and his discontent, because Van Marum's letters remained forthcoming. He has also received his mother's letter, which had been added to Van Marum's. It has been 14 months now since he has received the last letter from his mother. He has not received Van Marum's letter, dated 21 June 1816 (n<sup>o</sup> 2), until now. On the other hand he did receive an extensive letter from De Vries. Shortly after, he has left for Buitenzorg, together with the Commissioners General and Mr. and Mrs. Van der Capellen. They are true friends! In Buitenzorg he has had the opportunity to rethink his friendship for Van Marum. He is really grateful for the excellent way in which his friend is looking after his affairs, especially with regard to the claim of his arrear salary and the sale

of his cabinet of natural history. These arrangements have greatly improved his financial position. He wishes that Van Marum will succeed in mounting the whale skeleton and also that he will be prepared to receive the fully mounted crocodile skeleton, which is ready for shipment. He will also try to add a rhinoceros skeleton to this shipment, although these animals are difficult to get. Recently the resident of Pacalong has caught a specimen and offered it to him. Furthermore the insect cabinet has to be repaired.

He is happy to know that Van Marum has succeeded in liquidating all his debts. If possible, he will sign and return a copy of the survey of his receipts and expenses, drawn up by Van Marum.

Baron Van der Capellen has expressed his contentment about the fact that Van Marum has meanwhile received the seeds sent to him from Cape Town. This shipment has to be sent on to Ghent. Reinwardt does not understand why Van Marum did not get his share of the seed collection until now, because Mr. Tobias has sent both parcels at the same time. Besides, Van der Capellen has sent a seed collection to Van Marum separately, which he had bought from Mr. Villers. Furthermore, Westerman and Hesse have been busy collecting succulents for Van Marum. This collection will be sent to Holland as soon as possible. In his view Hesse is suited for a regular correspondence with Van Marum. He is very helpful and a rather keen botanist. Unfortunately he has been called as a Lutheran minister to Buitenzorg. So now he (Reinwardt) has to find someone else.

As Van Marum's beautiful garden has been enriched with a small hothouse, Reinwardt promises to double his efforts to carry out interesting observations and to collect interesting species. Nothing will be more agreeable to him than dedicating himself to that. Most regrettably he still has to do a lot of office work and to carry out organizational tasks. These jobs are really boring! From time to time he escapes to the woods and fields. The Javanese nature is really exerting an irresistible attraction on him! Especially the view of the giant 'Sallak' mountain – about 4.000 to 5.000 feet high and completely covered by impenetrable woods, is fascinating him! He prefers to examine all its hidden natural beauties. Meanwhile he has found a suitable companion, Mr. De Wilde, who has been proposed by him for directorship of the 'Maatschappij'. De Wilde owns several large estates on Java and is interested in the natural sciences. Furthermore Reinwardt has several objects in his possession, which might interest his friend, such as a beautiful rhinoceros

skeleton and a casuaris, which scratches around on the grounds around his house in Noordwijk, at the time. He also possesses a couple of beautiful Japanese, Chinese, Javanese and Balinese skulls. Last week he has dissected a peculiar animal. Almost daily the most remarkable animals and plants are delivered at his address. Therefore Kent is always behind schedule. A moment ago he has received a specimen of *Cymbidium*, an orchid, which cannot be sent to Holland. After his return to Holland, he will be able to show his friend the many drawings made by Bik. Because this talented artist is working very slowly, he has appointed an assistant, who has been ordered to draw copies. He is pleased to learn that His Majesty the King has appointed a landscape painter, which will be sent to Java. Mr. Horsfield, who is still in Solo, has informed him that he has made numerous drawings and that he is the owner of an incredible large collection of dried plants. After the end of the rainy season Horsfield will come to Batavia. Reinwardt imagines that this man has a tremendous knowledge. It makes him happy that Van Marum is maintaining such good relations with the Jacobson family. They are really wonderful people. He regrets that he has not sent them a letter until now. Furthermore he is awaiting new letters from Van Marum and also interesting books, which have been published recently. The financial situation of the colony is still bad. Payments still fail to occur. Meanwhile Mr. Engelhardt has been appointed Commissioner, to be put in charge of the administration of the Moluccas. The 'Admiraal Evertsen' will soon set sail to take him there. Reinwardt expects to receive many interesting objects from these islands, as well as from Celebes and Banka. Just like him, the Governor-General is eager to visit that part of the East Indies and he has been asked to accompany him on that trip. However, for the time being they are both indispensable in Batavia and in Buitenzorg.

In the region of Cheribon, as a consequence of military actions, riots have cost the lives of about 50 natives. Perhaps these troubles have been caused by Chinese lease holders, who are having the opportunity to pay a much higher rent to the landowners, than the natives can. Besides, in many regions the English did not leave yet. The last English governor is still on Java.

Reinwardt assures his friend that he enjoys good health at the moment, except for a minor disorder of his bronchi and an increased secretion of mucus. He has almost recovered now. Unfortunately he is not able to send a letter to De Vries, so he asks Van Marum to thank him for his kind letter.

He does not expect that the procedures of the 'Instituut' will change after the nomination of the new members, living in the southern provinces. After having spent a few words on Kemper and Reuvens, he promises to send a letter to his niece Caroline, as soon as possible. The same goes for D'Ailly and the others. He is happy that Van Eys is much better now. He adds the compliments from Elout and Van der Capellen and asks his friend to thank his wife for the copies she has made of her husband's letters.

[NA-RANH 529-20b; ZOC, COB, BOT, MED, GEO, ART, ANA]

**180. C.G.C. Reinwardt (Buitenzorg) to M. van Marum (Haarlem); 3 January 1817**

Because the ship, which is bound for Holland, has not set sail yet, Reinwardt has the opportunity to add a copy of one of his previous letters, as well as a letter for his mother in Lüttringhausen and one, addressed to De Vries, to the two letters he has delivered shortly before. If De Vries has made expenses with regard to the books ordered on his behalf, Van Marum has to reimburse him. He thanks his friend for taking care of his affairs and asks him to give his greetings to Mrs. Van Marum and to Betje. He hopes that Van Marum will keep his health.

[NA-RANH 529-20b]

**181. C.G.C. Reinwardt (Buitenzorg) to J. de Vries (Amsterdam); 3 January 1817**

Reinwardt – always eager to receiving letters from his close friends – is disappointed because he has not heard from De Vries for such a long time. In beautiful lines he describes the beauty and tranquillity of Buitenzorg. Since he has received several letters – after a silence of more than 14 months – everything is alright again. He has had an opportunity to give himself enough time to reflect the past and the future and this has got him going again. He feels very grateful towards his 'Creator', who has given him so much happiness. Although he has become quite a coachman, he prefers to walk around and to roam at Buitenzorg and its surroundings. The recently appointed landscape painter will have the opportunity to paint many beautiful types of scenery. If his draughtsman would have accompanied him, he would have been able to enclose a drawing. He regrets the accident which has happened to Kemper and Reuvens. Especially Elout, Reuvens's

friend, will be sad. Because he really misses the poems, treatises and speeches, which he used to read or to attend in Holland, he asks his friend to send him the most interesting of these documents, especially those, which have been written by Van der Palm, Van der Capellen and of course by De Vries himself.

[KB 121 B 8; BOT, ART]

**182. M. van Marum (Haarlem) to C.G.C. Reinwardt (Buitenzorg); 12 January 1817**

Because he has been given extra time for the completion of his letter, which he has begun on 31 December 1816, it is still possible for him to add a few words. During the last week, many letters (dated 2, 3 and 4 September) from Batavia have arrived at The Hague. However, there was no letter for him. Like many other friends, he hopes that this fact has not been due to Reinwardt's health. On 31 December 1816 'De Hoop en het Fortuin' has left Texel. It will take many letters to Reinwardt. Van Marum regrets that Dr. Bernard is on the verge of being appointed Medicinæ Professor in Ghent. Kemper has tried to figure out Bernard's intentions. Van Marum prefers to keep him in Holland. He even has offered him an annual salary of 3.000 guilders. Bernard did not accept the offer, because it was too modest. Now he hopes that an experienced practitioner is going to replace him. Thereupon, Van Marum accounts for Reinwardt's asset management. Because Reinwardt's last letter was dated 13 July 1816, his life certificate has expired. Has he been ill? Did a vessel perish during its passage to Holland? Until now, he did not receive any further orders to pay Mrs. Kent, for example through a draft or a bill of exchange. In his view his friend has to point out to Kent that he should take care of his family. He hopes to receive a letter soon, which will dispel his great concern about his friend's health. He also regrets that his friend did not receive his letter dated 1 November (1816). Are there any questions to answer? Van Marum also takes offense at the fact that the English – and especially Raffles and Horsfield – have collected so many objects of natural history – objects, which could have served as a basis for the publication of a *Flora Javanica* and perhaps also of a *Fauna Javanica*. Should that honour not be conferred upon Reinwardt? Has Reinwardt been informed about their progress, before they left Java?

He has also heard the news that his friend has the intention to re-establish the 'Bataviaasch Genootschap'. He asks his friend to send him a complete edition of its *Verhandelingen* and also to think about possible candidates for the position of Director of the 'Hollandsche Maatschappij der Wetenschappen', such as high-ranking officials, and Mr. Buyskes for example. He has also learned that Mr. Siberg has offered Reinwardt objects of natural history for his 'Kabinet van Natuurlijke Historie'. Siberg must have made a mistake. Because he is one of the Directors of the 'Hollandsche Maatschappij', he should have offered the collection to the 'Kabinet' of Haarlem. He hopes that Reinwardt will not forget 'Plantlust', Van Marum's country estate, when he decides to send plants to Holland. Of course he will proudly show these acquisitions to every visitor. Meanwhile, the collection of plants, which are cultivated in the (cold) greenhouse, has been largely extended, among others by the presents, received by him from Parmentier last week. Furthermore several recently appointed members of the 'Instituut' have seen him, after he had made them a visit, shortly after the general meeting of 12 July. He hopes that his correspondence with these colleagues will turn out to be fruitful and that it will yield many contributions to his botanical collection. Has Reinwardt perhaps the possibility to introduce him to someone, living in the Cape Province, to correspond with? He eagerly wants to receive seeds and bulbous plants. How could Baron Van der Capellen be so successful in this respect (collecting and sending a respectable collection to the University of Ghent)?

In Holland the winter and summer have been extraordinary. The summer was humid and wet, while in winter it did not freeze at all. Because of these circumstances he has not been able to collect seeds of many plants, for example of the pineapple and of many biennials.

He has to end this letter now. Already for many weeks he is looking forward to receiving a letter from his friend. He really hopes that their friendship will not fade, because of the long distance between them. He promises to do his best and adds the best wishes from his wife and from Betje.

[NA-RANH 529-20b; BOT, ZOC, KNI]

**183. C.G.C. Reinwardt (Buitenzorg) to M. van Marum (Haarlem); 19 January 1817**

Although he has recently sent his friend a letter, a new opportunity has presented itself and he wants to seize it. So he adds a message to the life certificate, which could not be added to the letter, sent by him from Buitenzorg on 3 January. He has stayed there for some time, together with about 300 other guests. They have participated in a hunting party, of which he gives a detailed account. The tiger's skin has been given to Mrs. Van der Capellen as a present. In his view the Javanese tigers are much larger than the ones he has seen in Europe. They also differ from each other in colour and markings.

He has good health again; the bronchitis has disappeared. He endures the rainy season better than the dry and hot season, in spite of the prolonged and heavy showers, which are often preceded by violent thunderstorms. Thanks to the cooling off, the temperature never exceeds 81° Fahrenheit. Like many others he is looking forward to receiving new books and all kinds of news. He wants to know if the French and German journals have already been delivered at his address. He asks Van Marum not to spend more than 200 guilders on that acquisition. If necessary, he can call in De Vries. On 14 December he has sent a letter to Van Marum, together with 12 jars of ginger. On 1 January 1817, he has sent another letter, in which he confirms the reception of Van Marum's letter, dated 17 July 1816. On 3 January he has sent a letter once more, in which he has acknowledged the reception of the account of income and expenses. At the moment he is living alternately in Buitenzorg, where he is always given a warm welcome by the Governor-General and his wife, and in Batavia. They have even offered him a small cottage on their estate. Although he is worrying about the fact that he should purchase all kinds of necessities, it would be sensible to accept this generous offer because of his work. Until now, he has not received the payments which are overdue on Java. Everybody is longing for the introduction of the new monetary system, to the establishment of a bank and to other financial facilities. Everything goes slowly, much slower than in Holland.

He sends his greetings to Van Marum, to Mrs. Van Marum, to Betje and to all his friends and he underlines his hunger for new letters from Holland.

[NA-RANH 529-20b; ZOC]

**184. Fr.A. Treffz (Banjouwangie) to C.G.C. Reinwardt (Batavia); 1 February 1817**

Treffz informs his principal that the 'Idjen' mountain has started to burn. Many people are taking refuge. The 'Addar' mountain has also started to spit fire. In his view, this could be the beginning of the end of Java [The rest of the text is illegible].

[NA 2-21.204(9); GEO, PHY]

**185. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 10 February 1817**

Reinwardt informs his friend that he has sent his letters, dated 19 December 1816, 1 January, 3 January and 19 January 1817, with the same vessel. At the moment he enjoys good health. The bronchitis has completely disappeared. During the rainy season the climate is quite bearable, because the rain cools down the air. The heavy daily torrential rains, accompanied by thunderstorms, are causing many diseases and many deaths. Fortunately his house is situated in a healthy district and no one is sick. The atmospheric conditions have a bad influence on his collections. The white ants and cockroaches also affect his collection. Everything becomes mouldy and is starting to fall apart. Meanwhile he has learned so much from his experiences that he knows how to reduce his losses. Unfortunately he has not been able to collect many important objects the last few weeks. Perhaps he will not even have the opportunity to make a trip. Fortunately he has been offered a house in Buitenzorg, where he can preserve his precious objects of natural history. He has jumped at that offer. At the moment this house is prepared for him, so he will be able to move in within a few weeks. As a consequence he owns two houses on Java now. Because the salaries have not been paid until now, it is impossible to pay instalments. Nevertheless he hopes to enjoy his stay in Buitenzorg. In his next letter he will tell more about the beautiful flora of the island.

Yesterday he received the message about the terrific eruption of the 'Idjen' in the Banjouwangie-district. He is eager to be informed more in detail. Several new rocks are appearing off the coast of Surabaya, a process which is accompanied by bursts of fire and probably also by the explosive discharge of rocks ('luchtsteen'). Because of the bad weather and as a consequence

of his many occupations the long journey will be postponed until the beginning of the dry season.

He has also sent a letter to Temminck, in which he asked to send him several books, among others his work on the pigeons (provided with plates). The most beautiful species can be found on Java. In his letter to Van der Mey he has asked for a couple of books to serve a reading group. He also hopes to receive some literary news about the 'Instituut' and about the 'Vrijdags gezelschap'.

Kent is still not working as he should do. His health is not too good. He is the most skilful in mounting skeletons. Bik serves him very well. Although he is working slowly, he is painting the most beautiful landscapes.

The commission for the take-over of the Moluccas, consisting of Mr. Engelhard and Mr. Middelkoop, has left quite recently. He has high expectations with respect to the extension of his cabinet of natural history. Meanwhile Mr. Hepner (= Heppener), from Banka, has sent him several objects. Before a new opportunity will present itself – a vessel setting sail for Europe – he will undoubtedly be able to prepare a couple of presents for Van Marum and for his other friends. He assures him of his unchangeable feelings of esteem and friendship.

[NA-RANH 529-20b; MED, ZOC, COB, BOT, GEO, ANA]

**186. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 20 February 1817**

Van Marum's most recent letters, dated 31 December and 17 January 1817, will be delivered in Batavia by the captain of the 'Cornelia'. He has added a statement of account regarding the period ending on 7 January 1817. Furthermore he has given a copy of his letter n<sup>o</sup> 6 to lieutenant-colonel Keer, Betje's nephew, who has left Flushing – or will be leaving within a few days. He has promised to deliver his letter at Reinwardt's in Batavia. Until now, he did not receive Reinwardt's letter, dated 13 July 1816.

Cras has informed him that Schlegel's pharmacy, where Reinwardt's niece Caroline is staying, is frequented by the mistress of the wine merchant Schimmelpenninck. Therefore he suggests to find another address for her, at least if she is willing to move. Van Marum is convinced that the surveillance is defective and that the conversation is indecent there. Perhaps it will be better for Caroline to leave for Java in order to make a good marriage. He has promised Cras to present these ideas to his friend, like he has done

already to De Vries, who will also receive a copy of this letter. Reinwardt should consider this proposition. Although he has accepted the responsibility for Reinwardt's asset management, he is not automatically responsible for the well-being of Caroline and he is not forced to act as her guardian. The procuration does not include that!

Regrettably he did not receive any letter since the one, sent on 13 July 1816 [This remark is contradictory to what Van Marum did mention in his letter, dated 12 January 1817!]. He knows that more recent letters have arrived in Holland, through England. Even a letter, sent in October 1816, has already arrived in Holland. Did the vessel, which was supposed to take Reinwardt's letters to Holland, perish? Did it sustain damage? Anyhow, he hopes that Reinwardt has made copies of his letters, before sending them.

Mrs. Kent has not received any financial support until now, besides the money he has provided personally. She urgently needs help. The pharmacist Van Rossum has agreed to continue supporting her, until further notice ('until Kent will have fulfilled his obligations'). Because Van Marum did not receive Reinwardt's life certificates until now, he will not be able to accept his salary as Director of the 'Kabinet van Natuurlijke Historie' for the third quarter of 1816, although it has already become payable on 23 July 1816. Another problem is that Reinwardt's sister Arnoldine has again asked for money. She has made her request too early, because less than three weeks ago 200 guilders have been sent to her already. So the next payment will not be due until 1 May 1817. Next week he will inform Mr. Morian (Lüttringhausen), that it will be impossible to comply with her request. He has also decided to allow Morian to give a modest sum of money if it is really necessary. The fixed dates for sending money to Lüttringhausen – 1 May, 1 August, 1 November and 1 February – will not be changed. He will order Morian to explain this decision to Reinwardt's relatives. Furthermore he wants to receive Reinwardt's approval.

Unfortunately this letter is rather sad. From the bottom of his heart he wishes his friend all the best and God's blessings and His protection. Finally he observes that he has also added a letter from Van der Vlugt.

[NA-RANH 529-20b; ZOC, COB, ART]

**187. C.G.C. Reinwardt (Noordwijk, near Batavia) to M. van Marum (Haarlem); 3 March 1817**

Everyday Reinwardt's craving for letters is growing. Unfortunately, the ship that will leave this morning, cannot take any parcels to Holland. So the parcel, which he intended to send, has to be kept in Batavia for the moment. Perhaps the 'Amsterdam', which may set sail soon, will take it to Holland. Anyhow, he wants to send the crocodile skeleton and a few other objects of natural history. Everybody in Batavia, known to Van Marum, enjoys good health, except for Mrs. Van der Capellen, although she is not dangerously ill. Meanwhile his quarters in Buitenzorg are ready to be brought into use. So he will soon move in. He is fully engaged in the organization of the educational system and the health service. There are many diseased in Tegal, who are suffering from a catarrhal disorder, which especially affects the liver. Only calomel might help a bit, according to the doctors, or better – to the surgeons. In their view this disease is caused by the fact that the river has largely been diverted to the paddy fields, which has reduced the velocity of the stream. He does not know which strange and unknown factor – passed on to the atmosphere – may have such a specific influence on the human body. In his view the heavy showers and the terrible heat are making the air less suited for human beings. Yesterday the showers and thunderstorms were really terrible. A Chinese and his horse have been struck by the thunder. In his last letter he has written about the fact that the 'Idjen' (in the Banjouwatie residence) has been rumbling terribly. On the basis of various messages sent to him, he has written a final report, which has already been published. He will add it to this letter, so perhaps Van Marum can send it to the *Haarlemsche Courant* or to the *Letterbode*. He fears worse, because a thickening haze is surrounding the mountain, probably because of volcanic eruptions. Even the sunshine has been much weaker than normally. Recently he has analysed water, coming from a mountain in Samarang and it proved to contain much sulphur, hydrogenic acid and also sulphuric acid. The analysis of the water from another mountain gave the same result. In May he hopes to make the long journey in the company of the Governor-General. At least His Excellency has expressed his wish to be accompanied by him. Probably it will not be possible to carry out thorough investigations and observations during that trip, although it could be a good preparation for a next journey. Anyhow, he will enjoy it. The character of the Governor-

General is intriguing him more and more.

Lord Amherst – the British ambassador to the Chinese Imperial Court – has visited Batavia, so there have been invitations for dinner parties. Mr. Abel, a physicist and botanist, appeared to be in Amherst's company. Sir Joseph Banks had recommended him. Reinwardt regrets that the objects collected by that man did not arrive yet, for example a herbarium and a collection of living plants from China. Furthermore he asks Van Marum to send him 12 copies of each of his orations, delivered by him in Holland and also the linguistic dictionary written by Wieland, which is still in his library. Mr. Sandra has agreed to deliver this parcel at Van Marum's. He hopes that Van Marum will send him Sprengel's *Institutiones Medicae* (Volume 5), at least if this is one of the books to be delivered by Müller & Co. The same goes for Richter's *Therapie* (Volume 4). Perhaps the bookseller J. van der Hey can help him to prepare this parcel for shipment. He adds a life certificate, a letter to Van den Ende, a letter to Kemper and one to Konijnenburg (in which he spends a few words on Mr. Smissaert, Batavia). Next time he will write to his other friends. He adds his greetings to his friend, to Mrs. Van Marum and to Betje.

[NA-RANH 529-20b; ZOC, COB, MED, PHY, GEO, CHE, BOT]

**188. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 17 March 1817**

Van Marum observes that although already several letters, sent on 4 and 5 November 1816 or even more recently, have arrived in the Netherlands, he did not receive any letter from his friend since the one, dated 13 July 1816. He and the many friends living in Amsterdam are very disappointed about that fact. All the same he wants to keep the deal made between the two of them. He adds a duplicate of his letter dated 20 February 1817. Its delivery has been left to captain Grevelink, commanding the 'Auguste'. He has asked Jeronimo De Vries, their mutual friend, whose wife has safely given birth to a child, to add a letter too. At the occasion of his last visit to Amsterdam, last Saturday, he has found out that Temminck has been taking more and more room in the cupboards of the 'Cabinet of Natural History', in order to store his growing collection of birds. Now he has even taken possession of the cupboards in which the jars of liquor, containing animal preparations, were stored, although Van Marum is responsible for that collection. He has

to accept that fact against his will, because these changes are carried out with the permission of the Commissioner General. So he has decided not to admit any visitors to the 'Cabinet'. He adds his warm greetings and calls himself Reinwardt's lasting friend.

[UBL BPL 2922; ZOC, COB]

**189. C.G.C. Reinwardt (Buitenzorg) to M. van Marum (Haarlem); 1 April 1817**

Most regrettably Reinwardt has not been able to send his last letter, dated 3 March, yet. Meanwhile he has received Van Marum's letter, dated 18 August 1816 (n<sup>o</sup> 4), for which he is very grateful. It has informed him about Van Marum's constant well-being. Again he expresses his gratefulness for Van Marum's efforts to improve his already agreeable financial position, especially because after all life in the East Indies is very expensive, as a consequence of which he has not been able to put money aside. Furthermore he has paid 5.000 'Spaansche Matten', being one third of the price of another house, bought by him. He had to pay transfer charges also. He has borrowed the rest of the amount (26.400 guilders) from the 'Weeskamer' ('Orphanage House') at 9%. Now he owns half the house. The regular payments of this mortgage are a heavy burden. On the other hand renting a house will easily cost 100 'Spaansche Matten' (a month). In spite of his economy his household – including accommodation and care for six horses – costs him 610 guilders a month.

He likes being in Buitenzorg and hopes to be there often. Most probably he will make his long round trip in May, together with the two Commissioners General. He promises to send a part of the promised goods to Holland before they will leave. Most likely the 'Amsterdam' will return to Europe in June or July. It pleases him that Van Marum has meanwhile received the seed collection, sent to Holland from Cape Town. The seeds given to Ghent by the Governor-General, have been bought elsewhere. The seeds sent to Van Marum, have been collected by himself; the determination of the collection of seeds sent to Ghent, is less reliable. It is also possible that only a part will germinate. At the first possible occasion he will try to purchase or to collect the Javanese seeds, wanted by Van Marum. It is really very difficult to preserve seeds on Java. Most of what had been collected, for example the seeds of the genera *Durio*, *Garcinia mangustana* and *Mangifera*, had

to be thrown away because of the excessive humidity and the voracity of the insects. Sending young potted plants to Europe will probably be more successful, at least if somebody will be charged to take care of these plants. Last time he has added a letter to Van den Ende. He is very grateful for having received a letter from Lüttringhausen.

The 'Idjeng' is not rumbling anymore. Another mountain in the neighbourhood is expelling vapours and smoke. He has planned to climb the nearby 'Sallak' mountain in April.

The enclosed letter (dated 16 January) hardly brings any news. Mr. Van IJsseldijk, whom he has been visiting frequently, has left for Solo, in order to enter into the office of resident. In order to get rid of his debts before he had to leave, he has sold some of his properties, among others the country estate of 'Tjilodong', where he has been welcomed so heartily, shortly after his arrival on Java. Furthermore, he has learned that Von Humboldt has arrived in Bengal and that he wants to travel on to Tibet. He would be very pleased if Von Humboldt would be so kind to visit Java also. Mr. Abel, in function as a physicist of the British Embassy, will undoubtedly have heard that the collections, sent by him to Europe (objects of natural history and a herbarium), have been lost.

He has planned to carry out experiments with his 'electrifying machine' soon, although for the time being the damp air makes its operation impossible.

He presumes that after having returned to London, Abel will send Van Marum several books, destined for Batavia. One of these books is Brown's *Prodromus*, because Abel has especially recommended this book to him. [The *Prodromus Florae Novae Hollandiae et Insulae Van Diemen* is a flora of Australia by botanist Robert Brown, published in 1810.] He has promised to send it to Van Marum, if there is no direct shipping line from London to Batavia.

Finally he is busy organizing his household. Therefore he could not send any letters to his many friends. He adds his greetings to his friend, to Mrs. Van Marum and to Betje. He wishes him a good health and assures him of his everlasting friendship.

[NA-RANH 529-20b; BOT, CHE, GEO, PHY, ZOC, COB]



Alexander von Humboldt (1769-1859; self-portrait)

**190. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 1 April 1817**

This letter will be delivered by lieutenant-colonel Keer, Betje's nephew. He will also deliver a duplicate of Van Marum's last letter, dated 31 December 1816 (n°VI) and a review of the state of affairs, regarding Reinwardt's financial position. Vollenhoven has told him that most probably these documents will be sent to Batavia with the 'Columbus'. D'Ailly junior still goes on organizing the insect collection of the 'Cabinet'. Every specimen is pinned up. Temminck should also make more efforts with respect to his position as acting manager of the 'Cabinet'. Unfortunately Temminck does not want to take care of the collection of stuffed animals. He has been absent during the entire summer. With Repelaer van Driel's consent he is completely devoting himself to the extension of his collection of birds. Meanwhile the rooms of the 'Trippenhuys' are overcrowded with birds, so he, Van Marum, has ordered not to admit any visitors. He has decided to shunt the problems at hand. He assures him of his sympathy and adds his kindest regards, of course also on behalf of the inmates. [Taking into account the fact that generally it takes about four to six month to deliver a letter in Batavia, Reinwardt did not receive this letter until about 10 September 1817].

[UBL BPL 2922; ZOC]

**191. C.G.C. Reinwardt (Buitenzorg) to M. van Marum (Haarlem); 9 April 1817**

After having sent several letters with the 'Java' to Van Marum, to which a few letters to various other friends had been added, he has been offered the opportunity to send a botanical collection to his friend through Mr. Abel, physicist and experienced naturalist, serving at the British legation in China, who will soon leave for England, via Cape Town, in the company of Lord Amhurst, the British envoy in China. Mr. Abel is willing to take care of this shipment. He has also agreed to hand the list of plants and seeds of the Cape Province, wanted by Van Marum, to Mr Villet in Cape Town. Furthermore he has promised to take a collection of succulents with him to Europe. Reinwardt has asked him to take with him as many of these plants as possible. He has also given him a copy of this letter and a collection of Javanese seeds, as far as it has been possible to collect these specimens, because most of the seeds have decayed again. He has also handed over four

cases to Mr. Abel, containing well developed seedlings of various species of *Garcinia*, *Psidium*, *Eugenia*, *Doekoe*, *Bidjitan*, *Nephelium*, *Koekoesan*, *Bryophyllum* and various succulents. Abel has promised him to take care of this collection as well. Reinwardt fears that only a few of these plants will survive. Of course Abel will claim his share of this collection, in order to give it to Kew Gardens (and to Mr. Aiton [=William Townsend Aiton, 1766-1849]) for a present. Finally he adds an inventory of the seeds sent with Mr. Abel, who will leave Batavia aboard the 'Ceasar'. If Abel has made expenses with regard to the collection meant for Van Marum, he should be compensated. He hopes that his friend will receive these collections in good order.

[NA-RANH 529-20b; BOT]

**192. C.G.C. Reinwardt (Buitenzorg) to M. van Marum (Haarlem); 9 April 1817**

In a second letter Reinwardt informs his friend that he has made the acquaintance of Mr. Abel, who has been travelling together with Lord Amhurst, the English envoy to China. Mr. Abel will take care of a botanical collection, loaded aboard the vessel that will take him through Cape Town to England. He gives the inventory of the seeds wanted by his friend (according to Van Marum's list of species asked for, which has been derived from the inventory of seeds, sent to the Botanical Garden of Ghent by Van der Capelle). He promises to send a letter to his correspondent in Cape Town and to ask him if the collection of succulents and other South-African plants has already been sent on to Van Marum. If necessary he will immediately put this affair in order. He also promises to collect a few rarities for his friend. Furthermore Mr. Abel has promised to send several objects to Van Marum from England. He hopes that Abel will succeed in keeping all these objects in good shape. Thereupon he describes the composition of the shipment, mentioned in the other letter to Van Marum, dated 9 April. He fears that Mr. Abel will decide to withhold a part of this shipment and to send these objects to Kew Gardens as a present. Finally he informs his friend that the letters written a few days ago, have been sent with the 'Java' (captain Mellem).

[NA-RANH 529-20b; BOT, ZOC]

**193. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 15 April 1817**

Initially Van Marum has been worrying about the fact that several letters from Batavia have failed to appear since he received Reinwardt's letter, dated 13 July 1816. Now he is pleased by the reception of the two letters, dated 10 and 21 September 1816 and with the announcement of a more extensive letter, dated 14 September 1816. He has understood that the major part of the collection sent to Europe, has been lost, because the vessel, taking it to Europe, has incurred severe damage. Only the governmental parcel has been saved. So, in the future Reinwardt should better add his parcels to those, sent to The Hague by the Commissioners General. In that way his letters will also be delivered earlier. Van Marum has tried to send the letters and the books, wanted by his friend, in the same way. Mr. Vollenhove(n) has warned him that the parcels have to be delivered the day after tomorrow at the very latest. Van Marum continues by giving a list of the journals to be sent on. De Vries has promised to add a letter too. Van Marum also adds a copy of Bernard's treatise on the vaccination, observing that the author has declared that copies of the documents dealing with the medical inquiry and surveillance ('Geneeskundig Onderzoek en Toevoorzigt') are no longer available. Furthermore he has sent Reinwardt's letters on to De Vries. Landré senior has promised to send his son Willem to Batavia. Van Marum dislikes the idea that Reinwardt has decided to skeletonise a crocodile all by himself, in order to enrich the 'Kabinet van Natuurlijke Historie'. He should leave that exhausting and boring work to others! He might overstrain himself!

Van Marum wants to deny the rumours spread by Temminck, that he has decided to build a collection of shells (and he knows why!). Only once he has said that he wanted to enlarge the incomplete collection of insects. Besides it is Reinwardt's task to do so. He (Van Marum) only promised to keep an eye on the 'Kabinet'. Furthermore the collections cannot be shown to visitors, while Reinwardt is not there. Van Marum has decided to admit no one in order to prevent unkind reports in traveller's diaries. Another solution is impossible, because Temminck seems to be too much interested in his own commercial activities (the trade of ornithological objects). He has even dared to use the glass cabinets for storing birds, which will be sent to the academies (universities) of the southern provinces. Regrettably

his friend did not send him seeds for his hothouse, until now. He hopes to receive that collection soon.

He is eagerly looking forward to receiving Reinwardt's letter, dated 14 September, because it will be more extensive than the ones dated 10 and 21 September. He hopes that this letter will also bring him the exact orders with respect to the payments to be made to Mrs. Kent. Kent should have taken care of his wife and children. If Reinwardt would have paid more attention to this affair, he would already have received the payment orders. If the orders do not arrive soon, the payments have to be ended.

[NA-RANH 529-20b; BOT, ZOC, COB]

**194. J.Chr. Baud (Batavia) to C.G.C. Reinwardt (Batavia); 1 May 1817**

The secretary of the Governor-General informs Reinwardt that a copy of the letter from the resident of Surabaya (dated 18 April 1817) will be sent to him, in his function as Director for Agriculture, Arts and Sciences [copy of the 'Register of the Decisions made by the Governor-General, Batavia'] [NA 2-21.204(7)]

**195. C.G.C. Reinwardt (Batavia) to J. de Vries (Amsterdam); 20 May 1817**

Reinwardt acknowledges receipt of two letters, dated 1 July 1816 and 1 August 1816. He is happy because his friend and his family are enjoying good health and because they are interested in his health too. Meanwhile he has fully recovered from the illness, which he has been suffering from in April. The agreeable climate will undoubtedly accelerate his recovery. Unfortunately his illness has delayed the progress of his work. Until now he has not been able to start the organization and execution of the tasks he has been appointed for. He also has to prepare his roundtrip on Java. It will focus completely on his proper task – carrying out scientific research. He is really yearning for this trip, because it will be better for his health than an office job. He likes the idea that De Vries is getting along so well with Van Marum. After all, many are scared by Van Marum's stern behaviour. Behind this forbidding appearance hides a right minded, noble, honest and firm man. It really bothers him that Van Marum is misjudged by so many. Erroneously his friends believe that he earns so little, or even that he has no salary at all. This only goes for the period until the colony had been

transferred by the English. Of course his salary could be better, but if he economizes, he will survive. On the other hand, he has not been recruited ('press-ganged') by the government. This does not mean that there are no problems. Because he has not been offered a house for free, he had to buy one. The government knows and understands that his salary is too low and that his budget is too modest to carry out all his orders. His heart longs for Holland, for his friends and relatives. However, his duties will keep him here. Again he sends a number of Batavian newspapers and a crate, filled with objects of natural history. With special interest he has read the academic news from Holland. He is surprised by the many mutations, especially in Leyden. He could have told that the skilled and honourable Bennet would not be suited for the academic duties. Furthermore he has read in the newspaper that Bernard has finally been appointed professor. He is really the right man for the job. Probably this appointment has also been inspired by the failing health of Professor Krauss.

To his pleasure he has also received a letter from his friend Van Marum. De Vries should have been a bit more expansive. He hopes to learn from his next letter that Bram Willet has accepted the professorate of medicine at our 'Athenaeum Illustre'. In Reinwardt's view he has got all the talents to develop a brilliant career. Fortunately Vosmaer has not occupied that vacancy. Landré junior is an excellent assistant. He hopes to be able to bend him to his will. This young man has also looked after him during his sickness. In his view it is highly unfair that Van Marum is blamed for keeping the 'Kabinet van Natuurlijke Historie' (Amsterdam) closed until he has returned from Java. He is very understanding with regard to his decision. As he knows Van Marum is very busy. Besides, as a matter of fact Temminck is responsible, but he seems to be too much occupied by his own business. As it seems, the 'Amsterdam' has been wrecked off the Cape of Good Hope. Apparently the crew has been saved narrowly. If this message is true, the efforts made by him and by his garden assistant of almost a year have been in vain. Aboard the 'Amsterdam' were five large crates, containing objects of natural history, destined for the cabinet of Leyden. He also regrets the political instability in the Netherlands and he foresees growing problems between the northern and the southern provinces.

Regrettably he has not heard from Kemper since a long time. Therefore he asks De Vries to give him his best wishes. At the first possible occasion he will

send nine cases of objects of natural history, Javanese antiquities and exotic weapons. Again he stresses that he is looking forward to receiving news from Kemper, especially about his visit to his relatives in Lüttringhausen.

Finally he returns to the shipwreck of the 'Amsterdam', with which he has sent a large slice of Amboinese wood, measuring seven feet in diameter. It will not be easy to replace this gift. Therefore he has decided to send three smaller slices this time.

[KB 121 B 8; ZOC, COB, BOT, ETN, ART]

**196.** C.G.C. Reinwardt (Batavia) to J. de Vries (Amsterdam); 15 June 1817

Reinwardt burdens his friend with a large crate. Only a minor part of its content is meant for him. Most parcels have to be delivered in Amsterdam. He has also added a small box for his niece Caroline and another small one for his relatives in Lüttringhausen. The Amsterdam addressees are Calkoen and D'Ailly. Another box is meant for Van Marum. He wonders why he did not receive many letters from Holland until now.

At the time he owns two houses – one in Buitenzorg and the other in Noordwijk, near Batavia. He fears that none of his friends – perhaps not even De Vries – will appreciate this news that much. All in all, this situation is very expensive.

He hopes to keep his health. Soon he hopes to make the trip with the Governor-General and the Commissioner General Elout. This journey across Java, which will take three to four months, had to be postponed as a consequence of the continuing presence of the English. If any letters, addressed to him, should arrive in Batavia, they will be forwarded to him.

[KB 12 B 8]

**197.** C.G.C. Reinwardt (Batavia) to J. de Vries (Amsterdam); 15 June 1817

Reinwardt informs his friend that he has sent a bag of coffee to his sister Arnoldine in Lüttringhausen. This present has been loaded in the 'Admiraal Buyskes'. Van Marum will have to pay the freight. He sincerely regrets the unpleasant experiences Van Marum has had. He hopes to receive new letters from De Vries.

[KB-12 B 8]

**198. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 22 June 1817**

Van Marum is extremely happy because of the reception – yesterday – of Reinwardt's letter, dated 1 January 1817, in which he mentioned his good health. Reinwardt should understand that he has really seized every opportunity to send letters to his friend. Because he has ordered to copy his letters before sending them, there is little chance that a letter will get lost. Reinwardt should do the same. From Elout's letter, dated 14 December 1816, he has learned that Reinwardt has sent a letter about the same date. Tomorrow he will also see Parmentier (in Enghien, near Brussels) and ask him for new plants for his hot house.

From Reinwardt's letters, dated 12 November 1816 and 1 January 1817, he has learned that most regrettably almost all his time is taken up by the organization of the education system of the East Indies and that it is almost impossible for him to devote himself to his more important tasks. The other friends in Holland are of the same opinion. Reinwardt is spending too much time behind his desk in the unhealthy town of Batavia. What about his original plans and ideals? He should not sacrifice his ideals for the projects of a few members of the government! What about the rest of his stay on Java? What if his life will be shortened as a consequence of his stay in the tropics? He might even die before he will get the chance to enjoy the results of his many observations. Enough said on this subject, now!

Van Marum and the other friends have understood that Reinwardt prefers staying in Buitenzorg at the country estate of the Governor-General, but that doing so might also keep him from the activities, initially planned by him. Van Marum has great expectations about Reinwardt's coming trip through the high mountains. Fortunately he will be in excellent company. However, this trip can only be carried out if the government guarantees safety against robbers and all kinds of harmful animals.

He really pities that the payments of Reinwardt's salary are always late and that he even has to borrow money at 9% interest. In spite of all his promises, Kent did not send money to his family until now. Van Marum has discussed this affair with De Vries and they have decided to continue the weekly payments (1.10 guilders from February on, instead of two guilders). Mr. Pottum – pharmacist (Leyden) – has withdrawn his consent to advance this sum, because until now he did not receive any assurance of its future

restitution. At the moment more than 92 guilders have been given to Mrs. Kent. Van Marum promises to continue these payments until Reinwardt will have informed him about his decision. Mrs. Kent is regularly seeing him and is begging him for financial support.

After having received Reinwardt's life certificate, the salary for his directorship for the third quarter of 1816 has been paid. Now he is awaiting the life certificate for the fourth quarter of 1816. Meanwhile D'Ailly has sent the books, as well as the parcel of paper, meant for the preservation of plants. Landré senior has promised to inform him in time about the day on which his son will leave for Batavia [See also the letter, dated 20 May 1817, in which a few words are spent on another person, called Landré].

Time is running short, so he has to shorten his answer to Reinwardt's last letter. It has pleased him that his friend is so very much contented by the way his financial asset has been managed. Van Marum has the intention to carry on. Therefore he has decided to show his displeasure about the fact that Reinwardt's so-called friends are not able to make arrangements for the payment of his salary in due time. This fact is even more disgusting because it does not seem to go for the higher ranks, like colonels. Even Kemper has not been able to influence this unacceptable situation. He does not understand why the two Commissioners-General have not been able to make better arrangements for their friend Reinwardt.

[NA-RANH 529-20b; BOT, ZOC; See also: UBL BPL 2922: identical letter]

**199. J.Chr. Baud (Batavia) to C.G.C. Reinwardt (Batavia); 24 June 1817**

Baud informs Reinwardt about the results of the decision with respect to the nature and quality of the coal found in the island of Madura. This coal is not fit for use, as appears from the letter sent on 3 June 1817 by the resident of Surabaya. Therefore it has been decided to send an extract of this letter to the Director of Agriculture, Arts and Sciences ['Extract uit het Register van Besluiten van de Gouverneur-Generaal'].

[NA- 2-21.204(7); GEO, PHY]

**200. J.Chr. Baud (Batavia) to C.G.C. Reinwardt (Batavia); about 30 June 1817**

Baud informs Reinwardt more in detail about the report (dated 2 June

1817, n° 132), sent to him by the resident of Surabaya, in which the presence of coal-mines in the island of Madura is discussed. The Governor-General has decided that a more precise examination of the possible presence of coal. Therefore the 'Constructiewinkel' 'Engineering Works' in Surabaya has been ordered to build the instruments, needed for probing on the sites, which – after having surveyed the surface of the island – will probably be the most appropriate locations for sounding and digging. For more than a month the officials Halewijn and Seest have examined the soil of Madura, among others in the Sumanap region (after its resident had permitted them to do so). They have been assisted by one of the workers of the 'Constructie Winkel', an experienced coal miner from Europe. Baud gives the following results: The commission has examined seven mountains, or better 'hills', situated in various regions: two of them were situated in the region of Baneallang, three in the Pamanassang region and finally two in the Samarang region. They have dug holes to a depth of more than 40 feet. Each time when coal was found, the layers turned out to be less than two feet thick. Its quality was never good. These samples were examined twice, in the field as well as in the 'Constructie Winkel'. It is only possible to use the greasy coal for heating stoves.

[NA 2-21.204(7); GEO, PHY, TEC]

**201. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 1 July 1817**

Because the 'Elisabeth' (commanded by captain Fakes) will leave Batavia within the next few days, Reinwardt grasps the opportunity to send an extensive letter to his friend. First of all he expresses his disappointment about the fact that Van Marum's letters are so rare. Anyhow, his last letters have remained unanswered until now. He has received a letter from his friend and former colleague Van Lennep, which has been sent to him through Elout. It has been taken to Batavia with H.M. corvette 'Venus'. He sincerely hopes that it has also brought several letters sent by Van Marum. From Van Lennep's letter he has learned that Van Marum still enjoys good health, but that Mrs. Van Marum and Mr. Jacobson have died meanwhile. Jacobson has always been one of his best friends.

He is in rather good health, although he often suffers from bronchitis, accompanied by a heavy mucous secretion in the bronchi. Following a severe

regime is the best condition for recovering. Elout, the Governor-General and Mrs. Van der Capellen have been ill for several days, but they have fully recovered meanwhile. So he expects the long journey to begin soon, although a few arrangements still have to be made, among others with regard to the more detailed negotiations with the British and to the expeditions to the far-away residences and Japan. Yesterday the English Governor and the English general have left. A last hitch might be the possible sudden leave of the rear admiral Buyskes to Amboina, because of a sudden revolt, especially on the island of Saparoua, which has caused the death of the resident, his wife, his children and about a hundred soldiers.

About two weeks ago he has delivered several parcels for Van Marum aboard the ship that will take this letter to Holland. Several of these parcels are destined for Van Marum, while the others have to be given to De Vries. These have to be distributed among a couple of friends. The first parcel meant for Van Marum also contains a copy of the *Bataafsche Almanak* ('Batavian Almanac') and a collection of seeds. Its inventory has been added to this letter. Another parcel, also meant for Van Marum, contains a couple of drawings, accompanied by a brief memorandum, while a third parcel, also addressed to him, contains a candle made of a wax-like substance, excreted by the seeds of a still unknown tree species. In Reinwardt's view it might be a *Laurus* species. He has discovered these candles in the village of Tjandjour, at the occasion of a short trip into the mountains. They produce a bright light. Meanwhile the seedlings have developed in his garden in Buitenzorg, where he is setting up a hortus. The Governor-General has given him a large parcel of land. Reinwardt hopes that this agreeable and instructive enterprise will be important to botany. He has already succeeded in engaging the English gardener Hooper, the former co-supervisor of the cultivation of plants at the 'Royal Garden' of Kew, after Abel had informed him (Reinwardt) that Hooper was perhaps well-disposed to stay on Java, in order to study its vegetation more in detail. Among others because of the request made by Sir Joseph Banks, Hooper has travelled to China in the company of Lord Amherst, the British ambassador. Hooper had succeeded in collecting many plant species for Kew. Unfortunately the ship carrying the delegation had been wrecked off Batavia, like he has already reported to Van Marum. This event caused the end of Hooper's employment. Having Hooper's readiness to cooperate, Reinwardt decides that he has to speed up the development

of the garden. While one side of the ground still has to be cultivated, the other part is already being planted. During a short trip to the top of the 'Salak', he has discovered and collected many rare plant species. He is sure that the coming trip will yield many discoveries. Of course the large new garden will also allow agricultural experiments. He asks Van Marum to send him seeds of flowering plants, economical plants, vegetables and trees. As far as the flowering plants are concerned, he especially has in mind carnations, violets, poppy's, various bulbs, such as Hyacinths and Tulips, and of course the seeds of flax, buckwheat, acorns, as well as beechnuts and the seeds of spruce and various fruit trees. He hopes to be able to make up this gift by sending a surprisingly rich present, cultivated in the new hortus. Meanwhile he has prepared another shipment for Van Marum, several plants planted in wooden barrels. If he had not been informed that the vessel, which will leave for Holland, had not been overloaded already, he would definitely have sent several other presents for Van Marum with it. A couple of days before, another vessel has arrived from Port Jackson. Its crew brought all kinds of curiosities of natural history. Because the prices turned out to be too high, he could not buy anything. Finally he succeeded in persuading one of the sailors to sell a portion of the seeds to him, which had initially been destined for Kew. Now he wants to share this collection with Van Marum. He hopes that his friend will meanwhile have received the collection, handed over by him to Mr. Abel on 9 April 1817. It had been agreed that this collection has to be split up between the two of them. He also reminds his friend of the books, he has asked Mr. Abel for. Mr. Hesse – on the verge of leaving for Europe – has promised to look for various species of Aloë and succulents. Regretfully, at the time only a few ships will sail directly to Holland from the Cape. Although Mr. Vilet has tried to send a case of plants to Holland, he did not succeed until now. Reinwardt has been informed that meanwhile a gardener from Kew has arrived in Cape Town, who has been ordered to collect living plants for this garden. Perhaps this man will be willing to collect a couple of plants for Van Marum also. Hesse has suggested to ask another European gardener, who has been sent to the Cape Colony by the Prussian King, to collect a few plants for him. The box meant for De Vries, also contains several parcels, which have to be sent on to Lüttringhausen. He has not heard from his mother since a long time.

Kent is helping him to prepare his luggage. Reinwardt is still busy organizing the education system and the medical service. Besides he has proposed the foundation of a medical academy for the navy. Meanwhile Mr. Landré, one of the Dutch schoolteachers, who have been sent to the Dutch East Indies, has died. There is really an urgent need for experienced schoolteachers. He really hopes that Van den Ende will be able to send him a couple of them soon.

A few weeks ago he has been so lucky to make a pleasant trip and to pay a visit to the country estates of Mr. De Wilde, who has been recommended by him for directorship of the 'Hollandsche Maatschappij der Wetenschappen'. The two of them have climbed the 'Salak'. He has also been informed about the death of the president of the 'Hollandsche Maatschappij', Mr. De Kanter Kamerling. He informs De Vries that two of its directors, Mr. Siberg and Mr. Van IJsseldijk, have died meanwhile. Especially Van IJsseldijk, the late resident of Sourakarta, has been a very close friend, who has been of great help to him. The 'Bataviaasch Genootschap' seems to have wakened up from a long sleep. Tomorrow, at the occasion of its first annual meeting, Reinwardt will be proposed for presidency. If the assembly agrees, he will accept the invitation. He knows that this decision will also please the Governor-General. Unfortunately he does not think much of the yield of this society. The contents of Volume 8 of its *Verhandelingen* will also be discussed, after which he will send a copy to Van Marum. He hopes to save so much money, that he will be able to pay off the mortgage, borrowed by him in order to buy his share of the house. He will send his future savings to Van Marum. He asks his friend to inform him about the most wanted goods in Holland. Furthermore he should send him a copy of Roxborough's work on the Javanese vegetation and other interesting publications. Kemper has promised to send him the latest edition of the *Hortus Kewensis*. Has Römer's *Systema Plantae* already been published? At one of the next occasions he will send Römer a collection of dried plants in return.

A few weeks ago there has been a rather heavy earthquake in Batavia. Similar messages have been received from Japara and Banjoewangie. There has not been much damage.

He often feels the need of possessing an 'assay oven', because he is still waiting for the one ordered by him in Paris. Probably he has been deceived by a swindler!

Yesterday he has seen the Governor-General, while two boxes of letters were delivered, partly destined for the East Indian government, while the rest appeared to be addressed to private persons. Many of his compatriots were pleasantly surprised by the reception of several letters from Holland, but again he was not! The 'Venus', anchored in the Roads of Batavia, did not bring any letters from Van Marum. He does not understand why and he is really disappointed. He hopes that one of the vessels, which are already visible off the coast of Batavia, will deliver a letter from his dear friend.

A couple of days ago, he has accepted to become president of the 'Bataviaasch Genootschap van Kunsten en Wetenschappen'.

He has received a number of newspapers. He asks his friend to reimburse the person who has delivered them.

The remittance of the extensive description of the trip made in May 1817 to the top of the 'Salak' (in the 'Blue Mountains' region, south of Batavia), has to be postponed until next time, because his draughtsman, who had to make a couple of sketches, has fallen ill. Reinwardt has made this trip in the company of the Governor-General, the artist Bik, Kent and De Wilde. They have travelled eastward through the road, built by General Daendels. Usually the carriages are pulled by Indian buffalos in that region. It turned out to be possible to follow that road until they reached the village of Tjandjoer, where they continued their track in a southward direction, through an almost impenetrable region. Only through De Wilde's assistance, who owns the larger part of that region, even the slopes, they have been able to climb the top of this mountain (of about 7.000 feet altitude). Its splendid vegetation was very impressive. The species, covering its slopes, are completely different from those growing in the lowlands. He has discovered many species of Myrthi, Andromedae, Azaleae, etc., which have not been described until now. He has also found many ferns and cushion like mosses (among which were many European species). In his next letter he will give more details. He has been the first European to climb that mountain. The party has also discovered a very old burial place. He promises to write more about these 'pseudo volcanic' mountains. He ends his letter and gives his best wishes to Van Marum, to his wife, Betje and his friends.

[NA-RANH 529-20b; BOT, CHE, AGR, MED, GEO, ART]

**202. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 16 July 1817**

Van Marum has added a copy of his letter n° 9 (dated 22 June 1817) to this letter (n° 10). He hopes that none of his letters will get lost, nor that they have been lost already.

From Reinwardt's letter, dated 10 February 1817, he has learned that his friend enjoys good health and that the bronchitis is not bothering him anymore. He begs Reinwardt to take care of himself, to stay alive and to return to Holland (in 1820, or earlier if possible).

Meanwhile he has received his life certificate for the fifth quarter, so he will be able to collect his salary. He has also received a letter from P.Fr.J. Ohm, a relative of Reinwardt, which had been added to a letter from his mother and sisters, living in Lüttringhausen. This letter has informed him that his sisters were not only suffering from springtime fatigue, but that Arnoldine has also been suffering from a chronic asthenia. Tomorrow he will send Reinwardt's relatives their monthly allowance. He is aware that they are always looking forward to this payment.

He has made a trip to Ghent, where he visited the flower exhibition. He has also been to Brussels and saw Mr. Parmentier in Enghien, who has given him new plants for his hothouse.

During his absence a box of succulents sent from the Cape, appeared to have been delivered by Mr. Hesse, on behalf of his friend. The letter, in which Reinwardt has discussed this present, has not been received until 28 February 1817. Because the journey from Cape Town to Holland has taken so long, many plants will probably have perished. Among the remaining plants he has found 10 to 12 species of Aloë (one of which is new), four or five species of Cotyledon, two species of Euphorbia and two new species of Cacalia. He has decided to share this present with the Count Von Salm-Dyck, at least the new species, of which at least two specimens have survived, in order to contribute to the realization of Salm's monograph. He adds a copy of Salm's *Catalogue Raisonné* (which has been published in April). While he was staying in Ghent, six boxes of Javanese plants have been delivered at its botanical garden (a present from the Governor-General in Buitenzorg). Having been allowed to throw a glance at its inventory, it appeared to him that only the Javanese names had been given. Van Marum is eagerly looking forward to receiving a similar present, especially rich in rare species and

he hopes that his friend will not forget that his hothouse is only 23 feet long. He already possesses specimens of *Bryophyllum calycinum*. Reinwardt should send him ripe seeds. He does not understand the predilection of the Governor-General for the botanical garden of Ghent. Until now he has not heard any news about gifts to the gardens of Leyden, Amsterdam and Utrecht. Reinwardt still has the opportunity to give him a part of a future shipment to the Amsterdam Hortus, especially if there are duplicates. He will try to answer Elout's letter. Until now he has not been able to inform the Directors of the 'Maatschappij' about the proposition made by Elout, but he will do so at the next possible occasion. He is very pleased to learn that Reinwardt's new house has been built in a very healthy area. In his way his friend will remain free from the February diseases. He should avoid the unhealthy regions as much as possible. He appreciates that the Governor-General has offered his friend a house in Buitenzorg. The eruption, which has occurred on East Java, must have been terrible. He promises to remind Temminck of Reinwardt's request. Most regrettably he did not receive the jars of ginger, Reinwardt promised to him in his letter, dated 19 December. He has asked Mr. Vollenhoven in vain to send him this present, although this man had promised him to do so immediately after its arrival. He does not know which vessel has brought these jars to Holland.

[NA-RANH 529-20b; BOT, GEO]

**203. C.G.C. Reinwardt (Batavia) to the Governor-General (Batavia); 18 July 1817**

Reinwardt reminds the Governor-General of the fact that he has received his decision made on 8 April 1817, n° 5, and informs his principal that he has examined the coal, sent to him from Banjarmasin, and that he has entered his report. Shortly after he has received a letter from the resident of Surabaya (dated 18 April 1817), being a covering letter to a second version of the above mentioned decision made by the Governor-General (dated 1 May 1817, n° 9). Through this letter he has learned that the coal from Madura had to be examined more closely. He has decided that as a consequence of this order the examination of the Banjermassin coal has to be postponed until he would have been informed about the Madura coal. Because the resident of Surabaya had added this message to the letter sent on 3 June 1817 (n° 3) to the Governor-General – and because meanwhile an extract

of this report had been sent to him – he has the opportunity to examine the Banjermassin coal as well. After having completed this examination, he will report on this subject. From the report, dated 3 June 1817, he has understood that the Madura coal is not usable as fuel.

[NA 2-21.204(7); GEO, PHY, CHE]

**204. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 25 July 1817**

From Reinwardt's letter, sent on 19 September 1816, Van Marum has learned that his friend intends to send him a collection of Javanese plants as soon as possible. He is very happy about Reinwardt's promise, but on the other hand he is disappointed that he did not mention this fact in his following letters. Immediately after, he has asked Kops to send him a copy of the monograph of the Orchids from Reinwardt's book collection. Immediately after having received this book, he will send it on to his friend, together with the two volumes of the work of Thenard. Or would his friend rather ask the publisher (in Paris) to send him the book himself? If not, Van Marum has to try once again to get it and to send it on to Batavia. From Reinwardt's letter he has also learned that he has been asked to deliver lectures. He is happy that his friend did reject this request. He should not sacrifice himself!

Since Bennet has accepted the professorate in Leyden, he has almost constantly been ill. First of all he has suffered from rheumatism, and thereafter from a swelling in the left part of the lower abdomen and from a limitation of his mobility. Meanwhile, Bennet has asked to be discharged. He has proposed Dr. Kleinhof van Enspijk as his successor.

From Reinwardt's letter, dated 15 December, he has learned that his letters sent in January and February have been the last ones to be received in Batavia. Until now he has received Reinwardt's letters, dated 1 January 1816, 24 May 1816, 21 July 1816, 19 September 1816, 14 October 1816 and 12 November 1816. In his letters n° 9 and n° 10 he has already answered these letters. He promises to convey the jars of ginger according to Reinwardt's instructions. The two jars intended to be sent to Reinwardt's relatives in Lüttringhausen, will be taken there by Mr. Frowein, or by Mr. Morian (who will visit him in autumn). He wonders why his friend has not had the opportunity to collect enough seeds for a shipment to Holland. In his 10<sup>th</sup> letter he has also asked to send him living plants, because meanwhile his

favourite and main occupation has become the cultivation of plants. He is very curious about the edible bird's nests and about the caves where these nests are found. Perhaps he could prepare Reinwardt's communication on this subject for publication in the *Verhandelingen van de Hollandsche Maatschappij*. He has informed D'Ailly that Reinwardt has ordered large sheets of white paper, to be used for the drawing of geographical maps. Maybe this shipment will arrive together with the paper he has asked for drying plants.

Referring to Reinwardt's letter, dated 10 February 1817, Van Marum observes that he has added a copy of the letter, addressed to the Amsterdam bookseller Van der Hey, in which he has asked to inform him about the possibility of sending him a couple of books for the 'Bataviaasch Leesgezelschap'. He also adds a copy of Van der Hey's answer. Although Van der Hey has asked Van Marum to pay him, he has decided not to do so for the time being, because Reinwardt did not order these books until now. In his view, Van der Hey – the publisher of the *Verhandelingen* – is a greedy and unreliable man. Furthermore Van Marum has decided to save as much money as possible for his friend. He should try to save the yield of the sale of his house, when he returns to Holland.

He also asks him to recommend a couple of young men to the Governor-General, who is known as a benevolent man. The niece of Betsy, who is staying at Van Marum's at the moment, is engaged to Van der Goes, first lieutenant of the artillery. Van der Goes has been ordered to leave for Java this Spring. Since the day of his engagement he has tried everything to be allowed to stay in Holland. He has even made an attempt to marry her and to take her with him. But the Governor-General did not give his consent. Reinwardt should try to make an acceptable arrangement. Van der Goes is a member of one of the most important families in The Hague. Van Marum does not have the possibility to exert any influence. In his view Reinwardt should see Van der Goes first. As soon as his effort turns out to be successful, the girl will leave for Java.

[NA-RANH 529-20b; BOT,AGR]

**205. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 26 July 1817**

Since Van Marum has sent his last letter (n° 10) with the 'Korenzaijer' (captain Schmidt), as promised by Mr. Vollenhoven), while a copy of his letter n° IX has been sent with the 'Jan en Cornelis' (captain Duyff), he did not receive Reinwardt's delayed letters, dated 14 September and 15 December 1816. First of all he wants to discuss Reinwardt's letter, dated 14 September. He was very much pleased by the fact that this extensive letter brought him so much news. Its many cordial words were heart-warming. His heart has been put at rest, knowing that his friend will not stay any longer on Java than it has been agreed. He is really missing his friend. There are still three more years to go. He promises to handle Reinwardt's affairs as good as possible, which gives him much satisfaction. Because life on Java is very expensive, the government should at least have offered him a house for free. Did the Commissioners General also have to buy a house? He is still upset by the fact that his friend has been tricked by the Parisian swindler, who has been paid in advance for scientific instruments, which have never been delivered. Reinwardt's decision (put into words in his letter) to send him a collection of living plants soon, has pleased him very much. For that reason he has ordered to build a hothouse. Furthermore he discusses the sending of a couple of books (among others written by Thenard, Paris). He is astonished that his friend has been asked to deliver lectures in Batavia. Bennet is in poor health. Furthermore he discusses Reinwardt's request to send books in behalf of the Batavian book club (see Reinwardt's letter, dated 10 February 1816), the overdue payments of Reinwardt's salary and his possibility to advocate the plans of Betsy's 17 year old niece, who wants to leave the Netherlands, in order to join her fiancé, Van der Goes, lieutenant in the artillery. This young man has already made his wish clear to leave for the Dutch East Indies, prior to his engagement. He even wanted to marry his fiancée and to take her with him to Batavia. Van der Goes, a member of the most well-to-do families of The Hague, has implored him to ask Reinwardt to plead his case when seeing the Governor-General.

[UBL BPL 2922; BOT, COB; see also: NA-RANH HMW 529-20b: 25 July 1817; almost identical letter]

**206. M. van Marum ('Plantlust', near Haarlem) to C.G.C. Reinwardt (Batavia); 29 July 1817**

Van Marum reminds his friend of several letters and copies of letters, which have been sent to Java with the 'Korenzayer' and with the 'Jan en Cornelis'. Since 16 July 1817 he has received two letters, dated 14 September and 15 December 1816. The first one has been delivered by Mr. Buys, the second one has been sent to him from Den Helder. He hopes to receive the jars of ginger soon.

Landré junior will sail to Java aboard the 'Jan en Cornelis' and he will try to send his letter with this young man. This vessel is still waiting for the right wind. If Reinwardt does not decide to prolong his stay on Java, more than one third of it has passed meanwhile. Van Marum fears that his friend will be kept on Java (much) longer. As he is growing older, he dislikes the idea of missing a friend and especially the idea of missing Reinwardt for another three years or more. Reinwardt should not promise to stay longer on Java, or to bite of more than he can chew. Is it not possible for him to return to Holland already in 1820? This decision would make him very happy. He appreciates that Reinwardt is satisfied about the way he is managing his account. He is still disappointed that his friend has to spend so much money on buying a house and he also disagrees with the fact that his Indian salary is so modest. The Government should at least have offered him a house for free. Van Marum wants to know if the Commissioners General had to buy houses too. De Vries will also be bewildered by the news of these huge expenses and he will also agree that Reinwardt is setting his self-interest aside too often. To his great relief he has learned from Reinwardt's letter – dated 19 September – that meanwhile the government has offered him a house. He hopes that he will make a high price for his own house and that he will send the yield of that sale to Holland. In that way Van Marum will be able to add a fair capital to Reinwardt's growing property. He expects Reinwardt to have already been informed that he did not succeed in acquiring an assay-oven and a balance in Paris. Once again he reminds him of the fraudulent practice of the Parisian trader, who has pretended to wield a great deal of influence with the government.

[NA-RANH 529-20b; PHY, CHY]

**207. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 1 September 1817**

Mr. Vollenhoven has informed him that soon a vessel will set sail from Rotterdam to the East Indies. This means that he will again have the opportunity to send a letter to Reinwardt. It would make sense to add copies of previous letters to the new ones. The last letter he has received was dated 10 February 1817. On 24 July 1817, he has sent a letter (n° 11) with Landré junior. Now he adds its copy to this new letter (n° 12). Meanwhile the jars of ginger have arrived. He will send two of them to Lüttringhausen. Two more have been delivered at DeVries's and also at D'Ailly's. Unfortunately a part of this cargo appeared to be damaged on arrival. The next shipment of ginger should be contained better.

In July 1817 he has sent on the last life certificate received by him, regarding the fourth quarter of the Dutch part of Reinwardt's salary, to The Hague. He has made the proposition to Goldberg to release Reinwardt from the obligation of sending further certificates, but Goldberg did not agree with that at all.

Yesterday, when Van Lennep asked him if he had received any letters from Reinwardt recently, he answered him in the negative. Van Lennep told him that he had received a letter from Elout (sent in April 1817), informing him that he and Reinwardt were going to make a trip through Java, in the company of Van der Capellen. Van Marum hopes that this journey will please his friend more than organizing primary schools or doing desk work. He has also told Reinwardt's closest friend that he had to buy a house and that therefore his financial situation had taken a turn for the worse. They have found it hard to accept this fact. Van Lennep has decided to tackle Elout about it. The government should enable Reinwardt to return to Holland in March 1818. He would like to have him in his company. Is it not possible to persuade him to return to Holland together with Elout? As a matter of fact he has tied himself to this job only for two years. Because of his defective lungs, he should not hesitate a second. Of course he will be able to make himself useful in Holland too! It is not at all impossible to find a substitute for the simple work Reinwardt has to do most of the time! He would absolutely derive much pleasure from the publication of a 'Natural History of Java', just like Von Humboldt has done with respect to the South-American continent. Unfortunately, the English have taken the

wind from his sails. In England Raffles has published a similar work, assisted by Horsfield. All in all, Reinwardt has to think out before he will decide to renew his contract. Since he has sent his last letter to Batavia, he has not heard from Reinwardt's relatives in Lüttringhausen.

Van Marum and his wife are in good health. He spends much time on his garden and is eagerly looking forward to receiving new shipments from Java for his hothouse. If necessary he could also send his friend fresh seeds. Of course he can hardly wait to embrace him. He finishes his letter by expressing his sincere friendship – also on behalf of his wife and Betsy and he observes that he did not receive the life certificate needed for the payment of Reinwardt's salary.

[NA-RANH 529-20b; BOT, ZOC]

**208. J. van Boekholt (Surabaya) to C.G.C. Reinwardt (Batavia); 4 September 1817**

At the occasion of his departure from Batavia, Van Boekholt has been charged by Reinwardt to collect objects of natural history for the 'Koninklijk Kabinet van Natuurlijke Historie' (Amsterdam). Thereupon he received a letter from the Governor-General, ordering him to follow Reinwardt's orders. Today he can inform him that he has at least partially carried out these orders. He has brought home a number of objects, mainly from the Dajjak region, mentioned in the inventory added to this letter. Unfortunately he knows little about natural history. This fact has complicated the making of a collection, which will be useful to Reinwardt. He might also have been off target now and then. Another problem is that as a matter of fact it is necessary to hire natives, who are experienced animal catchers. These men have to be paid in advance. Anyhow, he has received two or three of the most beautiful monkeys ('Kahau's'), two completely black 'wouwou's', a rare small yellow monkey and two 'soulons' (very rare birds, to which the Dajjaks are showing a certain religious respect), a very large snake, several 'sloths' and muskrats (together with their young) and finally a couple of squirrels with very long noses. Unfortunately all these animals have died meanwhile.

Soon he will be able to inform Reinwardt about other species mentioned in the inventory. He hopes that Reinwardt will appreciate his obligingness. As the government has decided that it would be useful to collect objects of natural history on Borneo too, Reinwardt should send someone there, who

is educated in natural history. Otherwise much of the work will finally prove to be in vain.

He ends his letter by expressing his feelings of respect, calling himself Reinwardt's most obedient servant.

On the inventory added to this letter, Van Boekholt also mentions two young orang-utans, the dried skin of the mother of these young animals, the dried skin of a bear from Borneo, two bobtail monkeys and several other animals, various rocks, Daijak articles of clothing, pieces of furniture, utensils, arms, ornaments and jewels. Van Boekholt has given the native names of all these objects.

[NA 2-21.204(4); ZOC, COB, GEO, MIN, ART, ETN]

**209. C.G.C. Reinwardt (Semarang) to the Governor-General (Batavia);  
7 September 1817**

As the Governor-General has asked Reinwardt to do so, he advises him with respect to the letter sent to him by the lieutenant-general of the district of Batavia, dated 20 August 1817 (n<sup>o</sup> 278), relative to the problematic deliveries of sulphur from the Banjouwangie residence. Reinwardt had already previously been informed about these difficulties. So it is necessary to examine the other possible production sites of the island, on which Banjouwangie is situated, where the collection of sulphur may be less complicated. From previous messages he knows that the district of Djapan might offer interesting possibilities. Furthermore the Governor-General has already seen the sulphur from the highest slopes of the 'Gédé' mountain. Reinwardt has also been informed already about the possible production site on the 'Roggo Jambungang' mountain in the residence of Pekalongang, where it is possible to collect a considerable quantity of sulphur, as it has been said.

Of course he is willing to submit his proposals to the Governor-General for approval. He offers to continue his investigation, as soon as he will have arrived in Surabaya. He awaits further information from its resident and from colonel Boiens, of course after having received and examined a sample of the sulphur dug in Djapan. In a document added to this letter, he explains that the supply of sulphur from the Banjouwangie region has become very dangerous and difficult, after the eruption of the mountain. The natives will have to be forced to do this job. The sulphur from Djapan still contains many

soil particles, after it has been refined. Nevertheless the Colonel Doctor of the artillery and several pharmacists have stated that this sulphur is very usable.

[NA 2-21.204(7); GEO, MIN, PHY, CHE]

**210. C.G.C. Reinwardt (Surabaya) to M. van Marum (Haarlem); 1 October 1817**

More than two weeks ago – on 12 September 1817 – Reinwardt has sent his friend a prolix letter from Japara. In it he has answered Van Marum's letters, dated 1 November 1816, 10 November 1816, 31 December 1816, 16 January 1817 and 17 January 1817. At that occasion he has also informed his friend extensively about his journey. Besides he has added a life certificate, a second bill of exchange worth 125 pounds, payable in London as well as a bank draft, worth 400 guilders, payable to W. Kent. Furthermore he has sent him the inventory of a collection of objects of natural history (5 crates), which will be sent to Holland with the 'Amsterdam'. Since then he has received Van Marum's letter, dated 20 February 1817 (n<sup>o</sup> 7). First of all he discusses Van Marum's remarks with regard to the unwanted contacts between his niece Caroline and the mistress of the wine merchant Schimmelpenninck. He confirms that he has been shocked by this affair and ascertains him that he has warned Caroline's mother without delay. However, his sister-in-law felt embarrassed about doing something, because the pharmacy might suffer financially. If possible he would absolutely send his niece to other people, who are already acquainted to him. On the other hand, the mother will be decent enough to take care of her daughter. At the occasion of the uncommon visits Caroline pays to DeVries's family, she is always very quiet. She does not get familiar with the friends of Van Marum and Reinwardt. The news received from Arnoldine Reinwardt (in Lüttringhausen) that Caroline has a roman-catholic lover, was also very inconvenient. All these facts have induced him to consider her transfer to the East Indies. Because it is only possible for her to make this journey in the company of a nice and reliable family, which occasion might not present itself within the next six months, or only just before he will return to Holland, it would be less advisable to do so. Furthermore his busy occupation and frequent absence will also be inconvenient, especially shortly after Caroline's arrival. Accommodation at other family's homes, especially at the houses of native ladies, will also be

problematic. Finally, making the acquaintance of other Dutch people and finding a potential partner will not be easy either. He knows that on Java many marriages have stranded and he is familiar with the consequences.

He promises to repeat the contents of the previous letters as good as possible, in order to compensate the loss of letters as much as he can. He has enclosed a letter to Mr. Van der Vlugt. To his letter written on 30 June 1817 he has added seeds from New Holland. Kent has informed him that meanwhile a part of the seeds, sown in Buitenzorg, has germinated. He hopes that the seeds, sent by him to Van Marum, are doing as well.

A couple of days ago he has arrived in Surabaya. The captain of an English vessel has given him a small collection of seeds (of which he will send some to his friend), the skins of several specimens of *Ornithorhynchus parad.* and several tubs of living plants, of which most have died meanwhile.

Because of his other duties, he has to end this letter now. He wishes Van Marum and his relatives all the best.

[NA-RANH 529-20b, BOT, ZOC, COB]

**211. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 8 October 1817**

To his 13<sup>th</sup> letter Van Marum adds a copy of his previous letter and two letters received from Reinwardt's relatives, as well as a letter from Mr. Morian. Until now he did not receive the letter, which Kemper had promised to deliver in Haarlem. Kemper has visited Reinwardt's relatives in Lüttringhausen and he has had a meal with them. They are doing rather well, although Reinwardt's mother gets weaker and weaker. She fears that she will probably not see her son back alive. Because Morian's business is on the decline, the regular payments to his relatives might be endangered. Mr. Frowein, whose letter he has also added, will take care of the continuation of these payments. He thanks his friend for sending him the nice letters, dated 1 and 9 April 1817. Regrettably he did not receive Reinwardt's letter, dated 3 March (1817), until now.

Everybody is happy because he is having good health. They regret that he still has to suffer from the high interest rate on the mortgage of his house and from the high costs of living on Java. Because of these facts it might be impossible to put any money aside. He really hopes that his friend is enjoying his roundtrip through Java, which he has started last May in the

company of Van der Capellen and Elout. So far his answer to Reinwardt's letter of 1 April.

He is very pleased to have read that four boxes of living plants are on their way to Holland and that his friend has asked Mr. Abel to take care of this shipment, although he (Reinwardt) had to accept that – once arrived in England – Abel wants to make his choice from these plants. Until now Van Marum did not hear from Mr. Abel, although he knows that Lord Amherst has returned to England meanwhile. Therefore he asks his friend to send a collection of seeds directly to Haarlem, especially of those species, which will apparently flourish in his hothouse.

All friends have enjoyed Reinwardt's exciting report about the hunting party, at which occasion a tiger has been caught and shot. Has this adventure not been too tiring?

After Mr. Van Veen had offered his collection of European butterflies to the 'Kabinet van Natuurlijke Historie', he (Van Marum) and Temminck have eagerly accepted this offer and they proposed to Repelaer Van Driel to accept it. He adds a copy of this proposal (signed by him and Temminck). At the moment Temminck is making a trip through Germany and Switzerland. Next spring he will continue his journey and travel to Vienna, after which he will return to Holland, through Saxony and Berlin, in May.

Van Marum is looking forward to receiving a letter from his friend. He asks him to send him as many letters as possible and always to enclose copies of previous letters. He fears that Reinwardt's last letter has been lost.

Bennet is staying with him and has asked him to convey his greetings. Since he has returned from Bad Ems, he enjoys better health, although walking remains difficult and painful, because of the stupefaction ('deadness') of his left leg. Van Marum ends his letter by adding his sincerest wishes and greetings.

[NA-RANH 529-20b; BOT, ZOC, COB]

**212. C.G.C. Reinwardt (Baneallang, Madura) to M. van Marum (Haarlem); 18 October 1817**

Probably the vessel 'Industrie', anchored in the roads of Surabaya, will soon set sail for Holland, through Batavia. So he will have the opportunity to send a letter to his friend. Perhaps Van Marum will even receive this letter before the one which has been taken from Surabaya to Holland by the

‘Amsterdam’, on 6 October. This vessel will probably anchor at Cape Town, because captain Hofmeijer has relatives in that port. The ‘Amsterdam’ will also bring home 5 crates of objects of natural history, as has been mentioned in his letter, dated 12 September 1817 (sent from Japara). To that letter he has also added an inventory. In accordance with the instructions, the crates have been addressed to the ‘Department of Commerce and Colonies’. They have to be delivered at Vollenhoven’s (in Amsterdam), the commissioner for the East Indian properties. Furthermore it has been arranged that Goldberg, General Director of that Department, has to order Vollenhoven to deliver these crates at Temminck’s and (at) Van Marum’s.

In his letter, dated 1 October 1817, Reinwardt has discussed the relation between his niece Caroline and her lover. Now he wants to add that Caroline, once arrived in Batavia, might marry too soon and get pregnant, a very dangerous situation, because the climate can cause a total asthenia. These young women are often succumbing during delivery. If an advantageous marriage proves to be impossible, Caroline should be obliged to return to Holland with him. Such a manoeuvre would cost a lot. He would prefer to ask his friends to keep an eye on her from time to time. First of all he has Landré (the schoolteacher G.N. Landré) in mind. This man knows the family (Caroline’s mother and her stepfather) well. His friends Cras, De Vries and of course Van Marum could watch over her. Perhaps Van Marum knows best how to solve this problem. It will probably be the best to lodge her elsewhere. Of course he will take care of the costs! Although Van Marum has not been appointed guardian officially, it is important to watch over the happiness and the moral behaviour of this minor. Everything Van Marum will do with respect to this affair will undoubtedly be considered as inspired by Reinwardt’s love and care for his niece!

Furthermore he completely agrees with the decision Van Marum has made to ignore the request sent to him from Lüttringhausen and also with the contents of Van Marum’s letter, dated 1 October 1816. He assumes that his friend has meanwhile received a bill of exchange for 156 pounds (payable in London) and a parcel of seeds from New-Holland. He also agrees with Van Marum’s decision to continue the quarterly payments of 200 guilders to his relatives in Lüttringhausen, in accordance with their agreement. He knows for sure that his relatives will use his financial support at least partially to offer hospitality to others (strangers!). Morian should teach them a lesson,

because in the first place the money is meant for their personal support. He feels very obliged that Van Marum has promised to watch over Caroline. He will reimburse all the expenses to be made. Once more he sends a bill of exchange for 125 pounds (a first copy has been added to the letter, sent by him on 12 September 1817). He allows him to sell this bill and to use the money for supporting Mrs. Kent. He also adds a life certificate. Furthermore he briefly discusses the contents of the letter, sent by him to Van Marum on 12 September 1817. He hopes that it has been sent to Holland aboard the 'Amsterdam'. If possible, he wants to add a couple of letters for his friends. With respect to the journey through Java he observes that the company had to stay in Surabaya for about three weeks. Here he has had the opportunity to make inquiries into the progress with respect to the monetary system of the East Indies. At Grissee he has been informed about the saltpetre works. In both cases he was not satisfied about the results and once again he reminds the villainous Parision dealer of instruments, who has deceived him by not delivering the instruments, he had already paid for. Nevertheless the present assay-ovens have enabled him to carry out his tests. The saltpetre is found in caves in the limestone mountains around Grissee, where many thousands of bats are living. These animals produce the saltpetre, mostly consisting of calcium nitrate. The manure from the insectivorous bats is extremely saltpetre rich. Large bats, like *Pterops Geoffr.*, of which he has sent a specimen to Holland, is a fruit eating animal (digesting the fruits of *Mangifera*, for example). So these creatures are very harmful to fruit trees. For the production of potassium saltpetre, large quantities of potash are needed. In Grissee, the annual production is about 45 thousand pounds of potassium saltpetre. He has also given advice about how to simplify its production and how to enlarge its yield. The island of Madura mainly consists of limestone and shells, corals and gypsum. In Surabaya the temperatures are extremely high. The dry season has not ended yet. It is very difficult to feed and to water the cattle. In spite of this heat the company enjoys good health. Yesterday they have left Surabaya. At the moment they are visiting the Sultan of Madura, where they are entertained royally. Tomorrow they will continue their journey to Sumarap, the most remote residence of the island. After that they will return to Surabaya and travel through the Eastern part of Java. He is very disappointed about the fact that he has hardly had any opportunity to do physical research or to carry out observations in the field of natural

history. He feels that he has to postpone the fulfilment of these wishes until a following trip.

The gardener of Buitenzorg has informed him that the continuing drought has severely damaged the garden and hampered its laying out.

He also adds a letter received from his niece Caroline about the old and very distressed Mrs. Luckemeyer. If she is still alive, Van Marum should give her a monthly support. He expects that Van Marum will have received the (bank) draft for the payment of 400 guilders to Mrs. Kent.

[NA-RANH 529-20b; ZOC, COB, BOT, GEO, MIN, PHY, CHE]

**213. C.G.C. Reinwardt (Pumarrap, Madura) to J.G. Landré (Amsterdam);  
21 October 1817**

Reinwardt is very astonished about the fact that – during his trip through Java – he has received a letter from Vrolik. Dated 16 December 1816, as well as a letter from De Vries. They tell him that Vrolik is doing better again. He hopes that the doctors, who are treating him, will soon discover the cause of his disease and that they will succeed in preventing recurrences.

Almost constantly he enjoys good health. He regrets that almost none of his messages are received by Vrolik. Landré will have understood that Van IJsseldijk has died meanwhile (He points at his letter, dated 1 April 1817). He feels really sad about his loss, because they have been very close friends. Furthermore he informs Landré about the experiences during his trip through Java in the company of the Governor-General, Mrs. Van der Capellen and the two Commissioners General, and – of course – of a large retinue. In spite of the heat (generally about 95°F) this journey did not affect his health. It did not rain since April. It has annoyed him that the natives of these regions are burning the dry leaves, which hinders the recovery of nature. Nevertheless Java is extremely beautiful and very fertile. In spite of the dry season, rice, indigo, cadjang, jarak and tobacco plants are still flourishing. The most beautiful region is the one called 'Kadoe'. This green province is criss-crossed with rivers. The bridges are made of bamboo and the mountain slopes are arranged amphitheatre like. It is all very inspiring for artists. In this region numerous remains of Hindoe temples are found. These relics from the past prove that as a matter of fact the Javanese are not lazy and that they do not only work in order to provide themselves with the bare essentials.

He is also happy about the fact that their mutual friend Mr. Koper is enjoying his professorate in Utrecht. Why did he not send him the text of his inaugural lecture until now? He asks Landré to convey his greetings and best wishes to all his friends and acquaintances. Finally he underlines his feelings of unchangeable esteem and friendship.

[NA-RANH 529-20b; BOT, AGR, ART, ETN]

**214. Resident of the Preanger Regencies (Tjanjor) to the Governor-General (Buitenzorg); 23 October 1817.**

The resident of the Preanger regencies has received two letters, one of which had been sent from Bandung, while the other one had been mailed from Limbanjan. In the first one he has been informed that the 'Goentoe' mountain in the region of Bandung is heavily breathing fire again. As a consequence of the falling of ashes it is getting so dark that he could not do without burning candles while writing this letter. The heavy rumbling of the mountain mostly resembles a heavy lightning, accompanying a thunderstorm. Immediately after having finished this letter, he will be off to Bandung, in order to report on this affair from there.

[NA 2.21-204(9); GEO, PHY]

**215. C.G.C. Reinwardt (Passarouang, Java) to G.Vrolik (Amsterdam); 30 October 1817**

Once again he has received a commendable personal letter from Vrolik (dated 15 February 1817), covering several documents, etc., which have been published by the KNI since he left Holland. He is very pleased and thanks his friend. He promises to present these gifts personally at the occasion of the next assembly of the 'Bataviaasch Genootschap', presided by him. He asks Vrolik to accept his words of gratitude and to convey these to the 'Eerste Klasse' of the 'Koninklijk Nederlandsch Instituut'. He assures him that the 'Bataviaasch Genootschap' is eager to serve the 'Instituut' and signs his letter as a member of the 'Eerste Klasse' of the 'Instituut'.

[NA-RANH KNI 175-28(67).42]

**216. C.G.C. Reinwardt (Passarouang, Java) to M. van Marum (Haarlem); 30 October 1817**

Although the 'Industrie' has meanwhile set sail from Surabaya, it is still possible to redirect letters to Batavia. So he still has the opportunity to answer a couple of letters. He asks Van Marum to take care of their delivery. From a letter sent to him by Temminck, he has learned that he is no longer well-disposed towards the 'Kabinet van Natuurlijke Historie' and that he is devoting himself completely to his private collections. He has received the published documents sent to him by professor Vrolik. The letter, addressed to Vrolik, also containing the acknowledgement of receipt, has been added to this letter to Van Marum. The island of Madura is barren, while the eastern part of Java is very beautiful and productive. The rainy season is already revealing itself by the first thunderstorms up in the mountains. Therefore, the group is hurrying to get back to Batavia. Yesterday they arrived in Passarouang, from Besoekie. He sends his friend his most amiable greetings and asks to convey his compliments to the ladies. In a marginal note he observes that he has added a few seeds to this letter.

[NA-RANH 529-20b; AGR, BOT, ZOC]

**217. C.G.C. Reinwardt (Surabaya) to M. van Marum (Haarlem); 4 November 1817**

Today Reinwardt has received a letter, sent to him by G.N. Landré (= Landré senior), in which Caroline's 'liaisons dangereuses' with a certain lady are discussed. He reminds Van Marum that he has asked him to get in touch with Landré, in order to discuss this tricky question with him. He regrets that he did not recommend this most outstanding man to Van Marum earlier. He is really a paragon of unselfishness and helpfulness. From this letter Van Marum will have understood that the (travel) company is already on its return voyage to Batavia. They will continue their trip within the next three days. They will probably arrive in Batavia in about two weeks. Meanwhile the rear admiral Buyskes has arrived on the Moluccas. The government hopes that the rebellious inhabitants will accept the conditions for capitulation. The commissioners on the spot – Engelhardt and Middelkoop – have been dismissed, while captain Sloterdijk, the commanding officer of the 'Nassau', has shot himself through the head, shortly before Buyskes arrived. The heat drags on. He adds his sincere greetings.

[NA-RANH 529-20b]

**218. C.G.C. Reinwardt (Samarang) to M. van Marum (Haarlem); 14 November 1817**

Reinwardt has been informed that it is still possible to send letters to Holland with the 'Fortitude'. He assures his friend that he still enjoys good health. He briefly summarizes the last letters, sent to Van Marum with the 'Amsterdam': his letter, dated 12 September 1817 (sent from Japara) and another one, dated 1 October 1817 (sent from Surabaya), together with a fine collection of seeds from New-Zealand and five crates of objects of natural history. Furthermore he has sent letters from Baneallang (dated 18 October 1817) and Passaruang (dated 31 October 1817). He also adds a summary of the documents, enclosed in these letters, among others a new life certificate, a bill of exchange and letters to his mother in Lüttringhausen, to Van Eys, D'Ailly, Mac-Intosh, Hoofd, Temminck, Vrolik and Landré.

Meanwhile the temperature in Samarang, which is sometimes above 101° F, is falling. At dusk heavy showers are falling, preceded by heavy thunderstorms and winds from the north-west. These signs are foreshadowing that the rainy season is coming soon. Nature is reviving again. The company hopes to arrive in Batavia within eight days from now.

He has left a black tiger in Lembang. In his view it must be a specimen of a very rare variety of *Felis tigris* and absolutely not of *Felis pantera*. Furthermore he has seen wild bulls in the woods near Sidaijo, Grisee and Rembang, which are as beautiful as the most beautiful Dutch cattle. They vary in colour, from dark brown to almost black, while their tail region is almost snow white. The cows are of a lighter brownish colour. It is supposed that the East-Javanese cattle are the descendants of these wild animals, while the cattle of West-Java probably belong to the Suratic cattle race.

Yesterday he has had the opportunity to throw a glance at the description of Java, written by Raffles and published in four volumes. He is very impressed and he hopes that Van Marum has already received a copy from Teylers Museum. He expects to learn much from it about Java and he hopes to have the opportunity to exchange ideas with the author. Raffles and Horsfield have achieved very well! On the other hand Van Marum should not have the idea that the two did not leave anything interesting over for him. He also stipulates the fact that in his work Raffles has announced the appearance of Horsfield's *Natural History*. Reinwardt is sure that this book will not be published within the next few years. As a matter of fact Raffles

will be appointed Governor of Bencoelen. He sends his cordial greetings to his friend and his wife and Betje and of course to all the other friends in Holland.

[NA-RANH 529-20b; ZOC,AGR,BOT]

- 219.** H. van Haak (Pekalongan) to C.G.C. Reinwardt (Batavia); 18 November 1817

Van Haak – provisional resident of Pekalongan – has received Reinwardt's letter, dated 7 November 1817 (n° 103). In accordance with the order given in it, he has ordered to examine the 'Argojembangan' mountain. As a result, he assures his principal that in the near future this mountain may yield at least five to six 'pikels' (625 to 750 pounds) of sulphur. He proposes to carry out a more detailed inquiry to this mountain. Thereafter he will inform Reinwardt about the results. He has sent a sulphur sample with the brig 'Catharina Charlotta' (Captain Scipio) to Mr. Van der Kaa in Batavia, who will deliver it at Reinwardt's.

[NA 2-21.204(7); GEO, MIN]

- 220. W.N. Servatius (Tandjil, Cheribon) to C.G.C. Reinwardt (Batavia); 22 November 1817**

Servatius sketches the extreme difficulties accompanying the extraction of sulphur from the inside of the mountain of Cheribon. The workers have to descent into an almost vertical crater pipe, in which there is a constant danger of caving-in. Perhaps it is possible to construct a kind of hoisting apparatus. Mr. Parvé has told him that in his view this enterprise is too dangerous. Furthermore it has already been established that the sulphur found here has an inferior quality. It is not pure, but mixed with other substances. The sulphur from Bandung is of a superior, or even an extreme good quality and purity. On Cheribon it will only be possible to dig small quantities at high risks. The workers will only be able to bring six pounds of sulphur to the surface each time. Reinwardt will agree that the sulphur found on Cheribon has an inferior quality.

[NA 2-21.204(7); GEO, MIN, CHE]

**221. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 23 November 1817**

Van Marum feels very disappointed about the fact that letters from his friend have remained forthcoming, although the *Haarlemsche Courant* has succeeded in publishing a message from Batavia, dated 13 July 1817. The last letter received from his friend was dated 9 April 1817. Meanwhile Van Lennep has told him the news, heard from Elout, that Reinwardt has climbed a mountain of 7.000 feet altitude. This message has also come to him through Reinwardt's letter to Van Lennep, dated 15 June 1817. He is happy about Reinwardt's good health. Why does he not order to make copies of his letters before sending them to Holland?

He has also added a copy of his letter sent on 8 October 1816 (n° 13). Meanwhile he did receive the box of seeds from Mr. Sappé (from the Cape Province), which was delivered by Mr. Hesse. Of the 210 species, almost two thirds are still unknown in Holland. Mr. Hesse has also given him the seeds of 60 to 70 different species and a couple of bulbs, before he left for Hanover. Of his increasing collection of seeds from the Cape Province several have been sown in his hothouse meanwhile. So he has sent Mr. Hesse a nice letter of thanks.

Mr. Abel did not keep his promise. Probably the collection, which was meant to give to him, has ended up in the 'Royal Gardens of Kew'. This news is the more embarrassing because meanwhile 30 species of beautiful Javanese plants have arrived in the Amsterdam Garden, among others *Laurus cinnamomum* and several other spicy plants. They were all in a splendid condition. He knows that the trader Schalij has ordered these plants in the East Indies. Because of a minor indisposition he has not had the opportunity yet to admire this collection.

Meanwhile their mutual friend Bernard has been appointed professor of practical medicine in Leyden. So Haarlem has been deprived of its last reliable physician.

He has also been informed that Elout will return to the Netherlands. What will Reinwardt's plans be? In his last letter (dated April 1817) he promised to send him the crocodile skeleton and several other objects of natural history. He did not receive this collection until now. He has been shocked by the news of the sudden death of Mr. Fagel (because of a catarrhal disease). He

has also heard the news that on Java the cultivation of rice does not yield enough money.

He hopes that Reinwardt will stay in Buitenzorg as much as possible. In his view Noordwijk is too close to Batavia, because it is surrounded by marshes and paddies. He might die of the same disease as Fagel did! And if not, he would ruin his health by swallowing too much calomel, like Fagel has done. Van Marum really hopes that his friend will return in the company of Elout. Meanwhile he has sent him the copies of his orations, as well as a copy of Weiland's 'Dictionary'. His request to send him publications and other printed matter has been conveyed to the young Mr. Sandra, who is studying at Utrecht University. D'Ailly will take care of the shipment of this parcel to Batavia.

Immediately after having received Reinwardt's message about the eruption of the 'Idjeng' volcano, he has delivered it at Loosjes's, who has informed him that this news has already been communicated in the *Algemeene Konst- en Letterbode* on 15 March 1817. In his next letter he will inform Reinwardt about his financial situation. He should have sent his life certificates in time. Until now, Van Marum has not received the certificate, due on 20 April 1817. He expresses his kindest regards.

[NA-RANH 529-20b; BOT, GEO, MIN, ZOC, COB, AGR, MED]

**222. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 25 November 1817**

Van Marum seizes the opportunity to send an extensive letter to his friend. The fact that so many letters did arrive from Batavia, even of late June 1817, while the most recent letter from Reinwardt was dated 9 April 1817, has made him very sad. The *Haarlemsche Courant* even succeeded in publishing some news from Batavia of 13 July 1817. Meanwhile Van Lennep has told him how Reinwardt has climbed a 7.000 feet high mountain. Van Marum is very happy about Reinwardt's good health. Once again he advises him to have his letters duplicated before they are sent to the Netherlands. Besides, it generally takes about six month before he receives the letters from Batavia. He adds the duplicate of his letter, dated 8 October 1817 (n<sup>o</sup> XIII). He is grateful for the box of seeds (210 different species) Mr Hesse has handed over to him, undoubtedly on Reinwardt's recommendation. Meanwhile he owns a considerable collection of seeds from the Cape. Until now he did not

receive his share of the collection of the seeds, sent with Mr. Abel, according to Reinwardt's letters, dated 4 and 9 April. He is very much put out over that man. Moonen, the florist, has told him that meanwhile a collection of beautiful Javanese plants has arrived in the Hortus of Amsterdam.

At the time he is suffering from a slight indisposition. Meanwhile Bernard has been appointed professor of practical medicine at Leyden University. Oosterdijk, his predecessor, had recommended him on his dying day.

He is eagerly looking forward to the day when his friend will return to the Netherlands. He discusses Reinwardt's most recent letter. He hopes that the fatal catarrhal disease, raging in Tegal, has not spread as far as Batavia. In his view the use of calomel as medicine is most peculiar. He hopes that his friend will spend as much time as possible in Buitenzorg. He briefly discusses his relation with Mr. Sandra, who is studying in Utrecht. He did not receive any news about the delivery of a couple of books, which have been ordered by Reinwardt (Sprengel's *Institutiones* and Rechter's *Therapy* [= G.A. Richter, *Die Specielle Therapie* (Berlin, 1821)]).

[UBL BPL 2922; BOT, MED]

**223. Resident of Tegal (Tegal) to C.G.C. Reinwardt (Batavia); 27 November 1817**

In the view of the resident of Tegal there is no doubt that the 'Tegal' mountain, being a fire-breathing mountain, will produce sulphur. However he does not know how to collect it. Nobody has ever climbed that mountain, because its slopes are completely impassable, although a couple of gentlemen – among which were the former resident and the assistant general-inspector of the cultivation of coffee – did succeed in arriving at its top. They have told him that they would never again try to make such a dangerous trip. The resident has also been told that in Tegal the sulphur is offered for sale by Chinese traders, who are buying it from the chief of the 'Simpoza' dessa, situated in the Bandung area, in the region called 'Kideng', where the sulphur is dug in the 'Padjang' mountain. The report, giving the oral statement made by two Chinese merchants, as well as a sulphur sample, have been added to this letter. If needed, he is willing to inform Reinwardt more in detail.

[NA 2-21.204(7); AGR, GEO, CHE, MIN]

**224. G.F. Koch (Tegal) to C.G.C. Reinwardt (Batavia); 27 November 1817**

The deputy assistant-resident Koch informs Reinwardt that three natives – Stradupa, Singa Troena and Kerta Bangsa – who are living in the Dessa ‘Bentaar’ (in the ‘Brebes’ district) – have often sold sulphur to the Chinese merchants of Tegal and Brebes. These Chinese are known to him. In their turn the natives have bought the sulphur from a certain Kadim, chief of the ‘Simpoza’ Dessa. Nobody seems to know where this man gets the sulphur. This declaration has been made up in the presence of two witnesses, clerks of the residence.

[NA 2-21.204(7); GEO, MIN]

**225. G.F. Koch (Tegal) to C.G.C. Reinwardt (Batavia); 27 November 1817**

In this additional note Koch declares that the two Chinese merchants, Sjo An and Hobu, have made the following statement: After having been ordered by the resident, they have tried to find out if the ‘Tji Parang’ mountain, in the ‘Brebes’ district, is throwing out sulphur, yes or no. After having arrived on the spot, they have been told that the inhabitants of the ‘Bentaar’ Dessa (in the ‘Brebes’ district) are often selling sulphur to the inhabitants of the Chinese camps at Tegal and Brebes. They have also declared that this sulphur does not originate from the ‘Tjiparang’ mountain, but from the chief of the ‘Simpoza’ dessa. [This statement has been written in the presence of the clerks J.A. Claerbout and J. Henricus.]

[NA 2-21.204(7); GEO, MIN, CHE]

**226. J.Chr. Baud (Batavia) to C.G.C. Reinwardt (Batavia); 27 November 1817**

Baud informs Reinwardt that he has taken notice of the contents of a letter, received from the resident of Samarang, dated 19 November 1817 (n<sup>o</sup> 181), informing him that in accordance with the decision made by the Governor-General on 11 October 1817 (n<sup>o</sup> 1), thorough investigations have been made with respect to the sulphur, which is found in that residence. He has been told that only with the greatest difficulties it is possible to dig sulphur in the ‘Marakaboe’ mountain in this residence, as is evident from the report written by the resident, which has been added to the above mentioned letter. Furthermore the resident has informed him that he is willing to procure sulphur from the narrow pass (‘Gorge’) in order to have

it examined. [‘Extract from the Register of Decisions of the Secretary of State/Governor-General of the Dutch East Indies’] On the basis of this information it has been decided to send this letter, together with the corresponding documents to C.G.C. Reinwardt, Director of Agriculture, Arts and Sciences.

[NA 2-21.204(7); GEO, MIN, CHE]

**227. A. de Wilde (Tjipoetrie) to C.G.C. Reinwardt (Batavia); 2 December 1817**

De Wilde acknowledges the receipt of the letter from the Governor-General, dated 27 November 1817. Meanwhile he knows that it is possible to dig and collect the sulphur needed by the Government, in the region of Tjipoetrie. He promises to give every assistance needed. He hopes that the distances to be covered and the condition of the crater will not be considered unbridgeable, regarding the facts given in the report. There are two craters. The larger one is the ‘Kawa Ratoe’, the smaller one is the ‘Kawa Wadoon’. The larger crater, which yields the sulphur, is very deep and only with the greatest efforts one can get to its bottom. This bottom is covered with a layer of sulphur powder of about 1½ to 2 inches thick. This layer can easily be loosened. The natives call this flowers of sulphur ‘Kambang makierang’. The job is difficult and dangerous, because sulphuric vapours are constantly ascending. Besides the quality of the sulphur is not excellent, so its mining should be reconsidered. Perhaps it is possible to dig about 50 ‘piculs’ (= 6.250 pounds). Liquid sulphur is thrown out, when the mountain breathes fire. The sulphur has to be transported in lumps, packed in baskets. A worker needs three days for delivering one load: on the first day he has to climb the mountain, on the second day he digs the sulphur and on the third day he descends the mountain again. The natives dislike this heavy job. It is only possible to recruit well-paid volunteers. Each man is able to carry 20 ‘katjes’ (about 25 pounds) of sulphur at the same time. Because of these facts, one ‘picul’ of sulphur will finally cost (much) more than 3 guilders a ‘picul’, once it has been transported to Batavia. De Wilde presumes that Reinwardt knows every place, where sulphur is found. He hopes to have met with Reinwardt’s demand and signs as his most obedient servant.

[NA 2-21.204(7); GEO, MIN, CHE]

**228. C.G.C. Reinwardt (Buitenzorg) to M. van Marum (Haarlem); 10 December 1817**

Reinwardt informs his friend that within the next few days captain Greveling will leave Batavia and will set sail for Holland. Greveling has expressed his willingness to take a couple of living plants with him, destined for Van Marum. Reinwardt proudly underlines that these plants are the very first crop of his private nursery, situated next to the 'Hortus Javanicus'. He also adds a few seeds of various plants, which he could not determine definitively until now. From Hesse's letter he has learned that Van Marum has received several plants from the Cape of Good Hope meanwhile. About two weeks ago, the travel company has returned safely to Batavia and Buitenzorg again. During this journey he has sent several letters to his friend. He was very happy to find his collections of seeds in good shape, both in Batavia and in Buitenzorg. All in all, he is satisfied about the progress of the laying out of the botanical garden. It is already a pleasure to every botanist. He is also satisfied about Hooper's dedication as a professional gardener. Kent has also done his best, although he still has the habit of not finishing what he has begun. This bad habit causes the deterioration of many plants and other objects of natural history. The draughtsmen are achieving well, although they could have produced more drawings. The landscape painter, who has arrived recently in Batavia, paints well and tastefully and with the right choice of subjects and sceneries.

Reinwardt reminds his letters, dated 1 October, 18 October, 30 October and 14 November. The last one has been sent from Samarang with the 'Fortitude'. The seeds received by him from New-Holland, a part of which has been sent on to Van Marum, have germinated well. Now they are flourishing prosperously. He hopes that the same goes for the seeds, which have been sent to Haarlem. The last letters received from Holland, have been sent by De Fremery and Moll, in June 1817. Moll has informed him that Van Swinden has meanwhile decided to make it up with him. He has also received a copy of Van Marum's translation of part 2 of the work of Davy. He is looking forward to receiving botanical and physical news from his friend. What about his cooperation with Van Salm Dyck?

Many Javanese plants have not been described until now. In his view, Brown's *Prodromus Australasica* seems to be the best-known work on Java and Brown is the best-known botanical author. He would very much like to possess

Brown's works, because this botanist has described the Asclepiadaceae and Orchidaceae in the most excellent way. More and more he regrets that he is forced to do so much office work. From a letter received from Caroline he has learned – to his sorrow – that his mother has become very weakened and that his two sisters are constantly ailing. He expects Kemper to inform him soon about the situation of his German relatives.

In Buitenzorg it is raining every day now. In the afternoon the thunderstorms are blasting and they are followed by heavy showers. The clouds are discharging before they are pressed through the mountain peaks. In Batavia it rains less. Because of the dry season, many soldiers have died there. He is in excellent health. With all his heart he wishes Van Marum the same and he hopes to receive a letter from him soon, which will inform him about his good health. He greets his friend, Mrs. Van Marum and Betje.

He wants to be informed more in detail about the circumstances his German relatives are living in, although he cannot imagine why. Anyhow Van Marum has to ask Morian. If necessary, for example because of high expenses for medical care, Van Marum should send extra money to Lüttringhausen. Because letters from Lüttringhausen are really scarce, he has asked his mother to send him a letter every month.

[NA-RANH 529-20b; BOT, ART, ZOC]

**229. C.G.C. Reinwardt (Buitenzorg) to M. van Marum (Haarlem); 10 December 1817**

Inventory of a shipment of living plants, packed in eight wooden tubs, loaded on 10 December 1817, aboard the 'Augusta' (captain Greveling). Among others this list gives the names of the fern species *Polypodium giganteum*, a huge tree fern. It has been completed with a description of the type specimen. Furthermore the species *Artocarpus integrifolia* L., *Bignonia elegans* and *Sterculia cordata* are mentioned.

[NA-RANH 529-22; BOT]

**230. C.G.C. Reinwardt (Batavia) to the Governor-General (Batavia); 11 December 1817**

On 11 December 1817 – in accordance with the decision made on 2 November (n<sup>o</sup> 11) by the Governor-General – Reinwardt enters his report on the possible mining of sulphur for the powder factory in Samarang. He

has understood that mining sulphur is always difficult and dangerous. This goes at least for Tegal and Cheribon. The government should not insist on digging sulphur on these locations. The best places for mining are situated in the 'Preanger' regencies, in Bandung, Limbangan and Tjardjang. The resident in function of the 'Preanger' regencies has to be ordered to collect the ingredients needed for the production of 140.000 pounds of powder. About 5.000 pounds of 'Preanger' sulphur will have to be collected at the 'Gede' mountain.

[NA 2-21.204(7); GEO, MIN, CHE]

**231. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 12 December 1817**

Inventory of a shipment loaded on the 'Augusta' (captain Greveling), among others containing seeds of *Bombax excelsa*, *Gossipium* (yellow cotton), *Lagerstroemia reginae* and several other plants.

[NA-RANH 529-20b; BOT, AGR]

**232. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 12 December 1817**

While others have received letters from Batavia, which have been sent in May and June 1817, Van Marum did not receive any news from his friend. He has been embarrassed by the fact that his friend has complained about the fact that letters from Haarlem remained forthcoming, or at least, that he did receive a letter only now and then. He stresses that he has sent copies of all his letters. He adds a list of the letters, sent by him and adds summaries. He has heard about Reinwardt's varying state of health (frequent colds, respiratory problems, pulmonary complaints and a secretion of mucus, which is much more abundant than it has been in Holland before). He and DeVries have decided not to conceal their concern. Perhaps Reinwardt and Elout should return to Holland together. He should not give his life away for his ambition, how important his physical and botanical investigations on Java might be. Especially climbing mountains, which have never been climbed before by any European, are definitely too tiring for the tender bronchi of his friend. He also hopes that the trip, which he is going to make soon in the company of the Governor-General and Elout, will be less tiring and that it will bring many really important facts, insights and objects of natural history.

Anyhow he did really enjoy Reinwardt's account of the conquest of the 'Salak'. He is eagerly looking forward to receiving the extensive report on that adventure. He hopes to be able to have it published in a monthly review. Filled with horror he has read the news about the murder on 'Saparoka', in the *Haarlemsche Courant*. In his view these disturbances may have been caused by the degrading treatment of the natives. They ought to be treated more humanely. He hopes that his friend will soon inform him that he intends to leave his unhealthy residence as soon as possible, or even better – that he has already done so. They might both hope to see each other again soon. Of course he is very happy that Reinwardt has founded a botanical garden meanwhile and that he has found a suitable gardener through the British Embassy also. Reinwardt will undoubtedly take advantage of this new situation, at least if his health allows him to stay on Java longer. At Mr. Schertzer's request Van Marum has ordered to compile a list of seeds of economical plants, which will be cultivated in the vegetable garden. In this way it will be possible to test which vegetables can be grown on Java. On the list of seeds of flowering plants, made by Mr. Monen, he has marked the species, which Reinwardt could ask to send him.

He thanks his friend for sending him the seeds of plants from New-Holland. He is also eagerly looking forward to the reception of the seeds from Java, which have been sent to DeVries. Unfortunately he has not heard anything about the seeds and living plants, which Mr. Abel (London) should have sent to him meanwhile. Now he is determined to inform Sir Joseph Banks about this sordid affair, because Banks is the intendant of the 'Royal Gardens of Kew'. He is determined to ask him to send half of the collection, which has been sent by Reinwardt to Kew, to Haarlem. This agreement has already been made with Mr. Abel a considerable time ago.

He has already mentioned that Mr. Hesse has brought him a box of succulents, of which a part was still alive. He fears that hardly anything which has been sent to Holland through London, will actually arrive here. In his view the people of Kew are having no scruples at all.

He congratulates Reinwardt with his presidency of the 'Bataviaasche Maatschappij'. It will owe him a lot. The 'Hollandsche Maatschappij der Wetenschappen' has received the volumes 1, 3, 4, 5 and 6 of its *Verhandelingen*. The volumes 2, 7 and 8 are still missing. He would like to receive a complete series in behalf of 'Teylers' Library. He has also informed Van den Ende

about what Reinwardt has told him about the educational system of Java. He regrets that Reinwardt has to put so much energy in its improvement. This activity will keep him from exercising scholarly activities. He really wonders why the government does not try to find someone else for that job, for example a talented clergyman! To Van Marum this is a new sign of Reinwardt's overwhelming benevolence. Fortunately within a few months he will have paid off the house of which he owns 50%. He (Van Marum) and De Vries have discussed which goods from Java are the most in demand in Holland. De Vries has promised to discuss this subject with Mr. Calkoen. He promises to satisfy Reinwardt's demand to send him wine. The 'Wilhelmina' will bring this cargo to Batavia. The wine is not only destined for Reinwardt himself, but also for Elout. At Reinwardt's request he has also ordered to send him several books, as well as a collection of flower seeds, the invoice for the vegetable garden and four varieties of tulip bulbs. A young man will bring him all these goods and he asks his friend to do him a favour in return. Van Marum underlines that he has decided not to send the bulbs until July. Anyhow, this time he will send the seeds of buckwheat and spruce and he will try to add acorns and beech-nuts. Regrettably he cannot acquire seeds of fruit-trees. Perhaps it will be possible for Reinwardt to entrust all the goods, which he wants to send to Holland, to Mr. Eschauzier, the ship broker, who will have a cabin of his own. Eschauzier has already promised him to be of service to Reinwardt, even with regard to the living plants, which he [Eschauzier] might wish to send to Van Marum. Eschauzier has also promised Calkoen to take Javanese birds with him to Holland. So this is also the very man with whom Reinwardt could send some of the products, which are most favoured in Holland. Of course he could use the revenue of the sale of his house in the unhealthy Noordwijk for purchasing this merchandise. It might greatly improve his financial position.

He continues by giving an account of Reinwardt's expenses and income. He regrets that he has not received his life certificate until now. Reinwardt has to send him this document as soon as possible, in order to enable him to invest money for him again. Meanwhile the interest has fallen. He also has to point out to Kent that this man has to take care of his family and that he should fulfil his financial obligations. Van Marum promises to continue the payment of the advances to Mrs. Kent, for the time being. Reinwardt has to deduct these sums from Kent's salary. Because he did not receive any instructions

until now, he has decided to reduce the weekly payments to Mrs. Kent to one guilder, until Reinwardt will have given him new instructions.

Because of the chill of last summer it appeared to be impossible to find acorns and beech-nuts. With regard to the books Reinwardt is interested in, he observes that they are for sale at Muller's bookshop.

De Vries and Calkoen have convinced him that the sale of coffee will probably proceed the highest profit.

Unfortunately his friend Bernard, the family physician, will leave for Leyden, in order to occupy Oosterdijk's position, who has recommended him on his deathbed. Meanwhile Van Geuns (Utrecht) has become senile.

[This letter has partially been written on 16 December; see also Van Marum's letter to Reinwardt, dated 23 January 1818.]

[NA-RANH 529-20b; GEO, PHY, BOT, COB, AGR]

**233. L.J. Blok (Samarang) to C.G.C. Reinwardt (Batavia); 16 December 1817**

Blok feels very honoured by Reinwardt's letter, dated 2 December 1817 and received by him on 7 December. He is pleased to inform him about the outcome of his request. The auction of the shell collection was to take place yesterday. He had been informed by Mr. Kleijn that it would not be sold for less than 3.000 guilders. Blok could not contact Reinwardt and he did run the risk of not being able to purchase the collection. Thereupon he has learned that Klein had been ordered to sell it for more than 3.000 guilders if possible. Nevertheless it would be a pity if the deal would be off, because of 300 guilders or so. Furthermore the deal would depend on what was going to happen with the collection afterwards. Today – at the auction – Mr Kleijn himself suddenly offered 1.400 'Spaansche Matten' (about 3.500 guilders). So Blok offered ten 'Spaansche Matten' more and became its new owner. He hopes that Reinwardt is willing to take over the collection for the same amount of money. He realizes that Reinwardt did not authorize him previously, although this collection was very important. If necessary, he is willing to pay the amount, with which he has exceeded the sum of 3.000 guilders. He promises to take care of the safe delivery of the collection, together with its display cases, at Reinwardt's.

[NA 2-21-204(4); ZOC, COB]

**234. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 18 December 1817**

The 'Augusta' has not set sail yet, so he still has the opportunity to send a letter to his friend in Haarlem. Meanwhile he has received Van Marum's letters – dated 17 March and 15 April 1817. Unfortunately Van Marum did not receive his letter, dated 14 September 1817, until now. It was added to the letters to J. Buys, his mother, De Vries and Van Eys. Probably Van Marum did receive his letter meanwhile. He is very disappointed about the situation of the 'Kabinet' and about Temminck's attitude, although he realizes the impossibility of opposing against an order given by the government ('the order to turn the cabinet into a depository'). He really hopes that his first shipment will be welcomed in Holland. Would it not be possible to charge the former servant Rijndert with the stuffing of the birds, which have been sent from the East Indies? He knows that Rijndert wants to be trained by Temminck. It is still possible to add several ethnological objects from Borneo (the 'Daijak' region) to the cargo which will be sent soon. He is still waiting for the crate of books, sent by D'Ailly, to be unloaded. The ship is still anchored in the Roads of Batavia. He is happy for Van Marum that Bernard has decided to stay in Haarlem for the time being. He asks Van Marum to convey his complements to him and to thank him for sending the documents on the vaccine. He is pleased that Landré is sending his son to Java. Furthermore Kops has asked him to send seeds for the Hortus of Utrecht. Could Van Marum not give him a part of the collection of seeds, which he has received, at least if they have arrived in a good condition? He thanks his friend for sending him volume 8 of the *Verhandelingen van de Hollandsche Maatschappij der Wetenschappen*. In Reinwardt's view his letters to Van Marum, dated 12 September, 1 October and 31 October 1817, together with the bill of exchange, added to the last one, will make an end to the problems discussed by Van Marum in his letter, dated 29 November 1816. He adds a letter from Kent to his wife, as well as the documents needed for paying her 400 guilders. Kent has sent him a message that he has been robbed. All his luggage and personal belongings have been stolen, Reinwardt's guns included.

Betje's nephew, lieutenant-colonel Keer, has paid him a visit. He has decided to add a couple of living casuarisses, a couple of parrots and a cockatoo to the next shipment, as well as a pen case (writing material included) for Jan.

De Vries will receive several jars of ginger, of which he has to give one to Van Marum. He wants to know if the 12 jars of ginger, which were sent last year, have been distributed according to his instructions.

Together with Van Marum's letters he has received the letter from Lüttringhausen. He has learned that his mother is growing weak, that her brother and her sister-in-law, Mr. and Mrs. Goldenberg, have died and that these events have deeply shocked her. His hope to see her alive after his return is constantly diminishing. He asks to convey the greetings of Mr. Van Wijk and his best wishes to Mr. and Mrs. Van den Ende. Van Wijk will soon be leaving for Banka.

Furthermore he observes that in the inventory of the preparations and objects, which have been sent from Japan to Holland, the objects contained in bottles of alcohol are lacking. Will it be possible to send him the red wine soon? In Buitenzorg it costs 15 'Spaansche Matten' (about 38 guilders) a dozen bottles. He had to buy several bottles already. Van Marum has to pay Temminck for the books, which he has sent to Batavia. He has also received the journals of Buffon and Cramer.

Meanwhile he has bought one 'pikul' of good coffee (125 pounds). It will be taken to Holland with the same vessel, that will take his letters to Holland. Mr. Frowein, known to Van Marum, is willing to take care of its transport to Lüttringhausen.

[NA-RANH 529-20b; BOT, ZOC, COB, ART]

**235. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 19 December 1817**

Today Van Marum has learned that he has got a few days respite so he will be able to add a few more lines to his letter. It will not be economical to send two hogsheads of wine to Batavia. Sending four hogsheads would be 55 guilders cheaper in proportion to the price a hogshead. Reinwardt could order four hogsheads and resell two! After having received this cargo he can send a bill of exchange to the wine merchants Schimmelpenninck & Kruiemel, who have already accepted Van Marum's proposal.

[NA-RANH 529-20b]

**236. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 21 December 1817**

Van Marum has again tried to see Caroline today, but it was in vain. He will try to make an appointment before. It appeared that she is seeing De Vries only now and then and when she is seeing him, she is always very withdrawn. Recently she has sent two letters to her uncle in Batavia. Until now De Vries has not received the shipment addressed to him, although the 'Elisabeth' has already anchored in the Roads of Texel, early this month. Mr. Calkoen has promised him to inquire and to ask Mr. Vollenhoven about it. [NA-RANH 529-20b]

**237. C.G.C. Reinwardt (Batavia) to J. de Vries (Amsterdam); 24 December 1817**

Van Marum's letters are really relieving Reinwardt. Their contents are a 'true gospel' to him. They really make his life bearable. Recently he has indulged in the appointment of a private secretary, who is a good actor too. Meanwhile Paijen, the landscape painter, has arrived. He has the ability to express the beauty, richness and fruitfulness of nature. Of course Bik is also a deserving artist, but he works in a style different from Paijen's. Bik has begun to work more diligently and to spend less time on painting portraits, since he has been promised a premium of 300 guilders, although portraying yields more money. As a matter of fact Bik has become very grasping.

Reinwardt hopes that De Vries will have received the letters, which he has sent before he set out on his trip. Through the one, dated 16 September 1817, he informs him that he wants to abandon the idea of becoming a godfather, although – in this case – 'tomorrow might come'. Besides, being a godfather in that far away East India is really something special! The cargo sent by him to Holland with the 'Amsterdam', also includes a disc-shaped slice of Amboinese wood (See also: 'KB 121 B 8/14', dated 20 May 1817). It is especially fit for making a tabletop. If the other friends would like to receive a similar slice of wood, he could send a few more. He also sends a box of nine jars of ginger. De Vries should take care of their distribution. Two jars are meant for Landré senior, two should be sent to his mother, one is destined for Van Marum, one for Caroline and one for Margootje or for the De Bosch's nieces. He leaves the final decision to De Vries. Besides he sends a sack of coffee, which has to be sent on to his mother in Lüttringhausen.

De Vries should ask Van Marum to reimburse his expenses with respect to the redirecting of these presents.

[KB 121 B 8; BOT,ART]

**238. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 25 December 1817**

Van Marum notifies his friend of the reception of two letters (dated 16 and 18 August 1817), which have been taken to Holland by the 'Cornelia'. This vessel has brought mail from Java to almost everybody who has friends or relatives on that island. Unfortunately he did not receive any news from Reinwardt. Although he has been worrying, he has understood that this might be due to the fact that at the time his friend was making a trip through Java, as he had learned from the *Haarlemsche Courant* of 23 December 1817. Buyskes has informed him that until now Reinwardt has not even accomplished one hundredth of the intended activities (of course his scientific activities are meant!), with which Minister Falck had lured him to Batavia by the honourable order, given to him by His Majesty King William I. Reinwardt was given 'the unique chance of getting to know our neighbours, to discover the most important and most impressive secrets of the three kingdoms of nature and – by means of studying the physical geography of this delightful island – to unveil all that is mysterious elsewhere.' In Falck's view a very acute and experienced scientist was needed, a man, trained in the most important sciences. Reinwardt's second task was to advise the two Commissioners General in the fields of education, agriculture and healthcare.

Meanwhile Reinwardt has not occupied himself with science for more than a year! He had to spent all of his time on the organization of primary education – he, a scientist! Why did the government not find somebody else to do this job? It has largely underestimated Reinwardt's many talents. It has simply abused him! Van Marum emphasizes that Kemper and De Vries completely agree with him. Yesterday – 24 December 1817 – their mutual friend Kemper (De Vries's brother-in-law) and his wife have visited him. They all mean well towards Reinwardt!

Van Marum has also discussed the ups and downs of Caroline. Her unwanted contacts with the mistress of Schimmelpenninck, contacts seem to have become even more frequent. While walking with this lady, Caroline has

even been seen dolled up. He really hopes that their conversation has been innocent until now. Van Marum wants to see her face and discuss these facts with her, at the occasion of his next visit to Amsterdam. After having done so he will inform Reinwardt. He still has not received the parcels and the box, meant for De Vries. They are still aboard the 'Elisabeth'. Kemper is rather occupied. Five days a week he is attending the meetings of the 'Tweede Kamer' ('Lower Chamber'), after having delivered his lectures from 8 to 10 in the morning. After having returned from The Hague, he has to continue these lectures at 4 o'clock in the afternoon. The friends of the 'Vrijdagsch Gezelschap' are regularly discussing Reinwardt's letters and everything that is happening to him. He adds a letter from Buis to Uilkens about clairvoyance and animal magnetism. If he is right, he has already informed Reinwardt that he has proposed to the 'magnetizers' of Groningen to carry out final and decisive experiments. After having read the above mentioned and enclosed letter, Reinwardt will agree that these men are constantly trying to run away from his proposal. In order to spare Bakker, he has decided not to polemize with Uilkens. He has left this 'fight' to Buis.

[NA-RANH 529-20b; BOT, ZOC, GEO, MED, PHY, AGR]

**239. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 26 December 1817**

Van Marum is really in a hurry in order to deliver these few lines, together with yesterday's letter, in time at Eschauzier's, before he leaves for Batavia. Eschauzier has promised him to take care of the plants, to be given to him by Reinwardt and to deliver them at Van Marum's.

[NA-RANH 529-20b; BOT]

**240. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); shortly after 31 December 1817**

Reinwardt – remembering Van Marum's request to send him the volumes 2, 7 and 8 of the *Verhandelingen van het Bataviaasch Genootschap van Kunsten en Wetenschappen*, has to inform him that only volume 7 is still available. However, the 'Genootschap' has decided to order the reprinting of the volumes 1 and 2. If Van Marum wants so, Reinwardt can add volume 7 to this letter. He would like to receive the (recent) publications of the 'Hollandsche Maatschappij der Wetenschappen'. He reminds Van Marum of the letters,

which have been sent on 2, 15 and 30 December 1817 and assures him of his friendship.

[NA-RANH 529-20b]

**241. C.G.C. Reinwardt (Batavia) to the Governor-General (Batavia); 14 January and 24 January 1818**

Most of this travel diary, written by Mr. Sm... [= Smissaert?] concerning Banka, and starting with the departure from Toeboelly, has been written by Reinwardt. It gives a wealth of data in the fields of geography, meteorology, botany, engineering (technology), geology and mineralogy. Besides, it offers a lot of information about the natives of the various settlements. Additional notes – on a separate sheet – give a record of 20 tin-mines on the island of Banka and of the technique of melting tin. Finally the usability of several types of tropical wood, especially for building ships, is given.

[UBL BPL 609-2; GEO, PHY, BOT, TEC, MIN, CHE, ART]

**242. C.G.C. Reinwardt (Buitenzorg?) to M. van Marum (Haarlem); 22 January 1818**

Reinwardt compiles an inventory of animal preparata (preparations) in jars of alcohol: lizards, birds, toads, spiders, squids, Simia, etc., which have to be sent to Van Marum.

[NA-RANH 529-20b; ZOC, COB]

**243. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 23 January 1818**

First of all Van Marum repeats the most important announcements, made in his letter, dated (12-)16 December 1817. He hopes that Eschassier is already on his way to Batavia, aboard the 'Wilhelmina'. He will ask Mr. Vollenhove to send this letter with another vessel. He also adds a copy of Reinwardt's financial account as well as the letter, recently received by him from Lüttringhausen. Shortly before, he has received a box of books from Mr. Durham, the assistant librarian of Sir Joseph Banks (London). Meanwhile Mr. Abel has sent him a package of seeds, which he had received from Reinwardt. With his own eyes Van Marum has seen that every parcel has been opened. Of the species *Caesalpinia sappan* he has only received one legume. Abel has also neglected to add descriptions. So now he is absolutely

ignorant about the identity of the plants, which he has received. Therefore he will send Mr. Abel a letter tomorrow, to which he will add a covering letter to his London agent. He has decided to call Abel to account. If he keeps silent, he will report to Banks.

Meanwhile he has received the objects from the crate, addressed to De Vries, which were meant for him, for example the beautiful drawings of a wood, completely consisting of tree ferns. He wonders if he will also receive the drawings, which have been coloured in. The drawings of a Japanese landscape and of 'Hottentotsch Holland' have also pleased him very much. He thanks his friend for what he has sent him until now. The candle, made of vegetable wax, will undoubtedly produce a bright light!

On 16 January he has seen Caroline face to face in Amsterdam. His warnings have been successful. She has accepted his advice and she has promised to mend her ways. Van Marum promises to see her from time to time.

Last Friday – in the meeting of the 'Vrijdagsch Gezelschap' – he has read Reinwardt's letter, which gives an account of his climbing expedition to the top of the 'Salak'. The audience was moved and very attentive. Unfortunately he did not receive any letters from Reinwardt after the one, dated 1 July 1817. Of course his friend will have had more than enough interesting experiences to justify the writing of several letters! Naturally it will be possible to add his letters to the mail which is sent by Elout! He is waiting for more letters, even if they are only a few lines long.

[NA-RANH 529-22; BOT, ART, ZOC, COB]

**244. Th. Horsfield (Semarang) to C.G.C. Reinwardt (Batavia); 25 January 1818**

Horsfield informs Reinwardt that he intends to travel from Semarang to Buitenzorg. He counts on the benevolence of the government and he asks Reinwardt to inform the residents of the 'Preanger' region and Buitenzorg about the objective of his trip. Probably he will travel slowly because he wants to carry out observations. Besides, he has many pieces of luggage. In this way he will be able to build up a collection. He will pay the costs himself. He counts on the assistance of the regents of these regencies, as soon as they have been informed about his plans. Coming February, he will be in Reinwardt's neighbourhood. He hopes that his colleague will help him.

[KB 121 D 6; BOT, ZOC]

**245. C.G.C. Reinwardt (Buitenzorg) to M. van Marum (Haarlem); 6 February 1818**

Although there are no letters to answer this time and although he does not have any news to report, Reinwardt does not want to miss the opportunity of sending a letter to his friend. A few days ago, the 'Cornelia' (captain Sipkes) has arrived off the Roads of Batavia. This time, there appeared to be several letters for him, sent by D'Ailly, Van Lennep, Calkoen, Sandra and Caroline. However, there were no letters from Van Marum. D'Ailly has also sent him a load of paper, needed for drying plants. Furthermore, he has received a box of books from Johannes van der Hey. Elout has informed him about the contents of a letter sent to him by Van Marum, in which he has promised that – at the occasion of the last meeting of the 'Hollandsche Maatschappij der Wetenschappen' – De Wilde would be appointed Director. Reinwardt also informs him that Batavia and Buitenzorg do not share Van Marum's objections against the appointment of Dr. Horsfield as a member of the 'Maatschappij'. As a matter of fact, the volumes 7 and 8 of the *Verhandelingen van het Bataviaasch Genootschap van Kunsten en Wetenschappen* are almost completely filled with the writings of this renowned scientist. Everybody knows that this gentleman has built up an enormous collection of objects of natural history – 'the building material of the natural history of our colony'. He is very pleased about what he has read from Van Marum's letter about the buying of his house and about his financial situation. He appreciates that Van Marum seems to be constantly concerned about his welfare and about his financial situation. He wants to stress that the Commissioners General have not been in the position to offer him free housing, like they have done to the other public servants. He has every reason to praise the benevolence of these gentlemen with respect to his person. It would be completely unfair and unjust to demonstrate signs of dissatisfaction or to express additional desires. He feels the need to express his feelings of extreme gratitude towards the Governor-General and Mrs. Van der Capellen. Every day again he experiences their benefactions and their new proofs of friendship, affection and confidence. At the time he spends most of his time in Buitenzorg. Every day he is invited for dinner. On the other hand he cannot do without his house in Batavia. Fortunately, his share of the purchase price of his house has completely been paid off, thanks to a special financial plan, which has – to a large extent – been figured out by the 'Weeskamer' and by the 'Huis van

Commercie' ('Commercial Court'). When the occasion presents itself, he will sell his share of the house with pleasure, although he will have to rent a house as a consequence of that action. It will impossible to rent a house in Batavia for less than 100 'Spaansche Matten' (about 250 guilders) a month. He has sent letters, seeds and living plants to Van Marum with the 'Augusta' (captain Grevelink). Unfortunately, the departure of this ship has been delayed for a considerable time. Meanwhile he has heard that it has anchored off the coast of Anjer (past the 'Strait of Sunda'), because of the many sick aboard. There is no doubt that the living plants sent with it will suffer considerably. The 'Hortus' is doing well. It is becoming more beautiful than most of the European gardens. He has also received several beautiful plants from China and from Japan. Of the plants of the last shipment, the survival rate will be low.

In her letter to him, Caroline has not spent a word on her relatives in Lüttringhausen. Landré's son has not arrived in Buitenzorg until now. From a letter, sent to him by D'Ailly, he has learned that he is aboard the 'Jan en Cornelis'.

Reinwardt is longing for more news from Van Marum about his relatives and his other friends. In the Cheribon region the activities of a band of robbers have provoked new riots. Soldiers have been sent there. Since he has returned to Buitenzorg, he has had to do much office work. Furthermore he has carried out several chemical experiments and he has made several observations, aimed at the improvement of the production of saltpetre. For example, he has found out that the soil in the bat caves does not contain any potassium nitrate, but only calcium nitrate and calcium chloride. So, large quantities of potash will be needed to separate the calcium from the nitrate. Furthermore, he has invented a procedure for the production potash from the potash-rich blades of rice-plants. He gives the details. Because he has heard too late of a possible shipping to Holland, he will not be able this time to send presents to Van Marum and several others. He wishes Van Marum, his relatives and his other friends the best and assures him of his esteem and friendship.

[NA-RANH 529-20b; BOT, ZOC, GEO, CHE]

**246. C.G.C. Reinwardt (Buitenzorg) to J.Chr. Baud (Batavia); 12 February 1818**

Reinwardt sends this additional report on the production of saltpetre to Baud, the secretary of the Governor-General, to whom it will be handed over. He hopes that the Governor-General will be satisfied about the information, which he has already sent him on 14 July 1817 and 12 February 1818. He feels grateful for having been offered the opportunity to carry out this research during his stay in the residence of Surabaya [See the letter, sent to him by the Governor-General on 26 September 1817]. He has carried out his investigations in the Grissee region. He has visited several sites where saltpetre is produced. He has thought about the best way of enlarging the production and of enhancing its proceeds. He has also looked around in the regency of Toeban (elsewhere on Java) and on Madura, where saltpetre soil is collected since long ago. Meanwhile he has got together the results of his research. More observations and experiments will have to be carried out in order to perfect the saltpetre production. Therefore the Governor-General has to regard this second report as a still incomplete tryout. [This report has been co-signed by Baud].

In the proper report Reinwardt describes the sites – caves and so on – where birds and bats live. The manure, which is produced by these animals, is an excellent base material for the production and purification of the saltpetre soil. The decomposition of this manure, mixed with decomposing vegetable waste, plays the leading part in this process. Because the saltpetre soil of this region is a mixture of saltpetre and lime stone ('slaked lime', or better: 'calcium carbonate'), the saltpetre has to undergo several chemical treatments, in which potash – or better 'caustic potash' or potash lye – plays a major role. A detailed description of the needed procedures follows, like they are executed at the time. Instructions are given for further improvement. Anyhow, the right concentration of the caustic potash is important. Not until after a process of decay of about three years, it will be possible to harvest about one pound of pure saltpetre from a cubic foot of saltpetre soil, which is about the same proceeds as in France. The fact of the limited availability of saltpetre soil is due to the fact that in a number of limestone caves it is only allowed to harvest eatable bird's nests. The saltpetre, which is produced and sold in Soetjie, is more expensive than the saltpetre, sold in Bengal, because in Soetjie much more caustic potash is needed. Besides, the quality of the

potash and caustic potash of Soetjie is rather bad. In Reinwardt's view it is also possible to improve the production of potash and caustic potash. He suggests several measures to facilitate the various purification procedures. In his very extensive report he gives ten advices, which may lead to an increase of the annual production of 100%, or in other words, to an annual production of 78.000 pounds of pure saltpetre and at the same time to a reduction of the costs.

[NA 2-21.007.58-43; Collection Baud; CHE, GEO, MIN, ENG]

**247. Fr.A. Treffz (Batavia) to C.G.C. Reinwardt (Batavia); 4 March 1818**

Treffz confirms the reception of a crate ('kelderkest') of 24 large jars and 30 large corks, sent by Reinwardt and meant for the preservation of objects of natural history.

[NA 2-21.204(4); ZOC, COB]

**248. G.F. Koch (Tegal) to C.G.C. Reinwardt (Batavia); 9 March 1818**

Koch thanks Reinwardt for his letter, dated 25 February 1818, in which he emphasizes to be pleased by the information about the sulphur producing region. He is aware of the fact that Reinwardt's activities are obviously determined by the interests of the government and that he (Koch) has been able to further these interests.

[NA 2-21.204(7); CHE]

**249. J.Chr. Baud (Batavia) to C.G.C. Reinwardt (Batavia) 22 March 1818**

The Raaden Mas Rio Soesrodiwirio of Drogorogo has reported to his brother Ario Somodiningrat, second Regent of Kadirie, that a long time ago – in 1745 – it has been raining so hard one day, that the mountains have been torn. Now, this phenomenon has occurred again. For example, the 'Paredo' mountain has been torn at five different spots and each cut measured about three rods in width (= about 1,13 m.). Rocks of more than 2,5 rods length (about 75 cm.) fell down the slopes of the 'Sombo' mountain. [These facts have been noted by Mr. Winter, and were translated by the two of them].

[NA 2-21.204(9); GEO, PHY]

**250. L.C. Blok (Samarang) to C.G.C. Reinwardt (Batavia); 5 April 1818**

Blok has added this note to two cupboards, containing a collection of shells.

He expects this collection to arrive in a good condition in Batavia. He has recommended it to the personal care of captain Martin, All the objects have been wrapped and packed separately in kapok. At another occasion he will tell Reinwardt how much money he has advanced for the acquisition and shipment of this collection, perhaps when they will be seeing each other. Now he is too busy. He asks him to convey his greetings to the Commissioners General and to the other good friends, recommends himself to Reinwardt's attention and assures him of his feelings of esteem.

[NA 2-21.204(4); ZOC, COB]

**251. J.Chr. Baud (Batavia) to C.G.C. Reinwardt (Batavia); 6 April 1818**

Baud informs Reinwardt that he has read the letter, which has been sent to him by the acting resident of Surakarta, describing several landslides and faults of the mountains in his residence. Baud has taken note of this message and has sent Reinwardt a copy. [The proper news has been written on the second and third sheet of this letter]. ['Extract uit het Register van den Secretaris van Staat/Gouverneur Generaal van Nederlandsch Indië'].

[NA 2-21.204(9); GEO, PHY]

**252. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 23 April 1818**

Since the beginning of 1818, Van Marum did not receive any news from his friend, while others have received several letters from Batavia, since then. Reinwardt's last letter was dated 1 July 1817. Van Marum had to tell everybody that he has not received a single letter from his friend. Probably Reinwardt's letters were aboard the 'Amsterdam', the vessel which has been wrecked several weeks ago, although he has heard that the letters have been saved. He has postponed the dispatching of a new letter, because he wanted to receive Reinwardt's letter first. Besides, the 'Wilhelmina' has been waiting in the 'Roads of Texel', the last few days in the company of the 'Soerabaya'. Therefore he has started to write a new letter. He will hand it over to Vollenhoven soon. Reinwardt will also receive a letter from his relatives in Lüttringhausen. They deplore that news from Java remains forthcoming. Probably Reinwardt's silence is also due to his trips to inner Java. On the other hand he wants to observe that Mr. Elout is sending his wife letters regularly and that meanwhile even letters, sent in December, have arrived

Den Heere Reinwardt  
 No XVII  
 Waardste Vriend!

Daar 'er zedert het Begin van dit jaar byna geen week verloopen is dat ik niet hoorde van Brieven van Java, by zoo veeln van daar zedert aangekomene Schepen, by veeln Familien van hunne naastblijfaan den en Vrienden ontfangen, is het my zedert dien tyd zeer onaangenaem en ~~het~~ ontrusdend geweest, geen Letter Schrift van u zedert uwe laatste ontvangene van 1 July gezien te hebben. Op zoo veeln aanvragen als my gedurig zoo hier als te Amsterdam, door uwe Vrienden en Bekenden naar u gedaan worden, moet ik telkens antwoorden, dat my de reden van het zoo lang achterblyven van enig Schrift van u geheel onbekend is: dat ik alleen veronderstel, dat het vorongelukte Schip Amstel, by het daar mee ingescheept een brief van u zal gehad hebben, doch de Brieven van dat Schip zegt men zyn geborgen, en men meent ook te weten dat 'er reeds van ontvangen zyn. — Zedert zoo lang een tyd van dag tot dag een brief van u verwachtende, heb ik in die verwachting dit Schryven van Week tot Week uitgesteld, onkundig of ter verzending wel gelegenheid zoude zyn: te meer daar het Schip Willemina nu laatst van Amsterdam westrokket en waar mede ik u een brief van 16 blad. gezonden heb, circa 2 maanden in Seel heeft gelegen naar een goede wind te wachten — Gisteren te Amsterdam vernemende dat het Schip Joura Baja, Kapit Feunijfe in Seel reik-ree ligt, is nu het Schryven van deze het eerst wat ik heden aanvang, om onverwilt aan de zorg van de H. Vollenhove te worden aanbevolen.

Gy ontfangt hier by een brief van uwe familie te Lutteringheaven voor weinig weken ter verzending ontvangen. Uwe moeder en Justors

in Holland. He has really been cut up by the news of the wreck of the 'Amsterdam', especially because the greater part of the collection, brought together by Reinwardt, has been lost forever. Moreover it is sad to know that his friend has not always enjoyed good health. Reinwardt must be very disappointed! Together with several other miscalculations and hard luck, it should do to make him decide to leave Java forever. De Vries and Kemper have also been very insistent that he should return to Holland together with Elout! All at once he seems to be ignorant about the day Reinwardt will return!

Van Marum also wants to be informed about his friend's health and especially about how his lungs have been during the long journey. Did the secretion of mucus increase? If Reinwardt only knew how much all his friends have been worrying about his health – and they still are – then he would not keep silent for such a long time! He would also have decided to have a copy made of every letter, sent by him to Holland! This time Van Marum adds a copy of his letter n<sup>o</sup> 16.

Meanwhile he has sent a letter to Mr. Abel, in which he has asked him why he does not send the plants, which have been promised to him. Mr. Abel has answered him that his attempts to keep the plants alive have been in vain and that besides there has never been an agreement between him and professor Reinwardt to send any plants to Van Marum. All in all, Van Marum is very disappointed. He is sure that Eschaussier will take good care of the plants, which will be given to him. He hopes that these plants will be in a good condition on their arrival in Haarlem, beautiful plants and well identifiable as well; among others: beautiful specimens of spice plants, which are still rare in Holland.

Anton Falck, Reinwardt's friend, has been appointed Minister of Public Education, Industry and Colonies, in stead of Repelaer van Driel and Goldberg. Van Marum really hopes that in the future Reinwardt's salary will be paid more promptly than it has been done until now. Anyhow, Goldberg has again failed to pay Reinwardt's salary in time, after having received the life certificate. Until now Van Marum did not receive the money. Reinwardt is also to be blamed for that!

Furthermore he informs Reinwardt that he has sent the agreed financial relief to his relatives in Lüttringhausen (200 guilders each trimester). Of course they will be worrying since they have received his last letter (dated

1 July 1817). Perhaps De Vries will also send a letter with the same vessel to Batavia. Everybody is regretting that the government has lured away Reinwardt, by making beautiful promises. Now the outcome does not seem to be in line with his original expectations.

[NA-RANH 529-20b; ZOC, COB, MED, BOT; See also: UBL BPL 2922: identical letter]

**253. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 30 April 1818**

Because of a catarrhal fever Reinwardt has to stay in bed. He has asked somebody else to take his letter to the vessel, which will set sail soon. Last month he did not feel well either. His disease has weakened him. It has not been easy to recover, because of the furuncles, which caused the fever. Finally he has regained his strength. Since the ulcerations have almost disappeared, he will soon be able to leave for Buitenzorg again. There he will recover completely and quickly, because of the healthy air.

He adds a list of the letters, received by him since he has sent his last letter. He is pleased about the fact that Van Marum receives his letters regularly. His last letter, dated 6 February 1818, has been sent with the 'Eclair'. The two previous letters (dated 10 and 16 December 1817) have been sent with the 'Augusta' (captain Greveling). A small collection of seeds and a couple of living plants have been added to the letter of 16 December 1817. Because of the considerable delay of the departure of the 'Augusta', there is little chance that these plants will survive.

He can understand why Van Marum justly complains about the fact that he has occupied himself so rarely with the natural sciences. Since his arrival – already two years ago, or better: since the restoration of the Dutch government – he has been charged with the organization of the vaccination, the medical police, the educational system and several other services. This has resulted in an abundance of office work and correspondence, which has kept him completely from practising science. Besides, there was no secretary (except for a few months, during which Mr. Van der Vinne has served him). There were only two copyists available. So he had to write every report himself. He could not resist, because all these tasks had been put in his contract. Within a few months these activities will be brought to a favourable conclusion, after which he will write his final reports and deliver them at the office

of the Governor-General. Besides, he has spent much time on planning a military academy on Java. This plan has been adopted meanwhile. The government has decided that this academy will be founded in Semarang. He has been appointed its governor. He knows that this will take much time. As soon as all these tasks will have been accomplished, he will set out on his long journey through Java, and – as he has promised himself – it will be completely devoted to science. He has decided to include a trip to the Moluccas. Probably this journey will take as many months as he has planned to stay in the East Indies. Of course Van Marum will fully understand him. As a matter of fact he wants to spend a couple of years on the investigation of natural phenomena. If the results should be disappointing in the view of the public, the government will not misunderstand his many efforts and merits. Until now, he has always rejected the proposal, made by the Governor-General, to stay five years on Java, in stead of four years.

In his next letter he promises to discuss thoroughly his financial situation. Although he is at the moment in the possession of a free house ('free of charge') in Buitenzorg, he has to spend much money: the house, owned by him in Batavia and the two households, which he has to manage. This is all very expensive, so he has to live extremely thriftily. He is still hoping that he will be able to sell his share of another house, without suffering a loss, if possible. Furthermore the people, with whom he shares his house, are rather adjusted to a luxurious life. Meanwhile the woman of that couple has informed him that her husband wishes to buy him out. He is really a wealthy man and he has such a high income, that there is no doubt that he will be able to pay before Reinwardt will leave for Holland. Furthermore Kent is busy wrapping the next shipment of objects of natural history. This collection will be shipped at the first possible occasion. After their arrival, these objects will be given to the 'Kabinet van Natuurlijke Historie' (Amsterdam). He has decided that a large crocodile skull will be given to the 'Hollandsche Maatschappij der Wetenschappen' (Haarlem). This object has already been wrapped and put in a large crate. It has almost the double size of the skull of the skeleton, which has been sent to Van Marum at an earlier date.

At the moment Horsfield is living in his house in Buitenzorg. There he has brought together an enormous collection of objects of natural history, which will be sent to England. Within a few days Horsfield will leave and

travel to Lieutenant General Raffles in Benkoelen. Raffles has asked him to return to England. On the other hand Horsfield wants to stay for one more year in the island of Java in order to finish his research in the field of natural history.

Reinwardt does not understand why he did not receive any letters from his relatives lately. He will continue sending life certificates. He wants to thank Goldberg for his proposal to send accounts of his activities in stead of life certificates. Meanwhile Landré junior has already been working on Java and he is really doing a good service. The garden of Buitenzorg has almost been finished and it satisfies in every way. Unfortunately Van Marum did not send him Römer's *Systema Plantarum* until now. Meanwhile the lieutenant Van der Goes has been authorized to marry. Reinwardt still has to inform him that he has to make an official and written appeal. He expresses his warmest feelings of friendship.

[NA-RANH 529-20b; BOT, MED, ZOC, COB]

**254. President and Councillors of Finance (Batavia) to C.G.C. Reinwardt (Batavia); 1 May 1818**

The emperor of Japan has asked the government of the Dutch East Indies to send him plants and seeds. The vessels heading for Japan have to set sail next month. The government has asked him to prepare this shipment carefully. It consists of 20 different plant species, which have to be delivered in separate pots. The leaves, flowers, seeds and roots of the most fragile species must be glued on sheets of paper. The seeds must be new and viable. Next year a collection of shells will be sent from Japan in return. In Reinwardt's opinion crewmembers, who are experienced in nursing plants, should be made responsible during the voyage. Only in this way it will be possible to prevent the loss of these plants.

[NA 2-21.204(8); ZOC, COB, BOT]

**255. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 20 May 1818**

On 30 April 1818, Reinwardt has acknowledged the receipt of Van Marum's letters 9, 10, 11 and 12. He is convinced that his letters will be received by his friend as regularly as he is receiving his mail. His letters have been sent with the 'Jan en Cornelis' (captain Duyf). This time he only has one

important subject to discuss – the pitiful wreck of the warship ‘Amsterdam’, after it had left the Roads of Batavia. As far as he knows, the masts had to be cut down, after the ship had ridden out several heavy storms. Finally it struck upon the rocks, off the Bay of Alyra (off the African coast). Because of that event the proceeds of about one and a half year of scientific work, carried out by himself, by Kent and several others, have been lost, at the cost of considerable expenses. As Van Marum knows, everything, which had been destined for the ‘Kabinet van Natuurlijke Historie’ (Amsterdam) has been sent with this vessel. Besides, all the objects, collected by himself on the island of St. Jago and in the Cape Province, have been lost as well. The inventories, sent to him previously, have given him a detailed account and so does his letter, sent from Japara on 16 September 1817. This loss is really irreplaceable, especially because so much work still has to be done. Perhaps Van Marum cannot imagine.

It is still impossible to give Kent *carte blanche*. He still has to supervise him, because he is not able to work meticulously for a long time. He is easily losing his diligence. He often does not finish a task. For example, he has left the preparation and mounting of several skeletons unfinished and he does not give further attention to these objects. Other objects have been left to decay and to disintegration. Separate bones are getting lost. Finally only a very small part of what has been collected, could be sent to Holland. Reinwardt feels very disappointed. One of the greatest losses is the one of the crocodile skeleton. Who would dare to ask him to compensate this loss? Would it not be appropriate for Van Marum to inform everybody in Holland about this terrible disaster, in order to secure the appreciation for his efforts of several years? He (Reinwardt) has already informed Falck about the disaster. It is really of interest to him that this news will be brought to the notice of His Majesty the King.

Meanwhile, a second collection of objects of natural history has carefully been prepared for expedition to Holland, although it is less valuable than the collection, which has been sent with the ‘Amsterdam’. This new collection has been stored temporarily in the governmental storehouses. Nevertheless it will do. Every skeleton is perfectly clean. Every object has been wrapped in paper carefully, and sealed with arsenic starch. The insect collection has also been wrapped carefully. Only by sealing all these objects hermetically, they have a chance to ‘survive’. For the time being he will not send the snakes,

which have been preserved in liquor (in this case: 'arak'). He still has to examine this 'rank of the Amphibia' more closely and from the point of view of comparative anatomy, although he has already had the chance to carry out several interesting observations. He is convinced that the differences between venomous and non-venomous snakes, as presented by most authors, is largely incorrect. He also adds an inventory of objects, which have been prepared for shipment. Van Marum will see that most of the collection is not suited for incorporation in the collections of the 'Kabinet'. He advises him to leave the crates in question sealed until his return to Holland. Rijndert Draak – the guardian of the 'Kabinet' – might be ordered to stuff the skins of the birds, which he has sent to Holland. Temminck will probably have given him instructions about how to operate. Maybe he will have the opportunity of giving him other tasks too. Draak should be paid for the job. Is it possible for Van Marum to bring about a favourable ending?

He also adds a small box, which has to be sent to De Vries. It contains a couple of small presents for several friends and several Japanese baskets, which should be given to Mrs. Van Marum and to Betje. He also allows his friend to take the amount of money, which he has advanced to Mrs. Kent (92 guilders and 10 pennies) from the money, administered by him.

The work at the 'Hortus' in Buitenzorg has almost been finished. The same goes for the planting out. Soon he will report on the current situation and send a complete account of his finances. Everyday his trust in being able to sell his share of the house is growing, although undoubtedly he will have to sustain a considerable loss. Anyhow he will loose the deeds of conveyance and the costs of the transaction (9 % in all), as well as the costs of maintenance. Finally, he is convinced that soon a new opportunity will present itself for sending a letter to his friend.

[NA-RANH 529-20b; ZOC, COB, BOT, AGR, ETN]

**256. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 24 May 1818**

Yesterday Reinwardt has given a letter for Van Marum to captain Duyf, commanding the 'Jan en Cornelis'. He adds a copy of yesterday's letter to the one he has written today. He also adds a duplicate of a life certificate and informs his friend, as has been promised, about his view on his financial situation. Van Marum will be surprised about the enormous amount of money,

which he has to spent here every month, although he is living extremely thriftily. The near sale of his share of the house will bring the needed relief. Nevertheless he will have to economize even further on house keeping expenses. The survey will prove that in 1817 his expenses have amounted to 15.000 guilders. Besides he possesses 4.800 guilders cash and a quarter of the value of the house, which is about 9.910 guilders, as well as several hundreds of guilders in ducats and rupiahs. The other quarter of the value of his house has been borrowed by him from the 'Weeskamer', at an interest of 9%. In order to prevent his property from being bequeathed to the 'Weeskamer', in case he might die, he has asked a couple of friends to act as executor of his last will. Otherwise it would be very difficult or even impossible to obtain his share of the money. So he has invited Mr. Merkus (assistant secretary of the Commissioners General) and Mr. Bouvier (medicinae doctor and personal physician to the Governor-General and inspector of the hospitals in the Colony), to act in that function. Soon the notary public will write the notarized protest with respect to this appointment. He ends his letter by adding his greetings and expresses his sincerest feelings of friendship.  
[NA-RANH 529-20b]

**257. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 2 June 1818**

In his eighteenth letter to Reinwardt Van Marum heaves a sigh of relief. At last he has received several letters from his friend, dated 18 October (sent from Madura), 31 December (from Passarouang) and 4 November (from Surabaya), after having sent his 17th letter (dated 23 April) with the 'Soerabaya' (captain Teunisse). Together with these letters he has also received several other letters, addressed to the relatives in Lüttringhausen, and to several friends, as well as several life certificates. He has sent these on as soon as possible. Now he has been reassured. He has understood that during his journey through Java Reinwardt's health has even been better than before. It is a pity that even during this trip he had to do office work. Why has the Governor-General not decided to assign an assistant? Finally his friend has got a secretary – Van der Vinne – as the newspapers have told him. He knows him and he hopes that he will prove to be a good assistant. He felt very happy after having taken note of the contents of Reinwardt's letter, dated 20 December 1817, which arrived in Holland with the 'Augusta', although

it was only a copy. He has learned that Reinwardt has returned safely to Buitenzorg. Now he is eagerly looking forward to the reception of the Javanese plants, which have arrived with the same ship. Unfortunately it has been diverted to the port of Antwerp, so at the moment of their arrival in Holland the living plants may have sustained much damage. Their transfer to Holland should be speeded up as much as possible. Van Marum has already asked an expert, living in Antwerp, to take care of this affair.

Van Marum, aware of the fact that the 'Amsterdam' has been wrecked, observes that he has not received the inventory of the goods, which had been added to Reinwardt's letter, dated 12 September, sent with that vessel. Several friends have informed him that the letters sent with this ship have been saved. The same goes for Reinwardt's letter, dated 1 October 1817 and for the package added to it (as Reinwardt had promised in his letter of 12 September 1817). He hopes that Caspar will have ordered to copy these letters and he regrets that his friend is still missing a clerk.

Meanwhile he has received the bill of exchange (for £ 125), which Reinwardt has sent to him. It will not be possible to convert this bill into cash in Amsterdam soon, without suffering a loss. In the future Reinwardt should send him bills, which have a shorter period of currency. He is happy to learn that Reinwardt has endured the heat of Surabaya (90° F) so well. Life in such a hot region must be very unhealthy. Because our life is rather short, his friend should cut short his stay on Java and return to the Netherlands as soon as possible.

From today on he will pay (at his friend's request) a monthly allowance of three guilders to Mrs. Luckemeyer. Mrs. Kent is very happy about the fact that she has received 400 guilders (less 92 guilders, which had already been advanced). Sunday 31 May, Landré has asked to see him. As he did expect it was about Reinwardt's niece Caroline. Unfortunately the appointment has been cancelled. Now he has decided to visit Landré senior himself on 4 June. He has already discussed Caroline's 'liaisons dangereuses' before (as Reinwardt will remember). He holds Landré senior in great esteem. In his letter, dated 10 December 1817, Reinwardt has sworn to him that he has sent him several letters since his return to Buitenzorg. Regrettably he did only receive the one letter written on 18 October, which had been sent on 31 October 1817. This implicates that others have been very careless with Reinwardt's letters, or otherwise, that the various ships, which have taken

letters from Batavia to Holland, have been wrecked and he cannot believe that! This proves once more the necessity of copying every letter before it is sent. It must have been very satisfactory for Reinwardt to see that the 'Hortus' was in such a good condition, when he returned from his trip and that he is satisfied about his gardener Hooper as well. Van Marum has every reason to hope for the dispatching of many beautiful plants, especially meant for his hothouse, for example of a specimen of the beautiful *Laurus cinnamomum*.

He has never received Reinwardt's letter, dated 14 November, which has been sent with the 'Fortitude'. It pleases him that the seeds of the Dutch plants sent to Batavia are flourishing in the Javanese garden. He is expecting a lot of the shipment which will arrive in Holland aboard the 'Augusta'. From Reinwardt's letter he has also learned that Van Swinden has become completely reconciled with him. Van Marum is absolutely not sure about Van Swinden's sincerity and he wonders if Van Swinden will have made up fully. When the occasion will present itself, he will inform his friend about Van Swinden's strange behaviour as president of the 'Eerste Klasse'. At the moment the 'Hollandsche Maatschappij' is in the centre of his attention. Today the programme for 1818 has been published. He has added a copy to this letter. Unfortunately Reinwardt has not expressed his opinion about the work of Salm-Dyck or about his (Van Marum's) contribution to it. He does not understand why, because his friend must already have had the opportunity to take note of his view on Van Salm's *Catalogue Raisonné* (because he must already have received a copy of this book). Anyhow he will check this and if necessary he is willing to send another copy. He keeps on regretting that his friend has to do so much office work, which keeps him from the far more important exploration of nature and from carrying out observations and research in the fields of botany, physics, chemistry and zoology. His friends in Holland are of the same opinion. There are enough less gifted people to do the office work, Reinwardt has trapped into under false pretences. Now the time has come to devote himself completely to the natural sciences. How many times does he have to repeat this?

According to the latest news, Reinwardt's relatives are no longer living in needy circumstances. The allowances have been reduced to the original level. Kemper has told him that the old lady has weakened a bit. He does not understand why they do not send him a letter for his friend every

month, so he can send these on to Batavia (just as Reinwardt would like!). He is also pleased that Reinwardt has already collected enough material for a second shipment. He hopes that this cargo will not be submitted to the same disaster, which occurred to the 'Amsterdam'. He promises to share the seeds with Kops, after they have germinated. He only wants to keep two specimens of each species for himself. Meanwhile it has already become late in the evening. Therefore he ends this letter, because he has to deliver it at Vollenhoven's tomorrow, who will take care of its mailing.

[NA-RANH 529-20b; BOT, MED, ZOC, COB, CHE, GEO, MIN, PHY, AGR; See also: UBL-BPL 2922: identical letter]

**258. C.G.C. Reinwardt (Buitenzorg) to M. van Marum (Haarlem); 4 June 1818**

Reinwardt assures his best friend that he has sent him two letters in May already. The first one has been sent with the 'Jan en Cornelis', the second one was mailed with the 'Koorntzaaijer'. Because after several weeks this vessel is still in the Roads of Batavia, he wants to grasp the opportunity to add a few lines. Since eight days he has returned to Buitenzorg now and he likes its agreeable climate. He has decided to spend most of his time here, because he has had the opportunity to sell his share of the house to the co-owner. As he will have to stay in Batavia from time to time, Elout has been so kind to offer him his house, which is really nice. Before he will leave Buitenzorg, he will have to arrange the removal of the most important furniture and other household goods. There is at least one other important item to discuss now – the rumours, coming from Holland – especially spread by Elout's letters. Reinwardt has been informed that very exaggerated complaints have been uttered about his (rather) miserable situation in the East Indies. It has been suggested that he has spread these rumours himself. He worries about what the Commissioners General might think of that. What if they learn from the letters from Holland that he – Reinwardt – is not satisfied at all about his personal situation? The fact that they are constantly showing him their friendship, deserves his gratitude, or does it not? Why do his friends want to put him in such inconveniences? He may have given a sigh now and then, but he has always done that in personal letters, of which the addressee should have understood the confidentiality. He continues by giving several examples and reminds his friend of the many

tasks he has been given. Finally he will have the opportunity to lose himself to the study of nature. Besides many reports have almost been completed by now. Their results will immediately contribute to the prosperity of the colony and that does not go for the results of his scientific observations! The Governor-General has been so kind to offer him a house in Buitenzorg, the most wonderful and most healthy region of Java, without asking any rent, while the Commissioners General had to accept a single room in one of the wings of the governmental Palace, of which the central part has to be rebuilt completely. This reconstruction will take at least one more year. Why do his friends not appreciate all these benefactions conferred to him? Even Elout has offered him a house! The government might even think that he does not have the nerve to promote his own interests. If his friends would have read his letters well, they would have understood that between him and his superior's friendship and confidentiality really do exist. So there is not the slightest reason for concern with respect to his personal well-being and Van Marum has to cut off these actions. He expresses his feelings of friendship. [NA-RANH 529-20b; AGR, BOT, GEO, MIN, CHE, PHY, ZOC, COB]

**259. M. van Marum (Haarlem) to C.G.C. Reinwardt (Buitenzorg); 23 June 1818**

Van Marum adds a summary of the letter, sent by him on 2 June 1818, to the one he is sending now (his 19th letter). The last letters received from his friend were the ones, dated 1 October 1817, 14 November 1817, 6 February 1818 (arrived today). He has added letters from Reinwardt's relatives, from Vosmaer and from Nieuwhoff. First of all, he answers the letter, dated 1 October 1817. He did not adopt the proposal, made by Cras, to send Caroline to Java. It was not a sensible proposal at all! De Vries has been successful in freeing Caroline from the lady of a shady reputation. Van Marum has discussed this result with De Vries and Landré senior. The proposal made by Reinwardt himself, to send her to Lüttringhausen, proved to be open to objections too. It is not possible to supervise her there. Besides it is not possible for her to live with her aunts. It would be better if she could live in Landré's boarding-house. He reminds him of the fact that it has been decided to discuss this affair with Landré and to organize a conversation, face to face, with De Vries and Caroline. Now Reinwardt will have the opportunity to take notice of the outcome of this procedure. He

is convinced that the relation between Caroline and the lady has stopped. Perhaps her lover has done his part and maybe that relation will turn out to be the best protection against the influence of the bad woman. He promises his friend to monitor these developments together with his friends in Amsterdam and to advise regularly. With this letter he has also received a bill of exchange. Furthermore he informs his friend about his financial situation. For the time being he will not convert into cash all the bills of exchange sent to him by Reinwardt.

He has received seeds from New-Holland, which present makes him very happy. He hopes that they will develop into beautiful plants. The first seedlings are already visible. They are of different species.

From the letter dated 14 November he has learned that his friend is meanwhile recovering from the superabundant mucus-secretion in his bronchi. The story about the confrontation with a tiger was very interesting. He has read it in the meeting of the 'Vrijdagsch Gezelschap' at 'Plantlust'. He hopes that his friend will be so lucky to make a good price for his house and that he will send the balance ('the profit') to Holland, where he (Van Marum) will be able to put it out in the most certain way.

[NA-RANH 529-20b; BOT, ZOC, MED]

**260. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 25 June 1818**

Van Marum informs his friend that this concise letter will be handed over to him by Dr. Blume, a friend of Mr. Waardenburg, a student. He is living at Mrs. Waardenburg's. Blume has asked Mr. Waardenburg to write a few lines for Reinwardt. He will take this note with him. Blume, native from Brunswick, is a protégé of the Princess of Brunswick. She has strongly recommended him. Blume states that Minister Falck has also recommended him to the Governor-General of the Dutch East Indies. He wants to examine the mammalia living on the island of Java. Reinwardt should decide about his employability on Java. He has applied as a naval surgeon. He loves the studying of natural history. Van Marum is not acquainted with his expertise in that field of science. He hopes to inform his friend more in detail on this subject some other time.

[UBL BPL 2922; ZOC]

**261. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 27 June 1818**

Vollenhoven has informed Van Marum that there is again an opportunity to send a letter to Batavia. He adds an abstract of the letter of 2 June 1817. More recently he did send two more letters. Since then he has received two letters from his friend, dated 14 November 1817 and 6 February 1818 (received only three days ago). He adds letters from the relatives living in Lüttringhausen, from Vosmaer and Nieuhoff.

First of all he will answer Reinwardt's letter, dated 1 October 1817 (sent from Surabaya). In it the future of his niece Caroline is discussed. Now he understands why Reinwardt did not like the idea of asking her to come over to Batavia. From more recent letters Reinwardt will have understood that his attempts to end her contacts with the bad lady have been successful. The letter sent by De Vries gives the same information. In his view Reinwardt's idea to send her to his relatives in Lüttringhausen cannot be recommended either. Meanwhile he has discussed this affair with De Vries and Landré. In his view it would be far better to make her staying at Landré's. Unfortunately this will not be possible yet. Anyhow, Landré will see her about her courting. In order to inform his friend, he has also added the letter on this subject, sent to him by De Vries. Undoubtedly De Vries and Landré will inform him more in detail. Meanwhile the contact with the bad lady has been ended. Added to Reinwardt's letter, dated 1 October, he has also received the 'secunda' of a bill of exchange of 425, the 'tertia' of which has been sent to London by him shortly after 17 October 1817. Reinwardt should not order its conversion for the time being. As soon as this security has been accepted and returned to the Netherlands, he will see Mr. Buys about it and decide about what to do. Furthermore he has received a collection of seeds from New-Holland. Unfortunately most of the species have not been identified. He has sown the seeds immediately and many seedlings are already visible. From Reinwardt's letter of 14 November he has learned that during his trip he has constantly been in good health, so he is not suffering from bronchitis at the moment. At the occasion of the meeting of the 'Vrijdagsch Gezelschap', held on 'Plantlust' on 20 June, the most interesting parts of this letter (which was received on that very day) have been discussed.

Van Marum supposes that until now his friend did not receive his letter, dated 24 June 1817 (n<sup>o</sup> XI). In his view Dr. Horsfield has indeed every right to

be elected member of the 'Hollandsche Maatschappij der Wetenschappen', considering the fact that the volumes 7 and 8 of the *Verhandelingen van het Bataviaasch Genootschap van Kunsten en Wetenschappen* have been written completely by him. Because Van Marum did not know that until recently, he could not propose him.

Van Marum has also understood that meanwhile the Governor-General and the two Commissioners general are doing their utmost to make his life more comfortable. He fears that they will try to persuade him to stay on Java longer than has been agreed initially. Furthermore he advises his friend with respect to the investment of his money. He should not loan his money on Java, not even against 9%. The quality of the plants sent to Holland with the 'Auguste' (captain Grevelink) will not be very good, because this vessel has been delayed for a considerable time. His friend should only send living plants with ships that will sail directly to Holland through the Cape, if possible to Texel. Meanwhile he has received volume 8 of the *Verhandelingen van het Bataviaasch Genootschap van Kunsten en Wetenschappen*. He is very pleased by the fact that Reinwardt has already made so much progress with the development of his 'Hortus Javanicus' and that he even succeeds in cultivating Chinese plants. He does not understand why that is possible, because the Chinese climate is very different from the Javanese climate. He hopes that Reinwardt will send him a specimen of *Enkianthus quinqueflora*, of which he has seen very beautiful depictions in the *Botanical Magazine*. Two crates out of five have recently been delivered at the 'Trippenhuys' (Amsterdam). These had been dredged up from the water, when the 'Amsterdam' was wrecked. He has asked D'Ailly to attend the unwrapping of these crates. Most probably the contents will have been severely damaged. Mrs. Elout has moved into a country house, situated at the corner of the Kleine Houtweg, in the same row as the Royal Palace. She has offered him the choice from a list of seeds and bulbs, which will soon arrive from Cape Town. Besides she has informed him about the near arrival of a couple of large felines. Recently D'Ailly has received a collection of animals for his menagerie from Reinwardt. Betje has expressed her strong wish to receive a beautiful small polly (a 'lorry'). Van Marum hopes that in the near future a collection of living birds will be sent to him. He ends by expressing his most affectionate feelings.

[UBL BPL 2922; BOT, ZOC]

**262. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 6 July 1818**

Reinwardt informs his friend that he has succeeded in handing over his letters, dated 20 and 24 May 1818, to captain Duyff of the 'Jan en Cornelis'. Although there is not much news, he wants to inform his friend about his well-being. Yesterday he moved from Buitenzorg to Batavia. Meanwhile he has succeeded in selling his share of the house in Batavia. For the time being he will stay in Elout's house, whenever he has to stay in Batavia. Most of the time he will be making a trip, or stay in Buitenzorg. He is preparing his next journey now. The day before yesterday he received two letters from Amsterdam. Unfortunately there was no letter from Van Marum. However there was a letter from one of his fellow members of the 'Eerste Klasse' of the 'Koninklijk Nederlandsch Instituut', who has written – nota bene! – that he (Reinwardt) was already bound for home, because staying on Java was not at all to his liking and that he had not achieved his aims. Van Marum must know already that Elout and Van der Capellen have received several of such 'idiotic' letters from Holland. He begs his friend to stop these foolish rumours, pointing especially at the letters sent to Elout by Van Lennep and Falck. This unpleasant fact has really caused him sorrow.

Of course he would have liked to send a couple of plants again, but these would arrive in Holland in winter. Therefore he will wait. Besides, a collection of seeds is waiting in Buitenzorg for being sent to Van Marum. He sends his cordial greetings to his friend and to all the others and finally he informs him that – strangely enough – one single object has been saved from the wrecked 'Amsterdam': a part of the crocodile skeleton. It has been washed ashore on the African coast. Maybe Van Marum will finally receive this object, although it is only of minor importance, compared with the objects, which have been lost.

[NA-RANH 529-20b; BOT, ZOC]

**263. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 24 July 1818**

The Governor-General has informed him that it is still possible to send letters to Europe with a vessel leaving for Antwerp. Therefore he takes the opportunity to inform his friend that he is in good health and that he is waiting for news from Holland. Almost all preparations for the next

journey have been made. However, before he can leave, he still has to travel to Semarang first, in order to put the military school into use. He will leave tomorrow, together with general Anthing. So he will not be able to start his scientific journey until the end of August. Letters from De Vries, Krauss and Kemper have informed him that his friend enjoys good health.

The last letters sent to Van Marum were dated 24 May, 2 and 4 June and 6 and 7 July 1818. The last letter, received from his friend, was dated February 1817. So for almost 17 months he did not receive any news from Haarlem. Other friends have informed him that the rumours about his so-called dissatisfaction about his job and living conditions in the East Indies are still dragging on, in spite of the messages sent by him to Holland, which is a very unpleasant fact. On behalf of the Governor-General he asks his friend to try to buy a telescope somewhere, perhaps through an auction, by buying it from a private person, or by ordering it at an instrument maker's. This telescope will be used by lovers of astronomy, in order to watch the celestial bodies. In his view this purchase should not exceed the sum of 300 to 500 guilders. He would be very pleased if Van Marum is willing to send his acquisition directly to Van der Capellen. Meanwhile it has been decided that Elout and Buyskes will return to the Netherlands in the course of January 1819.

In the entrepôts of Batavia a new shipment for Holland has been put ready: several crates, containing antiquities and objects of natural history. Its inventory has been added to a letter, which he has sent to Van Marum in May 1818. As soon as he has returned from Semarang to Batavia, he will try to send some money. Not until the end of this year he will have the opportunity of sending plants to Haarlem, because of the weather. However he will send him a collection of seeds soon. The 'Hortus' – almost completed – has become very beautiful. He ends this letter by adding his well meant greetings for his friend and especially for Mrs. Van Marum.

[NA-RANH 529-20b; BOT, ZOC, COB, ETN]

**264. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 24 July 1818**

On 27 June 1818 Van Marum has sent his last letter (n<sup>o</sup> 19) with the 'Elisabeth' (captain Pakes). Now he adds a duplicate of that letter, as well as a letter from Reinwardt's relatives (in Lüttringhausen). Reinwardt's mother is

getting weaker and weaker everyday. The doctors are powerless. Mr. Morian has also informed him about her state of health. His relatives and Mr. Morian are thinking that Reinwardt has already made his fortune and that therefore their allowance should be raised by 50%. In their view the two doctors and the pharmacist have – to a certain extent – the right to take advantage of their improved financial situation. Van Marum has his own thoughts about the quality of medical care in Lüttringhausen. However, on 20 July already, he has sent the payment-order for 200 guilders to Lüttringhausen. Furthermore Reinwardt's old maid Meintje has found lodging in the old men's home. He has been asked to advance 500 guilders, but he did not. Furthermore Meintje wanted to receive 100 guilders for a loan. He felt like having been forced to comply with this request, because she appealed to previous promises made by Reinwardt himself. In the view of De Vries and Kemper he should not give that allowance, although it would have been in accordance with his kind-heartedness. So they decided to give her 25 guilders in advance. This sum should do for the vital necessities and the old maid has agreed.

In the newspapers Van Marum has read that the 'Augusta', with which Reinwardt has sent a collection of beautiful Javanese plants to the Netherlands a few months ago, has made the port of Cape Town, after having sustained severe damage. Most of its cargo must have been lost. He really regrets, especially for the tree fern. If his friend should decide to send plants again, he would prefer to receive only the most rare specimens. His hothouse is only 24 feet long. He begs him to send a few rare Chinese plants, like *Enkianthus quinqueflora* (see: the *Botanical Magazine*). Not until last week, he has received the warrant needed for the payment of the second and third quarter of Reinwardt's salary as a Director. Why has he not sent the life certificates relative to the first quarter of his third year on Java, until now? By neglecting this affair he is his own enemy.

De Vries has informed him about the contents of a letter from Caroline to her uncle, which had not been sealed. Meanwhile this letter must have arrived in Batavia. He has understood that – all things considered – Caroline's 'lover' is an impeccable guy. He hopes that Reinwardt will accept this situation. As a close friend he is longing for his safe return to Holland. He hopes that the Governor-General will return soon and that he will be able to induce Reinwardt to make the same decision. Everybody knows that

the Governor-General has already decided to leave Java next year. He adds the greetings from his wife and from Betsy.

[NA-RANH 529-20b; BOT; See also: UBL UBL 2922]

**265. Commissioner for the Navy (Surabaya) to C.G.C. Reinwardt (Batavia); 21 August 1818**

At Reinwardt's request the Commissioner for the Navy – Overbeek – sends Reinwardt a sample of petroleum and a small barrel of 'Dammer Selah' (?). He hopes that he will be able to comply with Reinwardt's requests more quickly in the future. He underlines his willingness to do so.

[NA 2-21.204(4); GEO, MIN, CHE]

**266. C.G.C. Reinwardt (Batavia) to J. de Vries (Amsterdam); 28 August 1818**

Reinwardt has to hurry, in order to send a couple of letters with the 'Aleyda'. The man, who has brought him the last letters, has died in hospital because of alcohol abuse. Not until his death Reinwardt has received these letters. He has done his utmost to take care of that man. Even Elout has offered his help. This is only one of several examples. A couple of days ago he has returned from a visit to Semarang, where he has re-established the military academy, in his function as governor of that very useful institution, a training college, not only for competent officers, but also for honest and well-behaving citizens. He really hopes that De Vries will convey this message to Van Marum, because he has always opposed to Reinwardt's interest in governmental affairs. If he would not have gone to Semarang, he would already have started his 'physical' journey. Now he is still preparing it.

From what he has written down, De Vries will understand that he will not return to Holland soon, in spite of De Vries's 'urgent' demand, which has probably been prompted by Van Marum. Reinwardt underlines that he has considered this decision carefully. Through Eschaussier he has received his nomination as professor chemiae in the Amsterdam 'Athenaeum Illustre'. He asks De Vries to thank the council of mayors of Amsterdam, as well as the governors of the 'Athenaeum'.

He has also received letters from Caroline, Van Rossum, Van Walraven and Calkoen. He asks his friend to guide his niece and to keep her to the straight and narrow path. Perhaps she will have to be sent to Lüttringhausen.

Finally he observes, that on 20 May 1818 he has sent De Vries a box, containing presents for several friends and acquaintances and also a couple of newspapers. Again he adds some and asks De Vries to send him the last volume of Wytttenbach's *Pilomathie*.

[KB 121 B 8; CHE]

**267. C.G.C. Reinwardt (Buitenzorg) to M. van Marum (Haarlem); 28 August 1818**

On 26 August, when he had planned to leave for Buitenzorg, Eschaussier came to see him and delivered Van Marum's letter, dated 12 December 1817 (n° 15), as well as a copy of the preceding one (n° 14). He has not had the time for a conversation with Eschaussier, nor could he take delivery of the collection of seeds, the books, and wine, etc., which had been sent to him by Van Marum with the 'Wilhelmina'. He has decided to ask Eschaussier to inform him about the date of his return to Europe, because he wants to ask him to deliver a few things at Van Marum's. He hopes that captain Sypkes (of the 'Ida Alyda') will be willing to take this letter to Holland. He thanks his friend for his gifts, especially for the wine, bought from Schimmelpenninck & Kruimel. He will try to fetch a high price for the two hogsheads of wine, although its price will not be too high because of the enormous supply during the last few months. He hopes that Eschaussier will also deliver the volume of Römer's *Species Plantarum* and not the recently published issues of Sprengel's *Institutiones Medicae*, because the bookseller Sulpke has already sent him this book. Dr. Van Rossum has sent him the bill. He adds it to this letter and asks his friend to pay only the first mentioned sum (10 guilders), because he did not order the other books.

He is looking forward to receiving the seeds, sent to him by his friend. The almost completed 'Hortus' is already very beautiful. There is even a beautiful tree, called Marumia caudiflora. In Reinwardt's view it is a new species. He promises to send a couple of seeds, a description of the tree and also several young plants to Haarlem. He would have liked to name another plant after Von Salm, but he has found out that Wildemann has foxed him (see: *Magazin*, Berlin). Therefore he has named that plant Kiesera. As soon as the season will be more favourable, he will send a new collection of living plants. They will be sent with the ship, that will bring Eschaussier back to Holland. Another possibility will be to send this collection with the vessel

on which Elout and Buyskes have booked passage. He will also add a small collection of seeds.

Furthermore he acknowledges that he has been totally wrong about Mr. Abel. This man had not only promised to send Van Marum half of the plants taken to England, but also to send several other objects of natural history from London on to Haarlem. Furthermore Reinwardt mentions a problem with the Chinese missionaries.

A travel story written by Mr. Ellis, the secretary of Mr. Raffles, at which he had the chance to throw a glance, was absolutely full of defamation and mendacities, as he has found out. It did not mention a single word about the festive welcome at the Governor's Palace. Raffles, the former Governor of the East Indies, and now Governor of Benkoelen, still seems to frustrate the Dutch government as much and as often as possible. For example he has refused to renounce the towns of Padang and Palembang. Besides he seems to have spotted every Sumatran coastal town. All the Indian-English newspapers are suffused with the same animosity. It looks as if the English are still angry and jealous, because they had to return Java to the Dutch government.

A few days ago he has returned from Semarang, where he had gone, accompanied by General Anthing, in order to re-establish the military school on 10 August 1818. The travel company has made the journey out over land, while the return trip has been made aboard the warship 'Prins Frederik'. During the journey out they have been welcomed by Mr. De Wilde at his country estate. They stayed there for two days and they had a wonderful time. Probably Van Marum has already received the sad news about the death of Van der Goes, captain of the artillery at the Moluccas.

In his letters dated 10 and 24 May 1818, he has already mentioned the fact that ten crates, containing various objects, were already prepared for shipment from Batavia on 10 May. Its inventory had been added to the letter written on that day. Meanwhile he has asked the Governor-General to have this cargo embarked. Once more he sighs that after all the loss of the first shipment, as a consequence of the wreck of the 'Amsterdam', has turned out to be irreparable.

Now he will soon set out on his journey. Kent is doing his best to make the necessary preparations. The last few months Bik has not been able to work, because he has been ill. As soon as he sees Eschaussier, he will ask him to

take some merchandise with him to Holland. In that way Reinwardt will be able to pay Van Marum. Schimmelpenninck and Kruimel have advised him to buy a cargo of rice and tea and to send it to Holland. Because he is not a merchant, it is difficult to make the right decision. He did not send the bill of exchange to Van Marum until now, because he can get a good return on his capital here (9%).

In his last letters he has written that he has succeeded in selling his share of the house and that within the next two years he will receive the rest of the money the new owners owe him. At the moment he is lodged in a room of Elout's house in Batavia. However he will have to move in December, because Elout will be leaving by then. He has his office in the 'Gouvernementshuis' in Batavia. The various letters, which he has received from Professor Van Lennep, have informed him fairly well about the literary news. He really regrets the death of Florijn; a great loss to the 'Eerste Klasse'. He has also read the speech delivered by Van Lennep in commemoration of De Bosch. A few days ago he has read by chance that he has been appointed member of the 'Botanisch Genootschap' ('Botanical Society') of Ghent, like Van Marum has been before him. This is curious because he has never received an official letter of appointment. Anyhow its secretary Cornelissen has recently sent him a letter, accompanied by several short documents, which are not very informative ('which may have been caused by the French wind'). Furthermore he has started to collect rocks and minerals in behalf of the 'Teylers Museum' and of the 'Society' in Jena. Dr. Horsfield, who has left for Benkoelen, will soon return. This man has sent a huge collection of objects of natural history to England. Van Rossum has informed him that the 'Athenaeum' of Harderwijk has been dismantled meanwhile and he wonders what will become of Vosmaer.

Referring to the favourable balance of his accounts, he thanks his friend for being so kind to manage his possessions so well. The financial future looks good, taking into account that he has sold his house meanwhile. As a consequence of his illness and of his absence, he has not had the opportunity yet to send the life certificate, relative to the second quarter of 1818. This document may arrive any moment now from Batavia. He will send it immediately on to Holland, if possible added to this very letter, or better, to the next one. His bronchial disease does not worsen, at least if he is a little bit more careful. By doing so he will have the opportunity to devote

himself to the study of nature. Finally he wants to spend a few words on the controversy between Buys and Uilken, deciding that the former has rightly come off best.

If Van Marum does not want to keep the seeds, which have been added to this letter, he should give them to the 'Hortus' of Amsterdam, or to Professor Kops (Utrecht). He has also added a bill, signed by C.G. Sulpke (Amsterdam), showing that he owes him 41 guilders and a couple of pennies (41,16 guilders). He adds his kindest greetings to Mrs. Van Marum and to Betje.

[NA-RANH 529-20b; MED, BOT, ZOC, COB, GEO, MIN]

**268. M. van Marum (Haarlem) to C.G.C. Reinwardt (Buitenzorg); 28 August 1818**

In his 21<sup>ST</sup> letter Van Marum informs his friend that yesterday he has seen Mr. Vollenhoven in Amsterdam and that Vollenhoven has told him that he has sent a letter to Reinwardt with Van Ijseldijk's youngest son. In a hurry he has written a letter himself and sent it to Batavia in the same way, because he wanted to grasp every opportunity to send letters, an inclination which his friend obviously does not have, or at least his need to do so is weakening more and more. The last letter received from Reinwardt was dated 6 February 1818. This is not his only concern. It is even more annoying that he has received letters from Batavia, which have been sent more recently. So apparently several of Reinwardt's letters must have been lost. Finally the 'Augusta' (captain Greveling) has arrived in Antwerp early August 1818. Thereupon he has asked a Dutch friend, who is living there, to make inquiries about the destiny of the living plants sent to him. Until now the captain has not indicated which goods have arrived for the 'Kabinet van Natuurlijke Historie' and which objects were addressed to him. At least he knows now that two living leopards ('tjgerkatten') have arrived. He is really embarrassed by this present. Therefore, he has asked D'Ailly to accommodate these animals for the time being. D'Ailly has agreed. Shortly after, it appeared that only one of the animals was still alive. D'Ailly suddenly showed a still unknown and very uncongenial nature: He wanted Van Marum to convey the ownership to him. Van Marum refused to leave these animals to D'Ailly, because he did not know why they had been sent to the Netherlands. Thereupon D'Ailly explained that he had decided to

keep the crates, containing the objects of natural history at his house, while Van Marum claimed this collection. D'Ailly inflamed with anger and started to call him all sorts of names, in the presence of Van Marum's wife. He called him an intriguer and stated that his son had served him long enough at the 'Kabinet'. Thereafter D'Ailly left in a hurry. Van Marum was very upset by this infinite boorishness. D'Ailly junior, who was quite embarrassed, did not know how to react, but he wanted to finish the job, given to him by Van Marum: he wanted to complete the preservation and maintenance of the insect collection. He said that he hoped that his father would allow him to do so. So the friendship between D'Ailly senior and Van Marum is over and done forever. Later on, at the occasion of the visit paid by him to Mrs. Elout at her country estate in 'De Hout', he has learned that Elout had decided to give both animals to Van Marum for a present. Probably his friend Reinwardt has mentioned this fact in one of his lost letters. So that letter might have prevented this annoying problem.

Furthermore he has added a copy of his 20<sup>th</sup> letter to the one he is sending now. There are new troubles in the 'Eerste Klasse'. Again Van Swinden has been behaving very strangely. Van Marum is eagerly looking forward to receiving new letters from Reinwardt.

[NA-RANH 529-20b; BOT, MED, ZOC, COB; See also UBL BPL 2922: identical letter]

**269. Commissioner for the Navy (Surabaya) to C.G.C. Reinwardt (Batavia) 3 September 1818**

In reply to his letter, dated 21 July 1818, W.P. Overbeek, Commissioner for the Navy, informs Reinwardt that 19 guilders and seven and a half pennies have been advanced with respect to the dispatching, mentioned in that letter.

[NA 2-21.204(4)]

**270. C.G.C. Reinwardt (Buitenzorg) to M. van Marum (Haarlem); 15 September 1818**

Yesterday the Governor-General has paid him a visit and informed him that he has ordered to send the ten crates of objects of natural history, etc. to Holland, like he had done already on 20 August. The cargo has been loaded in the 'Ida Alyda' (captain Sypkes). Now he adds an inventory of this collection. The crates have been addressed to the 'Department of Commerce

and Colonies' and every single crate has been marked 'Koninklijk Kabinet van Natuurlijke Historie te Amsterdam'. If possible, he will add Vollenhoven's address. He also adds copies of his letters sent on 6 July and 28 August. The last letter received from his friend, was n<sup>o</sup> 15. He has learned that his unforgettable friend Van Eys has died. This was a painful message, as Van Marum will know. Soon he will send Van Marum another letter. He adds his greetings and adds a copy of the *Bataviaasche Courant* (n<sup>o</sup> 36), in which the wreck of the previous shipment has been discussed. He hopes that Van Marum agrees that this message deserves to be published in the *Algemeene Konst- en Letterbode*. He asks him to give this newspaper to De Vries, after having read it.

[NA-RANH 529-20b; ZOC, COB]

**271. C.G.C. Reinwardt (Buitenzorg) to M. van Marum (Haarlem); 18 September 1818**

Reinwardt sends a new life certificate. A few days ago he has sent an extensive letter with the 'Ida Alyda', covering the ten crates, which have been sent to Holland. The Calkoen brothers have informed him that rice is very favoured in Holland. Therefore he is going to ask Eschaussier to order the shipment of 100 loads of rice aboard the 'Wilhelmina' and to address this cargo to Calkoen. Eschaussier wants to receive 180 guilders ('Dutch currency') a load and besides 15% 'Avary (= loss-insurance). Of course Reinwardt will not be able to pay this huge amount of money until after the rice has been sold in Holland. He has decided to pay the insurance premium already in Batavia. Probably he will be able to sell the wine sent to him by Schimmelpenninck & Kruimel for 75 guilders by the crate. If possible he will inform Van Marum more precisely in his next letter.

[NA-RANH 529-20b; AGR, ZOC, COB]

**272. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 20 September 1818**

**In his 22<sup>nd</sup>** letter – to which he adds a copy of his 19<sup>th</sup> letter – Van Marum expresses his anxiety about Reinwardt's disease, about which he had been informed by an undated letter, sent to him by Van der Vinne. A week later he received another letter (dated 30 April 1818), in which captain Foppe Baas has informed him that Reinwardt had already made an almost complete

recovery and that he would probably return soon to the healthier Buitenzorg. The unhealthy atmosphere of Batavia must have had a bad influence on Reinwardt's furuncles. He should not risk his health, he might find his grave there! As a matter of fact Reinwardt has promised him to stay in Buitenzorg as much as possible! His true friends want to see him back alive and in good health. Meanwhile he has received Reinwardt's letter, dated 10 December, as well as Elout's letter about the case of the leopards ('tijgerkatten'). Again he grasps the opportunity to spend a few words on the unpleasant quarrel with D'Ailly. He still does not know what to do with a living animal of prey, which has been given to the 'Kabinet van Natuurlijke Historie'. Therefore he has finally decided to entrust the 'tijgerkat' to D'Ailly's care, under the express condition that if the animal dies, its skeleton will be returned to Van Marum. In the view of D'Ailly junior the animal was a specimen of *Felis pardalis*, as Temminck had told him. He does not want to see D'Ailly senior ever again! He regrets that Reinwardt has never informed him or Elout about the destination of these animals.

Once again he wants to know how the government has succeeded to tempt Reinwardt to come to the East Indies and why he has hardly been offered the opportunity to do scientific research, until now. Professor Van Lennep fully agrees with him and so does De Vries. Van Lennep even fears that sending a letter to Elout about this situation might endanger Elout's friendship with Reinwardt. Van Marum is not afraid, because it may take a year before that letter will arrive on Elout's desk. His friends have discussed this affair with Van Swinden in the meetings of the 'Eerste Klasse'. Van Marum wants to emphasize that he has never discussed this problem with others.

Reinwardt's last letter has given him hope that already several months ago his friend has been freed from office work. Perhaps he has already set out on a trip through Java, or maybe he is going to set out for his journey just now. He hopes that the Governor-General will assign the needed assistance in order to be able to carry out his original scientific plans with the least 'fatigues'. From Reinwardt's last letter, received by him until now, he has learned that he did not change his plan to return to Holland according to schedule and that he has rejected the proposition to serve as long as the Governor-General has to do. He should not sacrifice himself. Everybody is happy about his recovery. It will be easy to announce that he has nearly had no time to devote himself to science, until now, although this had to

be his most important assignment! If he would die before he will have had the opportunity to publish his discoveries, everything would turn out to be in vain. Reinwardt will also receive a letter from his relatives in Lüttringhausen, in which they have asked him to send a bag of coffee, delivered in Amsterdam by captain Greveling. Greveling has denied that he has loaded coffee in Batavia, which had been destined for Lüttringhausen. De Vries has only received a box of jars of ginger. Probably the coffee has been stolen somewhere. Reinwardt should try to prevent such events. Much to his pleasure he has also read that Landré junior has meanwhile become a useful assistant to Reinwardt. Van Marum is almost sure that already several months ago he has sent Römer's *Species Plantarum*. He promises to check that fact and if he is wrong, he shall send another copy to Batavia at the first possible occasion. Meanwhile Temminck has returned from Switzerland, Italy and Vienna. For the time being, he has stored the objects of natural history, destined for the Southern academies, at the 'Kabinet van Natuurlijke Historie' (in the 'Trippenhuys', Amsterdam), like it had been agreed with Repelaer van Driel. Van Marum knows that a discussion with Temminck on this subject would only lead to inconveniences. For the time being the 'Kabinet' will remain closed to the public. Last year, he has proposed to Repelaer van Driel to purchase Veen's butterfly collection at a reasonable price. Unfortunately he has never received an answer.

Betsy, who is of course still unaware of the death of the officer Van der Goes, thanks Reinwardt for having recommended the fiancé of her niece to the Governor-General. Van Marum was quite astonished when he learned from Reinwardt's letter that Horsfield and a couple of assistants were living in Reinwardt's house in Buitenzorg and that they are preparing a large collection of objects of natural history for expedition to England. Van Marum does not understand why Reinwardt is providing him with so many facilities. Horsfield will outsmart his friend! Fortunately the botanical garden is in a good condition and it serves well as a nursery for plants which will be sent to Europe.

Once again he stresses that he expects Reinwardt to send only rare and already drawn plants to Holland. He regrets that the tree fern, sent to him with captain Greveling, has died. He stresses his interest in useful plants.

[NA-RANH 529-20b; BOT, AGR, MED, ZOC, COB; See also: UBL-BPL 2922: identical letter]

**273. ?? Engler (Samarang) to C.G.C. Reinwardt (Batavia); 21 September 1818**

Through this extract n° 419, Engler, government official, informs Reinwardt that he and two army officers have watched the refining of 400 pounds of sulphur, ordered by him. This experiment yielded less than 100 pounds of rather pure sulphur. Thereupon he has seen the master gunpowder maker and he has ordered to repeat the refining procedure. After the second treatment the sulphur still proved to be contaminated. According to him, these extra purification procedures will cost the government a lot of money. Therefore he has decided now to select the best lumps of sulphur from the bags of collected sulphur and to carry out another experiment. In his view Reinwardt cannot imagine what rubbish has been sent to Semarang. Engler promises to send a sample to Batavia, so Reinwardt will be able to judge about its usability and to decide that Engler really acquitted himself. He regrets that he has not been able to meet the demands for the first time of his life.

[NA 2-21.204(7); GEO, MIN, CHE]

**274. C.G.C. Reinwardt (Buitenzorg?) to M. van Marum (Haarlem); end of September 1818**

Inventory of a collection of birds and insects, which has been sent about late September from Batavia to Van Marum. These objects have been destined for the 'Kabinet van Natuurlijke Historie' (Amsterdam).

[NA-RANH 529-20b; ZOC; COB]

**275. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 10 October 1818**

In his 23<sup>rd</sup> letter Van Marum has the unpleasant task to inform Reinwardt about the obvious decline of the state of health of his mother, followed by her death. Mr. Morian has promised to advance the money, needed for her funeral and for a few other expenses, as has been agreed with Van Marum. He will send him the bill afterwards for reimbursement. Van Marum adds a copy of his 22<sup>nd</sup> letter and emphasizes once more that copying letters before sending them is very useful. If Reinwardt would have done so, his important letter of September 1817 would not have been lost.

The last letter he has received from his friend was dated 30 April. So he does

not know yet if Reinwardt has already fully recovered. Through the letters Landré junior has sent to his parents, he and De Vries have been informed that Reinwardt's disease has been much more severe than he has wanted them to believe. Therefore his friends in Holland have been very anxious about his recovery. If this process will take too long his return to Holland might even be endangered. He might even decide to postpone his return passage!

Shortly after he had handed over the *Felis pardalis* to D'Ailly, Van Marum has found out that D'Ailly had sold it already to Van Aken (at the 'Botermarkt'). Vainly Van Marum has tried to get in touch with D'Ailly junior.

There is not much news about Reinwardt's financial affairs, except that the English bill of exchange of 125 has to be sent to Copenhagen, in order to convert it into cash. Now it has been decided that this bill will not be offered for sale at the Amsterdam Stock Exchange until December. At the end of this year he will again send an annual account. Furthermore he advises about Reinwardt's financial position. De Vries and Van Marum have bought 25 pounds of coffee in Amsterdam and have sent it to Lüttringhausen.

Van Marum is eagerly looking forward to Reinwardt's safe return. His anxiousness is growing. Probably his state of health is too defective for making his trip through Java. Van Marum also fears that the Governor-General is pushing him too much, a fact which might bring him to the decision to postpone his return to Holland. Why does he not reassure his friends and make them happy? He hopes that Kent will soon send a second bill of exchange for the support of his family, or that he has done so already. Otherwise Van Marum has to endure the same inconveniences as last time. [NA-RANH 529-20b; ZOC, COB, MED; See also: UBL-BPL 2922: identical letter]

**276. C.G.C. Reinwardt (Buitenzorg) to M. van Marum (Haarlem); 10 October 1818**

A couple of weeks ago Reinwardt has received Van Marum's 17<sup>th</sup> letter (dated 23 April 1818), as well as the duplicate of n° 16. First of all he wants to refer to his own letters, dated 28 August 1818, 6 September 1818 and 18 September 1818. In these letters he has acknowledged the receipt of Van Marum's letters n° 14 and n° 15. Now he has added a life certificate and a duplicate of the inventory of the ten crates sent to Holland with the 'Ida

Alyda'. He also adds a copy of his letter, dated 28 August 1818, as well as a copy of the list of seeds sent to Haarlem. Furthermore he has received 12 crates of wine from Schimmelpenninck & Kruimel, of which six have been sent at the expense of that firm. He has succeeded in selling these crates for 75 guilders each (which was the price the merchants had demanded). This price did not include the freight. In order to pay the wine, he has sent a bill of exchange (a 'primo') of 450 guilders (convertible after three months at the office of Mr. A. van Hoboken (Rotterdam)). He is pleased that Van Marum is satisfied about the drawings sent to him. Reinwardt expects that the other drawings, sent with the 'Jan & Cornelis' (captain Duyff), will be satisfying as well. He is happy about the fact that Caroline has taken Van Marum's advice to give up the companionship of the lady, whom she has met regularly. He hopes that she will go on doing so and that she will visit De Vries and Reinwardt's other friends more often than she has done until now.

He feels sorry that his letters are taking so many months to arrive in Holland and he refers to the fact that the last letter, received by Van Marum on 23 April 1818, was the one dated 1 July 1817. Nevertheless he hopes that his friend did meanwhile receive his letter, dated 12 September 1818, which was sent from Sapara, a few days later. He knows for sure that a letter, sent by the Governor-General that same day, has arrived in the Netherlands meanwhile. So most probably his friend will have received several letters in the meantime. All in all, he has proved that he did not at all spoil his correspondence with Van Marum. He thanks him for having been so kind to send the goods, which have arrived from Batavia, on to Lüttringhausen. Meanwhile he has been informed about the joy these presents have brought there.

At the time he enjoys good health; the mucus secretion from his lungs has diminished and he has the nerve to announce that he will soon set out on his tour. The preparations have almost been completed. More and more he has the opportunity to collect objects of natural history; the new collection is growing everyday. Just now Kent has fallen ill, while Bik has not been able to work for the last two months, because he has been sick also. These facts have considerably delayed the start of his journey. However meanwhile the two gentlemen are recovering again. For the time being he has decided to stay in the neighbourhood of Buitenzorg, because there are still many

unknown objects waiting for being collected.

He is still very dissatisfied with Mr. Abel, not only because this man has denied to have accepted the order to have a collection of living plants delivered at Van Marum's, but also because he did not send him – Reinwardt – a single letter until now. He did not even receive the promised copy of Brown's *Prodromus* and several other works, in spite of all his promises. The 'Wilhelmina' (captain Eleman) will leave late this month or early next month and he does not know yet if he will send plants to Holland aboard this vessel, because the weather will be too cold when they will arrive. He will send a couple of letters and also a collection of seeds to Van Marum.

In his letter, dated 18 September 1818, he has announced his decision to send rice to Holland, as had been suggested to him by Mr. Calkoen, because at the time rice will bring more profit than coffee, so today he has sent a letter to the Calkoen brothers.

On Friday 2 October at about half past one in the afternoon – while being writing a letter in Buitenzorg – he has experienced a rather heavy earthquake. The panes of his house have been broken and he has observed several cracks in the walls. The shaking of the ground has made him feel dizzy. The earthquakes have even been felt in the mountains and in Batavia. All the seeds, sent to him by his friend, seem to have died. The same goes for the tulip bulbs, although of a few of these the lateral bulbs seem to be still alive.

Meanwhile the 'Zeeuwsch Genootschap der Wetenschappen' has elected him a member. In its letter it has expressed its wish to receive objects of natural history from Java. Reinwardt is astonished because he did not even know that it was in the possession of a cabinet of natural history. He wants to learn Van Marum's opinion about it (Has its collection any importance, yes or no?) Furthermore he has been informed that a menagerie is built up in Leyden. He does not envy Brugmans, its director. Probably the Governor-General will decide to send several animals to Leyden, such as a young elephant and a young rhinoceros. Maybe the large warships, which will be leaving Batavia in December, and on which Elout, Buyskes and Anthing will embark, will be able to take a couple of living animals to Holland. Anyhow he will try to send a few large Hindustani sculptures (statues) with one of these vessels. These statues have been transported from Samarang to Batavia, last year.

He asks Van Marum to convey his greetings to the 'Vrijdagsch Gezelschap' and to underline that he is often thinking of its members. Furthermore he reminds the commemoration speech on De Bosch, which has been delivered by Van Lennep and also the collection of poems written by Van Hall. Unfortunately he has not heard anything from Temminck lately.

Meanwhile he has collected many still unknown species of birds and insects. D'Ailly has written him a letter and informed him about the purchase of Veen's collection of insects for the 'Kabinet'. Has this deal really been made? Horsfield has left Benkoelen and has arrived in Buitenzorg. He will leave for Europe at the end of this month.

He adds a copy of his letter, dated 28 August, as well as a duplicate of his life certificate. He expresses his warmest feelings towards his friend, towards Mrs. Van Marum and Betje and calls himself Van Marum's true friend.

[NA-RANH 529-20b; ZOC, COB, MED, BOT, GEO, ETN]

**277. C.G.C. Reinwardt (Buitenzorg) to the Governor-General (Batavia); 16 October 1818**

Reinwardt has received the report on the refining of sulphur from the Preanger regencies. The letters about this subject (which have been sent to him by Anthing and Engler) are in line with the decision, made by the Governor-General on 9 September 1818 (n<sup>o</sup> 6) and also with his order to collect sulphur. The sulphur, which is found on the grounds of the country estate of Tjipoetrie and of which the quality corresponds with that of the sample added to this letter, will yield a rather good profit. Therefore he recommends for good reasons to carry out the refining of sulphur provisionally on the spot where it is found. So the workers have to be equipped with the necessary machines. He advises the Governor-General to give the orders for the extraction of more sulphur, in accordance with his decision of 9 September 1818. The resident in function of the Preanger regencies also has to indicate where the sulphur has to be collected.

[NA 2-21.204(7); GEO, MIN, CHE, PHY]

**278. C.G.C. Reinwardt (Buitenzorg) to M. van Marum (Haarlem); 25 October 1818**

Reinwardt expects the 'Wilhelmina' to set sail within the next few days. From his letters Van Marum should have learned that he is sending a

shipment of rice to the Calkoen brothers. All in all, less rice will be sent than had been agreed, because a part of the cargo has been lost, while loading the ship. He has claimed an immediate compensation, but the captain wanted to sail immediately. Now he is still waiting for an answer. Meanwhile he has been informed about a heavy eruption near Bandung. This phenomenon is too exceptional for not trying to observe it with his own eyes. Therefore he has decided to leave as soon as possible and so he hurries to write a few lines. Landré junior, who has been charged with the shipping of the rice, will inform Van Marum more in detail.

The Governor-General wants to subscribe to an encyclopaedia, distributed at large scale in Germany. He has asked Reinwardt to inform Van Marum. Of course he is willing to do so! He asks his friend to send the volumes, which have already been published. As a matter of fact he wishes to subscribe himself, although Van Marum should judge if it is an interesting work, yes or no. If so, Van Marum should subscribe on his behalf and keep the volumes until he will return to Holland. He ends this letter by expressing his feelings of friendship and adds his greetings.

[NA-RANH 529-20b; GEO,AGR]

**279. C.G.C. Reinwardt (Trogong, regency of Bandung, Java) to the Governor-General (Buitenzorg); 2 November 1818**

On Sunday 25 October 1818 Reinwardt has left Buitenzorg in the company of Payen, in order to observe – if possible – the ‘Goentoer’ volcano (‘Goenoeng Goentoer’). The next evening they arrived in Bandung. There he was told that the mountain had ended its eruptions meanwhile. There were no exact reports available, because nobody had gone to observe the mountain, except for the Toewangong, who had not returned yet. A couple of Dutch government officials – Motman (?), Lawick von Pabst and Sterk de Wilde – who might have been able to inform him, had already gone elsewhere. Everywhere on the slopes the results of the eruption were still visible. He confesses that has been advised against climbing the mountain. Nevertheless he wanted to investigate himself what had happened. Besides nobody had climbed that mountain until then. So the next day he made an attempt in the company of a priest from the village, his servant and a few other persons. Almost immediately the first problems occurred. The track was strewn with blackened fragments of rock, and the woods turned out to

be carbonized. More than once the priest advised him to make a u-turn, but he decided to go on. Climbing along the south-western slope they arrived at a considerable height, where the results of the last eruption were clearly visible. After a walk of about nine hours, they had reached a height of about 800 to 900 feet above Trogong. Further up the mountain its surface became hotter. Because it was raining rocks from the sky, they continued along the southern slope. Again it became more and more difficult to follow the track. After about a 10 hours walk the priest got so very tired and so afraid that Reinwardt did not dare to ask him to accompany him any further. His servant, who had already been wounded in the leg, went back, like the rest of the company did. In the end there was only Reinwardt, accompanied by one member of the party, who was also wounded in his leg meanwhile. This man did not dare to leave him. They went on and the slope became steeper and steeper, until it was almost perpendicular. Therefore and because of the falling rocks, the situation became very dangerous. Rocks were blown from the sheer cliff. Finally he had to decide to descend. This part of the journey turned out to be extremely quelling. They found the priest waiting. He had been so lucky to see the mountain burning. After his return Reinwardt was extremely exhausted. The wounds in his hand and feet were very painful. Meanwhile he has fully recovered. Looking back, it has been a wise decision that Payen did not accompany him on the last part of that trip and that he has painted the volcano from a distance. In Reinwardt's view the Governor-General will get a better view of the situation from that painting than he would have had from Reinwardt's vivid description.

He wants to stress that he loves to walk around in the very beautiful surroundings of Trogong. He goes hunting, is collecting all kinds of useful objects, is making notes, carrying out observations and doing investigations. His Excellency should absolutely visit this region. As soon as Payen will have completed his drawing of the front view of the mountain – in about two days – the party will return to Buitenzorg. Meanwhile the heavy rains are beginning to fall and the roads are beginning to transform into muddy tracks. Mr. A. de Wilde, who has lived here in 1810 and 1811, has also seen Reinwardt. Furthermore Reinwardt has written a report on the 'Goentoer', which has to be published in the newspaper. He adds it to this letter, in order to find the consent of the Governor-General. If the newspaper of last Saturday has already given a message about the eruption, this new report has

to be adapted in a certain sense. His Excellency should order Baud or one of the other higher officials to judge and correct it and to have it taken to the printer. He asks the Governor-General to inform Elout and Buyskes as well. He assures him of his feelings of highest esteem.

[NA-2-21.204(7); GEO, BOT, ZOC, COB, ART]

**280. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 7 November 1818**

In his 24<sup>th</sup> letter Van Marum assures his friend that he has been waiting for a new letter for (many) weeks. He has become very worried about the fact that staying in Batavia has delayed his friend's recovery, the more because a new sign of life failed to appear. Fortunately he was informed that Reinwardt was already recovering through a letter sent to Van Lennep by Elout, which was read in the meeting of the 'Vrijdagsch Gezelschap', two days ago. Much to his regret his friend did not mention his disease in his letter, dated 20 May, which was sent from the unhealthy town of Batavia. In Van Marum's view Reinwardt is staying much too often in Batavia after all. He has added a duplicate of his last letter. Its contents will not please Reinwardt! Van Marum strongly regrets that he had to learn that the great majority of objects of natural history collected by Reinwardt and sent to Holland with the 'Amsterdam', has been lost. This is awfully sad. The written inventories have also been lost. He had hoped that one of these lists would have been saved and that he could have written a news report on that subject, hoping that it would be published in the *Algemeene Konst- en Letterbode*. Furthermore the contents of two of the crates delivered at the 'Trippenhuys' proved to have been damaged and lost by the action of the seawater. He hopes that the second shipment sent by Reinwardt – containing objects of natural history, antiquities, clothing, etc. – will not have been lost too. He has decided to write a new report, in which he will also point at the loss of the larger part of the collection sent with the 'Amsterdam'. He is eagerly looking forward to the reception of the drawings, which have been sent meanwhile. He will keep them until Reinwardt returns, together with the ones which he has received previously, in order to enable Reinwardt to make further use of it.

From Elout's letter he has learned also that Reinwardt has sold his share of the house and that he will live at Elout's, until the Commissioner General

will return to Holland. He hopes that Reinwardt will have the opportunity to send the proceeds of that sale to Holland in the most safe way: as a bill of exchange or as merchandise. He will continue to take care of Reinwardt's financial affairs. Anyhow Reinwardt should not entrust his capital to somebody living on Java, in spite of the interest they promise! Through his next letter Reinwardt must inform him about his financial situation. He promises to send an annual account to Batavia again, at the end of the year. Furthermore he adds a letter written by Morian. Morian has asked him (Van Marum) through his correspondent Mr. Schuymer (Amsterdam), to reimburse him for 300 guilders, which he has advanced to Reinwardt's relatives in Lüttringhausen. It is most regrettable that Morian has refused to send a bill. Nevertheless he thinks that he should comply with that demand. Morian has proposed to cut the next subventions of 300 guilders by 50%, so that the third payment will amount 300 guilders again. Van Marum is indecisive. In his view Reinwardt's sisters should be able to live on 600 guilders in stead of 800 guilders a year, since their mother has died, especially if they would decide from now on to call up the doctor and the pharmacist only if it is absolutely necessary because of the neurasthenia, which the sisters are suffering from. Van Marum wants to receive a quick decision from Reinwardt and he suggests that Morian should ask the two sisters through a letter. He sends his greetings, also on behalf of his wife and Betsy and he underlines that he is eagerly looking forward to the return of his friend.

[NA-RANH 529-20b; ZOC, COB, ART, ETN; See also: UBL BPL 2922: identical letter]

**281. C.G.C. Reinwardt (Bandung?) to M. van Marum (Haarlem); 7 November 1818**

Reinwardt sends his friend a copy of the report about his climbing adventure on the 'Goenoeng Goentoer' volcano, which he has sent from Trogong to the Governor-General, shortly before he left that region and returned to Batavia. It is meant for publication in the *Bataviaasche Courant*, which will be issued on Saturday 8 November or on 15 November 1818. The message also gives a series of geological, volcanological and mineralogical facts.

[NA-RANH 529-20b; GEO, MIN]

**282. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia) 11 November 1818**

In his 25<sup>th</sup> letter Van Marum first of all discusses Reinwardt's letter, dated 20 May 1818, which he has received on 7 November 1818. Actually it is a repetition of the discussion already described in his 24<sup>th</sup> letter, dated 7 November 1818. Besides today he did receive Reinwardt's letter, dated 4 June 1818. It has been taken to Antwerp by the 'Jan & Cornelis'. From there it was sent on to Holland through Brussels (probably added to the governmental mail). To his displeasure he had to conclude from it that Van Lennep has informed Elout about the contents of their discussion about Reinwardt's activities and achievements on Java. All in all, Van Lennep's remarks have turned out to be rather blunt and he was not aware of its consequences. Anyhow he has not cited Van Marum literally. So Van Lennep is responsible for what he has added himself. In his view Van Lennep has in his letter to Elout largely exaggerated with respect to Reinwardt's position. Van Marum did already mention that fact in his letter sent to Reinwardt on 20 September. Meanwhile Van Marum has learned that Elout is very much put out over the remarks made by Van Lennep and himself.

[NA-RANH 529-20b]

**283. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 13 November 1818**

Reinwardt brings to mind his previous report about the 'fire-breathing mountain', which has been sent to Van Marum by Landré junior with the 'Soerabaya', together with his letter, dated 24 October 1818. In his own letter he especially wanted to pay attention to the sending of rice, aboard the 'Wilhelmina' to the Calkoen brothers (Amsterdam). He hopes that they will make a good deal for him. After having subtracted the costs, they have to hand over the remaining money to Van Marum. Added to this letter, he sends a box, containing six jars of ginger, to the Calkoen brothers. They will have to redirect the ginger to Mr. Frowein, who will take care of its transport to Lüttringhausen. The 'Wilhelmina' has set sail on 29 October.

On 11 November he has returned from his visit to the volcano. Although he was very tired, he was also very satisfied about the result of his trip. He has escaped from every danger, while the mountain was erupting numerous rocks. Next time he will write an extensive report, because he has to send

this letter in one hour. He encloses a copy of the report, which has been published by him in the *Bataviaasche Courant*, last Saturday. The landscape surrounding the mountain is very beautiful. Furthermore he has made a trip to another mountain, about 5.200 feet high, the 'Talaga Badas', Its bowl-shaped top turned out to be completely filled up with milky white water. The nearby fall is consisting of boiling, liquefied sulphur and water. The hot vapours have already destroyed much of the vegetation. Nevertheless he has had the opportunity to bring home several beautiful and rare plants and also various seeds. Elout and Buyskes have decided to return to Holland at the end of December. He greets his friend, Mrs. Van Marum and Betje. He still enjoys good health, in spite of his tiring trip. He supposes that his friend has heard already about the death of captain Kaps.

[NA 2-21.204(7); GEO, MIN, BOT]

**284. A. de Wilde (Soeka Boemie) to C.G.C. Reinwardt (Batavia); 18 November 1818**

A. de Wilde, a large landowner at Soeka Boemie, informs Reinwardt that he had to stop collecting sulphur in the Tjipoetrie region as a consequence of the continuing request of the workers, who had been charged with that job. Several of his workers have fallen ill. The continuing bad weather and the fact that they have to travel seven days in order to bring one load of sulphur home, has made him to decide in that way. Such a trip of seven days consists of the following elements: three days for climbing the mountain, one day for collecting the sulphur and again three days for the return trip. As soon as the weather improves, he will order to resume these activities.

[NA 2-21.204(7); GEO, MIN]

**285. J.Chr. Baud (Batavia) to C.G.C. Reinwardt (Batavia); 19 November 1818**

Through this copy of the 'Extract der Besluiten van den Secretaris van Staat/ Gouverneur Generaal van Nederlandsch Indië' Baud informs Reinwardt that the Governor-General has recently received a letter from the resident of Surakarta (dated 10 November 1818), in which he announces that a heavy earthquake has occurred in the night of 8 November 1818, lasting at least 10 minutes.

[NA 2-21.204(9); GEO]

**286. J.Chr. Baud (Batavia) to C.G.C. Reinwardt (Batavia); 28 November 1818**

Ordered to do so by the Governor-General, Baud sends Reinwardt a couple of more detailed reports with respect to the last earth quake (see also the reports, which have been received between 9 and 19 November 1819).

[NA 2-21.204(9); GEO]

**287. C.G.C. Reinwardt (Batavia) to the Governor-General (Batavia); 4 December 1818**

Reinwardt reminds that His Excellency has given him two letters, dated 21 and 28 October 1818, in which he has asked him for an advice with respect to two letters, received from the lieutenant-general Anthing (n° 104/40, dated 20 October and n° 147/10, dated 27 October 1818). These letters are dealing with the results of the refining experiments on sulphur samples carried out by the 'Kruidmolen' in Semarang. He gives his considerations and advice. First of all he refers to the letter, sent to him by the land owner De Wilde (dated 18 November 1818). On the basis of this information, he has taken the view that it should be figured out if it would be possible to collect all the sulphur, needed by the government, in the Tjipoetrie region and to refine it there, if possible.

The first letter sent by Anthing makes clear that one has to expect a very unprofitable proceeds, because 400 pounds of unrefined sulphur only yields about 221 pounds of pure sulphur. Taking into account the average costs of collecting, transport and refinement, the cost price for the government will be about eight and a half pennies a pound. This price is too high. In a second experiment 3.618 pounds of unrefined sulphur yielded 2.383 pounds of pure sulphur. As a consequence of the better proceeds the cost price for the government will be 4 pence a pound of refined sulphur. According to Anthing's further information it is possible to buy refined sulphur of the finest quality for about 4 pennies a pound. Therefore it would be better for the government to abandon the refining of sulphur and to buy it elsewhere, at least as long as the merchants do not ask more than the above mentioned price. If a second refining process has to be carried out once more, the loss will be about another 20%. The loss as a consequence of the drying and pulverization has not even been taken into account! These calculations only go for the sulphur found elsewhere in the Preanger region, while the sulphur

found in Tjipoetrie – for example on De Wilde's estate – is of a better quality, so its profit will be much higher. Anyhow it should be examined to what extent the purification of sulphur collected in Tjipoetrie will be able to comply with the governmental needs.

In a second version of the report Reinwardt suggests to examine the possibility of refining the sulphur on the spot, and also to take into account the possibility of buying the sulphur abroad.

[NA 2-21.204(7); GEO, MIN, CHE, PHY]

**288. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 6 December 1818**

Van Marum has decided not to finish his 25<sup>th</sup> letter until he will have seen De Vries. However very sad events are forcing him to stay at home for the time being and he was not in the mood for writing letters. Meanwhile he has seen De Vries and they have discussed the contents of the letter sent to De Vries. Van Marum was very surprised to learn that Reinwardt had expressed himself quite different from the way in which he had expressed himself towards him. As a matter of fact they had both been using the same words, when they gave their opinion about the fact that Reinwardt had to spend most of his time on office work, that he had no trained assistant and that he did not get around to his really important tasks. Elout's angry letter to Van Lennep justifies that statement. In his own view Van Marum has acted very carefully and he is not to be blamed for the situation. He asks Reinwardt to reread the letter, which he has sent him on 20 September. Meanwhile he has learned to trust nobody else than Reinwardt and of course their mutual friend De Vries. Reinwardt can count on that! After having read Reinwardt's very unpleasant letter, dated 4 June 1818, its contents kept on occupying his mind. Perhaps his friend had to formulate his letter the way he did, in order to comply with the demands of the Commissioners. There is almost no doubt that he had to submit his letter for approval, before it has been sent. For that reason it has been sent to Brussels with the ministerial mail and from there to Haarlem. De Vries is of the same opinion.

A few weeks ago Betsy – after having been an esteemed and beloved member of the Van Marum family – has suddenly fallen ill. She has caught a fever and started to become delirious. Although the best possible care is rendered to her, she remains crazy. Her relatives have arrived to look after her.

From Reinwardt's letters, dated 24 May, 6 July and 29 July, he has learned about the sky-high costs of living in the East Indies. Because Reinwardt has sold his house, he will be able to save lots of money. Van Marum appreciates that he has appointed two executors to administer his inheritance, in case he might die. It shows his prudence.

Reinwardt's complaint about the fact that letters from him are remaining forthcoming, is not at all justified, because once a month he is sending a letter to Batavia. Soon he will have the opportunity to buy a telescope in Amsterdam in behalf of the Governor-General. Unfortunately D'Ailly still keeps his son from working in the 'Trippenhuys' in behalf of the insect collection. Reinwardt should send them a letter. At the occasion of a visit made to the 'Cabinet' he has found out that Reinders, the servant, was preparing the skin of a giraffe, which had been received from the 'Cape'. Temminck had bought this object from captain Grevelink, at the sum of 450 guilders, at the orders of Minister Falck.

[NA-RANH 529-20b]

**289. P. LeClercq (Batavia) to C.G.C. Reinwardt (Batavia); 7 December 1818**

Through a copy of the 'Extract der Besluiten van den Secretaris van Staat/ Gouverneur van Nederlandsch Indië', LeClercq informs Reinwardt about the decisions, made with respect to the information about the refining of sulphur collected in the Preanger regencies. This information was based on the documents entered on 20 and 27 October 1818 by the lieutenant general Anthing. Obviously the exact location where the sulphur has been found, is not known. Furthermore it has been decided that the results of the refining experiments have proved to be far from impressive. Anyhow the flowers of sulphur, which can be bought from the merchant Haswell at 4 pennies a pound, is less expensive than the sulphur mentioned above. Furthermore the resident of the Preanger regencies has not made clear until now if it is possible to provide enough pure sulphur from Tjipoetrie. It has been decided to inform the Department of War that meticulous experiments have been carried out with the sulphur from Tjipoetrie, in accordance with the decision made on 9 September 1818 (n<sup>o</sup> 6), immediately after the arrival of that sample at the Preanger Kruidmolen'. Leclercq explains that a precise report will be made of the results of these tests. If it becomes clear that the

sulphur is too impure (because it contains too many pieces of rock, minerals, etc.), the government might decide to propose the refining of sulphur on site. Of course it is necessary to send the needed tools and machines to the 'Kruidmolen' as well as someone to teach the natives how to carry out the refining procedures. LeClercq wants to know exactly where each sample of sulphur has been collected, which information has to be marked precisely on the parcels. [Another copy of this 'extract' will be sent to the resident of the Pranger regencies].

[NA 2-21.204(7); GEO, MIN, CHE, PHY, TEC]

**290. C.G.C. Reinwardt (Batavia) to the Governor-General (Batavia); 7 December 1818**

In his report on the purification of saltpetre, Reinwardt refers to the decision made by the Governor-General on 1 December 1818. He informs him that on average 14% is lost in the refining process, while the similar treatment of the impure Bengal saltpetre produces an average loss of 19%. So the saltpetre found and produced in Grissee has a better quality (at least before the purification process is carried out). On the other hand the difference in price between these two is considerable. The saltpetre from Grissee costs almost twice as much as the Bengal saltpetre does. Therefore Reinwardt advises to purchase the Bengal saltpetre, as long as it will be available for the powder production and as long as it is not necessary to refine it in the works of Grissee. So the conclusions drawn on 4 December 1818 will not be changed.

[NA 2-21.204(7); CHE, PHY, MIN]

**291. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 8 December 1818**

In the last part of his 25<sup>th</sup> letter Van Marum did already mention that he had learned from Reinwardt's letter, dated 6 July 1818, that his friend has meanwhile recovered and also that he is satisfied and that he is staying at Elout's from time to time, while he has to reside in Batavia. He has also learned that Van der Capellen has informed his friend that the secretary of the 'Eerste Klasse' of the 'Koninklijk Instituut' (Amsterdam) has informed him that Reinwardt did not at all like his life and his jobs on Java and that he did not have any hope of succeeding in achieving his various tasks. Van

der Capellen has also understood that for that reason Reinwardt begged his friend to suppress these unpleasant rumours. In Van Marum's view Reinwardt should have known better. He would have refused to contribute to the dissemination of such messages. From the beginning he would have set his face against it. Neither has he been familiar with the purport of the letter sent to Elout by Van Lennep and Falck, in which they had complained so very expressly about Reinwardt's mainly inferior activities. Van Marum does not know who has incited Falck to do so. It was not him! He wonders if Reinwardt has read Van Lennep's letter to Elout. Or has he only been informed orally and has he been given an exaggerated interpretation of its contents?

Anyhow Reinwardt's letter, dated 24 July, received by him last week, turned out to be much more pleasant, as far as it concerned his constant good health. However the fact that Reinwardt did not refer to Van Marum's role in the toning down of the unpleasant rumours has been very inconvenient. He really hopes that his friend will stop these unpleasant remarks!

Hereafter he discusses Reinwardt's complaints about the 'fact' that Van Marum's letters kept remaining forthcoming. He does not understand why, because he sends his friend a letter every month, always through Mr. Vollenhoven, because this appeared to be the fastest way, or at least he thinks so. Besides he always encloses a duplicate of his previous letter. Finally he uses consecutive numbers, so his friend will see immediately if a letter is missing.

Considering the rest of his letter, he presumes that Reinwardt is still on his way. He is eagerly looking forward to his report. He wants to publish the abstract in the *Letterbode*, in the *Vaderlandsche Letteroeffeningen*, or in another journal.

He continues by discussing Reinwardt's demand for a telescope at a moderate price and of a good quality. First of all he will browse in Amsterdam. Reinwardt has also promised to send him money, after having returned from Semarang. He is expecting to receive a large sum. He gives advice about how to enlarge his capital and how to prevent losses. Investing it in loans is by far the most secure way of making profit. At the moment the interest is 6,5%. Reinwardt should not give loans on Java! He should send bills of exchange or interesting merchandise to Holland.

Finally he spends a few words on the inconveniences connected with the former relationship with D'Ailly senior (see his letter n<sup>o</sup> 21, dated 28 May 1818). It did hurt him that D'Ailly had sold Van Marum's *Felis pardalis* to Van Aken, in order to show it on the Amsterdam 'Fair' (see his letter, dated 10 October 1818). Furthermore D'Ailly senior has forced his son to terminate his job at the 'Naturaliënkabinet'. Is it possible for Reinwardt to send a last letter to D'Ailly senior or to D'Ailly junior?

At the moment, the skin of a giraffe is being stuffed. It has been bought for 450 guilders. Reinwardt's friends are longing for his return.

[NA-RANH 529-20b; GEO, ZOC, COB]

**292. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 12 December 1818**

A couple of days ago Reinwardt has returned to Batavia. He has received several letters from Van Marum, dated 8 October 1817 (duplicate), 25 November 1817 (duplicate), 12 December 1817 (duplicate) and 23 January 1818 (original). Through Dr. Blume he has received a short letter – dated 25 June 1818 – only about Blume himself. He is very disappointed about the fact that he did not receive a more recent letter from his friend, like Elout and Van der Capellen did. He hopes that captain Pakes, who has left Holland in July, will bring him several extensive letters. The letters received this time, did not bring him much news. As a matter of fact he has already answered most of Van Marum's questions. The last letter answered by Van Marum, is the one dated 17 July 1818. He expects his friend to have given financial support to Mrs. Kent meanwhile. He has not heard anything from Mr. Abel until now. It is really a disgrace.

The Chinese ambassadors are behaving very uncivilized. With pleasure he has learned from Van Marum's letter, dated 8 October 1817, that his friend did advise to purchase Veen's collection of insects in behalf of the 'Kabinet van Natuurlijke Historie'. He remembers this beautiful collection very well. He is sure that D'Ailly will take care of it. Many bits of news, sent to him by Van Marum, were already known to him through various letters from other friends and from newspapers as well, which were sent to him. He is very happy about the favourable news regarding his mother. Morian has sent him a couple of letters and feels sorry for him that his business has ended so unfortunately. On 10 March 1818 Temminck has sent him a

letter from Lausanne. Fortunately Temminck has arranged this journey in close consultation with Van Marum. He knows that Temminck wanted to continue his journey to Italy, among others in order to collect objects of natural history in behalf of the southern Dutch academies. Even Brugmans has already set out on a journey for that purpose!

Furthermore he did receive a letter from De Vries, dated 20 February 1818 and also a very pleasant letter from Van Lennep, dated 24 June 1818. Van Lennep's sincere and friendly interest has given him warm feelings. He has also learned that Cras is ailing. Van Lennep's letter, dated 1 June 1818, has informed him of the death of Van Eys, that excellent man, who has always been very attached to him.

He supposes that Elout will inform Van Marum about his arrival and that he will also tell him that Horsfield (who is still on Java, but will soon be leaving for Europe), has not been appointed member of the 'Hollandsche Maatschappij der Wetenschappen', in spite of Reinwardt's mediation, and although he was entitled to. Horsfield will undoubtedly pay Van Marum a visit. Elout and Buyskes are preparing their return to Holland. They will probably leave in January. He has decided to grasp the opportunity to send letters, living plants and seeds to Holland, addressed to Van Marum and to the botanical garden of Amsterdam (as Van Lennep has asked), or to the Hortus of Utrecht. He will also add two crates of shells and three enormous and beautiful Hindustani statues, destined for Falck. Van Lennep has also asked him to send an essay to the 'Instituut'. Reinwardt does not know how to find the time. Soon he wants to go on a trip and he is needing every spare moment for its preparation. Because these preparations have almost been finished, he wants to leave as soon as possible.

He hopes that the 'rice speculation' will end well and that the Calkoen brothers will do their job. More and more he believes that the cultivation of coffee and sugar will bring prosperity to the East Indies. However he does not want to run a risk again. In the future he will always send money to Holland through bills of exchange.

He did not receive the payment for his share of the house sold by him, until now. Its buyer – P.R. D'Ozy, a brother of the Secretary General – has died just a few days ago. Because his widow is a wealthy lady he is not afraid of missing this money.

He promises to send a living specimen of *Marumia cauliflora* with Elout and perhaps also several objects for the 'Kabinet'. These days he is collecting beautiful birds and insects.

Dr. Blume proves to be very interested in natural history and 'anatomia comparata'. Reinwardt has decided to take him with him, in order to get to know him better. If he will satisfy, he intends to ask him to become his assistant director. Recently Blume has told him that he has seen several objects, which had been aboard the wrecked 'Amsterdam'. Reinwardt wants Van Marum to tell him if this is true. The drawing he will add to this letter represents 'L'Arbre du voyageur' ('Reizigersboom', Strelitziaceae *Urania speciosa*).

He has also received a letter from Dr. Langsdorff (Rio de Janeiro, Brazil). Van Marum will remember him from the account of the voyage made by Krusenstern. Langsdorff, an ornithologist, entomologist and botanist, praises the richness of South American nature, especially of fossils. Langsdorff has offered him objects of exchange. His collection comprises among others 6.000 insect species, for example 1.400 species of Lepidoptera. Furthermore the 'Anthophili' have given Reinwardt several interesting objects as a present and they have also appointed him member of their society. From the newspapers and from the *Letterbode*, he has learned that the 'Zeeuwsch Genootschap der Wetenschappen' has also appointed him member and that it has asked him to send a large collection of objects of natural history for their museum. He also knows that Elout has sent several objects to Van Marum, among others two living leopards. He has heard from Thyssen that Van Marum has given these animals to D'Ailly as a present. In his view this is a sensible decision. He knows that Elout will take many beautiful objects to Holland, which are meant to be given to his family and his friends. Therefore, he asks his friend once again to tell him which presents might please him most of all.

Bik is constantly suffering from hepatitis and he has been affected by the continuous administration of calomel. As a consequence he has not been able to work for more than three months already. He will probably not be able to accompany him on his trip. Payen does an excellent job, but he works very slowly. Van Marum will have the chance to admire one of his works of art at Elout's, after his return. Payen has accompanied him to the volcano in the Bandung region, where he made a beautiful sketch. He has also drawn

the sulphur lake on the top of the 'Talaga bodas'. However, how excellent an artist may be, his work of art always remains a poor imitation. Kent is doing fairly well. The English gardener Hooper has to be urged regularly, although he performs much better meanwhile, while working in the garden. The second Bik, a brother of the other artist, is assisting him well and he is very inquiring. He draws rather well, but he is often ill. Landré junior is rather quickly learning how to do the office work, so he will soon be of great help. Tomorrow he has to leave early for Buitenzorg. From there he will send Van Marum a letter through Elout. He regrets that Elout will be leaving soon. He will miss this amiable and experienced man very much, although the time has come for him to leave. Elout might damage his health. Reinwardt himself enjoys good health and he is very satisfied. He adds a life certificate, greets his friend and asks him to convey his greetings to Mrs. Van Marum and Betje.

In a postscript he emphasizes that he has been embarrassed by the news received from Lüttringhausen. He fears that he will not see his mother alive after his return. Unfortunately the letters from Lüttringhausen turned out to be one endless lamentation about exceptional expenses (because of a removal, continuous diseases, etc.). He had to decide that his financial support has been too modest. Because he loves his relatives he cannot stand the idea that they have to suffer from poverty. Therefore he asks Van Marum to help and to send 100 guilders to Lüttringhausen. Morian is able to give him more information, if needed. He knows that his friend feels the same about it.

[NA-RANH 529-20b; ZOC, COB, ART, ETN, BOT, GEO]

**293. C.G.C. Reinwardt (Buitenzorg) to M. van Marum (Haarlem); 16 December 1818**

Because Dr. Horsfield will leave for Europe within the next few days, Reinwardt has asked him to take a couple of letters to Van Marum. He has assured him that Van Marum will be pleased to make his acquaintance, because meanwhile he has lived in the tropics for more than 16 years. As a consequence he must have developed a thorough knowledge of the natural productions of Java. In this field he is really the most experienced man on earth. Reinwardt asks his friend to help Horsfield as much as possible, especially with regard to his desire to visit the cabinets of Haarlem and Amsterdam.

A few days ago he has sent Van Marum a letter with the 'Woodman' (captain Bear), an American vessel, which has left for Antwerp. He has also added a life certificate, of which he encloses a duplicate in the letter he is sending now. He wishes his friend the best and adds his greetings to Mrs. Van Marum and to Betje.

[NA-RANH 529-20b; ZOC, BOT]

**294. ?? Sampson (Batavia) to C.G.C. Reinwardt (Batavia); 19 December 1818**

Sampson informs Reinwardt that the two scalpels and 'dessigneur-dozen' (drawing cases) have arrived. He wants to know to whom these articles have to be sent.

[NA 2-21.204(4); ART, ZOC]

**295. Reinwardt (Buitenzorg) to M. van Marum (Haarlem); 27 December 1818**

Reinwardt is very pleased by the reception – a couple of days ago – of Van Marum's letters n<sup>o</sup> 13 to 19. From these letters he has learned that only a part of his correspondence has been received and that, for example, the letter sent by him from Japara, has been lost. This very extensive letter gives a description of the journey made by him at the time. He hopes that this important document will finally arrive in Haarlem, just like the letter, dated 10 December 1817, and the seeds and plants taken to Holland by captain Greveling and that these objects will still be in a good condition on their arrival. He has been informed that the vessel has anchored in the port of Antwerp, meanwhile. The journey to the Netherlands has taken a long time. In his view Greveling is a reliable captain. Nevertheless he fears that the casuaris and several other birds will not have survived.

First of all he thanks Van Marum and De Vries for having taken care of Caroline. From their messages he has learned that their attempts have been successful. Until now he did not receive any letter from Caroline, in which she did inform him about her experiences. So he does not know yet who her lover is. On 12 December 1818 he has sent a letter for Van Marum with Horsfield, who had decided to book passage on the 'Lady Raffles' to Europe. Probably he will even visit Amsterdam and see Van Marum as well. He has also given several other letters to Horsfield, which were addressed

to Temminck, D'Ailly and Brugmans. He returns the letter sent by Betje's niece to Van der Goes, to Van Marum, because he will have been informed meanwhile that Van der Goes has died. He reminds him that he did add a life certificate to the letter sent with Horsfield. He will stick to his promise to send more extensive letters with the warships, which will set sail for Holland on 12 January.

At the moment he is busy wrapping the skins of the birds collected by him, in order to send these to the 'Kabinet van Natuurlijke Historie', together with the collection of shells and other objects of natural history. Furthermore three enormous statues have been loaded in the 'Prins Frederik'. He will also add the inventories, regarding these collections.

Dr. Blume is satisfying well. He will probably be proposed to the government to be appointed Reinwardt's assistant. He seems to be very interested in natural history, physiology and comparative anatomy. There will always be much work to do for him. Fortunately at least something has been retraced of the cargo of the wrecked 'Amsterdam': the crocodile skull. He allows Van Marum to keep it for his Haarlem collection. He hopes that the second cargo will soon arrive in Amsterdam.

He adds a life certificate to this letter. Now he has to end it in a hurry. He will not be able to comply with the wish of Miss Betje to send her a lory ('loery') soon. It is only possible to procure these animals on the Molucca's, unless he will have the opportunity to find one in Batavia. It will even be more difficult to send another rare bird species to Holland, which is really a pity because it is easy to teach this bird how to speak and to copy the human voice. He ends his letter by adding his greetings to Van Marum and his wife. [NA-RANH 529-20b; BOT, ZOC, COB, ART]

**296. C.G.C. Reinwardt (Buitenzorg) to M. van Marum (Haarlem); 10 January 1819**

Reinwardt confesses that on 12, 16 and 27 December 1818 he had to write his letters to Van Marum in a hurry. Therefore he has decided to write his letters earlier this time. Elout, who will leave Java aboard the warship, with which Reinwardt has arrived in Batavia, has promised to take the letter with him.

In his last letter, dated 1 December 1818, he mentioned already that he has received Van Marum's letters up to n<sup>o</sup> 19. He had also added a life certificate

to that letter. He really hopes that he will fetch a high price for his rice. He knows that in July the price has risen to 50 shillings ('schellingen') a 'crooijang'. The price of coffee has also risen to a record level. At the occasion of the last sale organized by the government, its price was 33 'Spaansche Matten' a pikel (of 125 pounds). In a previous letter he did mention that D'Ozy – to whom he has sold his share of the house – has died meanwhile. In the meantime his widow has resold the house to Van Lawick von Pabst. Van Lawick has agreed with him that he will pay the price in six terms of four months each, although Reinwardt did ask for a quicker arrangement. Furthermore he asks Van Marum to send him a brief description of the species *Enkianthus quinqueflora*, which will help him to acquire this plant from China. He did not succeed in finding a description in the works at his disposal. He does not understand why only the skull of the crocodile has arrived in Holland. He reminds him that he did already offer it to the museum of the 'Maatschappij'. Now he adds a new present: 50 skins of birds, which are ready for being stuffed. These are doubles of his own collection. Elout has promised him to keep the crate, containing these objects, in his own cabin. Did Van Marum already find someone experienced in stuffing these animals? Reinwardt still has to inform him about their right eye colour. If Van Marum might decide not to accept these presents, he is free to use them as objects of exchange. He is also allowed to give them to De Fremery (Utrecht) or to Brugmans (Leyden). Meanwhile he has received numerous requests from friends and colleagues to send objects of natural history. He simply has not got the time to comply with all these demands. Collecting is not the only thing to do, because preparing, preserving and wrapping carefully is also necessary. These activities will take a lot of time. Besides the freight costs will be enormous. He hopes that Van Marum will consider this collection important. Anyhow he has spent much time and energy in determining the collected specimens down to the level of the species. If he might be off target now and then, his friend should correct his determinations. Furthermore he has once again added the inventory of the bird skins (already sent in September) as well as a few remarks. He is looking forward to receiving Van Marum's ideas about it, as well to those of Temminck, for whom he is also collecting. This time the shipment includes 80 species. Together with the collection sent earlier, this makes a total of 100 species. Besides he will send a considerable collection of insects this time.

One of the boxes contains insects from the Cape, the other ones are filled with Javanese insects and with a few specimens from Japan. He has wrapped and contained these collections meticulously. Almost all these boxes have been sealed up with arsenic starch and contained in leaden tea boxes. He also sends two cabinets, the drawers of which are filled to the brim with shells. Furthermore he has added a collection of sponges, the skeleton of a python and three large Brahmanic statues. Three other statues had to be unloaded and to be taken to Buitenzorg. He also sends a couple of drawings, representing five plant species, four of which have been added to the living specimens. One of these plants – Durio – has already been depicted by Rumphius a long time ago. Reinwardt sincerely hopes that Van Marum will decide to accommodate these plants in his ‘caldarium’. This might help him to decide to publish a book on the Javanese flora. Experienced engravers and well trained printers may help to produce a beautiful book! The engraver Van Beek is a good example, because he has made the most excellent phytotomic engravings for his colleague Kieser. He allows his friend to have some proofs made of the above mentioned drawings. If wanted, he can send a collection of drawings and also the explanatory texts, in which the characteristics of these plants have been described. The same goes for the plates, representing birds, snakes and insects. With regard to the birds he points at the possible support by Temminck. This time the living plants have to be delivered at the botanical gardens of Amsterdam, Leyden and Utrecht. Therefore he has planted all the specimens in wooden boxes, which have been placed in crates. Every crate contains six boxes. These crates are covered with a wooden hatch, which allows the air and the light to reach the plants. He would be pleased if Van Marum would be so kind to offer a specimen of Marumia (cauliflora?) and another plant to the ‘Botanisch Genootschap’ of Ghent, at least if the plants will arrive in Holland in a good condition. Furthermore the artist Paijen is still busy completing a painting of a landscape near Buitenzorg. He hopes that it will be sent to Holland, together with the above mentioned cargo. Elout, for whom Paijen has made this painting, will take care of all these goods during transport. Bik has fully recovered meanwhile. Doctor Blume has been appointed Reinwardt’s assistant director. Reinwardt has also added five parcels, each containing 80 seeds. One parcel is meant for the addressee, while the others have to be sent to the botanical gardens of Amsterdam, Leyden and Utrecht and to the

‘Botanisch Genootschap’ of Ghent. Unfortunately his limited supply does not allow him to send another parcel to the botanical garden of Groningen; Ghent comes first now. Of course Van Marum has the right to send some of the plants and seeds destined for him to Groningen. He encloses an inventory, although he does not dare to guarantee the correctness of the names of all the species mentioned. He adds a few remarks on a new species – at least he thinks it is – which he has given the name of *Kiesera sericea* R. He is not quite sure, but he knows that this species belongs to the group of *Diadelphina*. He briefly explains the origin of the name. Next time he will send an extensive description and a drawing of this plant. Finally he adds two letters, the first one has been addressed to Kops (Utrecht) and the second to Cornelissen (the secretary of the ‘Botanisch Genootschap’ of Ghent).  
[NA-RANH 529-20b; BOT, ZOC, COB, ART]

**297. C.G.C. Reinwardt (Buitenzorg) to M. van Marum (Haarlem); 10 January 1819**

Inventory of the seeds of 80 different plant species sent to Holland on 10 January 1819 and addressed to Van Marum, who has to share this collection with the botanical gardens of Amsterdam, Leyden and Utrecht and with the ‘Botanisch Genootschap’ of Ghent.  
[NA-RANH 529-20b; BOT]

**298. C.G.C. Reinwardt (Buitenzorg) to M. van Marum (Haarlem); 10 January 1819**

Inventory of seeds and living plants, sent to Holland on 10 January 1819 and addressed to Van Marum. This inventory gives 79 numbers, representing about 70 different species, mostly of angiosperms and a few cryptogams (*Polypodium* and *Asplenium*). The inventory also contains a number of specimens of the new species *Marumia cauliflora* R.  
[NA-RANH 529-20b; BOT]

**299. C.G.C. Reinwardt (Buitenzorg) to M. van Marum (Haarlem); 10 January 1819**

Inventory of bird skins, which have been sent to Holland in order to be stuffed. This collection has been given as a present to the 'Hollandsche Maatschappij der Wetenschappen' (Haarlem), of which he is a member. The list gives the names of 50 different species of birds.

[NA-RANH 529-20; ZOC, COB]

**300. C.G.C. Reinwardt (Buitenzorg) to M. van Marum (Haarlem); 10 January 1819**

Mixed inventory, giving an enumeration of bird species, partially still unknown. Reinwardt has given these specimens names. He has added descriptions and explained the names. In his view several determinations are doubtful. Further observations are needed, among others with regard to the way of life of these animals. The total number of species is 142. The inventory is followed by a list of several hundreds of species of insects (contained in 38 paper boxes) – mostly butterflies. They have to be given as a present to the 'Koninklijk Kabinet van Natuurlijke Historie' (Amsterdam).

[NA-RANH 529-20b; ZOC, COB]

**301. C.G.C. Reinwardt (Buitenzorg) to M. van Marum (Haarlem); 10 January 1819**

Reinwardt opens this letter by stating that once this shipment has arrived in Holland, the person, who will receive these objects of natural history from Van Marum, will have to pay his share of the transport fee, which amounted to 260 guilders. He has paid 60 guilders for the transport from his house to the port of Batavia and 200 guilders for the transport by sea to Holland and to Van Marum. Furthermore there is no news. Probably Van Marum wants to keep a part of this cargo for himself.

[NA-RANH 529-20b; ZOC, COB]

**302. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 11 January 1819**

Van Marum encloses a copy of his previous letter (n° 25), dated 11 December 1818, in his new letter. He has not heard any news from his friend, since he received his letter, dated 26 July 1818. He knows that many others have

already received more recent letters from Batavia. Actually there is no news. He also adds Reinwardt's annual financial account. It proves that his friend's financial position has improved considerably, because two loans have been paid off (500 guilders and 1.000 guilders respectively). Three new loans have been given (7.000, 3.000 and 3.000 guilders respectively). Two more loans have been redeemed (5.000 and 1.000 guilders). So at the moment Reinwardt's capital amounts 25.100 guilders, this makes an increase of 19.600 guilders. If the interest is not too low, Van Marum will almost be able to pay the trimestrial financial support of Reinwardt's relatives in Lüttringhausen, as well as Van Rossum's support, from the interest. This interest, added to Reinwardt's Dutch salary, will be about 6.000 guilders annually. If Reinwardt should decide to send the proceeds of the sale of his house to Holland, it will be possible to double his capital! Until now he did not receive any comment on the annual account of 1817, sent to Reinwardt with Eschassier. Did his friend receive the respective letter? He hopes that this account will be the last one he has to send to Batavia. He is convinced that Reinwardt will return to Holland in 1820. So he will not have to send any letters to Java after next September, because the passage often takes more than six months. He is looking forward to receiving new letters from his friend, who will probably receive a copy of a news report, which has recently been published by the 'Maatschappij'. Soon he will send a second copy to the 'Bataviaasch Genootschap', of which he has received the eighth volume. He asks his friend – being its president – to arrange the sending of the volumes 3 and 7. Meanwhile he has been able to acquire the 'Dollandsche Kijker', an achromatic telescope of about three and a half feet length, in behalf of the Governor-General. He has bought this instrument from J. Buijs (Amsterdam), for the sum of 250 guilders. If its quality is good, it will be sent to Java by Vollenhoven. In a previous letter he has already informed Reinwardt that Klinkenberg (Utrecht) had thought that he was entitled to receive several objects from the collection of natural history preserved in the 'Trippenhuys' (Amsterdam). Van Marum has refused to agree. Minister Falck has asked him to draw an inventory of all the objects of natural history received for the 'Kabinet van Natuurlijke Historie', until now. Thereafter Klinkenberg has tried to make Temminck his tool, by showing him several documents, proving that he was entitled to this claim and thereupon Temminck has informed Van Marum about it. Van Marum was ignorant of

the existence of these documents. Falck has ordered Temminck to write an inventory of the objects handed over to Klinkenberg. Now he adds a copy of this list to his letter to Reinwardt. According to this document a crocodile skull, the skull of a Javanese, a stuffed crocodile, the horn of a rhinoceros, the bill (nib) of a Jaarvogel, two specimens of the moorhen, two white herons, a hen, an owl, a small eagle and two goosanders (zaagganzen??) have been handed over. These objects appear to have been sent to Klinkenberg by His Exc. the Governor-General, lieutenant general Van der Capellen. Although Betsy is recovering again, this recovery is not mentally. Her sister Mietje is constantly taking care of her. In Van Marum's view Betsy should enter into a protestant convent, if such a solution is available. For the time being he has hired a sister-in-law of Betsy to do the household.

[NA-RANH 529-20; ZOC, COB; See also: UBL BPL 2922]

**303. A.A. Buyskes (Batavia) to C.G.C. Reinwardt (Batavia); 16 January 1819**

The rear admiral Buyskes informs Reinwardt that he has ordered the officers in command of His Majesty's warships – the 'Admiral Evertsen', the 'Prins Frederik' and the Maria van Reijgersbergen' – to set sail for Holland. He has also given orders to look after the 13 crates of living plants and the three crates of objects of natural history destined for the 'Koninklijk Museum voor Natuurlijke Historie' in Amsterdam. He has decided that the scientific cargo will be distributed over the three vessels.

[NA 2-21.204(4); ZOC, COB]

**304. C.G.C. Reinwardt (Buitenzorg) to M. van Marum (Haarlem); 17 January 1819**

Since he wrote his last letter to Van Marum (on 10 January 1819), Reinwardt has accompanied the two Commissioners General to Batavia, in order to attend their departure and to be present at the solemn installation of the 'Supreme Government'. This event has happened yesterday. Its details will undoubtedly be made public by the Dutch newspapers. He ends his letter by giving details about the arrangements made by Buyskes with respect to the living plants loaded in the 'Admiraal Evertsen', the 'Prins Frederik' and the 'Maria van Reijgersbergen'.

[NA-RANH 529-20b; BOT]

**305. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 25 January 1819**

Reinwardt has seized the opportunity to make public in the *Bataviaasche Courant* of 23 January that the botanical garden of Buitenzorg has been completed and to recommend this institution to the public. The message has also been published at the request of the Commissioners General. Elout has promised to have it published in the *Letterbode*. His friend De Vries will also have the chance to read it in the copy of the *Bataviaasche Courant*, which has been added to this letter. As usual the seven crates of objects of natural history, which have to be delivered at the 'Kabinet van Natuurlijke Historie' (Amsterdam), have been addressed to Vollenhoven. The Minister of Public Education, National Industry and Colonies has been informed through the letter from the Governor-General, dated 16 January (n<sup>o</sup> 10), in which he has been asked to order Vollenhoven to take care of the delivery of the seven crates at Van Marum's.

By accident a living python ('Groote Rijstslang') has been found shortly before aboard the 'Maria van Reijgersbergen'. It has been living aboard this ship for a rather long time. He promises to send his friend the skeleton of a specimen of this species, probably feeding itself with rats and mice. It is in a good shape and is still growing. The captain has promised him personally to deliver this animal in Haarlem. Reinwardt hopes that it will stay alive. If Van Marum does not want to keep it, he may also give it to Brugmans or to D'Ailly as a present. The specimen, which he has in his possession, has to be fed a hen once a week.

He is happy to have succeeded meanwhile in acquiring a very beautiful 'loery' (*Psidacus domicella*) for Miss Betje. It is a completely tame and very attached animal, which is speaking already a few Malay words. He hopes that it will arrive alive in Holland. He has added a second specimen of this genus (*Psidacus ruber*), in order to be sure that Miss Betje will receive at least one living bird. If the two happen to stay alive, Van Marum has to give one of these animals to Mr. Piet Calkoen, because he has already promised to give him one. Gerrit – Elout's servant – will personally take care of the animals during the passage and Reinwardt will pay him for his benevolent service. He asks Van Marum to pay 84 guilders and 4 pennies to D'Ailly, who has already received the corresponding bill of exchange. Although he thought that Kent had already sent some money to his wife, he has not done so, until

now. Therefore he asks Van Marum to give Mrs. Kent 400 guilders from his capital, through the pharmacist Potter, who should divide the amount into small sums. He does not like the idea that Elout – in whose house he is still living – will leave soon now. Elout has accomplished many good things for the sake of the colony. Therefore he deserves general esteem. Reinwardt himself is very impressed by his firm character as well as by the perseverance, with which he has tried to do the right things. Elout has always given his strong support to him. The English government in British India (Bengal) has also honoured him. It is really amazing that it has sent a letter to Buitenzorg, in which it fully agrees with what the Dutch Commissioners General have done in order to fight the shady and devious machinations of George Raffles, who is residing in Benkoelen at the moment. After Elout has left, Reinwardt has decided to move into a room of the house, which he has rented together with Mr. Merkus. He will only use it when he is staying in Batavia. Within the next few days he will leave for Buitenzorg again and set out on his journey. All arrangements have been made now.

He also sends his friend a bamboo cylinder, containing a parasol. It is meant to be used by him or by the ladies during a walk in the garden, in order to screen their eyes from the sun. A flat box not only contains a number of drawings, but also several copies of the *Bataviaasche Courant*, which he had promised to send to De Vries. He wishes his friend all the best.

[NA-RANH 529-20b; ZOC, COB]

**306. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 26 January 1819**

Reinwardt informs Van Marum that he has finished a wordy letter to his friend yesterday. Now he informs him that he has added a few other documents, among others the duplicate of that letter. After his arrival, Elout will hand these documents over to him. Meanwhile the ‘Zemeeuw’ (commanded by captain Wegener) is ready to sail. Maybe this fast ship will arrive in Holland before the squadron does. Mr. De Hoogh will bring this letter to Van Marum, as well as several parcels, destined for Lüttringhausen, which have been addressed to De Vries. Reinwardt observes that he has lived in De Hoogh’s house for a considerable time. It is the house he bought and sold again. He sincerely hopes that De Hoogh will be given a hearty welcome. He will be able to give Van Marum much information. At the time

he has good health. He wishes his friend good luck and asks him to convey his greetings to Mrs. Van Marum and Betje.

[NA-RANH 529-22]

**307. C.G.C. Reinwardt (Batavia) to J. de Vries (Amsterdam); 28 January 1819**

This letter will be delivered at De Vries's by Mr. De Hoogh, with whom he has owned a house in Batavia. De Hoogh, who will also deliver several parcels at Van Marum's, among others destined for Lüttringhausen, has booked passage on the 'Zeemeeuw'. Reinwardt is really concerned about his mother's state of health. He has also added several newspapers, giving information about the botanical garden. Furthermore he encloses a report, intended for Van Marum, about the fire-breathing mountain. Soon he will send a collection of objects of natural history, among others containing seeds and living plants destined for the botanical garden of Amsterdam.

Furthermore several antiquities will be added, as well as a beautiful painting made by Paijen. There is no doubt that De Vries will like it, in his capacity as commissioner of the coming public exhibition. He wants to know Apostool's opinion about it. He has also added a couple of botanical drawings – true masterpieces – made by Bik. He hopes that an engraver will be able to produce beautiful engravings, in order to make this fact more widely known. Elout will also take several drawings made by Bik to Holland and also a wooden box, containing Chinese toys, intended for Brammetje. Bik has a poor health. Caroline – he is really worrying about her – will receive a letter and a parcel, containing a piece of Japanese crape. Furthermore he thinks that there is something wrong with the mail distribution. The last letter received from De Vries, was dated 10 December 1817.

Tomorrow he will leave Elout's house, where he has been staying for six months. Recently he did rent a house in Batavia, together with Merkus and Prinsen. He will use one of its rooms whenever he has to be in Batavia. Soon he will leave for Buitenzorg and set out on his trip. So it will be difficult for De Vries to send him letters.

Yesterday he has sent a letter to Kemper and added a Japanese tea-tray for Chrisje. Kemper is a very lazy writer. Professor D.J. van Lennep, D'Ailly and W. Calkoen will also receive letters. Furthermore he should send a letter of thanks to the governors of the 'Athenaeum Illustre', but he will not be able

to finish it in time, because De Hoogh has already come to collect his mail for Holland.

[KB 121 B 8; BOT, COB, ZOC, ART, GEO, ETN]

**308. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 28 January 1819**

Since he has sent his last letter (n<sup>o</sup> XXV), he has had no particular reason to write another one. He adds the last letter received from the Reinwardt sisters, as well as a letter sent by Morian. Its sender has tried to palaver him into not cutting the trimestrial financial assistance of 200 guilders, which will be due on 1 February. He also promises to add a duplicate of his last letter as well as a duplicate of the annual financial account of 1818. Betsy does not recover. Van Marum is looking forward to a new sign of life from his friend, whose last letter was dated 24 July 1818, a fact which of course is due to his journey. He has read the awful news of the wreck of the 'Ida Aleyda' (commanded by captain Sipkes) off 'False Bay' on 9 November 1818. He has also heard that the crew has been saved. He hopes that the same goes for the collection of objects of natural history, which Reinwardt has sent with this ship.

[NA-RANH 529-20b; ZOC, COB]

**309. C.G.C. Reinwardt (Batavia) to J. de Vries (Amsterdam); 30 January 1819**

Reinwardt has sent two letters to De Vries. One of these has been entrusted to Elout, aboard the 'Admiraal Evertsen' and the other to De Hoogh, travelling aboard the 'Zeemeeuw'. He also sends a newspaper, bearing the news of the cargo shipped by him to Holland, as well as a letter of thanks to the governors of the 'Athenaeum Illustre' (Amsterdam).

[KB 121 B 8; ZOC, COB]

**310. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 3 February 1819**

Unfortunately the various letters, dated 15 December 1818 and destined for Van Marum, have been returned to him. Horsfield had promised him to take these letters to Holland. He does not understand the cause of this

delay of more than a month. He repeats the contents of these letters in a few words and adds a new life certificate and letters addressed to Brugmans, Temminck and D'Ailly, the same letters he had sent to Horsfield in Batavia. He advises Van Marum to track Horsfield, if he does not appear in Haarlem. Horsfield has left Batavia aboard the 'Lady Raffles' (captain Auber), who is sailing to Rotterdam. If Horsfield does not see Van Marum, he has to send the enclosed letters. He gives his kinds regards to him, his wife and Betje and of course to all his friends.

**[NA-RANH 529-20b]**

**311. J.Chr. Baud (Batavia) to C.G.C. Reinwardt (Batavia); 4 February 1819**

On the order of His Excellency the Governor-General, Baud sends him a couple of rocks and two pieces of gold, which have been sent to the Governor-General by Mr. Merkus. Reinwardt has to inform the Governor-General, after he has examined these objects.

[NA 2-21.204(7); GEO, MIN, CHE, PHY]

**312. C.G.C. Reinwardt (Batavia) to J. de Vries (Amsterdam); 10 February 1819**

Once more Reinwardt informs his friend about the letters sent to him through Elout and De Hoogh. He will be leaving soon for Buitenzorg. The 'Java' will bring a crate of Japanese baskets to Holland. De Vries should distribute these presents among Reinwardt's lady-friends. Furthermore he sends a parcel, containing two boxes of Japanese toys. One of these has to be added to the toys, which have already been given to Brammetje, while the other box is intended for Caroline. He also adds a newspaper and observes that De Vries's letter, dated 27 August 1818, has been the last one received by him. The quarrels and machinations within the walls of the 'Instituut' with respect to the election of a new member are miserable childish and niggling. It must have been quite a victory for De Vries to have been able to push the election of a member through, against Van Swinden's wishes. The 'Admiraal Evertsen' is waiting for favourable winds in the Roads of Batavia for 15 days already and Elout and Buyskes are aboard. He ends his letter by making

a remark about the quarrel between Van Marum and D'Ailly. Van Marum should solve this problem.

[KB 121 B 8; ART, ETN]

**313. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 10 and 12 February 1819**

Van Marum sends his friend a duplicate of his last letter (n<sup>o</sup> 27), dated 28 January 1819. Unfortunately Reinwardt has kept silence since then. At the occasion of the meeting of the 'Vrijdagsch Gezelschap', the following day, when he handed over Reinwardt's letter about the wreck of the 'Ida Aleyda' to De Vries, he was told that it had been just that vessel with which Reinwardt had sent his second collection of objects of natural history to Holland. So nine crates of all kinds of precious objects have been lost. What a pity! His feelings are indescribable. Of course Reinwardt will also mourn about this loss, once returned to Holland, among others because he had added descriptions and drawings of several objects. De Vries feels very sad also. Van Marum adds a copy of the report on this loss, published in the newspapers of Amsterdam and Haarlem. It will also be published in the *Algemene Konst- en Letterbode*. Yesterday he received a duplicate of the inventory of this shipment, made in Buitenzorg. On 16 January already the report on the first loss, previously published in the *Bataviaasche Courant*, has been made public in the *Haarlemsche Courant*. Van Marum also encloses a brief letter from Caroline. She is fine, as his friend may have understood already from the letter sent by De Vries. He also adds two letters from the Reinwardt sisters (Lüttringhausen), as well as a copy of the letter he wrote to Morian, in which he suggested not to send to the sisters more money for the time being, because they did already receive 300 guilders. As a matter of fact they did not agree with cutting the trimestrial allowances by 35% (150 guilders in stead of 200 guilders). Neither did they explain how they had spent the money. Van Marum, who is very disappointed about these extra demands, supposes that this money has mainly been spent on pharmacists and physicians. He wants to know Reinwardt's opinion.

In the last few lines of his letter – which have been deleted afterwards – he discusses the fact that several of Reinwardt's letters have been lost, while the remaining ones turned out to be rather short. Besides he wants to be informed about the date of Reinwardt's return to Holland. If he has decided

to return in August 1820, he should be informed about that news next September or October. He needs to know when he has to send his last letters. He is still convinced that his friend will not stay longer on Java than for the period of four years, which had been agreed.

[NA-RANH 529-20b; ZOC, COB, ART; See also: UBL BPL 2922]

**314.** Fr.A. Treffz (Batavia) to C.G.CC. Reinwardt (Batavia); 6 March 1819

Treffz thanks Reinwardt for his kind letter and for the fact that he has been commissioned by him. This commission is just what he wanted. Reinwardt has made his dreams come true, so it is one of the happiest days of his life. He promises to exert all his powers in order to prove himself worthy of the respect given to him. He will do his utmost. He will be obedient and diligent, in order to keep this respect. Meanwhile he has completed the stuffing of the crocodile. He wants to offer it to Reinwardt for his museum. It is the first object completed by him. Cornelis Bogard, working at the secretariat, would like to join the travel company. He is an excellent draughtsman and has a smooth style of writing. Within the next few days Bogard will come to Buitenzorg in order to accept further orders.

[NA 2-21.204(4); ZOC, COB, ART]

**315. C.G.C. Reinwardt (Buitenzorg) to M. van Marum (Haarlem); 8 March 1819**

First of all Reinwardt answers to Van Marum's complaint about the brief letters he is always sending. Between 10 and 25 January 1819 he has written a very extensive letter, which has been given to Elout. A copy of this letter has been handed over to De Hoogh, sailing aboard the 'Zeemeeuw' (captain Wegener). On 4 February he wrote again a comprehensive letter, which has probably been sent to Van Marum with the 'Java' (captain Jongheim), together with a couple of letters, intended for Horsfield. As Van Marum knows meanwhile Horsfield had already left Batavia aboard the 'Lady Raffles'. The large warships, which had been intended to bring Elout, Buyskes and Anthing to Holland, had to wait for favourable winds. Perhaps they are still sailing in the Straits. This delay may harm the living plants. Since these gentlemen have left, he (Reinwardt) and Van Ijsseldijk have received and read Van Marum's letter, dated 28 August 1818 (n<sup>o</sup> 21), together with a copy of the previous letter (n<sup>o</sup> 20). He has never received its original. Van

Marum must accept that he (Reinwardt) is still missing his other letters of the same date. To be more precise, it is about one or more letters from his relatives in Lüttringhausen, although he has asked to inform him, especially with regard to the financial problems of his sisters. Besides he has asked him to be a bit more generous towards his relatives. Meanwhile they know that his financial position is less prosperous than they may have hoped (thanks to the information sent by Van Marum to them and to Morian). It is very inconvenient for him that he is never able to satisfy his relatives. He fully agrees with the arrangements Van Marum has made with respect to his old maid Mientje. He did not receive Caroline's letter until now. He is still very angry about the behaviour of D'Ailly senior towards Van Marum. Such a rudeness is unacceptable! Reinwardt will never forgive him! Because he knows him better, he supposes that D'Ailly deeply deplores what has happened. From now on Van Marum should avoid him, the more because his son is indispensable for the maintenance of the 'Kabinet', especially of the collection of insects.

He really regrets that the second cargo, sent with the 'Ida Aleyda', is lost (when it left the 'Simonsbaai', near the 'Cape'), but he reconciles to the situation. Nevertheless it is really a pity that almost the whole cargo, among others two beautiful objects – *Cynthia gigantea* and *Anthingia excelsa* – and many beautiful skeletons (of a tiger, a crocodile, a casuaris) and many other important objects, have been lost. He reminds the many hours needed for the preparation of this cargo. It is really quite peculiar that the 'Amsterdam' and the 'Ida Aleyda' are the only ships that have been wrecked, since he arrived in Batavia almost three years ago. The same goes for a collection of Daijaks weapons (from Borneo), for which 2.000 guilders have been paid. Meanwhile he has decided to start all over again. He has decided not to be put off.

The heavy rains have delayed his trip. Because there is still a lot to be done on Java, which means that most probably he will not have the opportunity to visit the Moluccas, he has asked the Governor-General to agree with his proposition to send somebody else to these islands. Reinwardt has chosen a man, who is very experienced in collecting and stuffing animals, a brave man besides, Treffz, lieutenant colonel and commander of the 'Bataviaasche Schuttery'. He is extremely fit for large and dangerous operations. The government has pensioned him and appointed him Reinwardt's assistant.

Kent is not at all fit for that job, he is working too slow, is too fidgety and too imperious. Besides he is in weak health too often.

He asks Van Marum's attention for the fact that according to Gronovius's daughter in law (born Chatelein), who is living in Batavia, the beautiful collection of dried fishes, once having belonged to Gronovius (who died in 1777) and inherited by her, is still somewhere in London, together with a collection of drawings and all the manuscripts. Mrs. Gronovius owns a boarding school in Batavia, while her husband is working on the Moluccas. Mrs. Gronovius has offered this collection to Reinwardt for 11.000 guilders. It is really a very interesting and important collection. It comprises among others 215 fishes, 85 drawings, 38 manuscripts (for example 17 lecture notes, among others written by Boerhaave, Gronovius and Dudley). Mrs. Gronovius is referring to the statements made by Banks, Jacquin and Bloch. At least the collection of fishes should be purchased, especially because these specimens are still rare in his collection and their preparation is very difficult. On the other hand the price is too high and its condition may have deteriorated after so many years. So one has to negotiate a fair price. He wonders why she did not succeed in finding a buyer until now. Leyden could have bought it without any problem. He has promised Mrs. Gronovius to send a letter about this affair to Holland, because it is impossible for him to make a decision by himself. He asks Van Marum to inquire. Thereafter he will send her an answer.

He is rather satisfied about the hortus, although still many plants have to be added. This is one of the reasons for his journey. Maybe he will be able to write a catalogue this year. Too many species have not been determined yet. He has named the beautiful wax producing tree – last year he has sent Van Marum a candle, made of that wax – *Laurus sebifera*. The wax is extracted by boiling the crushed seeds. There are many interesting species of *Laurus* and *Ficus*.

What about Van Marum's work on the succulents? How is the Count Van Salm doing? Is it possible for Van Marum to send him the second volume of Römer's *Species Plantarum* and Brown's *Prodromus*? He is especially needing Brown's work. Of the eight barometers recently sent to him by Englefield (London), three appeared to be broken before arrival, three others were disordered. The last two were broken after arrival. Can Van Marum send him a mountain barometer?

Dr Blume, his assistant, is rather satisfying. He is willing to learn and he is industrious as well, although he is still needing indications. He is hardly experienced in the practice of natural history, he is not able to determine plants and animals and he knows little about botany. Furthermore he cannot be deployed for office work, because he hardly speaks any Dutch. His written language is riddled with Germanisms. In spite of all that Blume is doing his utmost.

Reinwardt is very satisfied about the progress of his own work on snakes. Recently he has discovered a new division of these animals.

The house, at the time used by him and D'Ozy as co-owners, will probably be sold to the government. So he has high hopes again that the selling price will be paid soon and in one term. He will probably buy a couple of bills of exchange for the money to be received, because sending merchandise to Holland is a risky business. What has been the outcome of the rice 'adventure' of some time ago? He still hopes to fetch a high price for the cargo sent to Holland aboard the 'Wilhelmina'. In Eschaussier's view the profit may be as high as 9.242 guilders. He ends his letter by adding the best wishes for his true friend.

[NA-RANH 529-20b; BOT, ZOC, COB, ART, ETN, PHY]

**316. C.L. Blume (Batavia) to C.G.C. Reinwardt (Batavia); 11 March 1819**

Yesterday Blume and Treffz have been busy all day buying the various necessities for the journey, according to Reinwardt's orders. He gives numbers and purchase prices. He concludes that they had to spend more money than expected. They have also bought the jars, bottles, liquids, etc., for the preservation of animals and animal preparations. He also mentions leaden boxes, which will probably not be used. [The original letter is written in German]

[NA 2-21.204(4); ZOC, COB]

**317. P. van Lawick von Pabst (Batavia) to C.G.C. Reinwardt (Buitenzorg); 13 March 1819**

Van Lawick informs Reinwardt that a barrel has been delivered for him. It has been stored in his office and its contents gives out a ghastly smell.

[NA 2-21.204(4)]

**318. C.L. Blume (Batavia) to C.G.C. Reinwardt (Batavia); 14 March 1819**

Blume expresses his desire to be a member of the travel company. He has already made several successful collecting trips – on his own account – and they have been less expensive than the journey on which Treffz will be going. He has learned that the ‘Zwaluw’ – at the moment anchored in the Roads of Surabaya – has been put at Treffz’s disposal. Treffz supposes that about early April he will be able to arrive in Surabaya in order to set sail. He has purchased his own equipment in Batavia, spending a lot of money. Blume knows that Treffz is an honest man and that he is eager to satisfy to Reinwardt. Blume has promised him to do his utmost to inform Treffz about the things he should know about collecting, preparing and preserving objects of natural history. He asks Reinwardt to answer soon, in order to keep his stay in Batavia as short as possible. This afternoon he and Treffz will make a short trip to the beach and perhaps they will be able to collect a few valuable objects. [The original letter is written in German].

[NA 2-21.204(4); ZOC, COB]

**319. C.J. Wolterbeek (Batavia) to C.G.C. Reinwardt (Batavia); 15 March 1819**

Wolterbeek – commanding His Majesty’s squadron of warships in East India – sends Reinwardt a copy of his letter to Jacobson, harbour master of Surabaya. He has insisted on the quick preparation of the corvette ‘Zwaluw’, to be used by the lieutenant colonel Treffz. This vessel is suited for a journey to the Moluccas and for sailing from one place to the other, in order to collect objects of natural history. Reinwardt will be able to find that he has ordered to prepare this vessel in the best possible way. The corvette will be put at Treffz’s disposal on 1 April 1819. Maybe it will be rather late by then for a trip to the Eastern districts of the colonies!

[NA 2-21.204(4); ZOC, COB]

**320. Fr.A. Treffz (Batavia) to C.G.C. Reinwardt (Batavia); 16 March 1819**

Treffz sends his principal the bills of his expenses, in accordance with the inventory received from Reinwardt. He has also indicated the total sum. He has heard that it is possible to sail aboard the ship of captain Sakes via Semarang to Surabaya. Therefore he asks Reinwardt’s permission to do so. If possible Sakes will set sail next Thursday or Friday. Treffz is awaiting

Reinwardt's instructions with regard to details of freight and transport. He has been advised to take a couple of presents with him, intended for regents and subordinate chiefs and to ask Reinwardt to give him some extra money for that purpose. Blume is very busy and thinks that he will be able to send a 'pedatie' today.

[NA 2-21.204(4)]

**321. Fr. Treffz (Batavia) to C.G.C. Reinwardt (Batavia); 20 March 1819**

Treffz acknowledges the receipt of the official documents regarding his voyage. Already twice he has sent the altimeter to Mr. Peereboom, but this man appeared to be absent. Probably he will be home today and will be able to return the receipt to Reinwardt. Admiral Wolterbeek has been so kind to put the 'Schildpad' (a colonial vessel) at his disposal. He has decided to leave as soon as this ship has returned from Bantam. Furthermore he would like to propose Coenraad Hendrik Dember as his draughtsman. Reinwardt should send his salary to him, so that he can hold it under his custody. About his own pension he observes that he would prefer to be paid on the day of his return, if Reinwardt will not succeed in extracting this money from the government in time. He promises to do his duty. He has also heard that there are still two beautiful skulls aboard the ship, so he wants to have a look aboard the vessel.

[NA 2-21.204(4); ANA, COB, ART]

**322. General Inspector of Public Works of the Dutch East Indies (Tanabang) to C.G.C. Reinwardt (Batavia); 22 March 1819**

The general inspector is very pleased by the reception of the letter, dated 18 March 1819 (n° 400), covering a mountain barometer, a corresponding thermometer and an instruction for the use of these instruments. He acknowledges the receipt and returns the signed document. He is eager to comply with Reinwardt's demand to carry out observations alongside the beach of Batavia. Perhaps these activities can be combined with other activities, which have to be carried out on the eastern seashore of Batavia. Because he will have the opportunity to carry out the experiments, Reinwardt should send him the respective instructions. Is it only about the barometric pressure, or also about the temperature?

[NA 2-21.204(10); PHY]

**323. P.A. van Lawick von Pabst (Batavia) to C.G.C. Reinwardt (Batavia); 26 March 1819**

The resident of Batavia has been ordered by the General Management of Finances to find a ship, which will be able to take the crocodile, stuffed by Treffz, to Holland. It is intended as a present for the 'Koninklijk Kabinet' (Amsterdam). Meanwhile he has learned that 'De Hoop' (captain Thinken) will soon return to Holland. He asks Reinwardt to inform him about the sizes of the crate, needed for this important object of natural history and about the way this crate should be loaded.

[NA 2-21.204(4); ZOC. COB]

**324. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 29 March 1819**

Together with this letter (n° 29), Van Marum sends his friend the copy of the previous one, dated 10 February 1819. Since the latter date he has received the copy of Reinwardt's letter, dated 29 August 1818 (He never received the original!) and the letters, dated 18 September 1818 and 10 October 1818. The day before yesterday he received the letter, sent by Reinwardt in November 1818. He has waited for several days and decided not to discuss a certain affair, until Reinwardt will have returned to Holland. Meanwhile he has understood that the letter, dated 29 August 1818, has been lost at the occasion of the wreck of the 'Ida Aleyda', like the bill, which has been sent by the bookseller C. Sulpke (Amsterdam). He has decided not to pay it, for the time being. Fortunately the wine, sent from Holland, has arrived in Batavia. Reinwardt should not pay for what he did not order himself.

He is very honoured by the fact that Reinwardt has named a plant after him, which had not been described until then. He is eager to receive a picture as well as its seeds. Regrettably Reinwardt has changed the name. From his letter, dated 29 August, he has understood that meanwhile Reinwardt has succeeded in selling his house and that he has to pay off a debt within the next two years. Van Marum deduces that this debt will not be paid off in April 1820, when Reinwardt will return to Holland. In his view Reinwardt should try to get a better return on his capital. He is very pleased by the geological collection (a collection of Javanese fossils) Reinwardt is preparing for the 'Teylers Museum'. At the time the financial position of that museum is very poor, which is due to the financial capriole of its General Director.

There is no money left, even not for buying the most urgent necessities. He has felt very jealous when he read that Dr. Horsfield has succeeded in sending so many objects of natural history from Java to England. It seems as if he has accomplished far more than Reinwardt has been able to do until now, because he has had the chance to devote himself completely to the investigations in the field of natural history.

After the 'Athenaeum' of Harderwijk has been 'destroyed', Vosmaer and Van Lidt de Jeude have been given the position of extraordinary professors in Utrecht. He still deplores the loss of the 'Ida Aleyda' and its precious cargo. Originally he hoped that the rice sent to Holland with the 'Wilhelmina' by Reinwardt could be sold at a considerable profit, but now he fears that the sale will end up in a loss. Anyhow it will proceed less than the 9.000 guilders, Reinwardt did pay for it. Calkoen will inform him more in detail. He has sent Reinwardt's life certificate immediately to Falck. Until now he did not receive Reinwardt's letter, dated 6 September 1818, mentioned in his letter, dated 10 October 1818.

He has added a letter from the wine sellers Schimmelpenninck and Kruimel. The information, which he is receiving about Caroline's health and behaviour, is very positive. There is even a chance that her relation with the pharmacist's apprentice will end soon, because during a severe disease he seems to have promised not to marry outside the Roman-Catholic Church. The friends in Holland are still worrying about Reinwardt's health, although the secretion of mucus by the lungs is decreasing. All in all, it is obvious that his health suffers too much from the bad climate of Java and from the heavy physical exertion. Although Reinwardt has written about that to his relatives, he did not mention these facts to his best friend! Pointing at the news read in the *Bataviaasche Courant*, Van Marum underlines that it is little short of a miracle that Reinwardt did escape with his life, when he climbed the volcano! He did not dare to publish this report completely in the *Haarlemsche Courant* and in the *Algemeene Konst- en Letterbode*. He might even have endangered his safe return to Holland!

From Reinwardt's letter, dated 10 October 1818, he has learned about the weak health of Kent and of the draughtsman Bik. There is no doubt that these facts have retarded his physical investigations. Reinwardt has made a wise decision when he decided not to send living plants to Holland with the 'Wilhelmina'. He expects to receive a couple of them in a more

favourable season. He thanks his friend for what he has sent to him and to Kops (Utrecht) with that ship. He has also read about Reinwardt's election as a correspondent of the 'Zeeuwsch Genootschap'. Obviously this society hopes to receive a collection of objects of natural history. If Reinwardt should decide to give an important collection of natural history to a zoological museum owned by the Kingdom of the Netherlands, the cabinet of the 'Hollandsche Maatschappij' should come first! Since the Kingdom of the Netherlands has reassumed possession of the Dutch East Indies, the 'Hollandsche Maatschappij' has only received a couple of useless wooden statues, two damaged tiger skulls and a living leopard (which does not fit in its collection!). Besides, that animal has been flogged by D'Ailly to Van Aken. He also knows that Elout will offer the menagerie of Leyden a young elephant and a rhinoceros. Brugmans has refused to accept the leopard ('tijgerkat'), which Elout had given to Van Marum as a present, because Brugmans was supposed to pay the meat for that animal out of his own pocket. He does not know to which cabinet the Hindustani statues – which Reinwardt wants to send him – have to be given as a present. Until now Repelaer van Driel has not answered his (Van Marum's) proposal to buy the complete collection of European insects for 2.000 guilders. Three days ago he has received Reinwardt's letter, dated 25 October 1818, Elout's letter, dated 7 November and a copy of the *Bataviaasche Courant*, informing him about Reinwardt's near leaving for the volcano of Bandung. He promises to inform the bookseller Muller about the subscription of the Governor-General to the German 'Encyclopedia' and to ask him to send the already published volumes to Batavia. Reinwardt should postpone his subscription until after his return to Holland! He has also read about a new loss suffered by Reinwardt, the loss of a part of the rice, because a boat sailed over. Reinwardt is really pursued by bad luck! Sandra, Reinwardt's pupil, has won a prize at the university of Utrecht. For the inmates of the family, the situation of Betje remains sad. He leaves the communication of the rest of the news to their mutual friends Van Lennep and De Vries.

[NA-RANH 529-20b; BOT, COB, ZOC, PHY, GEO, ART; See also: UBL BPL 2922: identical letter]

**325. C.G.C. Reinwardt (having left Buitenzorg) to M. van Marum (Haarlem); 29 March 1819**

On 20 March 1819, Reinwardt has set out on his trip, which will completely be devoted to the study of nature. He has decided to travel in a south-eastward direction, in order to explore the mountains, extending from there to the sandy south coast, near the island of Nuessa Cambang. The vegetation is very rich. The painter Paijen, his assistant Kent, Landré junior (as his clerk) and the draughtsmen J.Th. Bik and A.J. Bik are in his company. Yesterday Blume has returned to Buitenzorg, in order to look after Reinwardt's affairs. Although he has planned everything carefully, the train has become very long, comprising servants, horses, luggage and 120 bearers. The Governor-General and the government have been very benevolent. At the moment the company is residing near a marvellous waterfall west of the 'Salak', in a desolate region, although it is very beautiful in a botanical sense. This afternoon they have been exposed to dreadful thunderstorms and heavy rainfall, but the tents proved to be of a good quality. Although their camping site is situated approximately 150 feet above the level of the basin of the waterfall, everything gets soaked. Next to the fall there are a number of high and bent basalt columns, based on thick layers of another type of rock. As a matter of fact it is almost impossible to determine the nature of these rocks, because the slopes are completely covered by the vegetation. It is very peculiar that the vegetation seems to attract the heavy rain clouds, as one can see around the 'Salak', from the top of which gigantic white waterfalls are running down the slopes. The company has also discovered a new waterfall. At night the camp is constantly watched by 12 men and the fires are kept burning at the four corners of the camp, in order to protect the travellers against tigers and other ferocious animals.

Of course he has to do a lot of botanical work, because of the lush vegetation. Unfortunately many plants, which are not flowering at the time, or which are only bearing fruits, are difficult to determine. He is sure that most of the species have not been described until now, unless Horsfield has foxed him. The Portuguese botanist Noronna, who has not left many writings, has also collected plants in this region. Reinwardt is only familiar with Noronna's inventory of plants, published in Volume 5 of the *Verhandelingen van het Bataviaasch Genootschap van Kunsten en Wetenschappen*, while another volume contains several mediocre drawings. The author has only mentioned the

names of the plants, which are used by the natives. Unfortunately this man has died too suddenly and too early. Today he has finished the description of the second species of Marumia, that's to say of Marumia muricata R., a beautiful tree, bearing beautiful flowers. He will order to make a drawing. In his last letter to Van Marum (dated 15 March 1819) he has already mentioned that the Governor-General had agreed with sending lieutenant colonel Treffz to the Moluccas, in order to collect objects of natural history. Probably Treffz has left yesterday or just a few hours ago. This man has recently offered him the stuffed skin of a crocodile of about the same size as the crocodile skeleton which has been lost some time ago. Meanwhile this object has been sent to Holland, to Mr. Vollenhoven. Today he has informed him about the arrival of the crate, measuring more than 17 feet in length. It has to be taken to the 'Koninklijk Kabinet van Natuurlijke Historie' (Amsterdam).

In the meantime he has received the proceeds of the sale of his house. He has asked a mercantile house to send him a bill of exchange of 10.000 guilders, at a favourable price. He does not dare to take the risk of sending merchandise to Holland again, although the prices of rice and coffee are rather high. The last letter received from Van Marum was his 21<sup>st</sup>. The last letter he has sent him, was the one dated 8 March 1819. Furthermore he adds a triplicate of a life certificate. He will try to send his friend another letter soon. He ends this letter by expressing his hearty feelings and respect towards Mrs. Van Marum and Betje.

[NA-RANH 529-20b; BOT, ZOC, COB, ART, GEO, MIN]

**326. General Inspector of Public Works of the Dutch East Indies (Batavia) to C.G.C. Reinwardt (Batavia); end of March 1819**

The General Inspector acknowledges the receipt of the mountain barometer (provided with a large scale, 'down to 20 inch'), a thermometer, a booklet, entitled 'Companion to the mountain barometer', and a schedule, in which the results of measurements carried out at 23 different places, have been filled out.

[NA 2-21.204(10); PHY]

**327. C.L. Blume (Buitenzorg) to C.G.C. Reinwardt (Batavia); 3 April 1819**

In his first letter to Reinwardt Blume informs his superior that yesterday he arrived in Batavia and that he has seen Treffz. He signs as Reinwardt's 'ergebenster Diener und Freund'. Furthermore he stipulates his contacts with Van IJsseldijk. He expresses his appreciation of the fact that he has had the opportunity to visit professor Reinwardt. [The original letter is written in German].

[UBL BPL 2425]

**328. ?? Schutter (Surabaya) to C.G.C. Reinwardt (Batavia); 10 April 1819**

Schutter, the commanding officer of the navy in Surabaya, has the honour of informing Reinwardt that – about the end of April – the corvette 'Zwaluw', and its crew, under the command of the captain 2<sup>nd</sup> rank H. Deval, will be at Reinwardt's disposal.

[NA 2-21.204(4); ZOC, COB, BOT]

**329. Resident of the Preanger Regencies (Tjanjor) to C.G.C. Reinwardt (Buitenzorg); 12 April 1819**

In response to Reinwardt's letter, dated 11 April 1819, he is informed that all arrangements and preparations will be made in conformity with the instructions, given by him.

[NA 2-21.204(4)]

**330. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 16 April 1819**

Reinwardt informs his friend that he has had this report published at the occasion of the wreck of the second cargo sent by him to Holland. The major part of the collection of natural history aboard the 'Ida Aleyda', was lost, when it was wrecked on the sunken cliffs, near Cape Town, when it was trying to enter the 'Simonsbaai'. Once again he repeats the inventory of the objects contained in this second shipment. Most of the collection had already been brought together in 1817, by himself, or on his orders as Director of Agriculture, Arts and Sciences. Many objects are irreplaceable. Nevertheless he keeps on enjoying the interest of the government with respect to this subject, as it keeps on promoting the acquisition of a thorough knowledge

of the East Indian colonies. During this journey he will be accompanied by the painter Paijen, the two draughtsmen A.J. and J.Th. Bik and the gardener Kent. The lieutenant colonel Treffz has also been added to this company. He has been ordered to travel to the Moluccas and the other eastern islands, in order to collect the most interesting objects of natural history in behalf of the national collections of the Netherlands and to prepare these objects for shipment to Holland. It has pleased the Governor-General to put the colonial corvette 'Zwaluw' at Treffz's disposal and of course all the technical equipment he will be needing. Treffz has already proved his expertise, by stuffing a very large crocodile, which he has offered to the 'Koninklijk Kabinet van Natuurlijke Historie' (Amsterdam). It is very life-like and a rare and excellent contribution to the national collection. Reinwardt hopes that many gifts will follow. [This report has been published in the *Bataviaasche Courant*.]

[NA-RANH 529-20b; ZOC, COB, ART]

**331. C.L. Blume (Buitenzorg) to C.G.C. Reinwardt (Batavia); 20 April 1819**

Blume informs Reinwardt about a new genus of plants, called *Hydrargyris* [?]. Furthermore he brings a necessary expense to the notice of his superior. Besides Mr. Peitzel has made a bid of 200 'Spaansche Matten' respective to a couple of objects, but this transaction has not been concluded. He discusses a few other financial affairs, which have been arranged in behalf of Mr. Van Ijsseldijk and Mrs. Waardenburg (born Starasky), a widow. [The original letter is written in German].

[UBL BPL 2425; ZOC]

**332. Fr.A. Treffz (Samarang) to C.G.C. Reinwardt (Buitenzorg); 22 April 1819**

Treffz reports that his team has finally arrived in Samarang, after having been sailing for 13 days, in order to load fresh water. The small village green of Samarang is crowded with people. Before arriving there, they have enjoyed watching a Dutch brig defending itself successfully against two pirate ships off the coast of Pamanoekan. Although he wanted to assist this vessel, he could not because of the calm. On 13 April they have observed driftwood (timber rafts). Four long beams were taken aboard, intending to trade these

against larger planks, of which they might construct large objects, like crates. They will leave Samarang in a few days. Next time he will inform Reinwardt from Surabaya.

[NA 2-21.204(4)]

**333. C.L. Blume (Buitenzorg) to C.G.C. Reinwardt (Batavia); 24 April 1819**

Yesterday Blume has received Reinwardt's friendly letter. Mr. Treffz has left on 11 April. Again several minor financial transactions are discussed. [The original letter is written in German].

[UBL BPL 2425]

**334. C.L. Blume (Buitenzorg) to C.G.C. Reinwardt (Batavia); 29 April 1819**

Blume informs his superior that the Governor-General is not at all satisfied about the itinerary, as it has been determined by Treffz. [The original letter is written in German].

[UBL BPL 2425]

**335. Fr.A. Treffz (Surabaya) to C.G.C. Reinwardt (Batavia); 10 May 1819**

Treffz has the honour of informing his principal that they have arrived in Surabaya, after having sailed for 12 days, since they left Samarang. On the moment of arrival he has checked in with the commanding officer of the 'Zwaluw'. Everything on board proved to be well organized. Regarding the coming journey he could not have found a better ship. Tomorrow he will discuss the first day of the trip with lieutenant colonel Duvall and make a few other arrangements as well. Soon he will inform Reinwardt more in detail. He enjoys good health, in spite of the long journey he had to make and despite the many inconveniences.

[NA 2-21.204(4)]

**336. Fr.A. Treffz (Surabaya) to C.G.C. Reinwardt (Batavia); 18 May 1819**

It has been decided that they will set sail on Sunday 22 May 1819. The corvette is in an excellent condition and all the necessities have been loaded already. Captain Devall is an old acquaintance of Treffz. They will work

together like brothers. The corvette is equipped with 20 canons and has a crew of 104 sailors, 52 Europeans and 52 natives. Ammunition and provisions are of the best quality. The officers are most honourable men. They are very clean. There is order everywhere. Everybody is eagerly looking forward to setting sail.

[NA 2-21.204(4)]

**337. C.L. Blume (Buitenzorg) to C.G.C. Reinwardt (Batavia); 20 May 1819**

Blume thanks Reinwardt for the kindness shown to him through the sending of comprehensive information. Dr. Peitzel has seen the Governor-General. Blume is still suffering from diarrhoea ('Durchfall'). He fell ill seven days ago. Yesterday and today he has discharged blood. [The original letter is written in German].

[UBL BPL 2425]

**338. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Batavia); 8 June 1819**

Vrolik sends a complete series of copies of the documents, which have been published by the 'Eerste Klasse' of the 'Koninklijk Instituut' since 15 February 1817. On that day the works published until then have been sent to Batavia.

[NA 2-21.204(4)]

**339. Fr.A. Treffz (Sumbawa) to C.G.C. Reinwardt (Batavia); 12 June 1819**

While sailing along the coast of Sumbawa aboard H.M. Colonial corvette 'Zwaluw', Treffz informs Reinwardt that large parts of the sea are covered with the dust, which has precipitated after the last eruption of the Sumbawa volcano. The various mountains, especially those in the south, are still breathing smoke and they show themselves in a beautiful way. Meanwhile he has collected a number of specimens of pumice. At the first possible occasion he will send this collection to Batavia. If the wind is good they will sail on to Makassar. Everybody is eager to arrive at Goenoeng Apie, from where they have planned to cross the 'Strait'. The sick sailors have recovered meanwhile, except for a few, who are suffering from venereal diseases, but

these are also on the mend. There is harmony and friendship aboard and everything is in order. Meanwhile he has also been able to catch a few sea birds and succeeded in stuffing them perfectly.

[NA 2-21.204(4); GEO, MIN, ZOC, COB]

**340. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 15 June 1819**

Van Marum sends his 30<sup>st</sup> letter, although he is not quite sure about its number. Perhaps he did send n<sup>o</sup> 30 already before he left for his country estate 'Plantlust'. That letter was intended to be the answer to Reinwardt's letter, dated 13 November 1818. He did not keep a copy, most probably because he had to hurry. Anyhow, to be sure, he will add a copy of letter n<sup>o</sup> 29. Reading Reinwardt's last letter, he has been shocked by the news with regard to the misfortune of the rice transaction. He does not understand how it is possible that Reinwardt has already been informed about that unsuccessful transaction. He has received Reinwardt's report on his dangerous trip to the fire-breathing volcano. He has already arranged its publication in the *Haarlemsche Courant* and in the *Letterbode*. He would like to receive Reinwardt's report about his visit to the 'Sulphur Lake' (on the top of another mountain) in order to have it published in the *Letterbode*, or in another journal. He expects to receive the seeds collected for him by Reinwardt, through Elout at the occasion of his arrival in Holland. It pleases him to know that Reinwardt has fully recovered again.

Thereupon he briefly discusses Reinwardt's letters, dated 12 and 17 December 1818 (about a prize winning treatise and on Reinwardt's assumption of nepotism, which is vividly denied by Van Marum). He is eagerly looking forward to receiving the plants and seeds, which will be taken to Holland by Elout and Buyskens, together with the other objects Reinwardt has intended to give to the 'Kabinet van Natuurlijke Historie'. He is also eagerly awaiting the arrival of several beautiful objects for Reinwardt's relatives and friends. He is glad that Reinwardt has decided to send only money to Holland – in the form of bills exchange. To his dissatisfaction his friend did not receive his share of the selling price of the house yet. Is he still too trusting? Van Marum is also eager to receive the beautiful coloured drawings, which will give a good impression of the vegetation of Java. Reinwardt's letter dated 27 December has informed him that his letter, sent from Batavia on 12

December, must have been delivered in Haarlem by Dr. Horsfield. He asks Reinwardt to send him a more extensive letter through Elout and Buyskes. He has seen Van Lennep at the occasion of a visit to Her Royal Highness the Princess and learned from him that he had received a more extensive letter from Reinwardt, dated 27 January 1819. He would have sent him a letter earlier, if he had not decided to add a few words with respect to the sale of the rice too. He has tried in vain to see Mr. Calkoen. Afterwards he has learned that meanwhile one third of the cargo has been sold. He knew already that it would be the best to sell the rice as soon as possible, because prices were lowering and the rice had already been affected by the mites. He is dissatisfied with Calkoen's reactions. He sends his sincere wishes and assures him of his deep friendship. He hopes to see Reinwardt in good health soon. Finally he adds volume 9 of the *Verhandelingen* of the 'Maatschappij', which has just been published.

[NA-RANH 529-20b; GEO, BOT, ZOC, COB; See also: UBL BPL 2922]

**341. C.L. Blume (Buitenzorg) to C.G.C. Reinwardt (Batavia); 16 June 1819**

Blume complains about his poor health, although he is constantly staying in Buitenzorg. He keeps on making remarks with respect to his daily activities in public service, such as the vaccination programme. [The original letter is written in German].

[UBL BPL 2425; MED]

**342. C.G.C. Reinwardt (Banjaran, on Java) to M. van Marum (Haarlem); 18 June 1819**

Until recently Reinwardt did not receive Van Marum's letter, dated 10 October 1819. He was already travelling and he still does. The message about his mother's death has severely shocked him. Although he had already been informed about her gradual weakening and feared for her death, the letters received from Van Marum and Morian have made a profound impression. It is difficult for him to get familiar with the idea of never seeing her again. She was the object of his esteem and love. He has always circumvented the sending of alarming messages about himself, because he never wanted to sadden this pious soul. Loving her was the motive for all his actions. Van Marum's letter, dated 7 November, brought him the sad news. He thanks his

friend for his efforts in favour of his relatives, although the expenses with respect to their diseases and to the death of his mother have been exorbitant, Van Marum must go on paying the trimestrial terms without cutting them down. His sisters have the right to live decently. He also encloses a bill of exchange for 10.000 Dutch guilders bought by him at a favourable price. It must be sent to Mr. Hoboken. A second bill of exchange is intended for Blume's relatives, because his assistant has not had the chance to send them money until now. This bill, payable in four months, will probably be offered to Van Marum by Mrs. Waardenburg, a widow, because Blume is engaged with her daughter.

In general he is very satisfied about the results of the activities, which have been carried out during this trip. Until now he has only had the opportunity to examine the mountain region extending itself from the 'Salak' and the 'Gedeh' in south-eastern direction until the residence of Cheribon. He has climbed the 'Gedeh', which is about 8.500 feet high. On its top he has seen a crater, larger than he has ever seen before. The traces of the last eruption were still clearly visible. A few days ago he has climbed another mountain, the 'Patocha', about 7.500 feet high, with a large sulphur lake at its top. All these mountains are completely made of basalt. Now he is preparing to climb a third mountain, the 'Malahar' ['Malabar]. The slopes and valleys are inaccessible by the vast and impenetrable wilderness. From a botanical point of view this wilderness is very interesting, because it might conceal an enormous and inexhaustible profusion of unknown species. Meanwhile he has already distinguished three or even perhaps four species of the genus *Marumia*, the genus dedicated to his friend Van Marum. Furthermore he is collecting rock plants, which he will give to 'Teylers Museum'. The lower mountains surrounding the highest tops are made of limestone. He has also seen transitions of basalt into basalt porphyry and also mandelsteen, marl, pebble stones and slate. Unfortunately he has not had the opportunity yet to give an extensive report from his voyage journal. He will do so as soon as possible. The Governor-General has sent him a letter, written by Vrolik, in which he asks him to send the pelvis of a male Javanese. Unfortunately he is also making sneering remarks about Reinwardt, because he seems to have completely forgotten the 'Instituut' and the 'Athenaeum'. Reinwardt does not want to react. He simply decides that this man has not changed in

the least since he left Holland almost four years ago. Captain Greveling is of the same opinion.

If he would be in Batavia now, he would have sent Van Marum the receipt to be delivered at De Vries's. He has to end this letter now, because it is already late at night. He has to get up early in the morning. He adds his most sincere greetings to Mrs. Van Marum and Betje.

[NA-RANH 529-20b; GEO, BOT, COB]

**343. Resident of the Preanger Regencies (Tjanjor) to C.G.C. Reinwardt (Batavia); 22 June 1819**

The resident acknowledges the receipt of Reinwardt's letter, dated 19 June 1819, covering the sending of 1.000 Indian guilders (paper currency). In exchange he sends silver, worth 440 Indian guilders and copper, worth 560 Indian guilders.

[NA 2-21.204(4)]

**344. Fr.A. Treffz (Passerwang, on Makassar) to C.G.C. Reinwardt (Batavia); 24 June 1819**

Treffz informs Reinwardt that his corvette has left Surabaya on 24 May 1819 and that it has put in at Passerwang on the 26<sup>th</sup> of that month, in order to buy provisions. The ship and its crew are still in an excellent condition. Colonel Duvall lives in perfect harmony with his officers and with the rest of the crew. Treffz expects the journey to pass off smoothly and in good harmony. He has been accommodated in a spacious cabin. Besides he disposes of another room, where he can do his work without being disturbed and where he can store his instruments and weapons. Mr. Rothenbinkler has given him a couple of books, relative to his scientific work. The corvette will leave tomorrow. From the next stop, Biema, he will send a new report to Reinwardt.

[NA 2-21.204(4); ZOC, COB]

**345. Fr.A. Treffz (Passerwang, on Makassar) to C.G.C. Reinwardt (Batavia); 25 June 1819**

Letter, identical to the one Treffz has sent on 24 June 1819.

[NA 2-21.204(4); ZOC, COB]

**346. Fr.A. Treffz (Makassar) to C.G.C. Reinwardt (Batavia); 26 June 1819**

Treffz describes a specimen of the Timbaris – a small sloth, living on Celebes. It has about the size of a European hare, although its fur has a somewhat darker colour. Its head is quite similar to the head of a muskrat. Its eyeballs are yellow and have a pitch-black iris. The teeth are identical to the ones the squirrel has. It uses its tail, of which the end is bold and dark coloured, as a hand. The hands are provided with five claw-like fingers (with sharp nails), two of which are pointing forward and three are pointing backward. The feet (rear hand) are provided with a puggy thumb, 2 fasciated fingers, pointing forward and two fingers pointing backward. It is a good climber and it is able to hang upside down in a tree like a dead body. It prefers to eat rice, bread, potatoes and coconuts. It is easily tamed.

[NA 2-21.204(4); ZOC, COB]

**347. Fr.A. Treffz (Makassar) to C.G.C. Reinwardt (Batavia); 26 June 1819**

The travel company has needed a month to get from Passerwang to the place where they are staying now. Everything went well and everybody enjoys good health. Mr. Servatius, the governor, has given them a very hearty welcome, although he was in bad health, while his wife was in bed for some time already, suffering from a fever. Nevertheless Treffz has been assured that he can count on him, with respect to the collection and keeping of animals and other objects of natural history, such as insects. Servatius has even given him a living animal for a present. This animal – a Timbaris (or ‘Tombaris’) as it is called on Makassar, will be sent to Holland at the first possible occasion. The animal has been intended for De Graaf junior. Mr Peters, the warehouse manager, has given him a ‘carretschildpad’. If possible he will stuff the animal instead of skeletonising it. Its shell is about 4 feet in diameter and has a beautiful marking. As soon the cargo has been unloaded, he will go up the ‘Goea’-river, in order to pay the crocodiles an unexpected visit. He has been assured that he can possibly obtain a 20 to 25 feet long specimen with a beautiful tail. Within a few days – and assisted by Mr. Listo – he may be able to put his hands on a Pararang. They have also promised to provide to him several snakes of about 30 feet length and as thick as the stem of a coconut palm. He has even been told that a two-headed snake is living in these region. He wants to see before he will believe. The ‘Anna Paulowna’, which will soon arrive, will take a considerable collection of objects of natural

history to Batavia. This message is also meant for informing him about the safe arrival of the vessel, its crew, its passengers and its cargo.

[NA-2 21.204(4); ZOC, COB]

**348. W.N. Servatius (Makassar) to C.G.C. Reinwardt (Batavia); 26 June 1819**

The governor of Makassar informs Reinwardt that Treffz has arrived in the evening of the day before yesterday, aboard the corvette 'Zwaluw' and that Treffz has given him Reinwardt's letter, dated 12 March 1819 (n° 405). Now he pushes himself to send a quick answer and to inform him that he will do everything possible in order to fulfil Reinwardt's wishes and expectations, that he will offer every assistance needed, in order to contribute to the success of Treffz's mission. He assures Reinwardt of his deep and endless esteem.

[NA 2-21.204(4)]

**349. C.L. Blume (Buitenzorg) to C.G.C. Reinwardt (Batavia); 29 June 1819**

Blume informs Reinwardt that the living plants, collected by Reinwardt during his trip on Java, are doing fine. He goes on making remarks about some animal genera, among others about *Prensiculantia*, a genus, which in his view, belongs to the *Aegiliae* (?). He has sent Reinwardt's letters and packages, addressed to Van Marum and Blumhoff, in a safe way to Batavia. From there they will be sent on to the Netherlands. Peitsch has informed him that Van Marum has meanwhile received another collection of documents. [The original letter is written in German].

[UBL BPL 2425; BOT]

**350. C.L. Blume (Buitenzorg) to C.G.C. Reinwardt (Batavia); 30 June 1819**

Blume opens his letter by informing Reinwardt that he still has to answer several questions, asked by his superior. He describes several objects of natural history and botany, among others *Serpentaria*, various species of *Arnica* (among others *Arnica montana*). He expresses his strong feelings of gratitude towards the Governor-General. He spends a few words on Reinwardt's

*Systema Naturae of Java*. Writing contributions for that comprehensive work will occupy them for several years. [The original letter is written in German]. [UBL BPL 2425; ZOC; BOT, COB]

**351. C.L. Blume (Buitenzorg) to C.G.C. Reinwardt (Batavia); 4 July 1819**

After having given a brief introduction about several interesting animals, which have not been described until now, such as *Drachus giganteus*, *Epeira fuscata* (in his view a kind of sloth), Blume informs Reinwardt about several plant genera, such as *Typhis*. He adds that Van IJsseldijk is in rather poor health. [The original letter is written in German]. [UBL BPL 2425; ZOC, COB, BOT]

**352. Fr.A. Treffz (Passarouang) to C.G.C. Reinwardt (Batavia); about 6 July 1819**

Treffz gives a detailed account – covering a period of about eight months – of his journey to the eastern regions of the Dutch colonies, among others of his observations in the ‘Tingars’ mountains in the region of Passarouang. This region is not only interesting for its possibilities in the field of agriculture, but also because of the customs of its inhabitants. Their traditions are considerably different from those of the inhabitants of the coastal region along the Strait of Java. It is also one of the most beautiful regions. The mountains with their leaning tops are caused by volcanic eruptions. The valleys are unfathomable deep. The slopes are covered with high trees. Treffz also informs his principal about the architecture of the houses of the natives, their customs (the circumcision of little boys), about the way in which they prepare their food and about how they protect themselves from the cold. He also describes how he did collect various plants, which are rather similar to the European species. He adds a short list. He has also made observations with regard to the religion of the natives. This monogamous people is worshipping the ‘Braminas’ mountain. They do not marry as early in life as the inhabitants of the Javanese coastal regions. Their customs are as pure as the air. They do not make music and have no musical instruments. They work hard and are easy to govern. They cultivate Indian corn (‘Turkse Tarwe’). They always assist each other. They never climb the ‘Braminas’ mountain, an extinct volcano, before having made a sacrifice to their God and having laid down their

weapons ('kreeses') at its foot. Its slopes are very steep and as a consequence very poor. The superior end of the interior wall of the crater is of a dark grey colour. Downward it turns gradually into white. Its sulphurous smell is overwhelming. South-westwards of this mountain there is a much higher volcano, the 'Warsang hanas'. The slopes of this extinct volcano are also very steep. In Ledombo he has succeeded in getting a specimen of the 'prono djioo'. In the view of the Javanese its squashed fruits are – when mixed with lemon juice – an excellent medication against snake bites and other poisons. This plant species belongs to a still unknown genus. On 7 July he has returned to Passerwang. The cultivation of European fruit trees goes well, especially the growing of peach trees. Unfortunately the European vegetables are hybridizing very quickly, so they have to be replaced by new sowing seed from Europe or from the Cape Province. According to the natives there are no tigers, deer and snakes, besides a badger-like animal, which causes much damage to the plantations, when it is searching for worms and other lower animals.

[NA 2-21.204(4); BOT, GEO, MIN, AGR, ZOC, COB, ETN]

**353. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 12 July 1819**

Van Marum adds a copy of his last letter (n<sup>o</sup> 30), dated 15 June 1819. He informs his friend that he has recently received his extensive and pleasant letter sent with Elout. He has also received the inventories of the objects shipped with the squadron. It would be very sad if the third shipment would also be lost. Therefore he has decided to answer the duplicates of Reinwardt's letters, dated 10 March 1818 and 28 June 1818 now. He sincerely hopes that the plants, which have been sent to him, will arrive in good shape. It might have been better if these plants would not have been sent with the same vessel as the one Elout has booked passage on. Perhaps it would have been better if in Cape Town a special servant had been added to the company, in order to take care of the living plants placed under Elout's supervision. Furthermore he regrets that Reinwardt's house has been sold by Mrs. Dozy to somebody else, who has been allowed to pay the purchase price in six terms of four months each. He regrets this arrangement and advises his friend to demand its registration by a notary, as a mortgage. At Reinwardt's request he adds an exact drawing of *Enkianthus*. He hopes that his friend will be able to

collect a beautiful specimen. The beautiful birds, which have been destined for the cabinet of the 'Maatschappij', will be most welcome. He is eagerly looking forward to seeing these objects and also the ones destined for the 'Kabinet van Natuurlijke Historie' ('Trippenhuys', Amsterdam). Fortunately Reinwardt will still have the opportunity to add many of the species which have been lost at the occasion of the second ship wreck. As soon as the python sent with the 'Maria Reijgersbergen' will arrive alive in Holland, he will decide about the future of this animal. It pleases him that Reinwardt has succeeded in obtaining a living 'loerie' for Betsy. He hopes that playing with this animal will improve her very variable mental state. She does not want to leave her room, nor does she want to see anybody, except for the moments when she is feeling happy. On such moments she wants to see her sister Mietje and of course Van Marum and his wife. Fortunately this burden is made more bearable by the regular visits of her niece, Mrs. Woestenberg, a widow, who is also known to Reinwardt.

Van Marum does not at all understand why Kent has dared to ask him to pay 400 guilders to his wife, from the capital he is taking care of in Reinwardt's behalf. He emphasizes that he is not willing to do so, because Kent did not entrust any money to him. He has no idea what it is all about. Last year Mrs. Kent has already been begging the pharmacist Pottum to give her 800 guilders. At the same moment she had urged her niece to send a similar demand directly to Reinwardt. Of course he (Van Marum) has asked to show him the letters in order to prove that such a transaction has to be carried out. Now he adds the answer sent to him by the pharmacist and asks Reinwardt to find out if Kent has ever asked him to send 800 guilders to Holland on his behalf. Anyhow Van Marum has never seen such a letter. He does not know how to handle this affair. Another question put in Reinwardt's letters (sent on 10 and 25 January 1819) has to be answered also: What about an eventual publication of the botanical drawings sent to him by Reinwardt? He wants to receive more information before taking further steps. Added to his last letter (n<sup>o</sup> 30, dated 15 June 1819), mailed with the 'Soerabaya', he has already sent volume 9 of the *Verhandelingen* of the 'Maatschappij', meant for Reinwardt and for the directors living on Java. He has also added a copy of the programme.

Furthermore he has recently discussed the indecent behaviour of Mr. Calkoen, at the occasion of his request to be informed in detail about the

results of the rice transaction. Meanwhile he has learned that Calkoen has behaved himself in the same rude manner to De Vries. Van Marum does not see any possibility to act any further for the moment. Obviously Reinwardt should not send any more commercial goods to so-called friends, in order to sell these. He should better have asked Van Marum to act as his representative. Furthermore he has also complied with Reinwardt's request to subscribe to the *Allgemeine Encyclopaedie der Wissenschaften*, on behalf of the Governor-General. After their publication the various volumes will be sent to Batavia through Mr. Vollenhoven. He has also been informed that Caroline is learning French, after having been advised by Landré to do so, in order to be able to accept an appointment as a servant of a decent and reliable family. In the family of the pharmacist, where she is living now, the situation is rather bad and poor – 'their cupboard is nearly always bare!' She has also separated herself from her roman-catholic lover. She seems to do very well. Van Marum hopes that it will not be necessary to send many letters to Java from now on, at least if Reinwardt will keep his promise to serve Java for four years (until 1820) and to return to Holland, where he will have the opportunity to return to his safe and agreeable appointment in Amsterdam. If everything is going according to plans the letters sent from Holland after October or November 1819 will not arrive in time in Batavia for being read and answered by his friend. He should express himself more explicitly with respect to this plan. Finally, on Dr. Van Rossum's advice, he adds a bill sent to him by the bookseller Sulpke.

[NA-RANH 529-20b; BOT, ZOC, COB; See also: UBL BPL 2922]

**354. C.L. Blume (Buitenzorg) to C.G. C. Reinwardt (Batavia); 12 July 1819**

Yesterday Blume has sent on the parcel, sent by LeRoux and addressed to Reinwardt. Furthermore Van IJsseldijk has been so kind to advance the money needed for paying LeRoux. He did not receive the cash advances from Batavia, until now. Furthermore he has seen Mr. Benoit (on the *Prodromus animalium*, written by Illiger). [The original letter is written in German].

[UBL BPL 2425; ZOC]

**355. C.L. Blume (Buitenzorg) to C.G.C. Reinwardt (Batavia); 18 July 1819**

Blume discusses Reinwardt's herbarium, gives his view with respect to various new species, among others about *Valeriana javanica*, most probably discovered by Reinwardt. In Blume's view this species is identical with *Valeriana sylvestris*. He discusses the necessity of producing illustrations of the new species. Furthermore Henke, surgeon, has sent a present, meant for Reinwardt. [The original letter is written in German].

[UBL BPL 2425; BOT]

**356. Fr.A. Treffz (Makassar) to C.G.C. Reinwardt (Batavia); 23 July 1819**

Treffz is satisfied that he has already been able to send several collections of objects of natural history to Reinwardt. First of all he has sent De Graaf junior to Batavia, aboard an inland vessel, in the company of a living specimen of *Timbalis* (*Timbaris*, or *Tombaris*). Secondly he has sent a collection of ethnological objects to Batavia with the brig 'Constantia' (captain Mayne). Because of the heavy and continuous rains it has not been easy until now to collect curiosities. Since his arrival on Makassar it has been raining every day. He has added an inventory. In spite of the rains he has visited the various regions of Makassar. Finally he has acquired half a dozen of living specimen of the 'Pararang' (?), which are giving him lots of trouble. These animals are living close to the river banks, where they use to hang in the trees. So it is easy to shoot them. Mr. De Liso – his faithful hunting companion – has assisted him. They were able to catch several specimens alive, when they fell into the small proa. This animal is only feeding itself with the leaves of the Biraing tree. It is different from the iguana through its teeth and its tongue. While falling down it spreads a very disgusting odour, which makes everybody vomit. Its tail regenerates after it has been broken off, similar to what happens to the gecko. Meanwhile he has succeeded in stuffing the 'karet'-turtle, although this has been one of the most difficult jobs. In the jar, added to this collection, is a flat tailed and very poisonous snake. The natives call it 'Oli Lempilaat'. He has added the descriptions of three crocodiles living on Makassar. He has also added a report on the journey from Surabaya to Makassar. They will probably leave on 2 August 1819 and sail through the Strait of Makasar to the coasts of Amverang and Menado. From there he will send the second shipment of objects of natural history. This will be even

more beautiful than the first one. The Governor Servatius has taken great pains to make their stay as comfortable as possible. He has put the whole Government House at their disposal.

All is well aboard the 'Zwaluw'. The ship will also take five or six sick people on board. Duvall, who is really the best commanding officer he has ever met, is like a brother to him. They all live in harmony, not only the two of them, but also the soldiers. He has destined a couple of Pararangs for the Governor-General and asks Reinwardt to have these animals delivered at the Governor's, like he has done with regard to the crate, containing the stuffed crocodile. He wonders if a description of the Pararang is worth while to be published in the *Wekelijksche Bladeren*.

He hopes to receive another letter from Reinwardt, once he will have arrived in the island of Ambon. He wonders if it is possible to send him a couple of newspapers, which have been published since he left Batavia. He is very satisfied with the young Mr. Dember, who has been assigned to him as a clerk.

[NA 2-21.204(4); ZOC, COB, BOT]

**357. C.L. Blume (Buitenzorg) to C.G.C. Reinwardt (Batavia); 24 July 1819**

Blume sends Reinwardt a couple of letters, which have recently arrived from the Netherlands, among others a letter, written by Minister Falck. [The original letter is written in German].

[UBL BPL 2425]

**358. Governor of Malakka (Malakka) to C.G.C. Reinwardt (Batavia); 2 August 1819**

W.N. Servatius informs Reinwardt that by chance he has come into possession of a very rare and beautiful giant snake. It is possible for him to send it to Batavia with the corvette 'Eclips'. He hopes that this reptile ('dit kruipend ongedierte') will contribute to the splendour of Reinwardt's cabinet.

[NA 2-21.204(4); ZOC, COB]

**359. ?? Duyvené (Batavia) to C.G.C. Reinwardt (Batavia); 3 August 1819**

Duyvené sends two extracts of the report, made on 30 September 1818 (n° 345), to the Director of Agriculture, Arts and Sciences.

[NA 2-21.204(4)]

**360. C.L. Blume (Buitenzorg) to C.G.C. Reinwardt (Batavia); 3 August 1819**

Blume spends most of this letter on the descriptions of a number of new animal specimens. These objects will be sent to the 'Koninklijk Natuurhistorisch Museum' (Amsterdam). [The original letter is written in German].

[UBL BPL 2425; ZOC, COB]

**361. Resident of Surabaya (Surabaya) to C.G.C. Reinwardt (Batavia); 5 August 1819**

Reinwardt is informed that the schooner 'Constantia' has delivered five crates in the port of Surabaya. According to the covering letter written on 23 July 1819 by the lieutenant colonel Treffz, these crates are filled with objects of natural history. They have to be stored temporarily in the Government's entrepôt until it will be possible to send them to Batavia.

[NA 2-21.204(4); ZOC, COB]

**362. C.L. Blume (Buitenzorg) to C.G.C. Reinwardt (Batavia); 7 August 1819**

In this letter Blume discusses the various financial obligations. He goes on to discuss various butterflies (Ideae) and spends a few words on the works and merits of Kramer and Meijer. [The original letter is written in German].

[UBL BPL 2425; ZOC, COB]

**363. M. van Marum (Haarlem) to C.G.C. Reinwardt (Buitenzorg); 15 August 1819**

Through his 32<sup>nd</sup> letter Van Marum informs his friend that he has received only one letter of one page since he has sent him his 31<sup>st</sup> letter. It happened to be only the covering letter of the life certificate, dated 31 January. Reinwardt had added this letter to several others, addressed to Brugmans, Temminck and D'Ailly. They were sent to Holland with Horsfield. It had also been agreed that he – Van Marum – had to take care of their delivery. Until now

he did not receive a sign of life from Horsfield, nor did he receive any of these letters. As soon as he will have the opportunity of seeing Horsfield, he will ask him about their fate.

Meanwhile a terrible death has occurred. A few days ago Brugmans has died of a colica, apparently caused by an 'inflammatio intesteronium', which had changed into gangrene. According to several of his colleagues Brugmans has provoked this inflammation himself by drinking (too) much beer after having eaten fruit. In Van Marum's view Reinwardt will make the best successor of Brugmans. Probably he will be invited soon to accept this appointment. The academic circles of Leyden are of the same opinion. Van den Ende, who has sent him a letter from Brussels, is of the same view. Van Marum is seeing Falck and Kemper regularly, so he is well informed. Perhaps the invitation is already on its way to Batavia. Once again he emphasizes that the hot climate of Java is very unhealthy. There is no doubt that his life span will be cut short by the climate and as a consequence of the dangerous trips he is making from time to time. Of course the beautiful botanical garden, which has been enlarged meanwhile, and the largely extended collection of natural history (for which the building has been enlarged also), will please Reinwardt. Leyden will have the possibility to offer him more than Amsterdam can do. Besides teaching a large number of young students will be more agreeable than teaching a handful of young men. From the financial point of view the position to be offered to him will be very attractive. Meanwhile the 'Maria Reygersbergen' has arrived in the Roads of Texel. Thereupon it has sailed on to Medemblik. Although Mr. Vollenhoven has asked the captain to inform Van Marum as soon as possible, he has not been informed yet. So he fears that most of the living plants sent to Holland have been lost. Furthermore he has learned that because of a damage, admiral Buyskes has replaced the 'Admiraal Evertsen' by another vessel, the 'Prins Frederik'. A few weeks ago the 'Admiraal Evertsen' has been damaged when it sailed on the rocks in the 'False Bay', near Cape Town. There is only a minor chance that the living plants will be saved. So it seems as if the collections sent to Holland by Reinwardt are doomed. This goes especially for the botanical collections. It is even possible that finally only the Javanese plants will arrive in Holland with the vessel on which Reinwardt will embark for his return passage, because he will take good care of this collection. Of the seeds sent to Haarlem several annuals and biennials have germinated meanwhile.

If his wife would not have been ill, he would have had the opportunity to send these messages earlier, because she is always so kind to copy them. Yesterday at the occasion of a visit to Amsterdam, he has seen Mr. Vollenhoven, who told him that there was an opportunity to send a letter. From the reactions of the members of the 'Eerste Klasse', who were present in the meeting, he has learned that Reinwardt is by far the most suited candidate for the succession of the deceased Brugmans and that it had already been decided in that way. Therefore Van Marum sincerely hopes to see Reinwardt in Holland next year. De Vries has fully agreed with that, although he personally would applaud Reinwardt's return to Amsterdam. However, to be honest, the chance of being appointed in Leyden is to be preferred as the most honourable one. More and more everybody is getting worried about the fact that until now not a sign of life has been received from the 'Admiraal Evertsen'. The same goes for the 'Prins Frederik'. Furthermore, until now he did not receive the crates of plants, brought to Holland by the 'Maria Reijgersbergen'. He is very disturbed by the rude behaviour of captain Groot and he has decided to complain about that man to the Minister of the Interior, as soon as he will have received the crates of plants. He will also insist on receiving the living plants from the 'Admiraal Evertsen' and the 'Prins Frederik', as soon as these vessels will have anchored.

Unfortunately Mrs. Kent is bothering him again. Against his will she is asking him for advances. Kent should take care of her. After having expressed his goodbye wish, he underlines that he is eagerly looking forward to seeing his friend again.

This letter has not been sent until 31 August, because on that day Van Marum added an extensive note, in which he informs Reinwardt that at the occasion of the general meeting of the 'Instituut' several members appeared to have already been informed about Reinwardt's professorship in Leyden, vacant as a consequence of Brugmans's death. Undoubtedly Reinwardt will already have been invited to come to Leyden. More and more the loss of the 'Admiraal Evertsen' and the 'Prins Frederik' is feared. Nevertheless Van Marum hopes that the plants, sent to the Netherlands with these vessels, will be delivered in Haarlem soon, once these vessels have arrived. Mrs. Kent is bothering him regularly because she is in very urgent need of money.

[NA-RANH 529-20b; BOT; See also: UBL-BPL 2922: identical letter]

**364. Fr.A.Treffz (region of Makassar) to C.G.C. Reinwardt (Buitenzorg); 16 August 1819**

Treffz reminds Reinwardt that he has sent six crates of objects of natural history with the 'Constantia' (captain Mayne), which were addressed to Mr. De Salis (Surabaya). From there this cargo will be sent to Batavia. Because of interior riots the governor has proposed to await the arrival of the corvette 'Anna Paulowna', before setting sail again. Meanwhile the vessel, commanded by Mr. De Siso, has also arrived. He has informed him that the above mentioned corvette has meanwhile set sail to the coast of Borneo. During a conversation with the governor of Makassar Treffz and his companions have explained that they wanted to continue their voyage. Nevertheless they were ordered to keep the 'Zwaluw' in the Roads of Makassar, in order to enforce respect from the princes, until further orders will be received or other warships will arrive.

Treffz is still not satisfied about his achievements with regard to the collection of objects of natural history. He is not afraid that his attempts might suffer under the political disturbances. As a consequence of the situation he has the opportunity to travel inland. Unfortunately the proa is too small to contain many objects of natural history. Therefore he has decided to collect only smaller animals like fishes, birds and butterflies. He is also preparing and mounting the skeleton of a koeskoes.

Aboard the 'Zwaluw' everything is still all right. The sickbay is lodging six people, four of whom are severely ill. He will be leaving within the next few days. He enjoyed visiting the beautiful plains of the region. He has also visited a spring, giving mineral water, of which he will send a sample. Furthermore he is in the possession of a couple of Pararangs, a male and a female, which are getting along together quite well. He is feeding them bananas. In his view the protrusion at the tail of the male has been caused by regeneration.

[NA 2-21.204(4); ZOC, COB]

**365. C.G.C. Reinwardt (Trogong, Regency of Bandung, Java) to M. van Marum (Haarlem); 16 August 1819**

Reinwardt sends his friend a very extensive letter. As a matter of fact it is more a 'journal' (as promised), in which he briefly reminds having already mentioned the trip, which is still going on. He also reminds him of the

fact that he did send him a bill of exchange, worth 10.000 guilders (Dutch currency), together with several letters. At that occasion he has also discussed his order to advance 600 guilders in behalf of his assistant Blume. Until now this request has not been complied with. So Reinwardt wants it to be cancelled, because Blume has succeeded in sending the money to Holland in another way.

In his last letter he has answered the letters received from Van Marum, until then, including his 24<sup>th</sup>. Now he answers Van Marum's 25<sup>th</sup>, 26<sup>th</sup> and 28<sup>th</sup> letters, as well as the duplicate of n<sup>o</sup> 27. The regular reception of his friend's letters has filled his heart with joy, especially because he has understood that Van Marum has really grasped every opportunity to send him letters. He thanks him for that and hopes that he will continue his regular correspondence with him in the future. He wants to share his feelings about the sad situation of Betje and understands that Van Marum is worrying. In Reinwardt's view the affair of the unpleasant letters has to be settled definitively now. Van Marum should understand that he simply had to write this disagreeable letter. He asks to forgive him if he did express himself a bit too strongly. However he had the right to fear that the well-meant letters from his friend might endanger his position in the East Indies, because his true or presumed discontent might irritate the excellent Van der Capellen. This man has really shown so much goodness to him that showing his discontent would have been very ungrateful. Van der Capellen deserves his esteem in every way, as appears from their confidential and friendly correspondence, since he has left Buitenzorg (among others from the letter, dated 20 March 1819). Furthermore he wants to stress that his last letters, which Van Marum will not have received until now, are meant to put his friend's heart at rest. He really thanks him for his ever lasting attention and for his well-meant advice ('advices he will not forget!').

He is still waiting for more favourable news about his rice adventure. This precious cargo has been sent to Holland in November 1818, aboard the 'Wilhelmina' (captain Eleman). He is happy to know that this adventurous passage has been completed meanwhile. He expects the favourable news about a profitable transaction to follow soon. He also hopes that Van Marum will get a good return for it, as well as for the bill of exchange, which he has also sent. He promises to act carefully with respect to Jessen, Trail & Co. Firm, which is meanwhile known as one of the most solid and reliable ones.

It has recently established a large sugar cane plantation on a country estate, which has been bought for 150.000 Spaansche Matten. He has to cooperate with that firm, because it is taking care of his financial transactions, to that extent that they are of a mercantile character. For the time being he is not able to send a bill of exchange to Van Marum, because of his other financial obligations. His friend should know that the government is paying him about four and a half guilders (Indian) a day for travel expenses. The same goes for his companions. Furthermore he has been authorized to ask to be compensated for all transport expenses. Meanwhile he has found out that this is not enough. On the other hand he can save almost his complete salary. Of course Van Marum will understand that he has not had the opportunity to send a life certificate. He thanks his friend for sending him the annual account of his earnings and expenses of 1818, as well as his letter n<sup>o</sup> 26. He is very satisfied about his comfortable financial situation. Of course he has to be grateful for his blessings. He hopes that still many years will be given to him, in which he will have the opportunity of enjoying this blessed situation. Kent is spending his money rather recklessly, although he should have saved money and sent it to his wife. Reinwardt assumes that Van Marum has already paid more than the amount of 125 to Mrs. Kent and that her husband still fails to send her money. Reinwardt has decided to keep on making him face the facts.

He wonders why the freight of the crates, sent to De Vries in Holland, has not been mentioned in the last annual account, because the majority of their contents was intended to be sent to other friends and colleagues. He especially points at the large crate, containing drawings, which has been taken to Holland by captain Duyff. This man has been ordered to hand the freight bill over to Van Marum, so that he can be remunerated. In Reinwardt's view Duyff has really been too modest. He hopes that Van Marum will be so kind to indemnify him after all. Did he receive the above mentioned crate meanwhile?

Again he has got very angry because D'Ailly senior has forced his son to give up his job as a servant of the 'Koninklijk Kabinet van Natuurlijke Historie'. By doing so he has severely harmed his close and friendly relationship with Reinwardt. He is not sure about what to think of it, although he really appreciates that Van Marum and De Vries have succeeded in keeping him – that very honourable and respectful young man – for the 'Kabinet'.

Reinwardt proposes to give him a salary in one or another way. As a matter of fact he knows that D'Ailly senior always keeps his son short, insofar it concerns pocket money. Perhaps D'Ailly junior has even advanced the money for small purchases, which may have made his father angry. He has already advised (in a previous letter) to give D'Ailly junior some money, in order to make small expenses. From the letter sent to him by this young man on 24 November 1818, he has learned clearly that this solution would be a good one.

He is very happy to know that the 'Kabinet' has accepted a giraffe from the Cape Province, a rather rare animal in those regions. Furthermore he thanks his friend for sending him Vol. 3, part 1 of the *Letterkundige en Oudheidkundige Verhandelingen*, published by the 'Hollandsche Maatschappij der Wetenschappen'. He will keep the first copy for himself, while the other one will be handed over to the 'Bataviaasch Genootschap van Kunsten en Wetenschappen', at the occasion of the next meeting. He stresses that copies of its Vol. 2 are no longer available. Because there is only one publisher (printing office) in Batavia, it will be rather long before the volumes 1 and 2 will be reprinted.

After having returned to Batavia he will probably have to hold a meeting. Because he has accepted Van Marum's opinion that the 'Bataviaasch Genootschap' has fallen asleep – which is partly his fault – he has to rethink the possibilities of revitalizing it, without somebody else's help.

He simply has not got the time to write treatises. If he would decide to do so, he would fail in his other duties. Besides, because of the lack of scientific sources his writings would appear to be of a lesser value than the treatises written by him in Europe. So sticking to shorter notes and reports of his activities on Java would be wiser. It would be unfair to expect more from him. Finally none of the travellers succeeded in having printed his journal before having returned to his homeland. He thanks his friend for sending a 'Dollond' astronomical telescope of good quality, meant for the Governor-General. Mr. T...[Teyssset] will repay him what he had to spent for that purpose.

He acknowledges the fact that a couple of objects present in the 'Kabinet' have to be returned to Mr. Klinkenberg. Fortunately this action will not damage the collection considerably.

He has sent the four letters from the Keer brothers to Weltevreden. He did

not receive Van Marum's letter n° 28 yet. The same goes for the documents added to that letter. He has learned that his sisters in Lüttringhausen are demanding too much attention and money from Van Marum. He fully agrees that his friend has decided to refuse to send more than 200 guilders quarterly, although he knows that they are needing the money for a decent living. He is less satisfied about the fact that they have received extra money – 300 and 180 guilders – in order to pay the bills of the doctors and pharmacists. He cannot abandon the idea that these 'aesculapes' are abusing the simplicity of his sisters. As soon as possible he will get in touch with Mr. Morian. For the time being he has to keep silent about his plan, because his sisters will emphatically express their feeling that he is not willing to spend his last money on the health of his mother. So he has decided to ask his friend to order his relatives to send a specification. In his view his sisters keep on thinking that he is really succeeding in bringing together enormous treasures. Through the *Haarlemsche Courant* of 9 July 1818 – sent to him by the Governor-General – he has been informed that the 'Ida Aleyda' has been wrecked and that, as a consequence, his second shipment has been lost. The situation is even worse, because very recently he has been informed that the 'Admiraal Evertsen', which was carrying his third shipment to Holland, has also been wrecked and lost in the neighbourhood of Diego Garcia. This means a new disaster! Perhaps Van Marum has already received this news from Elout, who has almost been drowned, together with many others. The Governor-General has expressed his feelings of compassion towards Reinwardt. He has been overwhelmingly shocked and in his view one has to be more than simply perseverant in order to complete this job.

Because the 'Admiraal Evertsen' has been wrecked through fire and water, its cargo is completely lost. The passengers and crew-members have lost their luggage and personal belongings. He even thinks that this event will have its consequences for the differences between the government of the Dutch East Indies and the English Governor Raffles. Of his own cargo aboard this ship only a small case, containing notes on plants destined for Van Marum, has been saved, as well as a landscape made by Payen and a couple of Batavian newspapers reporting about his third shipment. Probably his extensive letter to Van Marum has also been lost, as well as the detailed inventories of the collection which had been added to it. Other letters may have been lost also, because the 'Zeemeeuw' (captain Wagenaar), its passengers and its crew have

been wrecked and lost also. Among these passengers was also Mr. De Hoogh, from whom Reinwardt had bought the house in Batavia. De Hoogh has been so kind to deliver a couple of letters at Van Marum's. Furthermore several valuable presents have been lost, among others destined for his sisters in Germany, for Caroline, De Vries, Dr. Van Rossum, W. Calkoen, Professor Bosscha and D'Ailly. Bringing together all these presents has been a great effort. De Hoogh had also taken extensive letters for Professor Van Lennep and Professor Krauss with him. All in all, it took him about two months to prepare this shipment. In order to send Van Marum at least a few of the most important objects, he has ordered to make copies of his letters at his office in Buitenzorg. These letters will be added to the one he is writing now, or he will send them next time. He continues by giving a description of the objects which were lost with the 'Admiraal Evertsen': a very beautiful collection of shells purchased last year in Samarang, a giant sea sponge, a kangaroo, the skeleton of a giant python (*Python javanica*) of more than 13 feet long, several crates, containing 100 birds, crates of living plants, crates of insects (packed in several boxes), a package of seeds (80 species) and a crate, containing 50 species of birds, destined for the 'Hollandsche Maatschappij der Wetenschappen'. He had also added two living birds – a papagayo (parrot) and a Moluccan loery, which had been asked by Van Marum as a present for Miss Betty Gray. Furthermore he had added several presents for Van Marum, De Vries, Caroline and several others. Moreover the quality of the objects of natural history contained in this third shipment, was much better than the quality of the first and second shipment, not in the least because he had – together with his assistants – meanwhile become more experienced in the field of collecting, carrying out various preparations, wrapping, packaging and preparing for shipment. He had also added a collection of drawings and descriptions of plants to his lost letter.

Besides he has sent a letter to Professor Cornelissen (Ghent) and suggested that he and Van Marum could possibly exchange seeds and plants. He vividly hopes that the collections sent with the other vessels of the squadron will arrive safely in Holland (the large statues and the crates of living plants and several other objects), divided and loaded in the 'Prins Frederik' and in the 'Maria Reijgersbergen' (captain Groot). Meanwhile he has been informed that the 'Prins Frederik' has anchored in the port of Cape Town on 4 May (with damage), but that there is still no news about the other vessel. So the

destiny of the 80 plant species, contained in several crates and of the living python is still unknown. He had planned to divide this cargo as fairly as possible among the botanical gardens of Amsterdam, Leyden and Utrecht. Of course he has informed Minister Falck about the various collections sent to Holland until then. The majority of the living plants will have dried out, because the vessels had to wait in the Roads of Batavia for almost three months. In his view the manuscripts and notes on natural history will have lost much of their value, because the objects described in them have been lost. He sincerely hopes that his friend will spread the news about this recent disaster, if it turns out to be hardly known. Doing so is really necessary, because otherwise the public might have too little consideration, when judging the proceeds of his efforts of so many years. If not, the government has to double his term of stay on Java. Nevertheless he will do his utmost to replace what has been lost. Actually his present journey is giving him every opportunity to do so.

After his return to Buitenzorg and Batavia he will occupy himself with the shipment of his new collections, so he has decided. Besides his new assistant Treffz has turned out to be a zealous 'collectionneur'. Furthermore Blume is collecting objects in behalf of the 'Kabinet', in the neighbourhood of Buitenzorg.

Unfortunately the white ants have ravaged the collection, which had been kept for shipment in the storage house of Batavia. It is really a disaster! Perhaps even his beautiful collection of skulls of various peoples of the East Indies has been affected by these animals!

With respect to Van Marum's question about the date of his return-passage (in order to know when to send a last letter to Batavia), he observes that it is at the time impossible for him to give a definitive answer. Everything will depend on the circumstances. He hopes that his friend is convinced of his burning desire to see him again as soon as possible. The feeling of missing his friends is at least as strong as it has been when he left Holland. Nobody on Java can compensate him for that! He is still a stranger (an 'alien') on Java and this feeling is growing stronger and stronger. Nevertheless – and Van Marum will agree – he has to do his duty. If this might imply that he has to stay longer, he will do so! Too much has been lost as a consequence of the circumstances (lost cargos, continuing diseases, etc.), which makes it impossible for him to do his job. So for the time being his friend should

continue sending letters to Batavia. Meanwhile many new plants have been planted in boxes in the botanical garden at Buitenzorg. These will be sent to Van Marum by autumn. During the trip he is still making, he has already collected many seeds.

Recently he received a letter from Professor Horneman (Copenhagen), giving many botanical novelties. He is very pleased by the fact that *Flora* is still so very much honoured and appreciated. He hopes to have the opportunity 'of making a sacrifice to Flora'. From Horneman's letter he has also learned that the *Species Plantarum*, written by Römer and Schultze, has been published meanwhile. Horneman has praised De Candolle's *Syst. Regn. a vegetabilis*; He sincerely regrets not being in the possession of these books. The journal of his new trip will give many botanical observations. Although the efforts made by Wildeman and Persoon have already yielded many new plant species, the woodlands of Java are still hiding many more unknown species. Meanwhile he knows at least three different species of the genus *Marumia* – *M. cauliflora*, *M. muricata* and *M. montana*.

He wants to end this letter by informing his friend about his present journey. Probably the first of his travel reports, published in the *Bataviaasche Courant*, issued on 5 June 1819 – will have been copied by the Dutch newspapers meanwhile. He has also suffered another loss – the loss of the cargo aboard the 'Ida Aleyda'. For more detailed travel reports he points at his last letter, dated 18 June, which has been sent from Lamadjang (or from Banjaran), in which he has enunciated in detail the continuation of his journey through the wonderful region of Tjisonndrie and of the climbing of the 6.500 feet high 'Patocha' mountain with its immense sulphur lake on top. He would like to send his friend a copy of the map, which he has drawn of the Preanger regencies, in order to enable his friend to understand this travel journal better. This region is by far the most beautiful region of Java and also by far the richest in natural resources. This rather exact map has been drawn by the talented Mr. Beetjes, who needed almost four years for its completion. Anyhow, it is much more accurate than the map, published in the work of Raffles.

After having completed his last letter, he has climbed and examined the highest peaks of the Banjaran region. They are a part of a chain of mountains, consisting of basalt. The highest of its three peaks – the 'Tiloe' – is about 6.000 feet high. The various slopes are largely covered by a thick layer of

humus. Unfortunately most of the trees growing there do not bear any flowers, or their tops are far too high (sometimes several hundreds of feet high). Of course many naturalists still have to visit this region in order to unveil its many secrets and to describe and determine the many species living there secretly. For example, at an average altitude of about 5.000 to 6.000 feet he has found a tree – it must be a Cupressus or perhaps a Juniperus species – with thick straight stems of really excellent wood. He has not been able to discover its flowers. Many beautiful species, among others of Laurus and Rhododendron, are growing on the ‘Tiloe’ mountain. He will try to send his friend also a beautiful specimen of Cyripedium, of which he has already sent several specimens to Buitenzorg. The ‘Malabar’ mountains, about 400 feet higher than the ‘Tiloe’, are even of a much more remarkable nature, its rocks are so iron-rich, that the compass needle starts to make the most peculiar movements. The slopes of these mountains have turned out to be the growing place of several still unknown oak species. These trees can provide excellent wood for carpenters. Besides Magnolia pumila he has discovered another Magnolia species. The smell of its flowers is already distinguishable at a rather long distance. The mountainous climate is very agreeable. After sunset the temperature is so low that most of the time a fire has to be lit. On the ‘Patocha’ mountain the average temperature is about 40 to 41°F. The climate of this region is so very agreeable that he reluctantly remembers the climate of Batavia. Because of this climate, the vegetation is rather similar to that in Europe. Genera like Valeriana, Ranunculus, Bellis, Spiraea, Hydrangea, Viola and many other well-known genera are easy to be found here, although most of their species are new. On these slopes he has also found shrubs, belonging to the Rubiaceae, which are spreading an awful smell. Because of the presence of the thorny twigs and stems of the rattan plants the woods are completely inaccessible. One has always to cut his path through these woods. So several servants are going in front in order to cut their way, using klewangs. Most of the time the stems of these climbers – about one arm across and several hundreds of feet long, are hanging down from the trees like giant cables. The woods of this ‘Malabar’ region are the home of many rhinoceroses. They are always fleeing immediately, finding their way on the steep slopes. Once he was in the middle of a plain, covered with Saccharum arundinaceum, when quite suddenly a huge rhinoceros appeared very close to him. The hunter who accompanied him, would have

shot the animal if his rifle would not have exploded, because of its too heavy charge. Reinwardt was disappointed and he still wants to acquire a beautiful specimen. He knows that these animals are often found in the neighbourhood of hot springs. He has also found their signs and excrements on the top of the 'Goenoeng Goentoer', the highest volcano of the region. From the 'Malabar' mountains he has descended a river-bed in a southward direction, from its origin until it ended into the sea. So it falls about 5.000 feet. There are several huge waterfalls. This river finds its origin in a broad and magnificent valley surrounded by mountain tops. The grasslands in the old craters are making this region look like an English country estate. They are the homeland of herds of rhinoceroses and wild bovine animals. From the top of the 'Sambong' he enjoyed a splendid view on these plains. Furthermore he visited the 'Papandayang'. In 1772, at the occasion of an enormous eruption, a part of its slope as well as 2.600 people living there, were lost, together with their belongings. He feels the need to examine this mountain more in detail. From this region they have continued their journey to the 'Goenoeng Goentoer'. About 40 to 50 people were needed to cut a track. He has chosen this trail not only in order to investigate the central part of this wilderness, but also to attain the crater in the easiest way. Undoubtedly Van Marum will remember that he has already climbed that volcano shortly after its eruption. However, this second track turned out to be extremely difficult to go. The trees of a higher part of the woods had completely died. Only a few parasitic plants were still living on the barren, black and carbonized stems, while a few climbers had reached the higher parts of these trees. The only exception was a tree fern, spreading its beautiful crown above the other trees, although its stem was almost completely covered with a layer of ashes. It had only survived because its cylinder, hard as iron, had protected its transport system. Their walk through the thick layer of lava ashes turned out to be extremely exhausting. Right in the middle of this carbonized wood he discovered an enormous side-crater, through which steam and sulphurous vapours were breathed forcedly and boiling mud was blown out, under a terrible thunder like noise. The boiling and breathing soil was extremely hot. Nevertheless, rhinoceroses and wild cows had left their marks behind.

He was very surprised that *Cyperus* and *Vaccinium* species were growing here. The company built its camp on the top of the mountain, quite close to

the main crater, which was easy to attain. They only stayed there for a couple of days, because of the cold and foggy air, which was also rich of sulphurous vapours and because it was difficult to get enough drinking water. It had to be carried up to the top, from about 4.000 feet below. This time it appeared to be possible to determine the exact altitudes.

Thereupon he spends a few words on the crocodile offered by Treffz, which he has sent to Mr. Vollenhoven last year. He has already mentioned this fact in his letter to Van Marum, dated 29 March 1819. Now he adds the decree made by the Governor-General with respect to this affair, as well as the written contract, as it has been agreed with the captain of the transporting vessel. These official documents have to be sent to Temminck. Reinwardt's superior – the Governor-General – is also making a trip through Java. At the occasion of his arrival in Bandung, Reinwardt had to give 'acte de présence' too. So he had to leave the mountains. Within the next few days the Governor-General – after having returned from East Java – will be in Samalang, because of the affair of the educational system. Reinwardt will see him again there. He sincerely hopes that until then he will have the time to complete his physical research. He pities the Governor-General, because his job has definitely not become easier as a consequence of new riots in the Palembang region caused by a prince, who has been irritated and become unreliable as a consequence of machinations.

At the moment he is enjoying good health. More and more he wants to see civilized people. From time to time the members of his travel company have been suffering from various diseases. Payen is making the most beautiful sketches, on which he will base his future drawings and paintings. Bik is working slower than Payen does. He is difficult to handle and often ill-tempered. However the few drawings made by him, are real master-pieces. Kent is doing rather well. Meanwhile enormous collections of birds, insects and dried plants have been accumulated. He prays God that they will not get lost this time. If in Van Marum's view a 'Herbarium Javanicum' is interesting for the 'Teylers Museum', he might be able to redirect his collection activities. In his letter sent to Holland with the 'Admiraal Evertsen', he has allowed his friend to give 400 guilders to Mrs. Kent (as a financial relief for the year 1819). Now he repeats this suggestion.

Landré junior is also a member of the travel company. To his regret, Blume – his deputy – is still not of great help to him. He does not speak or understand

a word of Dutch. So his notes are still of no use. Until now Blume is not able to replace Van der Vinne, his secretary. He is really missing an intelligent man, who is able to write most of the official documents for him.

By sending this extreme long letter he has proved – in his own view – that lack of time and lack of opportunity have been the only reasons why he had to send short letters now and then. He hopes that his friend is willing to read the most interesting parts of it in the presence of De Vries, Van Lennep and the other friends. He wishes him, Mrs. Van Marum and Betje all the best. Because this letter is so long, he has enclosed the letters to his sisters and to Caroline in the one addressed to De Vries. Probably the two letters will be sent with the same ship.

[NA-RANH 529-20b; ZOC, COB, BOT, ANA, GEO, MIN, PHY, ART]

**366. C.L. Blume (Buitenzorg) to C.G.C. Reinwardt (Batavia); 18 August 1819**

Blume spends most of the contents of this letter on discussing a number of plant species, among others on *Reinwardtia laurifolia*. He asks his teacher and ‘Wohltäter’ to inform him in the short run about the correctness of his determinations. He hopes to receive a positive answer, although he fears the opposite, because he has a rather poor knowledge of botany. He even supposes that the species, described by him, is a genus of a still unknown family, because of the deviant shape of its flowers. In his own view he has been of invaluable service to Reinwardt, with respect to botany. The results of these efforts will result in an abiding monument to his superior (the naming of a new plant family). [The original letter is written in German].

[UBL BPL 2425; BOT]

**367. Fr.A. Treffz (Makassar) to C.G.C. Reinwardt (Buitenzorg); 23 August 1819**

Treffz reminds his principal of having sent him a letter on 16 August 1819 (n<sup>o</sup> 12), informing him that the ‘Zwaluw’ has to stay in Makassar for the time being, because of the riots. On 21 August 1819 colonel La Fontaine went to war against Aboe Backor (or ‘Krain Dada’), with a force of 200 men. Aboe Backor had entrenched himself with 2.000 men in the native village of Beba, close to the sea, about three nautical miles from Makassar. The battle started in the morning, by 7 o’clock. Of the native warriors 58 men, among

others Aboe Backor himself and two other chiefs, lost their lives, while the troops of La Fontaine lost five soldiers, including lieutenant Clarison of the 23<sup>rd</sup> battalion. Besides 16 people were wounded, among others colonel La Fontaine himself, captain inspector Lucasses and lieutenant Van Dooren. The rest of the troops of the enemy – 1.492 men – were killed off by the army of the king of Goa and Sedendria, who had participated in the battle.

After that event the ‘Zwaluw’ set sail and the journey was continued along the coast. The lack of wind made it impossible to participate in the battle and to lend a helping hand. The dead and wounded were taken aboard the ‘Zwaluw’. The king of Goa has sent the heads of the 13 chiefs to the governor of Makassar. Treffz was offered the head of Aboe Backor. As soon as possible he will send this skull on to Reinwardt. Two other heads have been given to Dr. Godefroi (of the 23<sup>rd</sup> battalion) as a present. In due time, Godefroi will send these heads to the ‘Museum’. Treffz needs some time to write a precise report on the battle. Because of these disturbances he had to postpone a visit to Maros until now. The governor is afraid of living outside the town. Treffz was forced to rent a house. Colonel Devall and his men are in an excellent condition. There is only one soldier in the hospital, who is severely ill.

[NA 2-21.204(4); ANA, MED]

**368. C.L. Blume (Buitenzorg) to C.G.C. Reinwardt (Batavia); 29 August 1819**

Blume emphasizes that at the moment he occupies himself daily with the ventilation and cleaning of the various rooms of the building in which Reinwardt’s various collections and goods are stored. This building has been severely damaged. [The original letter is written in German].

[UBL BPL 2425; COB, ZOC, BOT]

**369. C.L. Blume (Buitenzorg) to C.G.C. Reinwardt (Batavia); 30 August 1819**

Blume gives an account of the way in which he has spent the money put at his disposal. A collection of objects of natural history, brought together in the region of Makassar and having been sent to Buitenzorg, is preserved in the entrepôt. [The original letter is written in German].

[UBL BPL 2425; ZOC, COB]

**370. Fr.A. Treffz (Makassar) to C.G.C. Reinwardt (Buitenzorg); 4 September 1819**

Treffz refers to the last letter sent to Reinwardt (dated 23 August 1819), in which he has reported about the battle with the rebels of the coastal regions of Makassar. Meanwhile he has started to prepare and clean the skulls of Aboe Backor and three other chiefs. Colonel La Fontaine has given him Aboe Backkar's weapons, his coat of mail and his banner, on the condition that he would promise to send these objects to the Governor-General. He has decided to send them to Batavia, together with the skulls. Meanwhile the peace has returned to the Makassar region. Everybody is eager to set sail and to leave this island now, but they will have to wait until they are relieved by other warships. Because his attempts to collect objects of natural history have not been very fruitful, he wants to leave as soon as possible. He asks to send Blume and a draughtsman to Makassar. Meanwhile the wounded in the hospital are recovering. Dr. Godefroi is doing his duty. He deserves the esteem of his principals. The two Pararangs are still alive and so does the Timbaria (or Coescos), who is eating from his hand. He is still waiting for the right opportunity to send a collection of objects to Batavia. As soon as he has completed his observations of the Makassar region, he will send his report, together with his record of the riots (the 'Story of Aboe Backar'). Today he also sends a 'Padoewalkang' to lieutenant Buerlin in Surabaya, together with two 'Farees' (large monkeys of Celebes) and two civets. He asks to send these animals to Reinwardt.

[NA 2-21.204(4); ZOC, COB, MED]

**371. C.L. Blume (Tegal) to C.G.C. Reinwardt (Batavia); 4 and 9 September 1819**

Through this letter Blume informs his superior about several botanical facts. He also informs him about the state of affairs with respect to the Hortus of Buitenzorg. At the moment it is impossible for him to reside there, because most of the rooms are needed for other purposes. [The original letter is written in German].

[UBL BPL 2425; BOT, COB]

**372. Resident of Surabaya (Surabaya) to C.G.C. Reinwardt (Batavia); 5 September 1819**

The resident of Surabaya acknowledges the receipt of Reinwardt's letter, dated 28 August 1819 (n° 467). The enclosed letters will be sent on as soon as possible. Immediately after their arrival from Makassar, the crates have been sent on to Batavia with the brig 'Rembang Harmonie'.

[NA 2-21.204(4); ZOC, COB, ANA]

**373. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 8 and 10 September 1819**

In his letter n° 33 (dated 15 and 19 August 1819), Van Marum has informed his friend already that he has been very worried about the fate of the 'Admiraal Evertsen' and especially about its cargo. Not only Van Marum, but also many others – experienced in the field of naval commerce – have been worrying about its possible overloading, as has been the case with the 'Prins Frederik' and several other vessels. For that same reason the 'Prins Frederik' has sustained damage on a coral reef. Therefore he sincerely hopes that Reinwardt is not intending to book passage on a warship carrying cargo to Holland. It will be much safer for him to board on a merchant vessel. During the last five years only one merchant vessel, the 'Ida Aleyda', has been wrecked on its return passage, while a much larger number of warships, carrying cargo to Holland, have been wrecked during the same period. However, the loss of the 'Ida Aleyda' has meant a real disaster for him, because it took so many objects of natural history, drawings, etc. to Holland. If he had been the collector, he would have decided to end his collecting activities completely. Nevertheless, there is still a chance of success. It would have been even worse if Reinwardt had to return to Holland within short, in order to resume his post as director of the 'Kabinet van Natuurlijke Historie' (Amsterdam). Therefore an appointment in Leyden seems to be much more preferable for his friend. He refers to the various advantages mentioned in his last letter. Now he has got a well founded hope to see his friend alive again next year. Initially he feared that the Governor-General might succeed in persuading him to stay on Java, until he will return to Holland himself.

In a deleted part of his letter Van Marum emphasizes that he has decided to keep the rare plants, which are actually less suited for his hothouse, for Leyden. He has decided to send the first specimen of each new species,

which he will receive, to Leyden, the second specimen to Amsterdam and the third one to Utrecht.

He has also learned that the 'Prins Frederik' has returned to Holland safe and sound meanwhile, after having been repaired in Cape Town. Today or tomorrow it will arrive in the Roads of Texel. He shall inform Minister Falck about his decision to send plants to Leyden and ask him to order the delivery of the crates and boxes of plants at his address, immediately after the 'Prins Frederik' has arrived. He is convinced that Reinwardt will not regret his decision to leave for Leyden. In this way he will be freed from Calkoen and D'Ailly. Furthermore Reinwardt will easily find out that Temminck has been very selfish when he offered himself for the direction of the 'Kabinet' and for the preservation of its collections. Van Marum is very pleased by the way D'Ailly junior is working; he is very zealous.

Maybe Falck is planning to unite the collections of natural history of Amsterdam and Leyden. Reinwardt may like that idea and so does he. Yesterday he has received four boxes of plants from the 'Maria Reijgersbergen', which had anchored in the Roads of Texel, already more than six weeks ago. To his surprise most of the plants were still in a rather good condition. Three specimens of *Marumia cauliflora* appeared to be still alive and of *Ficus toxicara* only one specimen was left. All in all, he has received ten living plants of that shipment. It will be up to Reinwardt to decide about their future, once he has been appointed professor of botany in Leyden. So he will send the majority of the plants, received by him, to Leyden and a smaller number to Amsterdam. If the plants sent to Holland with the 'Prins Frederik' will turn out to be alive he will act in the same way. He will keep the most beautiful, exotic and well developed plants, insofar they are important some how. He does not know if it will be sensible to send Reinwardt more letters from now on, because he might have been asked to return to Holland earlier. Anyhow he will try to get more information from Minister Falck.

On 10 September 1819 he has received the letter sent by Reinwardt during his trip, the one which he has so eagerly been waiting for. Fortunately his friend has enjoyed good health. Much to his relief Reinwardt has meanwhile received the payment for his house (10.000 guilders). The same goes for his decision to buy a bill of exchange for that money and to send it to Holland. Van Marum is still ignorant about the outcome of the sale of the rice sent

to Holland. Until now Reinwardt's so-called friend Calkoen has refused to inform him and De Vries about the result of this transaction. He expects Calkoen to give a rude and impertinent answer.

[NA-RANH 529-20b; ZOC, COB, BOT, AGR; See also: UBL BPL 2922: identical letter]

**374. C.G.C. Reinwardt (Trogong, Regency of Bandung, Java) to M. van Marum (Haarlem); 20 September 1819**

After having sent his last letter, dated 16 August 1819, Reinwardt has received Van Marum's letters n° 26 (duplicate), 28 (duplicate), 27 (original) and 28 (original). This time he will send a brief answer to the last one. Fortunately Van Marum is still enjoying good health. Regrettably Miss Betje is not well. He is surprised that the letters sent with the 'Ida Aleyda' did not arrive in Holland until now, because he knows that the mail sent with that ship has been saved. Van Marum should have paid the bill sent by Sulpke, inasmuch it concerns the books ordered by him: the *Institut. Med.* (by Sprengel) and the *Berlijner Magazijn*. He is very happy to know that his friend is pleased by the reception of his report on the genus *Marumia*. As a matter of fact he would like to express even more explicitly his feelings of attachment towards him. On the other hand he is irritated in a certain way about Van Marum's criticism about the way the name of the genus *Marumia* has been conceived. In his view he has correctly followed the rules of botanical nomenclature, or did he not? Anyhow Van Marum's proposition to correct the name of the genus will not be accepted by the other botanists. Maybe a few specimens of various species of *Marumia* will be taken to Holland by the vessels, which have set sail together with the 'Admiraal Evertsen' and which have not been wrecked. Added to Van Marum's letter he has received the message from the Calkoen brothers about the unfortunate issue of the rice transaction. He wants to be informed in detail. He has decided not to pay for the freight of the part of the cargo which did not arrive in Holland. The merchants Sieberg and Gildenhuis are also responsible, because he was not in Batavia at the decisive moment. In the future he will keep far away from mercantile speculations. From the letter sent to him by Schimmelpenninck & Kruimel he has understood that they have received the bill of exchange. Meanwhile it will have been accepted.

It would be better if the relationship between Caroline and the roman-catholic young man would come to an end, although he has written her recently that he would not mind if he is an obedient and zealous man.

He will accept every correction of the journal of his trip to the 'Goenoeng Goentoer'. The public must learn that he dares to take risks in order to be able to continue his scientific research. He enjoys good health since he has less office work to do. Yesterday he has sent a basket of seeds, collected during his journey, to Batavia. He adds an inventory. As soon as possible these seeds will be sent on to Haarlem. Probably not all the seeds will germinate. Even in Buitenzorg this does not happen. Immediately after their arrival the tree seeds have to be sawn. If Van Marum does not want to keep the whole collection for himself he is allowed to send a part of it to Professor Vrolik (Amsterdam). He should underline that this present has been given by Reinwardt. Vrolik has to repay his part of the freight to Van Marum. Because Kent has brought together a part of this collection Reinwardt cannot guarantee the correctness of all the determinations. He has also added the triplicate of the bill of exchange, worth 10.000 guilders. He has recently sent the original. Probably Van Marum will have received it meanwhile. Unfortunately he has not been able yet to add a life certificate, because he had to travel to Tjanjoer, the capital of this residence. Why has the Minister not decided to order the payment of his salary without having received this document in advance? Why is he not pleased with the reception of another official document – a concise report of the activities recently carried out by him on Java? This document should do. It proves that he is still alive. In Reinwardt's view the National Audit Office is insisting on that procedure. Meanwhile he has been forced to stay in this residence for about a month, in order to complete several documents. Now he is happy that he will have the opportunity to continue his journey within the next few days. The travel company has received two rhinoceroses, which were shot in the neighbourhood. Unfortunately the skins have been damaged too much, but the skeleton of one of these animals will be a valuable addition to the collection. He has succeeded in preserving the still very small foetus of one of these animals in alcohol. Furthermore he has written two travel reports. The first one was sent directly to Van Marum, the second one has been published in the *Bataviaasche Courant*, before it was sent to Haarlem. The letter, dated 16 August 1819, gives a full and extensive account of his

experiences and observations and he hopes that it will arrive in Haarlem. He again asks to continue the trimestrial payments to his sisters (in terms of 200 guilders), as well as to reimburse the bills of the doctors and the pharmacist. He reminds having sent the duplicate of the bill of exchange, the messages, which have already been published in the *Bataviaasche Courant* and a couple of letters (addressed to De Vries, Calkoen, Temminck, Caroline and several others).

From a letter received from Landré senior he has learned that the old Mrs. Luckemeyer, a widow, is living in reduced circumstances. Because he owes much to that blind and at least 85 years old lady, he really regrets her situation. So he asks Van Marum to help her. He has asked his niece Caroline to do the same. He has already authorized her to make the necessary expenses, up to the sum of 100 guilders, which should be advanced by Van Marum. If some money will be left, she may keep it for herself, because at the moment her parents are also in rather needy conditions. Van Marum should treat her as if she is his own daughter. He will not discuss Van Marum's payments in that respect, they will be accepted on before hand. He will be grateful for Van Marum's efforts. The same goes for the expenses in behalf of Mrs. Luckemeyer. He presumes that Elout, who has survived the ship-wreck, will have returned safely to Holland meanwhile and that he will already have informed his friend. He ends this letter by expressing his sincere wish with respect to Van Marum's well-being and he adds his greetings to Mrs. Van Marum and Betje.

[NA-RANH 529-20b; BOT, ZOC, COB, GEO, MIN]

**375. Fr.A.Treffz (Makassar) to C.G.C. Reinwardt (Batavia); 23 September 1819**

While still being in Makassar Treffz informs his principal that he has sent him two specimens of the largest monkey species living on Borneo ("Taries"), together with two civets and an inventory of the objects, which are waiting for being sent to Batavia. These objects will not be sent until the preparation of the four skulls has been completed. Through the kindness of the governor Servatius he has received a small animal (a prosimian, or half-ape). Meanwhile he has four living specimens in his possession, as well as one, preserved in a jar of liquor. It has the size of a rat. Its hands, feet and tail are hairless, while the rest of the body is covered with a thick coat. Its head

is very similar to that of a 'Koekang' (sloth). It has a wide tongue and large, round eyeballs, with black irises. Its teeth are needle sharp. The large hairless ears can be retracted completely. The fingers of the hands are equipped with flattened round nails, except for the second and third finger, which are provided with sharp claws. The toes are twice as long as the fingers. Half of the tail is hairless, the rest is covered with widespread hairs. Its food consists of locusts. It frolics like a rabbit. Treffz has also succeeded in getting a living couscous, together with its young.

Eight days ago he has lost his friend, lieutenant colonel Sallat. He died on 16 September at half past 4. Being on the mend again, he has decided to accompany the resident of Maros, who is visiting Makassar at the moment, to his residence and to investigate the mountains of Cesasin (?). The governor of Makassar is doing his best to organize a good biography of Aboe Backkar. It will be illuminated by a depiction of his head and of the heads of a few other rebels. Once again he repeats his request to send Blume and the draughtsman as soon as possible and to allow him to leave Makassar. If the delay drags on they will not be able to sail around Celebes and they will have to set course to Ambon directly. Everything is fine aboard the 'Zwaluw'.

[NA 2-21.204(4); ZOC, COB, ANA, MED, ART]

**376. C.L. Blume (Buitenzorg) to C.G.C. Reinwardt (Batavia); 24 September 1819**

Blume reports that he has been informed that a certain captain Ihnkes has meanwhile arrived in the harbour of Mauritius, that a certain Dr. Burke has sent a collection of seeds and that for the time being Mr. Bruninga (Banninga) will not leave, because Mr. Asmus is still occupying him. [The original letter is written in German]

[UBL BPL 2425; BOT]

**377. C.G.C. Reinwardt (Buitenzorg) to M. van Marum (Haarlem); end of September 1819**

Reinwardt sends his friend an inventory of every plant species of which he has collected seeds. In his view the list contains 27 new species, described by him.

[NA-RANH 529-20b; BOT, COB]

**378. C.L. Blume (Ti Rappe?) to C.G.C. Reinwardt (Batavia?); 6 October 1819**

Blume informs his principal that his collection is growing every day. This collection must absolutely remain in the possession of the government. [The original letter is written in German].

[UBL BPL 2425; ZOC, COB]

**379. C.L. Blume (Buitenzorg) to C.G.C. Reinwardt (Batavia); 8 October 1819**

Blume discusses the contents of several letters. He adds the letter, Mr. Burke has sent recently, as well as the documents relative to military affairs, Reinwardt has asked for. At Reinwardt's request he has also informed Mr. Peitsch about Reinwardt's opinion relative to the salary to be paid to Mr. Treffz. Furthermore he has received a couple of books on Chinese linguistics and grammar. He wants to stress that already prior to this (as a matter of fact in July 1819) he had received several documents relative to the vaccine and that he had thought that these documents were already present in every military hospital. He ends his letter by giving his advice with respect to the improvement of the education of surgeons and chirurgiae doctores in the Netherlands. Mr. Servatius has brought some cattle, which have been inoculated in Palembang (on the island of Cheribon). [The original letter is written in German].

[UBL BPL 2425; MED]

**380. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 8 October 1819**

Shortly after having sent his 33<sup>rd</sup> letter to his friend he has contacted Minister Falck in order to learn if Reinwardt has decided to return to Holland soon, yes or no, among others in order to know how long he has to continue his correspondence with Java. He also wanted to know if Reinwardt had already been invited to fill Brugmans's vacancy. On 16 September Falck has informed him that immediately after the sudden death of Brugmans the Governor-General has been asked to inform Reinwardt about his near return to Holland, although he had not been called officially yet. Falck has told him that he (Van Marum) could go on sending letters to Batavia for the next couple of months. There is not much news. The warship 'Prins

Frederik', which had left the Cape on 20 June 1819, has disappeared with its crew and cargo, without leaving any sign of life. This might mean that again a collection of objects of natural history has been lost, the third shipment sent by Reinwardt. In Van Marum's view his friend should not return to Holland aboard a warship! He does not know yet if De Vries has already seen Calkoen about the problems with respect to the sale of the rice, sent to Holland. He adds two letters, destined for Mr. Van Lee.

In a last remark he informs his friend that he has been informed that on 30 September the 'Prins Frederik', heavily damaged, has reached a port in Cornwall and that two other vessels have been sent there in order to assist that ship.

[NA-RANH 529-20b; ZOC, COB; See also: UBL BPL 2922: identical letter]

**381. Fr.A. Treffz (Makassar) to C.G.C. Reinwardt (Batavia); 8 October 1819**

Treffz reports on the plant species, which he has observed and collected during his trip to the eastern parts of the Dutch East Indian archipelago. He also informs his principal about the 'Parang parang', the Indigo, coffee, the 'Parrarang' and about the 'Marikis' (the natives of New-Holland), who are often visiting Makassar.

[NA 2-21.204(4); BOT, ZOC, COB, ANA, AGR]

**382. C.L. Blume (Buitenzorg) to C.G.C. Reinwardt (Batavia); 12 October 1819**

Blume promises his principal to put himself out to answer Reinwardt's most recent letter. First of all he discusses the position of the surgeons Peitsch and Pijnaker. Furthermore he observes that the snake, caught in Makassar, has arrived meanwhile. In his view it must be a specimen of *Python javanicus*. [The original letter is written in German].

[UBL BPL 2425; MED, ZOC, COB]

**383. Fr.A. Treffz (Makassar) to C.G.C. Reinwardt (Batavia); 14 October 1819**

On 1 October 1819 Treffz has received Reinwardt's letter, dated 26 August 1819 (n° 464). This was the first letter received by him through the regency

of Bandung. Because the 'Zwaluw' will have to stay in the roads of Makassar for a considerable time, until further orders will have been received from Batavia, he will probably be able to inform Reinwardt more in detail about the distinction between the three species of crocodiles, living in this region, among others by sending him the heads (skulls) of these animals as well as other parts of their bodies. Furthermore he promises to send various preparations of the Pararang, wanted by Reinwardt. The English brig (captain Brodie) will take a couple of objects which will be delivered at the office of the manager of the Colonial entrepôts of Batavia. The heads, skeletonised by him – among others the one that once belonged to Aboe Backkar – turned out to be less beautiful than he had hoped for, because they had been riddled by bullets. The governor of Makassar – Servatius – will send an extensive report about the leader of the rebels. The head of the commander-in-chief of Backkar's army – who was more than 90 years of age when he died – was completely toothless. The skull from New-Holland however has become very beautiful. There is no doubt that Reinwardt will be pleased by receiving this object. Furthermore he offers the reports of the observations made by him on Makassar. He has also collected several 'zeegewassen' (corals). He promises to add these objects to one of the next shipments. Again he repeats his request to send Blume and a draughtsman, so that they can join the party for the rest of the journey. He is already familiar with the name of the young artist – Hoff. If the 'Zwaluw' has to stay in Makassar for a while, they could still arrive in time. The butterflies he sends this time, have not been prepared in the right way, because the travellers have been caught in heavy rains, while they passed through the woods of Telle. Maybe they can only serve to make Reinwardt familiar with the species living in this region. He has recommenced to collect butterflies [The third leave of this letter gives an inventory of the species sent by him.]

[NA 2-21.204(4); ZOC, COB, ANA, ART]

**384. J.B. Benoît (Banjermassing) to C.G.C. Reinwardt (Batavia); 18 October 1819**

Benoît – resident of Banjermassing – informs Reinwardt that within the next eight to ten days he will receive a living deer ('Water-hartebeest'), a well-trained and very obedient animal, as well as a couple of small green parrots, destined for Mrs. Six. It is impossible to teach these birds how to

curse. They will be sent to Batavia aboard the cutter 'Pamela'. He will try to add a small red haired monkey for Reinwardt and another one of the same species for the 'Académie des Sciences, des Lettres et des Beaux-Arts' of Ghent, which he worships. He has the same feelings, and even stronger, for Baron de la Fouille de Huisse, who has rendered him such good service. He adds a few farewell words and asks him to convey his best wishes to Her Ladyship and to His Excellence the Governor-General.

[NA 2-21.204(4); ZOC, COB]

**385. General director of Finances (Batavia) to C.G.C. Reinwardt (Batavia); 26 October 1819**

As a result of two letters received from the National Audit Office – one dated 25 October 1819 (n° 255) and the other being dated 18 October 1819 (n° 17) – Reinwardt is informed that the bill, received from Mr. Lutjens (for the deliverance of eight rolls of canvas) and another one from a Chinese merchant (for the deliverance of several goods), will be reimbursed to Reinwardt for a total of 552 guilders, according to the decision made by the 'Council of Finance'. Furthermore a bill of 229 guilders and 3 pennies, already paid by Treffz (according to his letter, dated 8 October 1819) for the purchase of various utensils, will be reimbursed directly to Treffz, although the 'Council of Finance' did object to the way this bill has been sent in by Treffz.

[NA 2-21.204(4)]

**386. J.B. Benoît (Satus/Banjermassing?) to C.G.C. Reinwardt (Batavia); 1 November 1819**

Benoît has hardly had the time to acknowledge the receipt of Reinwardt's letter, dated 27 August 1819, through a proper letter of thanks. His constantly growing occupation, the absence of his brother Charles, the illness of Mr. Gronovius (very unpleasant), the quarrels between the officers, the disappointment about the qualities of the new servant Subandhar and finally the many ways in which the Sultan is obstructing every good initiative from the side of the government, the hawkish atmosphere between the Daijaks and the Bumpanes, all these things are infringing his personal freedom. So he has become a prisoner of the situation. He fears to loose his health. This letter will be sent to Reinwardt with the cutter 'Pamela'. It will also

bring 4 planks of the Sassafras tree (iron-wood), which have to be given to the Governor-General as a present. He has paid 96 guilders for these planks. He has also added the head of a Babyroussa from the Moluccas, two monkeys from the Daijak region, a koekan (quadrupede animal), two birds of prey and a Buntan Jaarvogel (?). Last night a second specimen has been lost. These acquisitions have cost him 105 guilders in total. Furthermore he wants to offer to Her Ladyship Mrs. Van der Capellen six white cockatoos and six loeries from the Moluccas. Sergeant Paulus, a Moluccan, will deliver these animals. They have been trained well and deserve the attention of the Governor-General. Furthermore he will send a political commission to the Daijaks, in order to investigate the causes of the preparations of a war, feared by the Sultan. Benoît wants to hamper these forces, not fully neutralize them. Besides he has given the members of the commission some money in order to buy a few curiosities from the Daijaks for Reinwardt. He has also been able to acquire a beautiful collection of needlework in Banjermassing, also destined for Mrs. Van der Capellen.

[NA 2-21.204(4); ZOC, COB, ART, ETN]

**387. ?? De Vink (Batavia) to C.G.C. Reinwardt (Batavia); 1 November 1819**

De Vink sends Reinwardt a letter, enclosing Benoît's letter, dated 1 November 1819, which has been sent from Banjermassing to Samarang by boat. Because of the season it has not been possible until now, to send these letters directly to Batavia. Sergeant Paulus has stayed in Samarang and has given the letter to the local commanding officer, who has sent it on to him – De Vink. De Vink does not mention the living animals discussed in Benoît's letter. It took the vessel 36 days to arrive in Semarang. Most probably most of the animals have died.

[NA 2-21.204(4); ZOC, COB]

**388. Fr.A. Treffz (Makassar) to C.G.C. Reinwardt (Batavia); 12 November 1819**

On 8 November 1819 Treffz has had the pleasure of sending a couple of boxes and parcels to Reinwardt. Mr. Reynst had promised to deliver these personally. Now he informs him that a Chinese 'padoewakang' is leaving for Surabaya today. Besides two stuffed crocodiles are prepared for being sent at

the next occasion. One of the crocodiles is 5 feet long, the other one is 6 feet. He is convinced that Reinwardt will appreciate these gifts. Impatiently they are all waiting for their changing. They have finished collecting. Besides the rainy season has begun, which impedes their job very much. Reinwardt should – if possible – fulfil his dearest wish and send Blume and Hoff to Makassar. Reinwardt could allow them to leave directly for Ambon. Treffz wants to receive further instructions now. The situation aboard the ‘Zwaluw’ is still very good and everyone enjoys good health. He did receive a message from the governor Kruithoff of Ambon, who regrets that Treffz did not arrive on Ambon yet. Finally he gives a list of the goods sent with Reinst to Batavia.

[NA 2-21.204(4); ZOC, COB]

**389. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 26 November 1819**

Reinwardt is complaining about the fact that it has been almost two months since he did answer Van Marum’s letter n<sup>o</sup> 29. Since then he did not receive any letter, nor did he answer any, because he has been travelling constantly. He did not have the opportunity to send a life certificate. Since he has returned to Batavia it is possible to send letters again. So he does. He also adds a letter from Mr. Keer to his sister, as well as the quadruplet of the bill of exchange, worth 10.000 guilders. Previous copies of this bill have been added to the letters sent by him on 18 June, 16 August and 20 September 1819. He hopes that Van Marum will receive these documents in good order and that he and Mrs. Van Marum are fine. He expresses his sincere wishes with respect to the recovery of Betje. Furthermore he has reported from Trogong that he had to stay there for a while and that it was provisionally impossible for him to continue his scientific journey, because he had a lot of office work to do.

On 14 October he has left Trogong and continued his journey to Samarang, where he was expected to attend the visit, paid by the Governor-General to that town, especially because of the military school, which has been established there. About a week ago he returned to Buitenzorg in order to prepare the collection of objects of natural history for shipment to Holland. Next to that he will set out on another journey. He has decided to send objects of natural history to the ‘Kabinet’ (Amsterdam) as well as living

plants to his friend and to the botanical gardens of the various universities. He reminds that he has added a collection of seeds to his last letter. Within the next few days his friend will again receive a parcel from Buitenzorg. It will be sent with the first vessel to set sail. He is not sure about the quality of the seeds at the time of their arrival in Holland, since many seeds will lose their germinative power after a certain time, at least so it has appeared from a growing experiment in the hortus of Buitenzorg with the seeds collected during his last journey. Therefore it would be better to send living plants. Unfortunately the ones, which are growing in the hortus of Buitenzorg, are suffering considerably from the heat and drought. Everyday his fear is growing that only a minority of the living plants sent to Holland aboard three different vessels, will arrive in a rather good condition. He hopes that his friend has already seen Elout. Meanwhile he (Reinwardt) has received two more letters from Elout. One has been sent from Diego Garcia, the other from Mauritius. Furthermore he has had the opportunity to read the report about his journey, among others about his visit to the 'Goenoeng Goentoer', which has been published in one of the newspapers of Haarlem, thanks to Van Marum's initiative. He regrets that he had to read a nasty printing failure. The altitude of the mountain has been given as 3.000 feet in stead of 5.000 feet, or rather almost 6.000 feet, as he has discovered later on, thanks to physical measurements!

Elout has also informed him that a couple of botanical drawings and a painting made by Payen have been sent to Holland with another vessel, which is sailing from Mauritius to Holland, because he feared to be hampered by custom problems. Fortunately Mr. De Hoogh has delivered the extensive travel report at Van Marum's. Reinwardt fears that there will not be enough time left for making excellent engravings from the drawings. It might be better to have these engravings made in France. He asks Van Marum's advice. Anyhow the plates seen by him in the description of Java, which has been made by colonel Van den Bosch, are of the worst quality. It is really a disgrace that this work is so very much admired by the various journals. Besides its author has grasped every opportunity to demonstrate his lack of knowledge. His work is really riddled with failures. Last time he had added a copy of the newspaper, in which the report of his roundtrip has been published. Now he adds a description of the continuation of his journey.

Meanwhile Van Marum will have learned that the Dutch government is

still hampered from various sides and that the inconveniences on Java are still going on. So last Saturday the newspaper has given a report of the riots in Palembang (Sumatra). Yesterday he has received the message that Mr. Smissaert has been killed by thieves in the island of Banka. There is no doubt that Van Marum will use this information carefully, in order to show his consideration towards Mrs. Smissaert. From several letters received from the Calkoen brothers, he has understood how badly the rice adventure has ended. A considerable part of the rice has not been sold yet and the quality of what is left is decreasing daily. So in the end he will loose on it. This transaction will be his last mercantile adventure.

During his last voyage he has collected many objects of natural history. Soon he will start wrapping and packaging. He has decided to send this collection in various cargos, in order to prevent its total loss. He has also decided to send one of the two rhinoceros skeletons to the 'Kabinet' (Amsterdam). Although many seeds sent to the hortus of Bogor (Buitenzorg) did not germinate, the garden has become more attractive. Unfortunately the English hortulanus has broken his left thigh bone, after having fallen from his house, about six weeks ago. So he has not been able to work ever since. Because he has not had the opportunity to supervise the collections, which have been kept in Batavia, many objects have been eaten by the white ants meanwhile. Especially a beautiful collection of human skulls, collected from various Indian 'races' (peoples) has suffered considerably. The journey of lieutenant colonel Treffz to the Moluccas is going less successful then expected. Although the disturbances on Makassar had been ended by force soon, the corvette on which he is sailing, has to stay there provisionally.

He ends his letter by adding his hearty greetings, also to Mrs. Van Marum and to Betje and he expresses his unchangeable feelings of warm friendship. In an addendum he observes that the notary public has disappointed him by not sending a new life certificate. Nevertheless he promises to send a copy at the first possible occasion.

[NA-RANH 529-20b; ZOC, COB, BOT, ART, ANA]

**390. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 28 November 1819**

Already for a considerable time now Reinwardt did not receive any letters from his friend, but he does not grumble, because he knows that Van Marum

is very busy. Perhaps several letters are already on their way to Batavia. Of course his friend will not have forgotten him. He has sent his last letter to Amsterdam on 20 August. Besides he did send him newspapers regularly. Now his friend will receive a couple of newspapers again. He will also be informed about his various whereabouts of the last few months. A couple of days ago he returned from Semarang. Although he has made several exhausting journeys, he has kept his good health. He has to end his letter now, because the ship is leaving in a moment. He asks Van Marum to send his greetings on to his many friends and relatives.

[NA-RANH 529-20b]

**391. Governors of Leyden University (Leyden) to C.G.C. Reinwardt (Batavia); 28 November 1819**

The governors of the university congratulate Reinwardt with his appointment as professor. They inform him that they had already been aware of the contents of the royal decree.

[UBL BPL 2425; UNI]

**392. Resident of Surabaya (Surabaya) to C.G.C. Reinwardt (Batavia); 1 December 1819**

The resident of Surabaya has sent several letters to Surabaya with the brig 'Alert'. They have to be delivered at Reinwardt's, together with four crates, containing the shell of a tortoise, a specimen of 'Timbalis', two monkeys and two tortoises from Makassar. He has ordered the captain to take good care of these objects.

[NA 2-21.204(4); ZOC, COB]

**393. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 2 December 1819**

Last Saturday (27 November), Reinwardt has sent a letter in which he has underlined the fact that he constantly enjoys good health. At that occasion he has also given a concise report of his travel adventures. Furthermore he has added a letter destined for the sister of colonel Keer. Because he could not add a life certificate then, he has decided to add triplicates now. He has asked the government to send these documents to Holland with three different vessels. He expresses his feelings of friendship.

[NA-RANH 529-20b]

Batavia den 3 December 1819

Amice friend ! Ik heb U voorl. Saturday  
den 27 November geschreeven, U daarbij myn  
Vantourende uitsaet gemeld, en U een  
Kort versly myner laatste reis met de fousant  
taegelonden, als mede eenen brief ingesloten  
van de. Hra Kol. Keer naar Mervand  
Wastenberg. De attestatie die Vta dusly  
siet lebbende kumen worden ingesloten  
dient alle alleen om U deselve toe te  
senden. Van deelve gaan thans triplicaten  
naer de post; met verzoek om U die  
met drie onderschiedene schepen te doen  
gewenden.

Ik verz. hierby myn hartelyke groete.  
an U, Mervand & Bette

C.G.C. Reinwardt  
Jb

G. ten Cate (Batavia) to C.G.C. Reinwardt (Batavia); 3 December 1819  
(letter 394)

**394. G. ten Cate (Batavia) to C.G.C. Reinwardt (Batavia); 3 December 1819**

Only a part of the cargo sent to Batavia and intended for Reinwardt has arrived. The entrepôt manager Bazel has informed Ten Cate that the brig 'Alert' (captain Brodie) has taken care of its transit. En route this cargo has been reloaded in the brig 'Mary' (captain Go Kang Soey). Now only the crates numbered 7 to 11 have arrived, together with 2 monkeys and five turtles. So less than half of the cargo collected by Treffz has arrived, as appears from the inventory sent to Ten Cate. Anyhow this list is identical to the one written by the resident of Makassar, which is dated 28 November 1819 (n<sup>o</sup> 18). A Timbarus and two turtles are missing. The entrepôt manager will take care of the delivery of the remaining objects and animals at Reinwardt's. The captain of the 'Mary' has stated that he did not receive any other objects.

[NA 2-21.204(4); ZOC, COB]

**395. Manager of the Westside Entrepôt (Batavia) to C.G.C. Reinwardt (Batavia); 4 December 1819 (provisionally)**

The manager of the Westside entrepôt informs Reinwardt that he has just received 4 crates (numbered 7 to 10) and a shell, numbered '11'. Besides Reinwardt will receive 4 living turtles.

[NA 2-21.204(4); ZOC, COB]

**396. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 7 December 1819**

Van Marum informs his friend that – most regrettably – Elout's last visit to him has been so short that it turned out to be impossible to discuss Reinwardt's present destined for the 'Kabinet van Natuurlijke Historie' (Amsterdam), which he has received through Elout: a collection of objects of natural history, as well as two leopards ('tijgerkatten'), one of which has survived, and many other curiosities. Unfortunately it will be impossible to have a living ferocious animal in a collection of natural history, so he has offered this beast to Brugmans, who has the possibility to accommodate it in his menagerie in order to please His Majesty the King. Brugmans has declared that he cannot accept this animal, because of financial reasons. Meanwhile D'Ailly had been informed about its existence and he has offered to lodge the beast in his own menagerie. Van Marum has given it to him

as a present under the same conditions, which had been agreed Brugmans. So it had been decided by the president and three of the directors of the 'Maatschappij'. Furthermore it has been agreed that D'Ailly has to pay a fee of 100 guilders if he refuses to return the cadaver to the 'Maatschappij', immediately after the animal has died. One of the tiger skulls sent to him by Elout is complete and well preserved. Meanwhile this object has been placed in the 'Kabinet van Natuurlijke Historie', next to a lion's skull. The collection of wooden Javanese objects is very exquisite. He has shown these objects to the members, who were present in the meeting. To his regret he did forget to inform Reinwardt about it and to thank him. After having discussed the best way of informing his friend, they have decided to send the reports published in the *Letterbode* (among others in the issue of 29 September 1819) to Batavia. The above mentioned messages have also been published in the *Amsterdamsche Courant* and in the *Haarlemsche Courant*, except for the one published on 29 September. Mr. Enschede had forgotten to have it published. He underlines that he has always sent the reports and messages published with regard to Reinwardt to Batavia. If he would have known on before hand that Elout was going to stay at Mr. Prins's in Haarlem for a couple of days, he would undoubtedly have paid him a visit. Besides he would have had the occasion to spend a few words on the Javanese birds, which Mrs. Elout has ordered to deliver at his address, in order to have these animals stuffed. He has assured her that several of these birds, if stuffed well, will be the jewels of the 'Kabinet van Natuurlijke Historie'. He is especially referring to two specimens of *Promerops incomparabile*, the 'Rode Paradijsvogel' and the 'Blauwe Paradijsvogel'. Actually there is really no one in Holland, who is as experienced in stuffing the dried bird skins as Temminck is. Of course Temminck would be willing to carry out this job in behalf of the 'Kabinet', but only if more specimens are available, in order to combine the best parts or to complete the best preserved one. Mrs. Elout has informed him that her husband has to decide. After Elout will have told him his decision, he will ask Temminck. Anyhow the crate contained ten birds, seven of which were very incomplete. Of course he is willing to send the *Verhandelingen* of the 'Maatschappij' to Elout, insofar these are still available and insofar as they have been lost by the ship wreck. With pleasure he has learned from one of Elout's letters that Reinwardt is still going on collecting all kinds of objects of natural history, in spite of the

loss of the third shipment and that he has not lost his zeal and energy in spite of these miseries. If Reinwardt does not die too soon, if he devotes himself completely to scientific research and if he decides to stay in the Dutch East Indies for some time, one may still expect a lot from this man. On the other hand Van Marum and the other friends are fearing that the unhealthy climate will harm his very sensitive lungs, because he is frequently suffering from bronchial diseases. They even fear that these diseases may finally kill him. Such a sudden event may cause the loss of everything which he has accomplished in the field of the advancement of the useful sciences. Of course the profit of his collecting activities will only be complete if he will be enabled to publish the results of his research and his observations.

Until now he has hardly had the opportunity to do so. Relative to this subject Van Marum also points at the fact that his friend has been offered Brugmans's vacant position and that meanwhile His Majesty has appointed him. His knowledge of chemistry, natural history and botany is highly esteemed in the Netherlands and abroad. There is no scientist in Holland, in whom these three domains of knowledge are so well united. All in all, it is very important for the first Academy of the Kingdom and for the young students, that Reinwardt will fulfil this vacancy as soon as possible. After the death of Brugmans, the recently designed, established and enlarged garden and the largely enriched collection of natural history (resulting from the combination of several cabinets of natural history) is urgently needing a man like Reinwardt. He is really the right man for the further development and accomplishment of Brugmans's schemes. For that reason Van Marum regrets that his friend will not have the opportunity to replace the three collections of natural history, which have been lost as a consequence of the various wrecks. It pleases him that he has made the acquaintance of Mr. Kuhl, who will succeed Reinwardt in the East Indies. He has recently been appointed by His Majesty. Kuhl's deep and general knowledge and enormous zeal justify the belief in a prosperous future of the sciences in the Dutch East Indies. Kuhl will be able to collect many objects of natural history and to prepare these for shipment to Holland. Besides he is much stronger and much younger than Reinwardt, so one may expect that he will be able to carry out observations and to build up collections with less interruptions than Reinwardt has been forced to accept.

He underlines his strong feelings of esteem towards his friend and informs him that he is still unaware of what has happened to the collection of drawings saved from the wrecked ship, as has recently been told by Elout. Van Marum has added the parts of the *Letterbode*, in which the news about Reinwardt has been published.

[NA-RANH HMW 444-97; ART, ZOC, COB]

**397. A.R. Falck (The Hague) to C.G.C. Reinwardt (Batavia); 11 December 1819**

In this official letter of appointment – of which a copy has been sent to Reinwardt – the addressee is informed about the nomination as professor at Leyden University, in the vacancy caused by the death of Prof. Brugmans. Falck stresses that His Majesty will follow this recommendation. He also informs Reinwardt that two young scholars will travel to Java in order to collect natural history specimens. This will soften the effect of Reinwardt's leave.

[UBL BPL 2425; ZOC, COB]

**398. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 13 December 1819**

In his heart Van Marum hopes that Reinwardt will already have left Java, when this letter (his 35<sup>th</sup>) arrives. Undoubtedly his friend will already have received his letter of appointment by Royal Decree, as a professor at Leyden University, as Director of its Botanical Garden and as Director of the Cabinets of Natural History. [Strangely enough Van Marum observes that this appointment dates from early November 1819]. Also on behalf of all his true friends he congratulates him with this appointment. Accepting this position will enable him to keep his vital energy and to further his health, because now he will move to a climate, which is better and healthier for his delicate lungs than the region where he lives now. Leyden offers him a unique chance. He has the possibility to enhance the prestige of its Botanical Garden and of its collections of natural history. The government will most probably subsidize these collections.

He has not received any letters from his friend since the one, dated 29 March 1819, although several families, known to him, have meanwhile received more recent letters from Java. Of course he is aware of the fact that

his friend is making a journey through Java at the moment. Nevertheless he does not understand why he does not feel the need to tell him about his many splendid and wonderful experiences.

Meanwhile the 'Prins Frederik' has made an English harbour, after having sustained severe and irreparable damage. A corvette has been sent there to take the cargo to Holland – insofar as it has not been damaged. Until now he has not heard anything about the collection Reinwardt has sent with the 'Prins Frederik' to Holland (6 crates of living plants). Furthermore he knows that of the 13 crates, containing 78 plants, transported by the 'Admiraal Evertsen', only the ones have been saved which have been put on the enclosed list. He hopes that Reinwardt will have the opportunity to collect a few objects for him, before he will leave Java forever. He is very interested in the most beautiful, exquisite and most important plant species. Elout (The Hague) has asked him to give an enumeration of the reports, which he has been able to get published in the *Letterbode* about the shipments sent from Batavia to Holland. Immediately after having received Reinwardt's report on the 'Hortus Javanicus', published in the *Bataviaasche Courant*, he has given it to the editor of the *Letterbode*. This report proves that it is possible for plants, brought into cultivation in Java, to be cultivated later on in Europe and even to be spread. He reminds Reinwardt that the dimensions of his hot house are moderate and that he would like to receive a few beautiful and rare plants. Because the loss of *Artocarpus* (*Artocarpus*?) has been very disagreeable, he hopes that Reinwardt will have the opportunity to compensate it. From the *Bataviaasche Courant* he has learned that Reinwardt also cultivates Chinese and Bengal plants, as well as plants from New-Holland and from other exotic regions. He is specially interested in what he has seen in the 'Botanical Magazine'. Furthermore he has recently received a letter from Lüttringhausen, which he encloses now. He has been ill since early October, so he has not had the occasion to see De Vries for a considerable time. Meanwhile Calkoen has informed him about the rice transaction. Because he had to pay more than 15.943 guilders and the proceeds was only 14.820 guilders, Reinwardt owes him more than 1.100 guilders now. About 1.100 pounds of rice have not been sold yet. Furthermore the rent of the storage room has to be paid and legal procedures with respect to the freight are still going on. Much to his regret this speculation has ended so unfavourably for Reinwardt. After all Calkoen

has handled Reinwardt's affairs very badly, in the view of De Vries and Van Marum.

[NA-RANH 529-20b; BOT, AGR, ZOC, COB]

**399. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 15 December 1819**

This letter will be delivered at Van Marum's by A. de Wilde, one of the Directors of the 'Bataviaasche Maaschappij', about whom he has written him already. He supposes that his friend will be inclined to see him for about an hour or so. De Wilde is the most excellent expert with respect to the island of Java and he will be able to bring Van Marum much news about the sender of this letter. He will also deliver 4 parcels of plant seeds. One of these is meant for him, a second parcel is destined for Cornelisse (Ghent), the third parcel is intended for Leyden and the last one has to be delivered in Groningen. A couple of days ago he has had the opportunity to send parcels of seeds to Utrecht and to Amsterdam. Before that he has already had the pleasure of sending a collection of seeds to Haarlem. These seeds have been collected during his last trip. He would have liked to send living plants also, but the ship had already been overloaded.

On 27 November 1819 [actually it was 26 November 1819], he did also send his friend a letter and again on 2 December 1819. The last one was very short. He had added a life certificate (in triplo), as well as a bill of exchange (in quadruplo) for the sum of 10.000 guilders, a printed report of his journey and a letter from Mr. Keer to his sister, Mrs. Waerdenberg. Through these letters he has informed his friend about his good health, about the fact that he had planned to wrap and package many objects of natural history, which have to be sent to Holland. This collection will include many new objects destined for the 'Kabinet'. Although he will be able to send another bill of exchange for 10.000 guilders, or even for 20.000 guilders, he prefers to wait for a while, because the prices are so low nowadays. Everybody in Batavia is longing for the arrival of ships and news from Holland. He hopes to receive a letter from his friend soon. Meanwhile the news has arrived in Batavia that the 'Zeemeeuw' (captain Wegener) has arrived safely in Holland, and so has Mr. De Hoogh. He will bring Van Marum the duplicate of the letter, which has been lost with the 'Evertsen'. He hopes that his friend will soon answer this letter. A couple of months ago – while he was still

on his trip – he received a letter from captain Grevelink (of the ‘Augusta’). Grevelink stated that he had never received a load of coffee for De Vries. Thereupon Reinwardt has informed De Vries, that he had the documents in his possession as evidence that he had really sent the coffee to Holland. These documents are preserved in his office in Batavia. He adds them to this letter, especially in order to denounce the unreliability of that captain and less with the purpose of convincing this man of the justice of his claim or to obtain the restitution of the coffee. He is still in the possession of the receipt written by the merchant from whom he has bought this coffee, the only coffee transaction of his entire life!

Tomorrow he will leave for Buitenzorg and within a few days he will return to Batavia. Perhaps he will have the opportunity to send his friend one more letter. He expresses his most sincere feelings of friendship and adds his best wishes to Mrs. Van Marum and Betje.

[NA-RANH 529-20b; BOT,AGR]

**400. Resident of Batavia (Batavia) to C.G.C. Reinwardt (Batavia); 31 December 1819**

Wrongly a sum of 440 guilders has been paid to Mr. Lutjens, as a compensation for having delivered several necessities to Reinwardt, according to the governmental ordinance, dated 6 November 1819 (n<sup>o</sup> 83A). Now Mr. Lutjens is repaying it to the treasury of the government.

[NA 2-21.204(4)]

**401. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 31 December 1819**

Reinwardt sends his friend six crates, each containing six boxes of living plants with the ‘Admiraal Buyskes’. They will be unloaded in Rotterdam. He adds an inventory, which is also dated 31 December 1819. He really hopes that these plants will arrive in good shape. If possible Van Marum should give a couple of plants to the ‘Hortus’ of Amsterdam and perhaps also to the botanical gardens of Leyden, Utrecht and Groningen. He asks him to mention plainly that he – Reinwardt – is the giver of these plants. Otherwise he might be accused of having given undue preference to Van Marum’s garden. He is sure that Van Marum will be very happy if the species named after him will arrive in good shape. He should not give these

plants to others. The descriptions and depictions of these plants will soon follow. He has also sent 100 pounds of coffee with this ship. It has to be delivered at De Vries's, who has to send it to Frowein. Frowein will send it on to Lüttringhausen. Reinwardt does not want this cargo to be lost again. Anyhow it will not be entrusted to captain Greveling (see Reinwardt's letter, dated 15 November 1819). He is looking forward to receiving more letters from Holland. Van Marum's 29<sup>th</sup> letter is the last one received by him until now. He has also added a collection of seeds to his letter, dated 15 November 1819, which will be delivered by Mr. De Wilde, travelling aboard the 'Koophandel' (captain Jansen). This vessel has set sail on 22 November 1819. Van der Capellen has left on 12 December 1819 aboard the 'Batavia'. On 2 December he has sent his last letter to his friend, to which a life certificate has been added, as well as a copy of his letter, dated 27 November and an answer to Van Marum's 29<sup>th</sup> letter. All in all, he has sent many letters to Holland these last few days – to Van den Ende, De Vries, Kemper, Van Lennep, Falck, Elout, Bakker, Driessen, Calkoen, Vosmaer and several others. It would be nice if the news about him personally, which has been published in the newspapers, could be sent to his sisters in Lüttringhausen. He enjoys good health and everything is fine. Since Elout has left, he has moved into the house of the Procurator-General Merkus. There he stays whenever he is in Batavia. Within a few days he will return to Buitenzorg. After his arrival in Amsterdam, De Wilde will come to Haarlem and see Van Marum. He will be able to tell him much about Reinwardt. He hopes that Miss Betje has recovered again and that Van Marum and his wife will be healthy and satisfied. He asks him to convey his greetings to Mrs. Van Marum and to Betje.

[NA-RANH 529-20b; AGR, BOT]

**402. C.G.C. Reinwardt (Buitenzorg?) to M. van Marum (Haarlem); 31 December 1819**

Inventory of the contents of the six crates (containing 36 boxes of living plants) sent to Holland with the 'Admiraal Buyskes'. The list gives the names of various genera and species, which were still unknown until then, among others 4 species of the new genus *Marumia*.

[NA-RANH 5229-20b; BOT]





TEUNIS WILLEM VAN HEININGEN

**THE CORRESPONDENCE OF  
CASPAR GEORG CARL  
REINWARDT  
(1773-1854)**

**Part Two: 1820-1854**

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**Caspar Georg Carl Reinwardt**

(Lüttringhausen, 3 June 1773 –  
Leyden, 6 March 1854)



**CHAPTER 7 (Part 2)**  
**THE DUTCH EAST-INDIES**

**403. C.G.C. Reinwardt (Buitenzorg) to M. van Marum (Haarlem); 6  
January 1820**

Yesterday Reinwardt has finally received Van Marum's letter, dated 15 June 1819 (n<sup>o</sup> 30). He has understood that his friend enjoys good health. Regrettably Betje is not doing well. Meanwhile he has fulfilled Van Marum's wish to be fully informed about his trip to the sulphur lake, by sending a printed report. With respect to Van Marum's curiosity regarding the collections sent to Holland last January, Reinwardt admits that he fears the loss of the living plants, which have been sent with the 'Prins Frederik' and the 'Maria Reijgersbergen'. He knows that the 'Prins Frederik' has anchored too long at the 'Cape' and that no news has been received about the 'Maria Reijgersbergen', until now. As soon as possible he will send his friend a drawing in order to give him a good impression of the rich vegetation. However, in order to do so he will have to set out on a journey first. Unfortunately his friend has never confirmed the reception of the drawings sent to him in November or December 1818, nor did he send his remarks about the pieces of art. Reinwardt does not understand why, because De Vries must have sent these documents on to him. Meanwhile many new drawings, representing plants, have been finished, but he does not dare to send these to Holland. Too many times already shipments sent to Holland have been lost. He also wants to know Van Marum's opinion about the production of engravings. As a matter of fact he is repeating this question now, as he is pointing at the letter, which had been added to the drawings, taken to Holland by Elout. He wonders why Van Marum has not heard anything, while Van Lennep and De Vries have already received their letters. They have arrived with the same vessel. It is still possible that Mr. De Hoogh did prefer to hand these documents over to him personally. So first of all there must be a reason for him to travel to Haarlem and to see him. Reinwardt thanks his friend for sending him the last volume of the *Verhandelingen*, which has been published. The same goes for the covering letter. Much to his regret his friend has been treated with unpleasant rudeness, when he went to Amsterdam in order to see the Calkoen Brothers and to ask them about the result of the rice sales. Reinwardt is really upset about it. He did not expect these men to behave

like that! He thanks Van Marum for the pains taken in his behalf. But why did he not inform Mr. Walraven about their disgraceful behaviour? Walraven would have admonished them! As a matter of fact he did not receive any sign of life from Calkoen until now. Why did the 'Soerabaya', which has delivered two letters from his friend, not bring him a letter from these gentlemen too? Furthermore he has sent letters to Mr. Keer and Mr. Ducloos yesterday. Keer is commanding the troops on Banka, since Smissaert has died.

His letter to Van Marum, dated 2 January 1820, was covering a copy of volume 7 of the *Verhandelingen van het Bataviaasch Genootschap van Kunsten en Wetenschappen*. This package was entrusted to captain Pakes. His ship is still waiting for a favourable change of the winds in the Roads of Batavia. On 30 December 1819 he has sent six cases to Haarlem with the 'Admiraal Buyskes' (captain Coffin). Now he adds an inventory. With the above mentioned vessel he has also sent a bale of coffee destined for his relatives in Lüttringhausen. This shipment was addressed to De Vries. He asks Van Marum to reimburse the freight. On 12 December 1819 he did send packages of seeds with the 'Koophandel'. A couple of days ago he has sent a similar cargo with the 'Baron Van der Capellen'. Furthermore he has sent a life certificate. On 27 November a more extensive letter has been sent, together with the quadruplet of a bill of exchange for the amount of 10.000 guilders.

Today's mail will be sent with the 'Henrietta en Betzy' (captain Schneider). Again he will add a couple of crates of living plants. Mr. D'Ozy's widow will take care of the plants during the passage. Two more crates of living plants destined for the 'Hortus Medicus' of Amsterdam, will be delivered at Professor Vrolik's. They will be sent with the same vessel. He will also add an inventory, like he has done last time. He has decided to send several specimens, because several plants may die during the passage. Besides, by doing so he will have the opportunity to please the *medicinae doctores* with the duplicates. Insofar as Van Marum does not want to receive certain plants, he is allowed to give them to the academic gardens as a present. This time he should send them especially to Kops (Utrecht), to Leyden, Groningen and Ghent. He has done his best to give the collection the best possible variety. Fortunately he has been able to add a specimen of *Marumia cauliflora* again. Although he had ordered to do so, no young plants have been cultivated. He has been far away for too long and the gardener has been without supervision all the time. As a consequence of the fracture of

a thigh bone he had to postpone the cultivation of new plants and to give priority to other activities.

On 5 January 1820 Reinwardt has returned from Batavia to Buitenzorg. He adds his greetings to his friend, to Mrs. Van Marum and to Betje and calls himself Van Marum's true friend.

[NA-RANH 529-20b; GEO, MIN, PHY, CHE, BOT, ART]

**404. C.G.C. Reinwardt (Batavia) to G.A.G.Ph. Baron van der Capellen tot Berkenwoude (Batavia); 6 January 1820**

Reinwardt reminds the Governor-General that through the royal decree of 11 January 1815, n<sup>o</sup> 11, it has been decided that at the end of April 1820, after having served the government of the Dutch East Indies for four years, his employment will be reconsidered by H.M. the King of the Netherlands. Assuming that His Majesty wants to know the opinion of the Governor-General with respect to his service, before He will decide about his return to the Netherlands, he wants to take the opportunity to express his reserve with the intended appointment as professor in Leyden. In prudent terms Reinwardt proposes an extension of his term of employment on Java. In his view the results of efforts made until now, should be taken into consideration. He supposes that the Governor-General is familiar with what he has achieved until now. He refers to the contents of a report, entered by him on 23 December 1818 and he adds a copy of a letter previously sent by him. He underlines that until now the results of his scientific activities have not been fully satisfying in every respect. His Excellency is well informed about the reasons for this request. He eagerly wants to complete his tasks. Not until recently he has had the opportunity to devote himself particularly to science. He refers to his recent experiences in the Preanger regencies. Continuing these activities for some time would be most profitable. So it would be a pity to end these activities untimely. He simply wants to try to complete his tasks. After he will have returned to the Netherlands his successors will have to complete his job. Once again he expresses his desire to stay on Java after his term will have expired. He begs His Majesty the King of the Netherlands to allow him to continue his various appointments, at least until 1 May 1821, or even – if possible or necessary – until the end of 1821.

[De Vriese (1854), pp. 291-295]

**405. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 31 January 1820**

Van Marum states that he has answered every letter received from Reinwardt and that he did not receive any letters after 29 March 1819. His concern with respect to Reinwardt's state of health has grown. Therefore he has contacted Mr. Elout (The Hague) a couple of days ago. Elout has sent him Reinwardt's letter, dated 13 July 1819, which was addressed to the Governor-General, on to him. In this letter Reinwardt reported on his trip to the 'Malabar' mountain. Elout has told him that the last letters, received by him from Reinwardt, have been written in August 1819 and that these do not give an account of a disaster which may have happened to him. Van Marum does not understand it at all. The relatives in Lüttringhausen are also worrying. In order to prove that fact he adds a short note, written by Reinwardt's sister Arnoldine. He does not know what to answer. Initially he had decided to send a comprehensive letter to Java, until Mr. Elout informed him that Reinwardt would probably postpone his return to the Netherlands. Besides there is not much news. Everyone, living in his house has caught a cold. Betsy – Reinwardt has already been informed about her 'déraisonnement' through his letter of November 1818 – has not completely recovered. She does not bear the presence of other persons and she is completely secluding herself. At the moment she is living at her sister's (The Hague), who is taking care of her, as a matter of fact at his expense. Leyden is eagerly awaiting Reinwardt's return to the Netherlands. In many respects this professorship is the right position for Reinwardt. Van Marum implores his friend to book passage on a sturdy merchantman or on a large war craft. He is eagerly looking forward to the day of Reinwardt's return.

[UBL BPL 2922]

**406. Secretary of the Governor-General (Batavia) to C.G.C. Reinwardt (Batavia); 2 February 1820**

The Governor-General has read Reinwardt's letter, dated 21 January 1820 (n° 560) and as a consequence he has decreed that J.Th. Bik, the second draughtsman of the Department of Agriculture, Arts and Sciences, will receive a considerable increase in pay. From now on his salary will be 300 guilders a month. Mr. W.M. van IJsseldijk, the clerk, has been appointed dispatching agent at a salary of 200 guilders monthly. They will both receive

a certificate of appointment. The gardener Willem Kent will also receive a salary of 200 guilders a month. These appointments date from 1 January 1820. The extracts of the 'Register der Handelingen en resolutiën van den Gouverneur-Generaal in Rade' will be sent to Reinwardt, to the resident of Batavia and to the National Audit Office of the Dutch East Indies.

[NA 2-21.204(2)]

**407. General director of Finances (Batavia) to C.G.C. Reinwardt (Batavia); 8 February 1820**

In accordance with the decree made by the Governor-General on 28 January 1820 (n° 5), the General Manager of Finance has authorized the resident of Batavia to rent storage space in the vessel commanded by captain J. Duyff, for the expedition of several objects destined for the 'Nationaal Kabinet van Natuurlijke Historie'. This letter has been sent to Reinwardt in order to inform him.

[NA 2-21.204(4); ZOC, COB]

**408. Resident of Batavia (Batavia) to C.G.C. Reinwardt (Batavia); 18 February 1820**

The resident of Batavia answers Reinwardt's letter, dated 14 February 1820 (n° 79) and informs him that he has already made arrangements with the captain of the 'Jan en Cornelis' with regard to the transportation of goods to Holland destined for the 'Koninklijk Kabinet van Natuurlijke Historie' in Amsterdam. He wants to know if these objects – inasmuch as they have been wrapped and packed in crates – can be transported to the entrepôts already, in order to be sent to Holland. The boxes of living plants must be kept by Reinwardt for the time being, until the resident will ask him to deliver them at the warehouse of the merchants Van Reenen and Company.

[NA 2-21.204(4); BOT, ZOC, COB]

**409. C.G.C. Reinwardt (Buitenzorg) to M. van Marum (Haarlem); 23 February 1820**

A few weeks ago, Reinwardt has received Van Marum's letters n° 32 (dated 15 August 1819) and n° 33 (dated 8 September 1819). Shortly before, he has also received the duplicate of n° 30 (dated 15 June 1819) and the original of n° 31 (dated 12 and 19 July 1819). Now Reinwardt has to answer these letters

provisionally and in a hurry, because during the last couple of months he has always been informed at the very last moment about the departure of ships. Furthermore at the moment he is too much occupied by other activities. What about Van Marum's original opinion that he should have sent all plants with the 'Admiraal Evertsen', as he has stated in his first letter to Reinwardt, now that he knows that this warship has been wrecked? Yesterday (22 February), the Governor-General has been informed by mail about Elout's safe arrival in Holland. Furthermore he has learned from a letter received by the Governor-General that the living plants sent to Holland with the 'Maria Reijgersbergen', have arrived in a perfect condition. Meanwhile he has read the account given in the *Amsterdamsche Courant* (22 September 1819), of the passage and loss of the 'Admiraal Evertsen'. Furthermore Van Marum has informed him that the first account of his roundtrip through the Dutch East Indies has been published in the *Staatscourant*. This means that Van Marum must also have received all his letters of a later date.

When reading Van Marum's letter, dated 12 July 1819, he was very surprised about the payments made to Mrs. Kent. In his view there is a misunderstanding. Evidently his friend did not receive his letter, dated 12 September 1817, with which he has sent a bill of exchange, worth 125, for which Van Marum has received the sum of 1.350 guilders. He has asked Van Marum to get a good return to his capital, for example by giving it for a loan. From the interest he would have been able to give Mrs. Kent a regular financial relief. Because she is again living in needy circumstances, Van Marum has to pay her 400 guilders immediately. The remaining 950 guilders have to be paid to her in small terms. Of course he should have sent his friend a copy of the concerning letter a long time ago. Unfortunately he has not done so.

Meanwhile he is wrapping and packaging a new shipment, destined for the 'Koninklijk Kabinet'. It will be sent with the 'Jan en Cornelis'. This vessel will probably leave early March. Among others it contains the skeleton of a rhinoceros, many birds, insects, fishes in jars of liquor, and so on. This shipment has been addressed to Mr. Vollenhoven. With the same vessel 36 living plants will be sent to Van Marum. Until now he did not receive an official letter of appointment as Brugmans's successor. However several inhabitants of Batavia have already been informed, among others the Governor-General. As a matter of fact he has not decided yet if he is interested in the job, yes or

no. Van Marum knows how very satisfied he has always been in Amsterdam and how much he has appreciated the many contacts he has in that town. On the other hand the larger possibilities and the more varied activities also have their advantages. Of course he will be much busier than he has been in Amsterdam. This fact might endanger his plans to spend enough time for preparing his East Indian notes and journals for publication. He could even imagine or wish that the government would have found somebody else for the vacancy in Leyden. However, if the decision has already been made, it might be impossible to change the course of the events. If so, he will have to accept the situation and to make the best of it. But, what about the future of the 'Koninklijk Kabinet van Natuurlijke Historie'?

If possible he would like to stay a few more years on Java, in order to finish the most important tasks. He knows how much his friend is longing for his return to Holland, but on the other hand he is fully aware of the obligations imposed upon him by his conscience, his honour and his sense of duty. There is no doubt that his friend knows that he wants to harvest at the end of his term and that he wants to bring home a treasure as large and as rich as possible.

Together with many other documents his dear friend has sent to him Volume 9 of the *Verhandelingen* of the 'Maatschappij' and he thanks him for that. Finally he points at an annoying printing error in his treatise on *Populus monifera*. He adds his greetings to his friend, to Mrs. Van Marum and to Miss Betje.

[NA-RANH 529-20b; BOT, ZOC, COB]

**410. C.G.C. Reinwardt (Buitenzorg) to M. van Marum (Haarlem); shortly after 23 February 1820**

Reinwardt partly repeats the contents of another letter, sent previously to Van Marum (dated 23 February 1820). He especially refers to the financial problems of Willem Kent's wife and to the way in which these problems can be solved.

[NA-RANH 529-22]



Carl Ludwig Blume (1796-1862)

**411. C.L. Blume (Buitenzorg) to C.G.C. Reinwardt (Batavia); 29 February 1820**

Blume – official of the Department of Agriculture, Arts and Sciences – has done his utmost with regard to the enrichment of the collections of the Dutch cabinets of natural history and also with respect to the service he has to render to Reinwardt, his principal, as far as it concerns discovering the secrets of the sciences Reinwardt is occupied by. Of course a considerable sum of money is needed for training a sufficient number of natives, in order to involve them in the collecting of objects of natural history and in the completion of an operation, which is so closely related to what Reinwardt is aiming for. In his own view Blume has inexhaustibly pursued his aim to the end, having taken every hurdle. By collecting so many objects of natural history he has almost compensated what has been lost so unfortunately of the shipments sent to Holland by Reinwardt in the past years. He feels that he should not exaggerate by trying to convince Reinwardt of the excellence of the collections brought together now. At the moment he only wants to discuss the offer which has been made to him by the government, when he offered his collection. The work done by him, has cost him a lot of money, much more than his salary allows him to spend. Even the sale of his surgical instruments did not proceed enough money to cover his debts. His main objective has been to enlarge the collections of the Dutch cabinets of natural history and to offer duplicates to certain collectors. He has never made notes of his expenses. Therefore he could not inform his principal about the exact sum of money spent by him. At different moments he has had different numbers of assistants. The same goes for the money spent on wrapping, packaging and storage of the collected objects and also for the purchase of plants. He sincerely hopes that renouncing the collections brought together by him and offering these to the government will compensate the money he owes it. He also hopes that after the reimbursement of his expenses a certain sum of money will be left for buying scientific instruments and other necessities, which will enable him to carry out some scientific work, which he has hardly had the time for, until now. At the occasion of the transfer of the collection and its settlement he wants to make three requests. First of all he asks to allow him to keep the duplicates. Secondly he asks the government to establish a fund for financing the collecting of objects of natural history according to written instructions. Thirdly he begs to be

compensated for the many journeys made by him and for the costs resulting from these trips, in addition to the costs of collecting the many objects. In behalf of that arrangement he gives an account of his expenses, as precise as possible (salaries of coolies, all kinds of necessities, All in all, he spent more than 5.060 guilders on that).

[NA-RANH 529-20b; ZOC, BOT, COB]

**412. C.G.C. Reinwardt (Buitenzorg) to M. van Marum (Haarlem) and C.J. Temmink (Leyden); 29 February 1820**

Letter accompanying a collection of birds, preparations of vertebrate animals and insects. This shipment of 11 boxes and a column of basalt will travel with the 'Jan en Cornelis' (Captain Duyff), and will be addressed to H. Vollenhoven, 'commissaris voor de Oost-Indische bezittingen'.

[UBL BPL 2425; ZOC, COB]

**413. C.G.C. Reinwardt (Buitenzorg) to M. van Marum (Haarlem); 1 March 1820**

This covering letter, added to a collection of living plants, gives its inventory: 2 crates, each containing 12 pots. There are three new species, described by Reinwardt: *Ficus humilis* R., *Sterculia cordata* R. and *Eugenia speciosa* R. Tomorrow he will try to send a more extensive letter. A new letter will follow on the day when 11 crates, containing a large collection of objects of natural history will be leaving Batavia, aboard the 'Jan en Cornelis' (captain Duyff). This collection is intended for the 'Hollandsche Maatschappij der Wetenschappen' (Haarlem). The last letter received from Van Marum, is n° 33 (dated 15 September 1819). He adds his sincerest greetings and informs his friend that the surgeon Sontag has expressed his willingness to keep an eye on the plants and on the rest of the collection.

[NA-RANH 529-20b; BOT, COB, ZOC]

**414. C.G.C. Reinwardt (Buitenzorg) to M. van Marum (Haarlem); 2 March 1820**

A few days ago Reinwardt has answered Van Marum's letter n° 31 (dated 12 July 1819) and n° 32 (dated 15 August 1819). He wonders if he has already acknowledged the receipt of Van Marum's letter n° 33. With much pleasure he has read that the living plants sent with the 'Maria Reijgersbergen' have

been received in a good condition. He approves that because of their lesser quality Van Marum has given most of them to the University of Leyden as a present. However he would like to have been informed about the names of these plants as well as about the exact numbers of the crates and about the way they have been spread over the three vessels, which have set sail for Holland between 16 and 19 January 1819.

Yesterday, 1 March 1820, he has sent two crates of six living plants each with the 'Soerabaya' (captain Theunisse) to Holland, accompanied by a covering letter, which has been addressed to Van Marum. Today he sends the inventory of that shipment. He has sent six more crates, containing 36 plants, with the 'Jan en Cornelis' (captain Duyff) to Holland, together with a parcel of about 30 seeds. The crates and the parcel have been addressed to Van Marum. The same goes for 11 crates of objects of natural history and a column of basalt. These objects have been addressed to Van Marum and Temminck. They are destined for the 'Koninklijk Kabinet van Natuurlijke Historie'. He prays to God, begging him that these objects will arrive safely in Holland. Most of them have been collected during his last journey. They are all of the finest quality and he especially points at the beautiful rhinoceros skeleton. Only a part of what has been collected, has been sent to Europe this time. The rhinoceros skeleton, for example, will be sent to Holland at a next occasion, although it has already been wrapped and contained. The specimen of Simia, which has been collected also, seems to belong to a new species – *Simia serili* (or *S. sirili*?). Van Marum will find several new species among the birds sent by him this time. He has put aside most of the new species. The same goes for the insects. This time he has decided to send the butterflies. All these specimens are complete, beautiful and exquisite. He sincerely hopes that the way in which he has wrapped and contained these objects, will turn out to be sufficient. All the animals, which have been put in jars of liquor, have been described. Drawings have been made of most of the objects. One of the items is the foetus of the rhinoceros. He is sure that this object will draw general attention, like the skeleton of the python will. He hopes that the 'Museum' will find a person who is skilled in stuffing birds.

The living plants, which will be sent today with the two vessels, absolutely deserve Van Marum's attention. A few species have been sent before. They will find their way to the various academies. Several species are extremely beautiful, such as the ones belonging to the genera *Lagerstroemia*,

Rhododendron and Artocarpus. Van Marum should decide how they have to be spread over the various gardens. If the shipments sent on 30 December 1819 with the 'Admiraal Buyskes' and on 6 January with the 'Henrietta en Betzy' are taken into account, his friend will soon receive 16 crates of six living plants each. Because the government has arranged room for cargo in the 'Jan en Cornelis', it will have to pay for it after the vessel has arrived in Holland. Furthermore the academies, which are going to receive plants from Van Marum, will have to pay their share of the freight. The Governor-General has been informed about this arrangement. Finally he has sent a crate, containing a can, in which 62 birds have been packed. These are destined for the 'Maatschappij', just like a couple of *Sciuri* (?) and a specimen of *Mephita javanica* are, a quadruped, which has not been described until now. In his view he has meanwhile compensated – at least to a certain extent – the loss of the last shipment. Finally he adds a copy of the inventory of the collection of living plants, which have been sent last December. At the next occasion he will be able to send a collection of rock samples to the 'Teylers Museum'. Next he pays attention to the most important items of Van Marum's letters. First of all he observes that a drawing and a description of *Enkianthus* had not been added to Van Marum's letter, dated 12 July 1819 (n<sup>o</sup> 31). This fact has made it impossible for him to order another specimen in China. Recently he received a collection of living plants from that country, among others a complete collection of species of the Tea-plant, known at the time and also specimens of *Laurus cinnamomum*. They were all quite different from what was present in the Dutch East Indies at the time.

From the Dutch newspapers he has learned that the *Python javanicus*, or giant rice-snake, has meanwhile arrived alive in Holland and that this creature has been transported to Leyden, although captain Groot had promised him to deliver it at Van Marum's. Obviously his friend did not want to lodge this creature. Furthermore he has understood that Van Marum has solved the financial problem with respect to Mrs. Kent.

He has already acknowledged the receipt of Volume 9 of the *Verhandelingen* of the 'Maatschappij'. Meanwhile he has sent a copy of Volume 7 of the *Verhandelingen van het Bataviaasch Genootschap van Kunsten en Wetenschappen* with the ship commanded by captain Pakes.

Once more he expresses his dissatisfaction about the way his friend has been treated by the Calkoen Brothers. He does not understand why they are

remaining silent about the outcome of the rice transaction. Their unreliable behaviour has totally surprised him. De Vries has been very upset also.

Since a long time he has not heard any news from his niece Caroline. If Landré senior is still of the opinion that she should be serving in a decent family, he will agree with that proposition. With respect to the bill sent by Sulpke he asks his friend to pay only for the first two books (30 guilders in total), because he did not order the other books.

The sudden death of Brugmans has terribly shocked him. Although Van Marum, Vollenhoven, D'Ailly and several others have informed him by mail that he has been appointed his successor, he has not been informed officially, until now. Anyhow he did not receive a letter of appointment yet. He has told his friend about his deepest thoughts with respect to this affair: Although the invitation to occupy this vacancy is really honourable and although the new job will give him much pleasure and satisfaction and although he will be able to give room to the further development of his most beloved fields of study, his former job (in Amsterdam) has always been fully satisfactory. The busy professorship in Leyden will be much more demanding. Besides, having to say good-bye to the East Indies will be an enormous sacrifice. Much more than doing these things he wants to evaluate, analyse and describe his many observations and discoveries and prepare them for publication. He still has to finish many jobs and affairs on Java and he has to prepare his home passage. He has been informed that Sandifort is willing to act as a provisional professor of botany and as a provisional director of the botanical garden.

The last letter received from Elout, was dated 7 November 1819. Most regrettably he is not in the position to meet the demand of Mrs. Waerdenburg. For a long time he did not receive a sign of life from De Vries. From the Dutch newspapers he has learned that meanwhile his travel reports have been published.

Van Marum will receive his next sign of life through captain Duyff, together with the inventories (of the last shipments). He expresses his warmest feelings of friendship for him, for Mrs. Van Marum and Betje.

[NA-RANH 529-20b; BOT, GEO, MIN, ZOC, COB]

**415. C.G.C. Reinwardt (Buitenzorg) to M. van Marum (Haarlem); 2 March 1820**

Inventory of plants growing in the Government garden ('Botanical Garden', or 'Hortus Javanicus'), which have been sent today to Holland with the 'Jan en Cornelis' (captain Duyf). It lists 36 living plants, each in its own pot, packed six crates.

[NA-RANH 529-20b; BOT, COB]

**416. ?? Duyvené (Batavia) to C.G.C. Reinwardt (Batavia); 9 March 1820**

On behalf of the General director of Finances, Duyvené informs Reinwardt that the resident of Batavia has been authorized to reimburse him 82 guilders, because he has advanced the purchase of objects of natural history for the 'Koninklijk Kabinet van Natuurlijke Historie'. This payment will be put to the account of the budget of the Department of Agriculture, Arts and Sciences for the year 1820.

[NA 2-21.204(4); ZOC, COB]

**417. C.G.C. Reinwardt (Buitenzorg) to M. van Marum (Haarlem); 10 March 1820**

First of all Reinwardt repeats the most important items of the letters sent by him on 1 and 2 March 1820. Of the first letter the main subject has been the shipment of the objects aboard the 'Soerabaya' (captain Theunisse): two crates of living plants. This cargo has been boarded on 2 March 1820. In the second letter he has dealt with the shipment of six crates of living plants (36 in total), a package of seeds, a crate of birds and a couple of mammals sent with the 'Jan en Cornelis' (captain Duyff). He will add the inventories of the two shipments and a bill of lading, regarding the first shipment. The 'Jan en Cornelis' has also taken eleven crates of objects of natural history and a large rock of basalt to Holland. The first shipment has to be given to Van Marum, while the second shipment is meant to be delivered at the address of the 'Maatschappij'. Finally, a copy has been added of the inventory of the collections sent with the 'Admiraal Buyskes' (which has set sail on 30 December 1819) and with the 'Henrietta and Betzy' (which left for Holland on 6 January 1820). Through his letter of 6 January Van Marum has already been informed that this shipment was to be delivered at Vollenhoven's. He had also added copies of the inventories of previous shipments. Besides

Temminck has been informed about the contents of the recent shipments. In his letter, dated 2 March 1820, he has answered Van Marum's letters n<sup>o</sup> 30, 31, 32 and 33, like he had already done in his letter, dated 23 February 1820. Once again he discusses the difference of opinion with the bookseller Sulpke and he points at the instructions, which he has given to his friend. The new shipments are of a high quality. Because many new species have been collected recently, he did not have the opportunity to describe these until now. So he has held them back. Shortly after 2 March he has received Van Marum's letter, dated 8 October 1819 (n<sup>o</sup> 34), together with a copy of n<sup>o</sup> 33. In the first one his friend has mainly discussed the letter sent by Minister Falck ('an abstract of the letter dealing with Reinwardt's appointment in Leyden', dated late July 1819). As he has learned later on, Falck had already informed the Governor-General through a personal letter. So his superior knew already that he was probably going to be called to Leyden, in order to succeed Brugmans. However until now the Governor-General has not been informed through an official letter, although he has received other official documents, meanwhile. All in all, Reinwardt is happy that he did not receive the official letter through which he is called to Leyden. As a consequence he will keep on looking forward to receiving more letters from his friend. He will have the opportunity to stay on Java for some time in order to complete the most necessary activities. By doing so he will be able to compensate the dramatic losses of the last few years. He eagerly wants to collect as much interesting objects as possible and especially living plants, in order to take these to Holland. Furthermore he has to leave Java in a favourable season, which excludes the arrival in Holland during the winter season.

In spite of their previous promises he has not received a letter from the Calkoen Brothers about the rice transaction, until now. As soon as possible he has conveyed the letter addressed to Mr. Van der Lee to the Department of War.

He wants to be informed about the destiny of the living plants, sent with the 'Prins Frederik'. He hopes that they have not been held back. The government in Buitenzorg has already been informed that Dr. Horsfield has arrived safely in England, together with his enormous collections and that he is already busy stuffing and arranging the many animals. However he has not mentioned his intention to travel to Holland, nor did he say a word about his further career.

Meanwhile he has been informed about a new and regrettable loss. A considerable part of a collection of objects of natural history and other rarities, which have been ordered in Japan, seems to have been lost. Most probably one of the two vessels, which were taking this cargo to Holland, has been wrecked and lost. Many of these objects have been purchased by him personally, among others in order to surprise his friends. A letter (dated 7 November 1819) sent by Elout, has been received in Buitenzorg. Finally he wants to know if the painting and the drawing, which have been saved after the shipwreck, have arrived in Holland meanwhile. The botanical drawings should not be engraved in Holland, because the quality of the engravings made in London or Paris is much better. He adds his best wishes. [NA-RANH 5292-20b; ZOC, COB, BOT, ART]

**418. Fr.A. Treffz (Surabaya) to C.G.C. Reinwardt (Batavia); 10 March 1820**

Treffz describes the part of his journey up to the arrival of the small convoy in the Roads of Ambon, today. This account is a part of the journal of his voyage from Makassar via Ambon to Surabaya. They have sailed along the Glisson island, the 'Hartebeesten' island, the isles of Sumbauwa, Noesaradie, Wadie, Rosegalet, the Bay of Flores and the islands of Hasterij, Boeron, Ambon and Amblauw.

[NA 2-21.204(4); ZOC, COB, ETN]

**419. Fr.A. Treffz (Surabaya?) to C.G.C. Reinwardt (Batavia); about 10 March 1820**

Treffz has drafted a list of necessities, which have to be bought in order to exchange them against objects of natural history and other rarities. He has to acquire these in the islands of Papua and Aro and on the coasts of Ceram, according to Reinwardt's orders. Of these rarities he mentions pieces of red, white and blue linen, floral patterned sits (cotton), parangs, objects made of iron, arak, rice, Javanese garments, rupiahs and new coins ('duiten', or pennies).

[NA 2-21.204(4); ZOC, COB, ETN]

**420. Fr.A. Treffz (Surabaya?) to C.G.C. Reinwardt (Batavia); 10 March 1820**

Treffz sends the following objects of natural history to Batavia with the corvette the 'Zwaluw'. He has collected butterflies, corals ('zeegewassen'), the skull of a native from the northern coast of New-Holland, large seashells, crocodiles, a four-legged hen, the eggs of a Pararang, several snakes, for example a Tara blauw, a Rongo, a Tomo-labo (several of these animals together with their eggs), an Oelo lekko lekko, a Coretta, a tree lizard, the 51 parts of a dissected crocodile head (which have been wrapped already), a snake skin, the fruits of a Boedoe tree, a 'Beurskrab' ('Gatan klappa'), a crate of bottles (containing the eggs of the Tomo labo snake, the kidneys of a Tomo labo snake, a preparation of the Pararang, a specimen of Sawangi (a fish), a memong, the skull of a woman from Makassar, the head of a 'Jaarvogel', the prepared skin of a Tomo labo snake, the scalps ('pruiken') of Aboe Backkar and two of his generals, an anker of arak (= 38,8 litres), in which a few Pararangs have been preserved, a young specimen of the Sieni tree and the bark of the Senie or Boelie tree, which is used to make the sago ('sagu') red and bitter again.

[NA 2-21.204(4); ZOC, COB, BOT, ANA, ETN]

**421. Resident of Batavia (Batavia) to C.G.C. Reinwardt (Batavia); 19 March 1820**

The resident of Batavia informs Reinwardt that captain Duyff wishes to receive 280 guilders for transporting the collection of objects of natural history to Batavia, referring to the fact that last year captain Sijpkens has succeeded in agreeing on the same amount of money. The resident asks Reinwardt to inform him.

[NA 20-21.204(4); ZOC, COB, ETN]

**422. C.G.C. Reinwardt (Buitenzorg) to the Managing Director of Finance (Batavia); 20 March 1820**

Reinwardt declares that Treffz's claim for travelling expenses – relative to the orders given to him by the Secretary of State/Governor-General (see his letter, dated 4 March 1819, n° 14) to travel to the Moluccas, has been determined according to the tariff settled by the Commissioners General for the Dutch East Indies (decree of 11 December 1818, n° 6) – has been made

truthfully. Treffz will be paid for 275 days, at a rate of 4½ guilders a day. This makes a total of 1.237 guilders and 15 pennies. This amount still has to be paid to Treffz.

[NA 2-21.204(4)]

**423. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 21 March 1820**

Reinwardt asks his friend to pay 300 Dutch guilders against the enclosed bill of exchange to Mr. Landré (Batavia), the son of Mr. Landré (Amsterdam).

[NA RANH 529-20b]

**424. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 21 March 1820**

Reinwardt informs his friend that Landré junior wants to send 300 Dutch guilders to his father in Amsterdam (G.N. Landré), for which reason he has asked him to send this bill of exchange to Holland. Reinwardt asks Van Marum to pay this sum at his expense. He assures him of his unchanging friendship and veneration.

[NA-RANH 529-20b]

**425. Resident of Batavia (Batavia) to C.G.C. Reinwardt (Batavia); 22 March 1820**

The resident of Batavia sends Reinwardt a bill of lading in triplicate, relative to the cargo he wants to send to Holland with the vessel of captain Duyff. Because he does not want to miss this chance, Reinwardt has to sign these documents and return one copy before tomorrow night, 23 March 1820. He has to keep the two other copies, if he wants to make use of another captain. He also adds a certificate in triplo, in order to make it possible to remunerate the captain for the freight charges.

[NA 2-21.204(4); ZOC, COB, BOT]

**426. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 23 March 1820**

After having sent his letters addressed to Van Marum to captain Duyff (Batavia), he still has to send a brief message to his friend. The resident of Batavia has sent the bills of lading of the cargo to him (Reinwardt), in stead

of sending them to Holland. Now he sends these documents to Van Marum and to Vollenhoven, together with the certificate, in order to show that the freight charges have to be repaid in Holland. He is sure that the Minister of Colonies will make proper arrangements and that he will inform Van Marum and Vollenhoven. Yesterday he has given a bill of exchange of 300 guilders to Landré junior. So Van Marum has to pay the same amount of money to Landré senior. Reinwardt will inform Landré senior about this arrangement. He asks his friend to pay this bill of exchange as soon it is shown to him. He expresses his well meant feelings towards his friend, towards Mrs. Van Marum and to Betje.

[NA-RANH 529-20b]

**427. ?? Duyvené (Batavia) to C.G.C. Reinwardt (Batavia); 23 March 1820**

Through this extract of the governmental decision the secretary of the General director of Finances informs Reinwardt that his principal has decided to authorize the resident of Batavia to pay the sum of 1.524 guilders, 3 pennies ('stuivers') and 8 pence ('penningen') to the Director of Agriculture, Arts and Sciences, after having read a letter from the National Audit Office, dated 22 March 1820 (n° 58). This sum has to be used to pay the expenses in behalf of the 'Koninklijk Kabinet van Natuurlijke Historie' (Amsterdam). It will be deduced from the budget for the year 1820.

[NA 2-21.204(4); ZOC, COB]

**428. Fr.A. Treffz (Amboina or Makassar) to C.G.C. Reinwardt (Batavia); 26 March 1820**

Lieutenant colonel Treffz acknowledges the receipt of Reinwardt's letter, dated 30 September 1819 (n° 503). On 8 November 1819 he has sent several objects of natural history to his superior. They have been taken to Batavia by young Mr. Reynst (see his letter n° 17). However Reynst could not get to Java, so he returned to Makassar. The condition of the objects was still good. Thereupon colonel Devall has been ordered to return to Surabaya. Treffz has asked permission to travel to Amboina. But, as there was no vessel available, he has decided to stay in Devall's company and to await Reinwardt's further orders. Meanwhile he has ordered to store arak and salt in the storehouse of Makassar until Reinwardt has made further decisions. Most of the sum of 1.000 rupiahs has been spent meanwhile, although it had been intended to

use it for buying presents.

On 1 March 1820 the 'Zwaluw' has left Makassar, in order to sail through the 'Strait of Apy'. However this plan was hampered by heavy volcanic ash rains. Therefore it was decided to sail through the 'Strait of Flores'. This time the head wind prevented this plan, after which they set sail to Amboina, and arrived there safe on 10 March 1820. Thereupon Treffz continued his collecting activities. He has decided to await further orders again. Meanwhile he has decided to visit and to examine the surrounding islands and nearby coasts. He will stay at Koffing (on the southern cape of Ceram) for some time. If he has to visit Salawatty and the regions inhabited by the Papuans, an armoured vessel is indispensable. Because the governor of Amboina is only able to provide him with a gunboat, of which the room below decks is only three and a half feet high, there is not enough room for shelter. Besides it is not provided with enough storage room. All in all, this vessel will not be able to transport a larger collection of objects of natural history and enough provisions for a journey of two months. So he has decided to send his collection to Batavia with the 'Zwaluw'. He has given the inventory to captain Devall, who has promised to take care of the cargo. Treffz is very satisfied about him. If Reinwardt is willing to send him another vessel, it should be small, fast and well-armed. It has to be put completely at his disposal. Furthermore he wants to receive a written authorization, with which he can claim all the necessities from the governmental storehouses, for example all kinds of presents, which are the most popular in these regions. At his request the government of Amboina has paid him 2.100 rupiahs, needed for purchasing curiosities of a scientific character and to pay his train. Is it not possible for Blume to accompany him during the last part of his voyage? Treffz thinks that most probably he will be very much occupied on the Papuan islands and on Ternate, Minada (Menado?), Kimmén and Corantalo. He promises to send eight specimens of the Walking Leaf (Cheleuthoptera, Leaf-insects). He also promises to collect other animals. He has heard rumours about a Pararang species, which is even more beautiful than the one living in the island of Celebes. His boy has just shot one. He will also try to acquire a specimen of Babyroesa (Babyrussa). He has bought two specimens of a Casuaris species, which will be sent to Batavia at the next occasion. Besides many shells have been offered to him, but he only wants to accept the most exquisite ones, a selection in which he follows the work, written by Knorr (-).

He asks Reinwardt to order the government to send him a collection of presents to be used for exchange, as well as coins. He adds an inventory of the objects suited as means of exchange. Since the route to Java is open again, the next transport to Batavia and to Reinwardt will soon follow.

[NA 2-21.204(4); ZOC, COB, GEO]

**429. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 26 March 1820**

In his 37<sup>th</sup> letter Van Marum expresses his eagerness to know if his friend is really planning his near return to Holland. There is no doubt about the 'importance' of Leyden for science. Elout has offered to add Van Marum's letter addressed to the Governor-General to his own letter. The matter is urgent. He hopes that his friend has meanwhile received his letter n<sup>o</sup> 36, which has been sent to Batavia by Elout. He has very much enjoyed reading Reinwardt's extensive letter, dated 16 August 1819. Mr. A. van Hoboken has already received the bill of exchange written out in his name. It has been accepted on 14 February 1820. So it will be exchangeable on 14 May 1820. In Van Marum's view this is the right approach. As a matter of fact these bills of exchange from a reliable financial firm are the best way of transferring money to Holland.

In his view there are only a few men who equal Reinwardt's high moral standard. Reinwardt should not expose himself to all kinds of dangers and all kinds of daredevilries. Sulpke will have to wait until he has returned to Holland, before he will get his money. Until now, he has not received the basket of seeds, sent to him from Trogong through Batavia. Reinwardt still has to send life certificates to Holland. Falck has promised to pay Reinwardt's Dutch salary as soon as he has received the certificate relative to the second half of 1819. So he has to go on sending these documents regularly. Maybe Falck will be succeeded by a Minister, who will be even more formal, like Goldberg for example, who absolutely wants to receive the written proofs of Reinwardt's existence in time. According to Reinwardt's wish Van Marum has seen Caroline and he has discussed with her the financial relief needed by Mrs. Luckemeyer, as well as Reinwardt's proposal to give her 100 guilders. Meanwhile Caroline has found a job and accommodation in the house of the Slingeland family. Unfortunately he has not had the opportunity yet to see her again. DeVries and his wife are very much pleased with the situation.

In their view it is a change for the better. Van Marum is very satisfied about D'Ailly junior. He sees him every two weeks, most of the time prior to a meeting of the 'Instituut'.

In order to prevent excessive financial demands from Lüttringhausen, he has explained to Reinwardt's relatives that their brother will never become very rich. He will send them a copy of the account of the high living costs on Java, as Reinwardt has suggested him to do.

Elout has informed him that the case of botanical drawings has been saved from the 'Admiraal Evertsen'. He hopes to receive them soon and to discuss their possible use with Elout. He has received the duplicate of Reinwardt's extensive letter, as well as the inventories. In addition he has arranged its publication in several newspapers. Regrettably he has not been informed about the cabinet of shells, bought by Reinwardt in Samarang, nor did he receive any further message about the acquired *Spongia crateriformis* or about the skeleton of the *Python javanicus* (of about 13 feet length). The inventories, sent by Reinwardt, only mention birds, insects, living plants and seeds. He understands why his friend is so very sad about the loss of many precious gifts, which he had bought for his friends. Fortunately the 'Zeemeeuw' has not been wrecked, as Reinwardt had feared, because he has received the duplicates of several letters, which have been sent with that ship. However, he did not receive the presents. Finally, almost every shipment has been lost. Only the crocodile skeleton did arrive in a good condition. It has been delivered at the 'Oost Indië Huis'. From there it was taken to the 'Trippenhuis', because it turned out to be impossible to take it to the 'Koninklijk Kabinet van Natuurlijke Historie'. Meanwhile many interested persons have come flocking, in order to admire that object. Van Marum is going to write a report, which will be published in the *Letterbode*, as well as an extract of Reinwardt's extensive travel account.

He adds a few remarks with respect to the financial position of the Kent family. Unfortunately he has remained ignorant about the fact that Kent has sent money to Holland, as a consequence of the loss of several of Reinwardt's letters. Therefore he could not react to the claims brought by Mrs. Kent. According to Reinwardt's previous instruction he has paid her 400 guilders. So All in all, there has been a certain confusion about the question if these payments have been authorized, yes or no. This year he will pay the same amount of money again. As a consequence of the rumours

about the possible death of Kent and Reinwardt, which have reached De Vries through Eschauzier, he did receive several letters from Leyden, Utrecht and Groningen about the correctness of this message. Like Van Marum does, De Vries hopes that the call from Leyden will draw Reinwardt to Holland and to its university.

Van Marum fears that his letter will arrive too late and that Reinwardt will already be on his way to Holland. He knows Van Marum's feelings! Miss Betsy had to be replaced by Mrs. Woestenberg (the widow) as Van Marum's housekeeper. She is now living at his expense with her relatives in The Hague.

[NA-RANH 529-20b BOT, ART, ZOC, COB; See also: UBL BPL 2922: identical letter]

**430. ?? Duyvené (Batavia) to C.G.C. Reinwardt (Batavia); 28 March 1820**

Duyvené, secretary of the General Director of Finances, offers Reinwardt an extract of the verbatim account, dated 23 March 1820 (n° 2).

[NA 2-21.204(4)]

**431. Secretary of the National Audit Office (Batavia) to C.G.C. Reinwardt (Batavia); 1 April 1820**

The secretary of the National Audit Office acknowledges the receipt of Reinwardt's letter, dated 26 March 1820 (n°639), covering a receipt ('kwitantie') regarding a statement of expenses made by Reinwardt from 13 July on, during a trip through the Preanger regencies. Reinwardt has offered this declaration to the Governor-General. Now the president and the members of the National Audit Office inform him that they will settle this affair as soon as Reinwardt will have entered his statement of expenses.

[NA 2-21.204(4)]

**432. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 3 April 1820**

Reinwardt reminds his friend that he has informed him that already some time ago he was going to send a certain amount of money to Holland, but that he had decided to wait because the rate was still too adverse. Nowadays it is possible to buy bills of exchange 'on Holland' again. Therefore he sends his friend a bill of exchange of 12.000 guilders. It has been drawn by Jessen

Trail & Co on the Firm of Fairlie Bontam & Co in London. It will be payable in Rotterdam, at three months sight. He has decided to send this bill with the 'Canada', sailing to London, so Van Marum will receive it through an English mercantile house. He asks his friend to inform him about the acceptance of this bill. He will not leave Java, before having authorized an intermediary to receive and open his letters. If the bill will not be accepted, the objection should be sent to Mr. Merkus, Procurator General in Batavia. Merkus will deputize for him, after he has left.

He reminds his friend that he has sent an extensive letter with the 'Jan en Cornelis' (captain Duyff), to which he has added a rich collection of objects of natural history, destined for the 'Kabinet'. He also reminds him that he did inform him in his last letter – dated 21 March 1820 – that he has given a bill of exchange on his own name to Landré junior and that he has asked to pay it at sight. There is no further news. He still enjoys good health and he is still looking forward to receiving letters from his friend. He adds his greetings and asks him to convey these to Mrs. Van Marum and to Betje.

[NA-RANH 529-20b; ZOC, COB]

**433. General director of Finances (Batavia) to C.G.C. Reinwardt (Batavia); 4 April 1820**

The General director of Finances has received Reinwardt's letter, dated 20 March 1820 (n° 625), to which his state of travelling expenses for the sum of 1.237 guilders and 15 pennies ('stuivers') had been added. These expenses had been made by the retired lieutenant colonel Treffz from 1 April until 31 December 1819 (31 December included). In his letter Reinwardt had asked to send him a warrant for its payment. The General Director of Finances returns this account. As a matter of fact the Governor-General has decided on 4 March 1819 (n° 14) that a certain procedure has to be followed. The General management of Finances had already agreed with Reinwardt to pay the money directly to him. Reinwardt will hold Treffz's pension and daily wages in his custody. First of all Treffz has to send a life certificate to the General Management of Finances. The resident of Batavia, who will transfer the money, has already been informed about the procedure, as appears from the letter (dated 16 March 1819, n° 80) received by him from the General Director of Finances. Reinwardt has to return the statement of expenses together with Treffz's life certificate.

[NA 2-21 204(4)]

**434. ?? Duyvené (Batavia) to C.L. Blume (Buitenzorg) and C.G.C. Reinwardt (Batavia); 14 April 1820**

Duyvené, secretary of the General Director of Finances, informs Blume and Reinwardt that their letter, dated 11 April 1820, has been read and that it has been decided that the resident of Batavia has to pay to Dr.C.L. Blume, assistant-director of the Department of Agriculture, Arts and Sciences, the sum of 5.060 guilders and 20 pennies ('stuivers') for the delivery by Blume of a collection of objects of natural history and a collection of surgical instruments. This sum includes 405 guilders as a reimbursement for travel expenses, made during his collecting trips. The resident has to deduce this sum from the budget of the Department of Agriculture, Arts and Sciences for the year 1820. Blume's expenses for travelling and accommodation will be paid in the same way [Decree n°1 from the 'Extract uit het Verbaal van den Hoofddirecteur van Financiën voor Nederlandsch-Indië].

[NA 2-21.204(4); ZOC, COB, MED]

**435. C.G.C. Reinwardt (Buitenzorg) to M. van Marum (Haarlem); 16 April 1820**

Reinwardt sends his friend a duplicate of his letter, dated 3 April 1820. It mainly served as a covering letter to the bill of exchange of 12.000 guilders. Now he adds a 'secunda' of this bill as well as the bills of lading signed by captain Duyff and the part of the *Bataviaasche Courant* in which the report on the vaccination programme on the island of Java has been published. This message deserves to be published in the Dutch newspapers as well. So Van Marum has to send it to De Vries. In this way the public will learn that he is doing more than only collecting flowers, like De Vries has once said. Reinwardt has decided to devote himself completely to science from now on. Therefore the government has decided to appoint his assistant Dr. Blume supervisor of the vaccine and medical service. Unfortunately Blume is not very popular. The rumours about his appointment have caused so much grumbling among the older practitioners, that the Governor-General has not dared to appoint him permanently. Therefore he has asked Reinwardt to continue the supreme control over this service, while Blume has been appointed inspector. So he remains Reinwardt's subordinate. Reinwardt hopes that Blume will be made responsible for the administration of this service. From time to time his relation with Blume is problematic. Blume

is not very obedient. For example he has built up an enormous collection of natural history for which he has spent too much money. He has even made debts. Furthermore he had decided to send this collection to Holland, without having consulted Reinwardt. Blume pretended to be its owner. Perhaps he has acted in that way in order to get rid of his debts. Reinwardt has reprimanded him and he has asked the Governor-General to make the final decision. The Governor-General has decided to hand the collection over to Reinwardt and to compensate Blume for what he has advanced. The collection turned out to be mainly consisting of birds and insects. As a consequence Reinwardt is spending most of his time now on wrapping and packaging. So he will be able to send his friend many objects again.

Recently Diard – a brilliant French naturalist – has arrived on Java. Most of the time he is in the company of Duvaucel – Cuvier's stepson, who is staying in the Dutch East Indies already for several years. They are both working in the field of zoology. Before they arrived on Java, they have been staying in Calcutta for a long time, after which Raffles had persuaded them to come to Benkoelen on Sumatra. They have stayed there for eight months and collected many objects of natural history. Raffles has been of great help to them. He has even given them a monthly allowance.

However, the partition of the collection among Raffles, the English 'East India Company' and themselves soon caused real problems. As a result they had to leave Benkoelen, forced to leave almost all their 'treasures' behind. Duvaucel left for Padang, while Diard came to Java. Soon they will go to Bengal, because they are convinced of being protected by the English government and by the 'Asiatic Society'. Their major discovery has been the one of the tapir on the island of Sumatra. In Reinwardt's view this fact proves that the New World is gradually becoming better known than the Old World.

Because it has meanwhile been a long time since he has received a letter from Van Marum, he is eagerly awaiting the arrival of ships from Holland. Van Marum's last letter has been sent on 15 October 1819 (n<sup>o</sup> 34). So he must have received Reinwardt's answer in the meantime. He hopes that the living plants sent with the 'Admiraal Buyskes', the 'Henriëtte en Betsy', the 'Soerabaya' and the 'Jan en Cornelis', will have been received in a good condition. Furthermore Van Marum must have received the sum of 109 guilders and 8 pence. A bill of exchange for that sum has been sent to

D'Ailly (Amsterdam). He also adds a letter to Mr. Morian and another one, addressed to his sisters in Lüttringhausen.

[NA-RANH 529-20b; MED, ZOC, COB, BOT]

**436. Fr.A. Treffz (Amboina) to C.G.C. Reinwardt (Batavia); 23 April 1820**

Treffz informs his principal that he has sent several objects of natural history to Batavia with the corvet the 'Zwaluw'. It has left Amboina on 11 April 1820. From an old Amboinese woman he has bought a spiral staircase for only 34 rupiahs, an excellent piece of woodcraft. He has snapped up this bargain before other interested buyers could. The governor showed himself also impressed by its beauty and its price. Less than an hour later the Englishman Monreau offered him 250 rupiahs for it. Another traveller, colonel Jeauffret, even offered him his complete collection of natural history, stored in 24 cabinets. Thereafter he has chartered a vessel, took into employment two helmsmen and ten sailors and decided to put himself into its command. He also borrowed four heavy guns ('draaibussen') and ammunition from the government. He has decided to sail with this vessel along the coast of Ceram and to Keffing, where he wants to stay for a couple of months. Until now he has paid 208 rupiahs and 12 pennies ('stuivers'). Furthermore he has engaged Mr. Knops, a civilian of Amboina, at a salary of 100 rupiahs monthly. This man is fairly well acquainted with this region. Besides he lives in harmony with all the chiefs of Ceram. Treffz has high expectations for him. Knops has also promised to take him to the people of the 'Halvooren'. He wants to acquire a couple of skulls there, even if he would have to sacrifice himself. Meanwhile the government of Amboina has also offered him all kinds of things to be used as objects of exchange. Because the arak has been left behind on Makassar, he has bought a quantity of arak from Mr. De Haan (Amboina) for 170 rupiahs. The governor is assisting him in every respect. So probably he will succeed. He sends a small crate of shells and another one, containing insects with Mr. Rundberg to Batavia. He will set sail tonight. He promises to send a more extensive letter from Keffing. He has added the inventory of the small crate n<sup>o</sup> 32 to this letter.

[NA 2-21.204(4); ZOC, COB, ETN]

**437. H.B. Hencke (Djokjakarta) to C.G.C. Reinwardt (Batavia); 4 May 1820**

Hencke, deputy surgeon of Djokjakarta, sends two Brahmanic antiquities to Reinwardt. The first object is most probably a table-bell. The second object is no longer complete, so its function cannot be determined. Perhaps Reinwardt knows more about it. He also wants to add a short report on the vaccination programme carried out by the surgeon major Gouvre of the 12<sup>th</sup> French battalion, who has vaccinated a number of Javanese children. At the occasion of his departure Gouvre has turned over his office to the local surgeon Senthers, who has vaccinated a number of European, Chinese and native children, as well as the ruling Sultan of Mataram. The vaccine had no effect on him. In Hencke's view this may have caused by the influence of a native priest or of a female native doctor ('Doekoon'). This was a disappointing result. Nevertheless after several years this Sultan has fallen ill and suffered from the smallpox. After a couple of years the English resident Garnham asked Hencke to continue the vaccinations, so he vaccinated 60 more children. Hencke continues by giving another example. When the Commissioners General took over the government Hencke was asked to continue the vaccinations again. Major Nahuys, the resident, allowed him to give half a rupiah to every child, once vaccinated, but this experiment turned out not to be successful, because the children did not come in time, when they were called for a second vaccination. Hencke wants to offer Reinwardt a report on a hospital for native women suffering from venereal diseases. From a conversation with the garrison's surgeon he has learned that there was hardly any women suffering from these diseases. He hopes to have satisfied Reinwardt with his report.

[NA 2-21.204(4); ETN, MED]

**438. J.B. Benoît (Tatas, Banjermassing) to C.G.C. Reinwardt (Batavia); 6 May 1820**

The resident of Banjermassing acknowledges the receipt of Reinwardt's satisfying letter, dated 27 August 1819. He has tried very hard to acquire the objects, which Reinwardt had asked to provide him with. Until now the agents of the resident of Djoegalis did not answer the letters sent to them by the governor. The same goes for the men, whom he has sent to the various 'doessans'. Anyhow he sends Reinwardt a specimen of an untamed

race now, which shows several characteristics of the Daijak people, as well as a native from Becampoy, an individual, whom he has promised to set him free. This individual has been educated to a certain extent. Perhaps he will be of service to Reinwardt. Furthermore he also receives two skulls of Manjardies, who have been executed by the Sultan. He would be very pleased if Reinwardt would be so kind to offer the weapons and the animals to the Governor-General. One of the animals he is going to send is a living 'Musique'. He will send these monkeys with Liwan, his orderly. He still remembers the presents Reinwardt has sent him and recommends himself to his attention.

[NA-2-21.204(4); ANA, ETN, ZOC, COB]

**439. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 3 June 1820**

Reinwardt is eagerly looking forward to the arrival of a new letter from his friend. The last letter received from Haarlem has been n° 34 (dated 15 October 1819). Recently two vessels have arrived from Holland and another one from Antwerp. He hopes to receive several letters from Holland, arriving with the 'Van der Werff'. This vessel has sailed from Texel on 5 December 1819. It may arrive in Batavia any moment now. Another vessel, which has arrived today, has brought him the royal decree, dated 8 November 1819, announcing his appointment as professor in Leyden, accompanied by a copy of a letter written by Minister Falck as well as a copy of another letter from the governors of Leyden University. The Governor-General has received a copy of the Ministerial letter. Meanwhile he has understood that he has to take into account that he will have to leave Java soon. For the time being he does not know yet when he will leave. It will not be before the end of this year, the most favourable time for a return passage to Holland. Of course he must have the opportunity to prepare himself properly. He has to break away from his many occupations and obligations. He has to leave all kinds of activities unfinished. He hates that idea! Although the invitation received from Leyden is very honourable, he does not like the idea at all. Leyden is having high hopes for him. In order to come up with these expectations he will have to work very hard in a position with which he is no longer familiar. Besides he wants to have enough spare time for preparing the publication of his many discoveries and observations. He wonders if there will be any

time left for the contemplation and consideration of his ideas. Will there be any time left for seeing his friends? Nevertheless he has decided to obey the call from Leyden and to accept the appointment, among others because his friend Van Marum wants him to do so.

At the first possible occasion he will answer the letters received from the Minister and from the governors of Leyden University.

He has decided to send this letter with the ship that will be leaving Batavia tomorrow. Why did his friend not inform him about the opinion of the governors of the 'Athenaeum Illustre' with regard to his new appointment? How can he be sure that Mr. Van Rossum is still willing to replace him? He also wants to be informed about the advantages of his new appointment. What about Van Marum's position? What about the future of the 'Koninklijk Kabinet van Naruurlijke Historie'? He is still looking forward to receiving the original letter from Minister Falck. Probably this letter will be brought to him by the 'Van der Werff', together with a number of letters from Van Marum and from his many other friends. Minister Falck has also informed him that he has decided to send a couple of excellent young scientists to the Dutch East Indies next spring, in order to replace him. Reinwardt is almost sure that one of them will be Mr. Kuhl. He hopes that Van Marum will go on sending him letters for some time.

Today he will also add the triplicate of the bill of exchange worth 12.000 guilders, the 'prima' of which has been sent on 3 April 1820 and the 'secunda' was sent on 16 April 1820. Until now he did not receive a letter from the Calkoen Brothers, bringing him the news about the proceeds of the rice transaction. He also adds the triplicate of the bill of lading, relative to the cargo sent to Holland with the 'Jan en Cornelis' (captain Duyff). Van Marum has already received the inventory, which had been added to the letters, sent to him on 3 and 10 March 1820.

Meanwhile a new cargo is waiting in the governmental storehouses for shipment to Holland – 12 crates, among others a crate of birds and insects – which will be delivered at the 'Hollandsche Maatschappij der Wetenschappen' (Haarlem). A second crate has been destined for the 'Zeeuwsch Genootschap der Wetenschappen'. Furthermore he has decided to send a collection of birds to Temminck, a collection of insects to Langsdorff (Rio de Janeiro) and various objects of natural history to Westermann (Copenhagen). Wrapping and packaging these objects is occupying him and his assistants already

for several days. Again he spends a few words on the zoologists Diard and Duvaucel, who have recently discovered the Sumatran tapir, or who – at least – have confirmed its existence. This animal distinctly differs from the American tapir. Together with several other scientists he (Reinwardt) has discovered that the unicorn rhinoceros of Bengal is different from the unicorn rhinoceros of Sumatra, like the Sumatran two-horned rhinoceros is different from the African two-horned rhinoceros, as Van Marum will know of course. Meanwhile he has received two specimens of *Simia nasica*, living in Borneo, and a third specimen, living on Makassar. He also adds a bill of exchange in Van Marum's name (for 109 guilders and 8 pence), to be paid to D'Ailly and he refers to his previous request (made on 16 April 1820). He sends his greetings, also meant for Mrs. Van Marum and Betje. He hopes that she is recovering again.

Colonel Keer is still on Banka, fighting the rebels. He has won the battle at the cost of several casualties. Meanwhile a new expedition against the disloyal natives is prepared. The 'Van der Werff' will bring fresh sailors to Banka.

He fervently prays that his friend will be fine.

[NA-RANH 529-20b; ZOC, COB]

**440. Commander of the troops of Batavia (Batavia) to C.G.C. Reinwardt (Batavia); 13 June 1820**

In reply to his letter, dated 12 June 1820, Reinwardt is informed that orders have been given to keep 4 'picols' of arak (500 Hollandse ponden) at Reinwardt's disposal.

[NA 2-21.204(4); ZOC. COB]

**441. M. van Marum (Haarlem), to C.G.C. Reinwardt (Batavia); 18 June 1820**

In his letter n<sup>o</sup> 38 Van Marum admits that he has not sent a letter to his friend since a long time. His many occupations relative to the 'Maatschappij' have kept him from doing so. Besides he is slightly disappointed about the fact that initially Reinwardt had promised him to return to Holland after a four years term, which means 'not later than April 1820'! He has even repeated this promise several times. Why did he not confirm this decision? Meanwhile he has learned from Kemper that Reinwardt has asked His

Majesty to allow him to stay on Java for the time being and that he has asked Kemper to support this request. He should have understood that this is really an unpleasant message. Now the Governor-General seems to have won and probably Reinwardt will stay on Java as long as his superior will do. Although he will have the opportunity to make many discoveries until his departure and perhaps even during his return passage, this postponement is really very disappointing! He cannot imagine why Reinwardt seems to avoid the assumption of duties in Leyden.

Furthermore he wants to receive a letter soon, since Reinwardt has been fully informed by Minister Falck about the details of Brugmans's death and now that he has officially been invited to come to Leyden, where the governors of the university are anxiously looking forward to the reception of Reinwardt's consent.

He discusses several of his friend's letters. With respect to the one, dated 2 December 1819, he observes that nowadays Reinwardt's Dutch salary is paid directly to him (Van Marum) and even before the respective life certificate has been received. With respect to Reinwardt's letter, dated 15 December 1819, he observes that he has received four packages of seeds through Mr. De Wilde (Amsterdam), destined for Ghent, Leyden, Groningen and finally for himself. Most regrettably these seeds did not germinate. Once again he asks his friend to send him only the most beautiful and most exceptional plants and of course many seeds, in order to please his colleagues. Because he did not receive any seeds lately – in spite of Reinwardt's remarks on this subject – he supposes that a cargo must have been lost. The same goes for Reinwardt's remarks with respect to the quadruplet of the bill of exchange in the sum of 12.000 guilders. Meanwhile it has yielded 9.957 guilders. After having seen Kemper and De Vries about the question what to do with this money, he has reinvested it at 5% interest. The same letter also discussed the unknown results of the rice transaction. He hopes to inform his friend soon about this affair, which is dragging on for several years already.

Van Hoboken has informed him about the shipment of six crates, containing 36 living plants, which have been sent with the 'Admiraal Buyskes'. Unfortunately these crates have been swept overboard, or even several of them have been thrown overboard. Next time the Governor-General should hold the captain of the vessel personally responsible for the cargo. He especially regrets the loss of the specimens of the three *Marumia* species.

The specimens of the fourth species are in such a bad condition that they will probably perish. He has only succeeded in saving a few plants. He hopes that his friend will continue to send him living plants, especially of the species which can possibly be cultivated in Holland. He promises to give most of the plants sent by him to Leyden and Amsterdam. Until now he did not receive the seeds sent to him with the 'Baron Van der Capellen'.

He is pleased to know that his friend has found lodging in the house of the Procurator-General Merkus after Elout has returned to Holland. He hopes that he will restrict his stay in the unhealthy town of Batavia to a minimum. Obviously the last letter received by him was only meant for covering the copy of the reprinted Volume 7 of the *Verhandelingen van het Bataviaasch Genootschap van Kunsten en Wetenschappen*. In order to accept this parcel he had to pay almost eight guilders for postage, because it had been delivered in Den Helder and not at the ship-broker's office in Amsterdam. Therefore he repeats the indications for the sending of letters and parcels.

Thereupon he spends a few words on the excellent engraving and the marvellous drawings, which he has received through Elout, after the cargo had been landed in Flushing. The vessel, which delivered this package, had to winter in the pack. These pieces of art are very beautiful. Since Van Beek has died Van Marum knows that there is nobody left, who has the artistic skill to make a perfect engraving. Nor is there anybody who has the skill to colour these prints. Elout, who thinks that he has found someone, who can, wants to discuss this suggestion with Minister Falck. Therefore he has asked him to return the drawings. In his view Reinwardt should decide to travel to Paris, just like Temminck has done for the purpose of the printing of his work on pigeons. He could have added the annual account, but he does not, because Reinwardt will probably already be on his way to Holland, when this letter arrives in Batavia, at least if he has meanwhile expressed his preference for the professorship in Leyden and if he has abandoned his plan to prolong his stay on Java.

Van Marum stresses that Reinwardt knows his feelings with respect to this affair. He adds his kind greetings from his wife and ends his letter by observing that Betsy is still raving. She is staying with her relatives in The Hague (at his expense), while her niece Sientje has taken her job as a housekeeper.

[NA-RANH 529-20b; BOT, ZOC, ART]

**442. P. van Lawick von Pabst (Batavia) to C.G.C. Reinwardt (Batavia); 20 June 1820**

The resident of Batavia – P. van Lawick von Pabst – states that he has been ordered to put 229 guilders and 3 pennies (‘stuivers’) at Reinwardt’s disposal in order to repay Treffz, for the expenses made by him in behalf of the Department of Agriculture, Arts and Sciences. The letter, relative to this subject, is dated 19 June 1820 (n° 148a).

[NA 2-21.204(4); ZOC, COB]

**443. ?? Sampson (Batavia) to C.G.C. Reinwardt (Batavia); 23 June 1820**

Ordered by the surgeon, Sampson – manager of the storage of medicines in Batavia – sends 50 bottles of arak, to be exactly: 58 pounds (‘Hollandse ponden’) ‘voorloop van den arak’ [‘first running(s) of arak’] of 20° [20%]. He asks Reinwardt to inform him immediately if he wants to receive more and – if so – to return the empty bottles.

[NA 2-21.204(4); ZOC, COB]

**444. J.E. van Beindig (Magelang) to C.G.C. Reinwardt (Batavia); 25 June 1820**

Van Beindig is willing to contribute to the achievement of Reinwardt’s goal relative to the natural history of Magelang. Although he is not at all an expert, he is very willing to contribute to the enrichment of the collection of objects of natural history. Therefore he takes the liberty to send him the balance, drawn from a trip to the ‘Soembing’ mountain and on its slopes. He has made this trip recently in the company of Van Bloemestein, Palm, Harrar and Van Andringa. The ‘Soembing’ mountain is known as one of the ‘Two Brothers’.

Because he was ignorant of the exact requirements with respect to a more or less scientific description, he hopes that Reinwardt will accept the description given by him. He also takes the liberty to send him two swords found by him on the top between the rocks of the crater. These objects will be sent to Batavia with the vessel that is leaving (today). He ends his letter by expressing his feelings of high esteem.

[NA 2-21.204(4); ZOC, COB, ETN]

**445. ?? Sampson (Weltevreden) to C.G.C. Reinwardt (Batavia); 27 June 1820**

Sampson – storage manager for medical supplies – informs Reinwardt that the distilled arak, requested by him (500 pounds of 20°) are ready and at his disposal. The liquid is contained in carboys, each containing 25 pounds of arak. He expresses his feelings of esteem.

[NA 2-21-204(4); ZOC, COB]

**446. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 29 June 1820**

Within the last few days Reinwardt has had the pleasure of receiving two letters from his friend, n° 35 (dated 13 December 1819) and n° 36 (dated 31 January 1820). These letters had been added to a letter from Elout. He deplors the fact of Van Marum's indisposition, although he is only complaining about a common cold. He hopes that he has fully recovered meanwhile, since the severe winter has gone. He regrets that his friend is so very worried about the fact that his letter of 29 March has remained unanswered. He does not understand why on 31 January Van Marum has not received his letter, which was sent on 18 June 1819, because he has been informed about the contents of Van Marum's letter, dated 13 July 1819, to the Governor-General. He assumes – or better – he is sure that Van Marum will have received his more recent letters, for example the extensive one, dated 19 August 1819. Anyhow, in his last letter, dated 3 June 1820, he has sent him the 'tertia' of the bill of exchange, worth 12.000 guilders. Since then he did not return to Buitenzorg. He has made several trips to the seashore and he has visited several islands off the Roads of Batavia. He is pleased to know that Elout has advised his friend not to end the correspondence with him too soon. He hopes that he will go on sending letters to Batavia for at least the next few months. Of course Van Marum knows that not until the end of 1819 the invitation to come to Leyden has been sent to him and that it often takes more than a year before the answer is received. Besides it is impossible to leave the Dutch East Indies at full speed. First of all a favourable occasion has to present itself – a trading vessel – which will suit him and besides, its captain should have a good reputation! Furthermore he did not answer the letter of appointment until now. It is even possible for him to postpone his answer until the next occasion will present itself. He has hoped to receive an

extensive letter from Kemper and from various other friends, which could give him more detailed information about the call from Leyden. It seems that Van Marum wants him to accept this appointment unconditionally. He does not understand why his friend does not get that first of all he wants to be informed about the conditions and the advantages of this appointment. Is it possible for him to move into the house, in which the late Brugmans has been living? Of course there are several other questions to be answered. He is not sure about his future in Leyden. On the other hand he has been warned not to make too many conditions before hand. Neither should he count too much on what is offered to him voluntarily. He knows that the vacant post of botany has been fulfilled excellently at the moment by a professor of anatomy, while a professor of theology is teaching natural history and a professor of medicine is teaching chemistry. Why do the governors of Leyden University not invite Vosmaer, who is teaching at Utrecht University and offer him Brugmans's vacant professorships? He is suited in every respect. Besides Vosmaer is treated like the 'odd man' in Utrecht. Only because Van Marum has stressed that he should accept this honourable invitation from Leyden, he will decide to do so. He promises to send his answer to Leyden at the first possible occasion.

If he would be obliged to leave by the end of the year he will not be able to achieve his goal as well as Van Marum's, although he will have the time to prepare his return passage. However he will not be able to take many living plants with him. Meanwhile Professor Sandifort has informed him about what the Hortus of Leyden has received from Van Marum. Unfortunately this inventory gives the names of two species of *Fagraea*, to be exact *F. zeylanica* and *F. javanica*, although both specimens sent by him are belonging to the same species, *F. javanica*. He adds several other corrections of plant names.

He has been shocked by the very unfavourable news about the rice transaction. Most probably the sum of 10.000 guilders, paid by him on Java, will be lost. He regrets the fact that this affair has been worrying Van Marum so much. Furthermore he discusses the position of his niece Caroline. She has to be taken care of! He suggests Van Marum to see De Vries about it. In his view Caroline will prefer to live with him after his return to Holland, for example to govern his household. Perhaps it will be the best solution to lodge her with decent people at a reasonable price, at least if his friends

do agree or if they consider it necessary to do so. Van Marum and De Vries are allowed to spend the necessary money, whatever it may cost. It is only allowed to make her housekeeper or 'Mamsell', if this appears to be the best solution. If possible he would have sent another bill of exchange worth 10.000 guilders, if the circumstances would have been more favourable. He ends his letter by expressing his passionate wishes with respect to Van Marum's health and his feelings of true friendship.  
[NA-RANH 529-20b; MED, BOT, ZOC, CHE]

**447. ?? Sampson (Batavia) to C.G.C. Reinwardt (Batavia); 30 June 1820**

Once again Sampson informs Reinwardt that he has sent a quantity of distilled arak (20°) to him. This time he has sent 142 pounds contained in six carboys, five of which are filled up with 25 pounds of arak each, while the sixth one is containing 17 pounds.  
[NA 2-21.204(4); CHE, ZOC, COB]

**448. J.E. von Beindig (region of Magelang) to C.G.C. Reinwardt (Batavia); end of June 1820**

On 12 June 1820 Von Beindig and his company have left Magelang, intending to climb the 'Soembing' mountain, one of the 'Two Brothers', situated on the border between the 'Kedoe' residence and the 'Vorstenlanden'. Therefore they went to the 'Rara-an' dessah, in the 'Djetis' district. On 14 June they moved on to the 'Ketjepit' dessah, north of the 'Soembing' mountain, a couple of miles from Para-an. They have camped there. Von Beindig continues by giving a detailed account of this trip, about the inhabitants, about the various dessahs and about the customs and living conditions of the natives. He also adds a description of the geographical, botanical, geological and mineralogical aspects of the region, among others with regard to the 'Semeroe' and the 'Merapi' volcanos. He describes the interior of the crater region at the top of the 'Soembing' mountain. The natives of the various dessahs of the 'Ketjepit' region are cultivating tobacco.

After having returned to the village of Tjemara Kembar, where the horses had been left behind, everyone was satisfied and very happy about their safe return from this dangerous trip. They had dinner together and discussed the exciting and beautiful scenery, while having several glasses of wine.

[NA 2-21.204(9); GEO, PHY, MIN, BOT, ETN]

**449. C.G.C. Reinwardt (Batavia) to J. de Vries (Amsterdam); 30 June 1820**

Reinwardt informs his friend that a fleet of vessels has brought a number of letters for him to Batavia. He has read that his friends and relatives are fine. He discusses the sad conflict between the Calkoen brothers and Van Marum. He is very grateful for the way in which his friends have taken care of Caroline. He promises to repay all their expenses. After his return to Holland he will ask her to come and live in his house. Perhaps he will even have the chance to take possession of Brugmans's house. He has also been informed that he will be confronted with a new situation: On the one hand the governors of the university seem to demand much of the professors, on the other hand their freedom will be restricted. Perhaps it would have been better if he would have been allowed to return to Amsterdam. Furthermore he discusses a few death cases. He has really been worrying about Van Marum's disease. He knows that his friend longs for his return to Holland. Nowadays his own health is rather good. The climate of Buitenzorg is much healthier than the weather in Batavia. Hoyaarts (?) and Furr (Fuss?) have died. Meanwhile a contingent of soldiers has arrived, commanded by the rear admiral Musquetier, in order to go on a punitive expedition against the perfidious ruler of Palembang. Finally he observes that the machinations of the English are causing many inconveniences to the Governor-General, which also goes for the actions of the pirates.

[KB 121 B 8; AGR, MED]

**450. General director of Finances (Batavia) to C.G.C. Reinwardt (Batavia); 1 July 1820**

The Governor-General has authorized the payment of 5.465 guilders and 20 pennies ('stuivers') to C.L. Blume, assistant director of the Department of Agriculture, Arts and Sciences (see his decree of 29 March 1820. n° 6). Of this sum 5.060 guilders will be paid for the collection of objects of natural history and instruments handed over by Blume to the government. The rest – being 405 guilders – will be paid to him as reimbursement for his travel expenses relative to the collecting of these objects. It will be paid directly to Blume himself, immediately after the General Director of Finance has been informed about the arrival of the above mentioned collection and instruments at Reinwardt's. He asks Reinwardt to inform him as soon as

possible about the arrival of the collection, after which the money will be paid.

[NA 2-21.204(4); ZOC, COB]

**451. C. Dias (Amboina), C.H. Smits (Amboina), J.H. van Winter (Amboina) and J.J. Bruins (Amboina) to C.G.C. Reinwardt (Batavia); 3 July 1820**

The senders give a description of the collection of objects of natural history found in the heritage of the late lieutenant colonel Treffz. The inventory has been impressed with the government seal. This bill of lading has been handed over to the delegates of the government – J.H. van Schöler (secretary of the government) and J.J. Bruins (deputy magistrate of the Moluccas). It gives a number of cabinets and boxes. This collection will be sent from Amboina to Surabaya with the brig ‘Aurora’ (captain C.J. Gebhardt). He has been asked to redirect the collection to Batavia, where it has to be handed over to the resident. Furthermore a description of the collection is given: 1 large metal box, containing a large number of birds of paradise and a parrot) and 21 crates and wooden boxes, the contents of which have also been described. One of the crates contains several objects of art, that’s to say: a silver mounted klewang. There is also a small box containing five ‘spiral staircases’ (‘wenteltrappen’) and a shuttle. These objects have been handed over by Dias and Smith to Van Winter and Bruins.

[NA 2-21.204(4); ZOC, COB, ETN]

**452. H.B. Hencke (Djakakarta) to C.G.C. Reinwardt (Batavia); 4 July 1820**

Hencke has decided not to leave until he will have had the opportunity to instruct a young man, 18 to 19 years of age, with respect to the monthly medical operations he used to carry out. This man has to replace him after his departure to a region where many officials are usually falling ill.

[NA 2-21.204(9); MED]

**453. ?? Sampson (Batavia) to C.G.C. Reinwardt (Batavia); 7 July 1820**

Sampson asks Reinwardt to sign one of the enclosed bills of lading for reception and to return it to him. Furthermore he returns the provisionally given receipts.

[NA 2-21.204(4)]

**454. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 20 July 1820**

Reinwardt reminds his friend that in his letter, dated 27 June 1820, answering Van Marum's letters n° 35 and n° 36, he had promised to send money to Haarlem again. Now there is a good opportunity to settle this affair. Accompanied by Mr. P.G. Siberg (Batavia), he has bought a bill of exchange, worth 10.000 guilders. He asks his friend to acknowledge the receipt of the two bills of exchange, of 12.000 guilders and 10.000 guilders respectively, sent to Haarlem some time ago, before he will return to Holland. Meanwhile 34 crates are waiting in the governmental storehouses for shipment to Holland. With the same vessel he hopes to send several more crates, one of which has to be sent to the 'Maatschappij'. Another one will be sent to the 'Zeeuwisch Genootschap', while a third one has been addressed to Temminck. Wrapping and packaging has taken much of his time. He has to do it all by himself, because almost everybody, who has accompanied him during the excursion to the beach, has fallen ill. He has also been ill, but meanwhile he has fully recovered. He did not change his plan to return to Holland by the end of the year, or early 1821, and he hopes to see his friend as soon as possible. The winter is really the best season for returning to Holland. Besides it is the best time of the year for sending living plants too, because they will arrive in Holland in spring. Expecting to see his friend again in good health and wishing him the best, he asks to convey his greetings to Mrs. Van Marum and to the other housemates.

[NA-RANH 529-20b; ZOC, COB, BOT, MED]

**455. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 24 July 1819**

In his 39<sup>th</sup> letter Van Marum deeply regrets that he has been deprived of news from his friend since he received the letter dated 31 October 1819, while others did receive recent letters from Batavia. Nevertheless he wants to send his friend a letter from time to time. He hopes that being appointed professor and director of the Cabinets of Natural History will make him decide to leave the East Indies and to come to Leyden. This letter covers a duplicate of his last letter sent from Haarlem. He has sent them to Mr. Kuhl, who was on the verge of leaving for the Cape. Because Kuhl had decided

to stay there for some time, he has decided to move up the expedition of these letters for a couple of days. Van Marum informs his friend that he will send Kuhl a letter through Mr. Vollenhoven, in which he will ask him to send the letter meant for Reinwardt, at the first possible occasion on to Batavia. He adds an inventory of the plants which arrived alive with the 'Maria Reijgersbergen' and also gives the names of the species lost since the arrival of that ship in the roads of Texel. Van Marum hopes that this letter will arrive in Batavia before his friend will leave for Holland. He is especially interested in the various species of Marumia. He is eagerly looking forward to receiving more news from his friend and assures him of his warmest feelings.

[UBL BPL 2922; BOT, ZOC]

**456. General director of Finances (Batavia) to M. van Marum (Haarlem); 29 July 1820**

On 25 July 1820 the Governor-General has decided to authorize the General Director of Finances to order the shipment of the collection of natural history prepared by Reinwardt's department and to send it to Holland with the 'Johanna' (captain Jonker). He asks Reinwardt to give indications to the resident of Batavia with respect to the objects to be sent to Holland, in order to make the proper arrangements.

[NA 2-21.204(4); ZOC, COB]

**457. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 29 July 1820**

Since he has received Reinwardt's letter, dated 31 December 1819, Van Marum did not receive any sign of life from his dear friend, while others have received more recent letters. In spite of that he will go on sending letters to Batavia. He hopes that his friend will inform him that he has accepted his appointment in Leyden as a professor and as director of the 'Kabinet van Natuurlijke Historie' and the 'Hortus' and that he has decided to abandon his plan to stay on Java for a new term. He has added the copy of his letter n<sup>o</sup> 38, because he has given its original to Mr. Kuhl, who had asked him to do so. Recently he has learned that Kuhl has decided to stay at the Cape a bit longer, before continuing his passage to Batavia. Through another

letter he has decided to ask Kuhl to send the letter addressed to Reinwardt on to Batavia as soon as possible. He is eagerly looking forward to receiving Reinwardt's more extensive letters.

[NA-RANH 529-20b; ZOC, COB, BOT]

**458. Governor-General (Batavia) to C.G.C. Reinwardt (Batavia); 1 August 1820**

In his answer to Reinwardt's letter, dated 30 July 1820, n° 739, about the necessary purchase of a collection of natural history at the occasion of an auction, the Secretary of State/Governor-General informs him that he has decided that the money advanced by Reinwardt will be reimbursed to him. The bill has been sent on to the resident of Batavia, who has been authorized to repay Reinwardt. An extract of this letter will be sent to the General Management of Finances, to the resident of Batavia, to Reinwardt himself and to the National Audit Office.

[NA 2-21.204(6); ZOC, COB]

**459. C.H. Dember (Amboina) to C.G.C. Reinwardt (Batavia); 12 August 1820**

Dember, clerk of the late lieutenant colonel Treffz, has received the news of the death of his employer during the trip he had been charged of by H.M. the King of the Netherlands, in order to collect objects of natural history. This journey has taken him along the coast of Ceram. On 18 June 1820 Treffz has died as a consequence of heavy tachycardia. His body has been buried in the native village of Haya, in the island of Ceram. The necessary arrangements have been made, among others with respect to his legacy. Dember had hoped to receive many objects of natural history, but he only received one fish, a very poisonous species – which is called 'Ikan Swangie' – in the language of Amboina. He has tried to preserve it. On 6 July 1820 he has witnessed the arrival of Mr. Koops and his company. Among the objects brought home by Koops were the skeletons of two specimens of the 'Ikan Douijong'. Before he died, Treffz had made a drawing. Reinwardt will find it among Treffz's personal papers. Furthermore he will receive several black 'koeries' (loeries?), three of which have died meanwhile, and a couple of 'Kroonvogels'. Dember has recently been informed that from 1 July on he will be unwaged. Unfortunately he is not able to produce any document

proving that Treffz had promised to pay him a decent salary during his voyage. He begs Reinwardt to find out if there is any possibility to redeem Treffz's promise. It is impossible for him to survive on the basis of his very modest salary. As a matter of fact he has lost a 'father' – in a certain sense. Treffz has treated him like his son. Besides because of a head injury he is staying in the hospital. Furthermore he has received a beautiful specimen of the Pararang, even more beautiful than the specimens from Makassar. He recommends himself in Reinwardt's attention and favours.

[NA 2-21.204(4); MED, ZOC, COB]

**460. H. Tielenius Kruythoff (Amboina) to C.G.C. Reinwardt (Batavia);  
14 August 1820**

The governor of the Moluccas informs Reinwardt that lieutenant colonel Treffz has died during his return passage from the east-coast of Ceram. Of course the addressee knows that Treffz was collecting objects of natural history and that he has been so kind to write letters of recommendation for him, which were addressed to the native chiefs. He does not know if Treffz has achieved his aim, although in his letters he has expressed at least a certain satisfaction. He knew the dangers of a visit to the Papuan region and he has been aware of the fact that he would only be able to escape from these dangers with the help of the native chiefs of the east-coast of Ceram, who are acquainted with the natives of the Papuan islands. According to the messages received by him, Treffz has died aboard his ship on 16 June 1820. He has been buried near Haya. His death is a dramatic loss to the government. The 'Weeskamer' of Amboina has accepted his heritage. Tielenius Kruythoff has appointed a commission in order to organize the shipment of the objects, which have to be sent to Reinwardt. The same goes for the documents addressed to the government. He assures Reinwardt that nothing will be lost. Therefore he has also engaged Mr. Dember, Treffz's secretary, at a small salary. He recommends him to Reinwardt's attention, because he has not been informed about an official engagement. Until Reinwardt has decided, he will take care of the collection. He also returns a letter, which was sent to Treffz by Reinwardt, when he had died already.

[NA 2-21.204(4); ZOC, COB, MED]

**461. Resident of Batavia (Batavia) to C.G.C. Reinwardt (Batavia); 7 September 1820**

The resident of Batavia answers Reinwardt's letter, dated 3 August 1820, and offers him five bills of lading, relative to the goods belonging to the Department of Agriculture, Arts and Sciences (Batavia). These have to be sent to Holland as a consequence of the decision made by the General Director of Finances, according to the letter, dated 29 July 1820, n<sup>o</sup> 3. They have already been loaded aboard the 'Johanna' (captain C.J. Jonker).

[NA 2-21.204(4); ZOC, COB]

**462. C.J. Gebhardt (Amboina) to C.G.C. Reinwardt (Batavia); 8 September 1820 (provisionally)**

Captain Gebhardt (commanding the 'Aurora'), which has anchored in the Roads of Amboina, informs Reinwardt that he intends to set sail to Surabaya, where a collection of objects of natural history will be unloaded. The collection is in a good condition. All the crates and boxes are still sealed. He is willing to take this cargo to its final destination, if the freight will be repaid. The amount is 33 guilders (Indian), according to the current rules of calculation. He has added four bills of lading signed by him. One of these has to be paid (by Reinwardt).

[NA 2-21.204(4); ZOC, COB]

**463. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 8 September 1820**

Within a few days, the 'Johanna' (captain Jonker), having loaded a cargo destined for the 'Koninklijk Kabinet van Natuurlijke Historie' will set sail from the Roads of Batavia. Reinwardt has added the bills of lading and the inventories, relative to this collection) to this letter. He has also added a couple of official letters, addressed to Van Marum and Temminck. The same goes for the collection of birds, which has to be sent to the 'Hollandsche Maatschappij', among which are several new species. He has held back a few very rare and very beautiful specimens. These will be taken to Holland by himself. Among the collection of insects are many duplicates, which can be used for exchange. The marine animals and other objects from the sea – such as fishes and corals – have been collected along the beach, during an excursion, at the occasion of which many of his companions have fallen

severely ill. Four of them have died and two more are still very ill. Kent has also a bad health. He has not been able to work for a long time.

Immediately after the arrival in Holland, one of the crates – containing several hides (among others of *Phasianus argus* and *Simia nusica*) and also various birds – has to be opened, in order to check its contents. The contents of the other crates is less endangered, because the tins of insects and birds have been sealed by soldering. Crate n<sup>o</sup> 40 contains an antique statue, made of stone. This time he has also sent birds and insects to Temminck. Similar collections have been sent to the ‘Zeeuwsch Genootschap der Wetenschappen’ (Flushing), to Langsdorff (Rio de Janeiro) and to the Cape of Good Hope. As soon as he will have received various objects from the Moluccas, he will be able to prepare a new shipment.

A few weeks ago he has received Van Marum’s letter, dated 26 March 1820. This pleasing letter has brought him much agreeable news, among others about Van Marum’s recovery and his continuing good health. He has also learned that his extensive letter from Trogon(g) has arrived meanwhile, that the enclosed bill of exchange has been accepted, that Caroline has found a good accommodation and that Elout has taken the painting and the drawings to Holland. He fears that the large shell collection, the skeleton of the Python and the *Spongia crateriformis*, which had been loaded aboard the ‘Admiraal Evertsen’, have been lost, because these objects are not mentioned in the inventories. No other collection of shells from the East Indies equals the lost one. It has been the result of 40 years of collecting.

Furthermore he adds a ‘secunda’ of the bill of exchange of 10.000 guilders, the ‘prima’ of which was sent by him on 20 July. In the letter sent on that day he has suggested to Van Marum to inform Merkus, Procurator-General in Batavia, if the conversion cashing of that bill would cause any problems. He simply has not got the time to add a life certificate as well.

He asks his friend to thank Van den Ende for sending him such a kind letter. Not until yesterday he has received De Vries’s letter, dated January 1820.

Meanwhile many boxes of living plants are waiting to be sent to Holland. They are growing well. He has decided to take these plants with him when he returns. He has not changed his plans to return early next year. He will leave as soon as an opportunity will present itself. So he will see Van Marum again that same year. He keeps on collecting plants in the neighbourhood. It will not be easy for him to leave this very abundant and very beautiful

vegetation. Raffles (in Sumatra) has informed him that a very peculiar plant has been discovered there. Its flower has a diameter of more than a yard and weighs more than 15 pounds. Reinwardt does not believe this news. In his view it has to be a kind of fungus. He is pleased by the important news that in the newspapers the academy of Saint Petersburg has used the correct names of the animals, which it has received from Batavia: a crocodile and a large lizard.

The official message, which he has ordered to publish in the *Staatscourant* of 10 April 1820, has been taken from an official letter sent to him by Minister Falck.

He very much regrets the deaths of Cras and A.G. Camper.

At the end of the year the 'Arinus Marinus' will take a living elephant to Holland. The arrangements with the captain have already been made. The freight will be high.

He hopes that Van Marum will be able to read this letter. It has been written in a hurry. He adds his greetings, also to Mrs. Van Marum and to his many friends.

[NA-RANH 529-20b; ZOC, COB, BOT, MED, ART, ETN]

**464. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 17 September 1820**

After having returned from Ghent, where he had stayed for several weeks as a member of the commission, installed by His Majesty the King, in order to judge the proceeds of the national industry, it turned out that he had received four letters from his friend. They were dated 10 March, 23 March, 3 April and 15 April 1820. Through the first one he has been informed about the arrangement Reinwardt has made with Mr. Merkus in Batavia about the solving of problems, which might arise with regard to the cashing of the bill of exchange of 12.000 guilders. He did not receive Reinwardt's letters, dated 1 and 2 March 1820 until now, nor did he receive the two boxes of living plants taken to Holland aboard the 'Soerabaya'. He has understood that meanwhile the damage has been repaired in the harbour of Cape Town. Probably the living plants will all have died. The objects of natural history, which he has received meanwhile, are in a good condition. He wants to know why he had to hand the whole shipment, which has been delivered by captain Duyff, over to the Leyden Academy, because he has not received

a single living plant from the collections delivered by the 'Admiraal Buyskes' and the 'Henriëtte en Betsy'. The bill of exchange, which has been accepted in London, will be converted in Rotterdam by Ferrier & Co. He gives his opinion on the unpolished behaviour of Blume and informs his friend that the bill of exchange in behalf of D'Ailly senior has been cashed meanwhile. He also reacts to Temminck's appointment as director of the new 'Koninklijk Museum van Natuurlijke Historie' in Leyden and to the attempts of G. Vrolik to obstruct the transfer of the 'Koninklijk Kabinet van Natuurlijke Historie' from the 'Trippenhuys' (Amsterdam) to Leyden. Furthermore he has seen Minister Falck in Ghent. They have discussed Reinwardt's return to Holland. With regard to the addition Reinwardt has made to his letter of 27 October 1819, he observes that his friend should ask Poleman, a chemist, who is staying in the Cape Province, to what extent he has succeeded in collecting specimens of the plant species, wanted by Van Marum, as he had promised to do.

[NA-RANH 529-20b; ZOC, COB, BOT]

**465. H. Tielenius Kruythoff (Amboina) to C.G.C. Reinwardt (Batavia);  
18 September 1820**

The governor of the Moluccan Islands reminds Reinwardt of his previous letter, dated 14 August 1820, reporting about the death of Fr.A. Treffz and about the measures, which he has taken with respect to Treffz's estate, in order to save the curiosities and objects of natural history collected by him. Now he offers a copy of the inventory, which has been drawn by the commission, installed by him. All these objects have been contained in crates, according to the added bills of lading. Thereupon these have been stamped with the seal of the government, after which they have been sent to the resident of Surabaya with the Dutch schooner 'Aurora' (captain Gebhardt). He has asked the resident to send this cargo on to Reinwardt. Furthermore he has allowed Dember to supervise the living birds aboard that vessel. He would be very pleased if this collection would arrive at Reinwardt's address in Batavia in a good condition.

[NA 2-21.204(4); ZOC, COB]

**466. Governor of Amboina (Amboina) to C.G.C. Reinwardt (Batavia);  
18 September 1820**

Shortly before 18 September 1820, Tielenius Kruythoff has drawn the inventory of the shipment, which will be sent to Reinwardt. This list gives the contents of several tens of crates, cabinets and a large tin box, containing a large collection of products of nature, like birds of paradise, dugongs, shells, stuffed iguanas, marine plants, five spiral staircases, a shuttle (the two last objects are contained in crate n<sup>o</sup> 12), minerals, paper from Macao, dyes (pigments), monkeys, cartridge paper ('Kardoespapier'), Chinese paper, wild nuts, mace, living birds, loeries, Crown birds ('Kroonvogels'), etc. This inventory has been drawn according to the collection, after which this list has been handed over to J.H. van Schuler, secretary of the governor of the Moluccas and J.J. Bruins, deputy magistrate of the Moluccas.

[NA 2-21.204(4); ZOC, COB]

**467. H. Tielenius Kruythoff (Amboina) to C.G.C. Reinwardt (Batavia);  
19 September 1820**

The governor of the Moluccas informs Reinwardt that he has charged C.H. Dember – former assistant of the late lieutenant colonel Treffz – to supervise the transport of the collection of objects of natural history, which have been loaded in the schooner 'Aurora', from Amboina to Surabaya. Dember has informed him that in the past the government has paid him a monthly salary of 50 guilders and that he did not receive any money during the time spent by him on Amboina. So meanwhile the government owes him 300 guilders. Therefore the governor has advanced this sum from the government treasury of the Moluccas. After having returned to Batavia this advance will be deducted from his final wages. The governor stresses that he was not familiar with the fact that Dember had been officially employed by Treffz. Dember himself will be able to inform Reinwardt in detail about his financial relation with his former superior. In his view it is a very obliging man, who deserves to be treated with benevolence.

[NA 2-21.204(4); ZOC, COB]

**468. C.G.C. Reinwardt (Batavia) to J. de Vries (Amsterdam); 30 September 1820**

Reinwardt thanks his friend for sending him a new sign of life. At the moment he is suffering from a deafness, which is temporarily, as he hopes. He is pleased to know that Caroline is doing better now. After his return to Holland he wants to take care of her. He hopes that De Vries and Van Marum will replace him until then. Furthermore he hopes to make his return passage about New Year. He is still not very charmed by the idea of having accepted the invitation to come to Leyden. Therefore the ties with Amsterdam and with his many friends, living there, are still too strong. If the governors of the 'Athenaeum' would have shown a little more interest in keeping him in Amsterdam, he would not have hesitated for a moment. He would have cancelled Leyden immediately. Because he has not done so, he has to accept the appointment in Leyden. He is surprised that so many excellent young men are coming to the East Indies. Has this perhaps something to do with the unfavourable situation in Holland? In Java as well as in the other islands many are shrinking from returning to Holland. The unfavourable situation of the Netherlands might jump over to the East Indies, especially if so many Dutchmen are coming to Batavia. From time to time the Governor-General is getting discouraged about the situation. He suggests Van Rossum and Vosmaer as his successors at the 'Athenaeum' (Amsterdam). In his view E.J. van Maanen is a very mediocre scientist, who will be easily overshadowed by his new colleagues. He asks his friend to send him the account of the general assembly of the 'Instituut', which has been presided by him. He has been shocked by the death of so many of his colleagues: Bonn, Brugmans, Bosscha, Wyttenbach, Cras, Camper (A.G.) and Van Kinsbergen. He still feels extremely annoyed about the disaccord and the machination within the 'Eerste Klasse' of the 'Instituut'. For a long time he did not receive a sign of life from Van Lennep.

[KB 121 B 8; MED]

**469. Resident of Grisee (Grisee) to C.G.C. Reinwardt (Buitenzorg); 2 October 1820**

The resident has received a collection of objects of natural history from Benoît, resident of Banjermassing, among others containing an orang utan (from the Daijak region), wolf foxes ('wolfvossen'), also from the Daijak

region, two red long-nosed monkeys ('langneuzige rode apen', or Wouwouw monkeys), a leopard ('tjgerkat'), a koekang, an 'eidervogel' ('eidereend'/ eider duck?; see also the letter, dated 12 October 1820), several deerhorns and also blowguns (from the Daijak region and from Sempit), spears and quivers, a 'jarkol' (inlaid with silver) from a native workshop in the mountain region, two Daijak headdresses, sample stones ('staalstenen') and a bear's hide, preserved in a barrel of chalk. These objects are in a perfect condition. They will be taken to Reinwardt at the first possible occasion. Until then the living animals will be accommodated at the house of the resident of Grisee. A reasonable freight has still to be paid. A letter from the resident of Banjermassing to Reinwardt has also been added to this shipment.

[NA 2-21.204(4); ZOC, COB, ETN]

**470. Resident of Grisee (Grisee) to C.G.C. Reinwardt (Buitenzorg); 3 October 1820**

The resident informs Reinwardt that suddenly the opportunity has presented itself to send the collection described in his letter of 2 October 1820 to him. Today these objects will be taken aboard the 'Wilhelmina' (captain J. Samuels). The Javanese Doesakim (or Doerakim), who has accompanied the collection to Grisee, is supervising the operation. The resident has made an agreement with the captain with respect to the freight. Reinwardt will have to pay 20 guilders, now the governor has authorized this expense. During the passage from Banjermassing to Grisee a wouwouw monkey has died. The resident ends his letter by observing that this animal has not been mentioned in the inventory drawn by the resident of Banjermassing.

[NA 2-21.204(4); ZOC, COB, ETN]

**471. Principal clerk of the General Management of Finances (Batavia) to C.G.C. Reinwardt (Batavia); 4 October 1820**

After having taken notice of Reinwardt's letter, dated 2 October 1820 (n° 774), the principal clerk of the General Management of Finances has authorized the governor of Makassar to make final arrangements with respect to the registration of the salt, arak and palliasses, which have been taken back from the luggage of the late lieutenant colonel Treffz. An extract of this decision will be sent to Reinwardt.

[NA 2-21.204(4); ZOC, COB, CHE]

**472. Assistant resident of Batavia (Batavia) to C.G.C. Reinwardt (Batavia); 12 October 1820**

This letter from the deputy resident of Batavia covers the cargo which has been taken from Banjermassing to Grisee and from there to Batavia by the 'Wilhelmina' (captain Samuels). He also mentions an orang utang from the Daijak region, three wolf foxes, two red long-nosed monkeys ('wouwouw monkeys), one of which has died during the passage to Grisee, a leopard, a koekang, a duck ('eidereend'?) and seven 'Karongs' (Kalongs?). The deputy resident hopes that these objects will arrive in Batavia in a good condition, because he has done his utmost – together with the deputy resident of the 'Ommelanden' – in order to guarantee a successful transfer. The Javanese keeper has accompanied this transport.

[NA 2-21.204(4); ZOC, COB, ETN]

**473. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 16 October 1820**

This letter will be sent to Holland with the 'Baronesse Van der Capellen'. It covers a life certificate and the quadruplet of a bill of exchange, of which he has already sent three identical duplicates. These were added to previous letters addressed to his friend. He has held back these documents as long as possible, because he hoped to receive another letter from his friend, through the vessels which have arrived lately in Batavia. Unfortunately Van Marum's letter n<sup>o</sup> 37, dated 26 March, still is the last one. From several of his friends, among others from Elout, he has received more recently mailed letters (from June 1820). From these letters he has learned that Elout has seen Van Marum, shortly before. The Governor-General did even receive several letters from Holland, which have been sent in July 1820. Reinwardt has sent his last letter to Van Marum on 20 September 1820, to which he had added the duplicates of the inventories of the shipment of 36 crates sent to Holland with the 'Johanna' (captain Jonkers).

To his pleasure the bill of exchange sent by him last year, has been accepted meanwhile. He hopes that the same goes for the bill of exchange, worth 12.000 guilders, of which he has added the fourth duplicate to this letter. He has sent its first, second and third duplicates on 3 April 1820, 16 April 1820 and 3 May 1820. He also adds the fourth duplicate of a third bill of exchange, worth 10.000 guilders.

Today he has also given a bill of exchange (in triplicate), worth 500 guilders, to Landré junior, together with a written instruction for Van Marum. Together with the bills of lading (in triplicate), these documents will be sent to Landré senior.

From Elout's letter he has also learned that the drawings, which had been taken by him to Holland, have met Van Marum's approval. He has also understood that the engravings have to be made in Paris. He is (almost) sure that the government is willing to contribute to the costs of this project and of course Elout will support this proposal. Everyday new drawings are made. The same goes for his contributions to the *Flora Javanica*. The number of rare plants in the garden and the collection of living plants is constantly growing. The same goes for the number of plants to be sent to Holland, as soon as the season will be favourable. Most probably he will take a part of this collection with him, when he leaves for Holland. Meanwhile he has promised the governors of the University of Leyden (the 'Leydsche Academie') to speed up his departure as much as possible.

From the ministerial letter he has learned that Kuhl and Van Hasselt and a couple of other men will soon arrive on Java. Elout has informed him that Van Marum has particularly recommended Kuhl. The two gentlemen will have a lot to do here.

He hopes to be able to complete various observations. Nevertheless he wants to stick to his promise to return to Holland early next year. By that time he hopes to have found a vessel, which will offer enough storage capacity. Having said what he had to say, he ends this letter after having added his greetings to Van Marum, his wife and the other housemates.

[NA-RANH 529-20b; ZOC, COB, BOT, ART]

**474. C.L. Blume (Bandung) to C.G.C. Reinwardt (Batavia); 17 October 1820**

Blume proudly informs his principal that yesterday he has succeeded in having shot a young male specimen of the Bantinger cattle. He promises to send the skeleton to Reinwardt, immediately after it has been skeletonised. Most probably a female specimen, which has also been shot, is in the possession of the hunters. [The original letter is written in German].

[UBL BPL 2425; ZOC, COB]

**475. C.L. Blume (Bandung) to C.G.C. Reinwardt (Batavia); 19 October 1820**

Blume has written this letter in a hurry (see also his letter, dated 17 October 1819). He informs his principal that meanwhile he has acquired a female specimen of the Bantinger. He has needed 30 people to transport this object and several others to Bandung. Today he will set out for the mountains in order to receive a female specimen of the Rhinaster. It has been caught about 25 'palen' from the town of Bandung. As soon as these objects will have been prepared for transport, they will be sent to Reinwardt.

[UBL BPL 2425; ZOC, COB]

**476. J. de Bruin (Batavia) to C.G.C. Reinwardt (Batavia); 24 October 1820**

De Bruin, resident of Batavia, acknowledges the receipt of Reinwardt's letter, dated 22 October 1820 (n<sup>o</sup> 788), covering an invoice. He informs him that the resident of Surabaya will send the objects found in Treffz's estate, to the resident of Batavia. They do belong to the government. After having received this shipment, the resident of Batavia will carry out Reinwardt's instructions with respect to these goods. Furthermore he has ordered J. van der Vinne, deputy resident of police of Batavia, to send Reinwardt the objects, which he (Reinwardt) has mentioned in his letter, dated 10 October 1820. He hopes that Reinwardt has meanwhile received these goods in a good condition.

[NA 2-21.204(4); ZOC, COB, ETN]

**477. Assistant resident of Batavia (Batavia) to C.G.C. Reinwardt (Batavia); 8 November 1820**

The assistant resident of Batavia informs Reinwardt that this letter is covering the dispatching of nine 'Kroonvogels', sent to Batavia from the Moluccas with captain Gebhardt. Now these animals are given on consignment to Reinwardt.

[NA 2-21.204(4); ZOC, COB]

**478. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 22 November 1820**

In his 41<sup>st</sup> letter to Reinwardt Van Marum observes that most probably this letter will not arrive on Java until after his friend has left. He still hopes that he will return soon, because he has promised his sisters to do so, although he has been very indecisive towards his best friend. According to his last utterances Reinwardt will probably leave early 1821. It would be very unpleasant if he would not receive letters from Holland during the last months of his stay on Java. So Van Marum has decided to go on sending letters for the time being. He has added the duplicate of his last letter ('the extensive one') to De Vries's letter. He has sent these two with the 'Koophandel'. Since then no main events did occur. Meanwhile Reinwardt's bill of exchange (worth 12.000 guilders) has been accepted. It will be paid in Rotterdam in December. The fact that the last letter received from his friend was dated 16 April 1820 has made him worrying. Besides once again he had to discover that the relatives of other persons staying in the East Indies have received more recent letters.

He strongly wishes that nothing will keep Reinwardt from returning to Holland and from accepting his most honourable and agreeable appointment in Leyden. He hopes that he will soon receive more news from his friend, together with the confirmation of what he has just expressed.

[NA-RANH 529-20b; see also UBL BPL 2922]

**479. C.L. Blume (Samarang) to C.G.C. Reinwardt (Batavia); 29 November 1820**

For the first time Blume dares to sign his letter to Reinwardt as his 'highly honoured friend'. With satisfaction he announces that the vaccination programme, to be carried out in the residence of Tegal, has been properly organized. [The original letter is written in German].

[UBL BPL 2425; MED]

**480. J. van der Vinne (Batavia) to C.G.C. Reinwardt (Batavia); 19 December 1820**

Van der Vinne, deputy resident of Police in Batavia, returns Reinwardt's letter, dated 24 November 1820, and informs him that he has sent the tapir from Batavia to Buitenzorg. It has arrived in a good condition. He had to

spend 64 guilders and 15 'stuivers' for building a roof above the watering place and for the construction of a drinking trough and a shelter. He asks Reinwardt to arrange the reimbursement of this sum (and he suggests the way in which it should be done). For economical reasons he has asked to build the sty from second hand wood. This letter has been co-signed by Valck, secretary of the resident, and Landré, clerk of the resident.

[NA 2-21.204(4); ZOC, COB]

**481. J. de Bruin (Batavia) to C.G.C. Reinwardt (Batavia); 20 December 1820**

The resident of Batavia offers a copy of the letter sent to him by the assistant resident of Police of Batavia, in which he has asked Reinwardt to sent him a payment order for the sum of 64 guilders and 15 'stuivers'. This money has already been spent on the construction of the accommodation for the tapir, which has been taken to Batavia. The animal has been sent to Buitenzorg.

[NA-2-21.204(4); ZOC, COB]

**482. ?? Mogendorff (Buitenzorg) to C.G.C. Reinwardt (Batavia); 21 December 1820**

The resident of Buitenzorg acknowledges the receipt of Reinwardt's letter, dated 20 December 1820 (n° 803) and answers that the inspector of the Civil Construction Department has been ordered to put two heavy wagons at Reinwardt's disposal as soon as these will be available in Buitenzorg, in order to have the goods, mentioned in his letter, transported to Batavia.

[NA 2-21.204(4); ZOC, COB]

**483. W. Botanicus (Jedo) to C.G.C. Reinwardt (Batavia); possibly 31 December 1820**

After having inquired after Reinwardt's state of health, Botanicus informs him in his extensive annual letter, which will be taken to Batavia by Mr. Blomhoff, about various subjects. Last year he has received the list of objects of natural history, which Reinwardt wants to receive from Japan. This inventory has been sent to Jedo by Blomhoff. Botanicus is enjoying good health, because of the pure and agreeable nature and he thanks his Creator for that gift. Once more he sends Reinwardt all kinds of roots, flowers, fruits, minerals, dried plants, drawings (small sculptures, statuettes?) and brief

descriptions. He asks him to check these documents and to return these papers through Blomhoff, as he has done last year. He also adds pieces of dark green 'grazem' (?), two slices of soapstone (stealite, steatite?), a piece of 'Oogenwortel' and a piece of 'Zeevlap' (sea-weed?), according to what Reinwardt had asked to send him. Soon he will send several pieces of red and white coral. About the small pieces of 'harssteen' ('Harststeen', amber) he observes that they are extremely seldom found at the seashore.

Furthermore Botanicus asks him to send botanical, anatomical, medical and surgical books, which have been published recently. Reinwardt would very much oblige him, if he would meet this wish. Is it possible for Reinwardt to send him a dried specimen of the 'Americaansche Zom', a herb, which is unknown in Japan? He also wants to receive Cajapoetie oil, 'lak' (the substance used for sealing letters). He also puts a question about the oilstone ('olijsteen'), mentioned in Heister's work on anatomy and he makes a remark about Van Konijnenburg's *Ontleedkunde*.

Furthermore he wants to give Reinwardt a roll of Japanese Imperial paper linen as a present. He wants to know how long he will stay in Batavia. He adds his best wishes, among others with respect to his health and expresses his feelings of esteem.

[In this incomplete document, nevertheless covering 21 pages, among others the following subjects and objects have been mentioned: the inventory of the contents of crate n° 12, marked 'CGCR', and meant to be shipped with the 'Fortitudo': (1 paint-box, 1 'scheeldoos', 32 specimens of Japanese paper, Japanese 'Kaard' (teasel?), bamboo, 'vuurblaaser', 'meilwijzel', 'veerwaijer', moxa, engraving of a tumour, 'zonne-pajong', 'regen-pajong', etc.); the inventory of crate n° 26, marked 'CGCR', to be sent with the 'Fortitudo' (containing several goods, also mentioned on list n° 12 and besides Japanese coin, medicines ('Ebrico?'), paper, knitted silk, one book of dried plants, one book of drawings of dried plants, glue, and one case, containing Jakoero (pomegranate), Kaki (Japanese fig), 'persicos' (?), tokomisuriki (?), Mokoegel (with white and with red flower), Hasi (Wax-tree), nadesico (?), camphor-tree, 1 pot of Kaidoo (?), 1 pot of Sasangsua (?), 'Jae ans' (?), Ringo (?), Konote kasiwa (?), H. Baki (?), Sarasa momo (?), Kirin Kakoe (or Kirin Katoe?), Toosi Baij (?), Hats uki viba (?), Sotets (Ironwood ?), Tijka Kasura (?), Satski (?), Setska (?), Kokoboe baij (?), a crate, containing 15 gum-trees

(Eucalyptus?), Latsuka viba (?), Isiuw Momo (?), Tiabo viba (?), Hats simo viba (?), Bioo jamaki (?), Siakoe nankij (?), Kirisima (?) and Kofoesi (?). All these objects have been contained in different cases and boxes.

The root, added to this shipment, which is about eight to nine feet long, produces a milky sap, which can be transformed into starch. After it has been purified and dried in the sun, it can be pulverized into a fine pounce, which tastes good and can be used in cooking. It is refreshing and thirst-slaking and besides it is an anti-pyretic as far as it concerns fevers, caused by poisons [Botanicus does not give its name].

He ends his incomplete document by giving the descriptions of several other Chinese and Japanese plants, as well as their use in a general and a medical sense. These descriptions do suggest that initially drawings had been added. In total more than 100 species are discussed [This last part of the document is about 12 pages long].

[NA 2-21.204(8); BOT, MED, CHEM, ETN, ART]

**484. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem) and C.J. Temminck (Leyden); 20 January 1821**

The 'Arinus Marinus' (captain Langeveld) has anchored in the Roads of Batavia, ready for setting sail. It will take the cargo prepared by Reinwardt and destined for the 'Koninklijk Kabinet van Natuurlijke Historie' to Holland: 14 crates in total, numbered '1' to '13' and '15'. Besides a basalt rock has been loaded, which has been marked '14'. As usual the crates have been addressed (consigned) to the Commissioner Mr. Vollenhoven. He promises to inform him today. Vollenhoven will claim the expenses (the freight he will have to pay) at the 'Oost-Indië Huis'. He has to keep the cargo in behalf of the addressees. He adds an inventory and a list of minerals to this letter. Half of the collection of minerals has to be given to 'Teylers Museum'. If the museum wants to receive these minerals before he has returned to Holland, Van Marum and Temminck will have to hand this collection over. The crates n° 6 and n° 8 are holding personal belongings, which have to be held back until his arrival. Although he did not receive any news about the last two considerable shipments sent to Holland in March and September 1820, he has already had the pleasure of being informed that the 'Jan en Cornelis' (captain Duyff) has delivered the first cargo in a perfect condition. He hopes that the same goes for the second shipment, which has been sent with the

'Johannes' (See also: 'NA 2-21.204(4)', dated 29 July 1820) and of course also for this new shipment: a new and important collection of comparative anatomy (preparations of the Indian tapir, as well as its skin and its skeleton). The longer his stay on Java will go on, the more his obligations towards Van Marum and Temminck are growing. He will stay on Java until the end of this year. He realizes that this is putting more and more a claim on his friends and he thanks them for being so obliging. He ardently wishes to see them next year in perfect health and assures them of his esteem and appreciation. [NAT; ZOC, COB, GEO, MIN]

**485. Secretary of the Governor-General (Batavia) to C.G.C. Reinwardt (Batavia); 23 January 1821**

After having discussed the proposition made by Reinwardt in his letter, dated 20 January 1821 (n<sup>o</sup> 822), the Governor-General has decided to increase the monthly salary of Landré, clerk of the Director of Agriculture, Arts and Sciences, by 150 guilders, as from 1 January 1821. An extract of this letter will be sent to the General Director of Finances, to the National Audit Office, to the resident of Buitenzorg and to Reinwardt.

[NA 2-21.204(2)]

**486. Secretary of the Governor-General (Batavia) to C.G.C. Reinwardt (Batavia); 23 January 1821**

After having taken notice of the proposals, made by Reinwardt in his letter, dated 20 January 1821 and referring to the decisions previously made by the Governor-General, it has been decided today to raise several salaries as of 1 January 1821. The salary of the officials Kuhl and Van Hasselt, who have been appointed in order to extend the knowledge of the products of nature of the East Indies, will be raised up to 500 guilders (Indian) monthly. The monthly salary of their assistants Van Raalte (anatomist) and Keultjes (draughtsman) will be raised up to 200 and 300 guilders, respectively.

Until Reinwardt's return to the Netherlands these four men will be supervised by him. Kuhl and Van Hasselt are allowed to appoint six servants, at a monthly salary of 12 guilders each. They are also authorized to purchase the necessary equipment and other goods. They will have to claim their expenses at the end of each month. The Department of War is allowed to provide them with enough of the first distillate' of arak ('voorloop'), meant

for the preservation of objects of natural history, which they are going to collect. This arrangement had already been made with Reinwardt (on 1 June 1820, n° 1). Reinwardt, Kuhl and Van Hasselt are also provided with camphor, needed for the preservation of objects of natural history. An extract of these decisions will be sent to the General manager of Finances, to the Department of War, to Reinwardt, to the National Audit Office as well as to the residents of Batavia and Buitenzorg.

[NA 2-21.204(2); ZOC, COB, CHE]

**487. G.A.G.Ph. Baron Van der Capellen van Berkenwoude (Buitenzorg) to C.G.C. Reinwardt (Batavia); end of January 1821**

The Governor-General informs Reinwardt that the King has made him 'ridder in de orde van de Nederlandse Leeuw'. He congratulates him.

[UBL BPL 2425]

**488. ?? Duyvené (Batavia) to C.G.C. Reinwardt (Batavia); 8 February 1821**

The secretary of the General Director of Finances informs Reinwardt that, after having consulted the Council of Finances of the Second Department, it has been decided to order the resident of Batavia to pay to Blume, deputy to the Department of Agriculture, Arts and Sciences, the sum of 582 guilders, which has been advanced by him during his journey across Java in order to collect objects of natural history.

[NA 2-21.204(4); ZOC, COB]

**489. ?? Duyvené (Batavia) to C.G.C. Reinwardt (Batavia); 8 February 1821**

By sending him an extract of the 'Verbaal van den Hoofddirecteur der Financiën over Nederlandsch Indië', dated 8 February 1821 (n° 38), Duyvené informs Reinwardt on behalf of the General Director of Finances that the Council of Finances has decided to authorize the resident of Batavia to pay him 303 guilders, which is the credit balance of a current account relative to the value of the estate of the late lieutenant colonel Treffz.

[NA 2-21.204(4); ZOC, COB]

**490. ?? Duyvené (Batavia) to C.G.C. Reinwardt (Batavia); 8 February 1821**

Duyvené has read the letter sent by the National Audit Office, dated 8 February 1821, and returns it to Reinwardt. Its contents has been discussed in the Council of Finances of the Second Department. This Council has decided to authorize the resident of Batavia to pay the sum of 1.960 guilders and 6 'stuivers', being the reimbursement for the expenses made by the Department of Agriculture, Arts and Sciences during the past year. Additionally Duyvené informs Reinwardt that the sum has been changed into 1.958 guilders and 6 'stuivers', because another declaration had to be raised from 194 guilders and 6 'stuivers' up to 197 guilders and 29 'stuivers'. [NA 2-21.204(4)]

**491. ?? Duyvené (Batavia) to C.G.C. Reinwardt (Batavia); 9 February 1821**

Duyvené has read Reinwardt's letter, dated 7 February 1821 (n° 831), in which he has made the request to book storage room in the 'Schoon Verbond' (captain Wagener), in order to send 12 crates of various sizes and six crates of living plants. At that occasion he has also indicated that storage room should be booked in the 'Dijkzigt' (captain Jacometti), in order to transport four crates of living plants to Holland. He has promised to inform the resident of Batavia about the exact dimensions of these crates and to mark them. Thereupon the General Director of Finances has decided – after having consulted the Council of Finances – that the resident of Batavia will be authorized to consult Reinwardt and to book the needed storage room aboard these ships, in order to send the objects mentioned in his letter, to Holland.

[NA 2-21.204(4); BOT, ZOC, COB]

**492. ?? Sampson (Batavia) to C.G.C.C. Reinwardt (Batavia); 12 February 1821**

Sampson informs Reinwardt that he has been ordered to prepare eight 'pikols' (= almost 1.000 pounds) of arak of 20° (= 20%) and he wants to know where this load has to be delivered. He warns Reinwardt that the concentration of this solution can easily decrease. It will be preferable to transport this liquid in large demi-johns. He wants to know his opinion. He

wants the recently delivered demi-johns, as far as these have been emptied meanwhile, to be returned in order to be used again.

[NA 2-21.204(4); CHE, ZOC, COB]

**493. J. de Bruin (Batavia) to C.G.C. Reinwardt (Batavia); 16 February 1821**

On 9 February 1821, the resident of Batavia has been ordered to book storage room aboard the 'SchoonVerbond' and the 'Dijkzigt'. In the first ship 10 to 12 crates of various sizes and six crates of living plants will be stored and four crates of living plants will be stored in the second vessel. Reinwardt will personally prepare the second cargo for shipment. De Bruin reminds Reinwardt of his promise to inform him about the exact dimensions of the crates, as soon as possible. The two vessels will set sail within the next few days and he wants to observe that the contracts with regard to these transports still have to be made.

[NA 2-21.204(4); BOT, ZOC, COB]

**494. ?? Sampson (Batavia) to C.G.C. Reinwardt (Batavia); 20 February 1821**

Tomorrow, 21 February 1821, the arak and camphor ordered by Reinwardt, will be sent from 's Landsch Magazijn van Geneesmiddelen' (Batavia) to the 'Westzijdsche Pakhuizen' ('Westside Entrepôts') of Batavia. These goods will be transported aboard proas, which have been booked through the resident of Batavia. Unfortunately not all the arak was available, only 31 numbered demi-johns were. Furthermore a pot of eight pounds of camphor has been added, which has been given the number '32'. Finally he adds a mailing list in duplo, one of which he has already signed.

[NA 2-21.204(4); CHE, ZOC, COB, BOT]

**495. C.G.C. Reinwardt (Batavia) to J. de Vries (Amsterdam); 21 February 1821**

Being on the verge of leaving for Holland, Reinwardt wants to make a tour to the neighbouring islands. He has added a case (meant for Caroline) and a tin box (meant for Mrs. Calkoen, widow). These objects will be delivered by Elout, who will leave Batavia aboard the 'Schoon Verbond'. He hopes to see his friend soon again. He ends by observing that the removal of the

'Koninklijk Kabinet van Natuurlijke Historie' from Amsterdam to Leyden has not surprised him.

[KB 121 B 8; ZOC, COB]

**496. P.F. Wegener (Batavia) to C.G.C. Reinwardt (Batavia); 21 February 1821**

Wegener – captain of the 'Schoon Verbond' – is waiting in the Roads of Batavia for a favourable wind in order to set sail for Amsterdam. He gives an enumeration of the cargo, which has been handed over to him by Reinwardt: six crates, containing 36 living plants, marked '1' to '6'. After having arrived in Holland Wegener will deliver this collection at Van Marum's, knight, and director of the 'Koninklijk Kabinet van Natuurlijke Historie', who will repay him the freight.

[NA-RANH 529-22; BOT]

**497. ?? Sampson (Batavia) to C.G.C. Reinwardt (Batavia); 23 February 1821**

In conformity with the orders received by him, Sampson sends Reinwardt the various chemicals, ordered by him, except for one chemical, Sp. salis fumans, which has been replaced by Sp. salis marin. These chemicals are needed for the preservation of objects of natural history. In the past they have been sent to Batavia by D'Ailly, chemist in Amsterdam. Sampson is convinced that their quality will satisfy Reinwardt. He adds a shipping list.

[NA 2-21.204(4); CHE, ZOC, COB]

**498. C.G.C. Reinwardt (Batavia) to H. Schlegel (Leyden) and C.J. Temminck (Leyden); 24 February 1821**

Reinwardt informs Schlegel that today 12 crates of objects of natural history, destined for the 'Koninklijk Kabinet van Natuurlijke Historie', have been loaded in the 'Schoon Verbond' (captain Wegener). He adds an inventory. The crates, which have been marked with the lettering 'Koninklijk Kabinet van Natuurlijke Historie, Leyden' and numbered '17' to '28', have been addressed to Mr. Vollenhoven (Amsterdam). He has also added a duplicate of his letter, dated 20 January 1821, as well as the bills of lading with respect to the cargo sent with the 'Arinus Marinus' (captain Langeveld).

[NAT; ZOC, COB, BOT]

**499. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 25 February 1821**

Reinwardt is fully prepared for setting out on a journey to several islands, after having prepared three cargos for Holland: a collection of natural history, destined for the 'Koninklijk Kabinet', and two collections of living plants. These shipments have been taken to the Roads of Batavia. Van Marum will receive 12 crates of objects of natural history, which will be sent to Mr. Vollenhoven with the 'Schoon Verbond' (captain Wegener). They are destined for the 'Kabinet'. The inventory and the personal letter to his friend, have been added to the official letter to Van Marum and Temminck. The 'Schoon Verbond' will also bring six crates of living plants to Holland, which are also destined for Van Marum. Besides, the 'Dijkzigt' (captain Jacometti) will take 4 more crates to Van Marum, each containing six living plants. All in all, his friend will receive 60 living plants this time. Added to what he has sent with the 'Arinus Marinus' a few weeks ago, Van Marum will receive the total number of 96 plants. Of course certain species will please him more than the rest, because they have not been sent to Holland before, for example *Marumia macrophylla*. This fact pleases him very much. At the moment specimens of *Marumia montana* are not available, but he promises to acquire several specimens. If Van Marum should decide to give plants to the botanical gardens, Leyden comes first, followed by Amsterdam, Utrecht and finally Groningen. With respect to the objects of natural history sent to Holland this time, two Dugong skeletons, the skeleton of a wild Javanese bull, the skeleton of a tapir and a couple of beautiful monkeys from Sumatra will undoubtedly draw the attention. Van Marum will agree that the tapir is a specimen of the already known species. After these objects had been taken aboard, Reinwardt has received an official letter from Minister Falck, informing him that the cabinets of Amsterdam and Leyden have been merged in the mean time; that the zoological collection, offered by Temminck, has been bought and that nevertheless Reinwardt will continue to be paid as Director of the Amsterdam cabinet, until he has returned to Holland. He recognizes that everything is done to add lustre to 'Leyden'. He also adds a life certificate.

He is eagerly looking forward to receiving news from Holland. He also wants to know if the bills of exchange, worth 12.000 guilders and 10.000 guilders, have been converted into cash meanwhile. He regrets that he did

not receive a letter from his friend, because he will be leaving tomorrow. Now he will probably have to wait until after his return to Java. His journey will take about six weeks. There is no more hope for new letters from Van Marum, because his friend has indicated that he has almost no motivation to send more letters, now Reinwardt has decided to prolong his stay on Java. Reinwardt regrets this, because he has always tried to find favour in Van Marum's eyes. Only very recently he decided to stay on Java for one more year. This decision has been provoked by his pride and by his sense of duty. Only by doing so he will have the opportunity to complete his various jobs and activities and to collect again a part of the collections which have been lost. Van Marum should know that one needs at least several years here, before being able to work properly in the field of natural history. He has high hopes of his forthcoming trip. He will be assisted by several experienced scientists and servants. He has been offered a ship with full equipment, the 'Experiment' (captain Hooper). From now on he will have the opportunity to devote himself completely to science, so his journal will be much more complete and detailed than it has been in the past. He has planned to sail from Batavia to Timor. The season will keep him from staying there for a long time. From there he will sail to Banda and thereupon to Amboina and Ternate and finally to Menado, on the north-east coast of Celebes. By the end of the year he will return to Batavia. He will only stay on Java for a while before returning to Holland, early 1822.

On 20 January 1821 he has sent his last letter to Van Marum with the 'Arinus Marinus'. In it he has asked to give Caroline 200 guilders, for which he has sent a bill of exchange. Furthermore there is still a small sum of money on a credit account at the Firm of Van Ossen & Trail & Co, for which he has asked to send him bills of exchange. Because these are not available now, this transaction has to wait until after his return.

He is very satisfied about the qualities of Kuhl and Van Hasselt. They have been prepared well in Europe for their future task in the East Indies. He promises to send his friend letters about this trip as often as possible. Tomorrow he will embark, together with the Bik brothers, Landré and Kent. He adds his greetings, assures him of his true and deep feelings of friendship and asks him to inform his sisters in Lüttringhausen about his good health. Finally he adds the bills of lading regarding the two shipments of plants, the first one of 12 crates and the second one of six crates.

[NA-RANH 529-20b; ZOC, COB, BOT, ART]

**500. C.G.C. Reinwardt (Koepang, on Timor) to M. van Marum (Haarlem); 4 April 1821**

Yesterday the company has arrived in the island of Timor, where a ship for London happened to be waiting. Now he has the opportunity to send a letter to his friend, through which he assures him of his perfect health. The journey has not been successful until now, because the winds were not favourable. He hopes to carry out several observations, because this island is of another origin than the islands of Bali, Sumbawa, etc., which have been visited before. On Sumbawa he has visited Bima. From Java to Flores all the islands proved to be of volcanic origin. The volcano of Bima was still smoking and fire-breathing. Everywhere one can observe the enormous volcanic revolutions, but on Timor the earth is quiet. From here he will continue his journey to Banda and Amboina. He hopes to be back in Batavia before the end of the year. He asks his friend to inform his sisters and the many other friends about his good health and to inform Landré senior that the same goes for his son. He ends his letter by expressing his feelings of unchangeable and true friendship and esteem.

[NA-RANH 529-22; GEO]

**501. C.G.C. Reinwardt (Banda) to M. van Marum (Haarlem); 23 May 1821**

Reinwardt reminds his friend of having sent a letter to Haarlem on 25 February 1821, the day before he set out on his journey. From Timor he has grasped the opportunity of sending a letter with an English whaler. The journey to the next stop – Banda – has taken much time. The south-eastern winds have not been favourable. From now on they will change their eastern course. As a matter of fact, they have left Batavia too late in the year, after the western monsoon had already gone. The strong currents – among others in the strait between Timor and Ombaay have not favoured their journey either. The natives of Ombaay are known as cannibals, so they did not dare to land there. The visit paid to Timor has been more profitable although he has not had the chance to visit its copper mine. He has found out that in a geognostical sense, Timor belongs to another formation than the other islands, visited by him. It is not composed of basalt but it is of sedimentary origin, rich in various ores (iron, gold, copper, etc.). He has collected many rock samples in behalf of ‘Teylers Museum’. He has also

sent young specimens and seeds of the Sandal tree (*Santalum album*) to Buitenzorg. He hopes that he will be able to take several other specimens of this tree to Holland. On the islands of Sumbawa, Solor and Semaó he has succeeded in collecting many new plant species. Off the coast of Timor he has also collected many beautiful and exotic fishes. Regrettably he will not be able to witness the catching of a sperm-whale (spermaceti-whale). Whaling must be very profitable in this region, because at least 26 large English three-masters have anchored in the Roads of Timor. In his view Timor would really be a prosperous colony if its government would be more stable and the region would be peaceful. At the time the many princes are robbing, fighting and murdering each other, right under the eyes of the Portuguese government. This government is hampering the Dutch traders by selling all kinds of herbs and plants and also gunpowder to the natives, although the Dutch government has prohibited the importation of these goods. Even the export of sandal wood and of wax is hampered by this situation. As a matter of fact the natives of Timor are rather peaceful, while the inhabitants of the nearby island of Rottij are very war-minded, although on the other hand they are very loyal to the Dutch authorities [He is especially referring to the reports by Van Hoogendorp in the first volumes of the *Verhandelingen van het Bataviaasch Genootschap van Kunsten en Wetenschappen*] Because the native princes used to stick the heads of their defeated enemies on poles, he could obtain several skulls from their King Sidius Placet as a present. Meanwhile he has also discovered that the proceeds of nature are very much alike those of New-Holland. He has visited the island of Keffer, situated between Timor and Banda. It was very spectacular for him to see how the coral banks are succeeding each other from the bottom of the sea up to high above sea level, forming high limestone mountains. So the theory of Werner has to be completely abandoned and one should adhere to the ideas of Hutton – ‘Hutton is my man!’ Everywhere the signs of mountains arisen from the sea bottom are visible. The forces causing these events must have been tremendous. On one place the land is disappearing in the bowels of the earth, while elsewhere the earth is emerging from the deep, or volcanoes and craters are formed.

He has visited most of the planters of Banda. The island is completely covered with nutmeg trees. Its beds are separated from each other by Canary trees. The soil is not especially fertile, so all food has to be imported from

elsewhere. Life is very expensive here. Yet Banda is – in a mercantile sense – one of the richest places on earth. Probably he will need about two weeks before having finished his job on Banda. He is rather satisfied with his success. He has decided to return to Batavia by the end of September or early October. May God give that he will see his friend Van Marum in good health.

Meanwhile he has become very uncertain about the fate of the ‘Arinus Marinus’. He has been told that this vessel has been wrecked shortly after having left Batavia. The loss of 13 crates of objects of natural history, 36 living plants and a living elephant would be an irreparable disaster. He has also sent collections of plants to his friend with the ‘Dijkzigt’ and the ‘Schoon Verbond’. In spite of all the rumours he hopes that the three ships will arrive in a good condition.

He is very sad about the fact that it will be impossible for a long time to receive letters from his friend. Perhaps he will never receive the letters, which will arrive after he has left Batavia. This letter will be sent with the ‘Antoinette Jakoba’, which will sail via Batavia to Europe. He ends his letter by expressing his warmest feelings of friendship and highest esteem and adds his compliments for Mrs. Van Marum and the other housemates.

[NA-RANH 529-20b; ZOC, COB, BOT, GEO, MIN]

**502. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 7 July 1821**

As far as it concerns Van Marum the time is past that it was a pleasure to answer Reinwardt’s letters. Especially in June his hope was growing that Reinwardt would soon return to Holland. According to the information sent to him by Vollenhoven his friend had decided to embark on the ‘Arinus Marinus’ in January 1821. Van Marum has even cut short his trip to Rotterdam in order to welcome his friend. But there was no question of a return although the ship, which has arrived recently, has brought him a letter, dated 25 February, telling him that his friend was leaving the day after for a roundtrip through the East Indies and that he would not return to Batavia until the end of the year. This meant a bitter disappointment after Reinwardt had given him hope for a quick return. Now his friend has promised him to return early 1822. But what about the reliability of such messages and promises? He wants to express his feelings of disappointment and he knows

that DeVries is feeling the same. He is growing older and older. He fears that he will not see his friend again in this life. Besides he is making all kinds of dangerous trips without sparing himself. If he does not report accurately and extensively, these trips will be almost meaningless. Although Reinwardt has underlined that only after a difficult internal conflict his sense of duty and his pride have made him decide to stay in the Indies for one more year, Van Marum does not understand this decision at all. In his view these feelings should have urged him to leave Batavia and the Dutch East Indies as soon as possible and to commence the professorship in Leyden, already accepted by him. There he will be much more useful than in the East Indies, where he is trying to collect whatever objects of natural history, which he can lay his hand on. He could leave that to his successor Kuhl. Besides leaving for Holland would end the rumours with respect to the unpleasant question if he has really spent enough time on the study of nature, yes or no. Reinwardt knows his opinion about the postponement of his return and everybody he knows in Leyden is of the same opinion. In order to prove this fact he adds a letter from Sandifort. However he will go on promoting Reinwardt's interests for the time being, at least as long as he will be able to do so. He is getting old. Besides, on 27 February his wife has died. She has succumbed to a bronchio pulmonary disease. He is really suffering from that loss. Mrs. Woestenbergh, widow, Betje's niece, is serving him as a housekeeper. Shortly after he has received Reinwardt's last letter, the 'Schoon Verbond' has brought 36 plants, which had all lost their leaves. They proved to be completely dried out. He has ordered to take them to Leyden, in order to have them examined. Until now, he has not succeeded in keeping more plants alive in his hothouse than the *Artocarpus incisa*, the *Bombax gigantea* and a few other species, which had been taken to Holland with the 'Maria Reijgersbergen'. So sending living plants aboard merchant ships is very risky, because they are neglected, although the freight is extremely high. Taking plants to Holland only makes sense if Reinwardt is personally supervising the cargo. Furthermore he wants to observe that he did not receive anything from the collections taken to Holland by the 'Arinus Marinus' and the 'Dijkzigt'. Because the two cabinets have been united, everything is sent to Leyden! Temminck is even controlling the acquisitions. Reinwardt knows his opinion about that! He is very much needed in Leyden! In spite of

these feelings his relation with Temminck is good nowadays. Temminck has formulated the instructions for the director of the 'Koninklijk Kabinet' in such a way, that it does not at all hamper the professor of natural history in the performance of his duties.

The bills of exchange, worth 12.000 guilders and 10.000 guilders, have been converted into cash meanwhile. After having seen De Vries about it, these sums have been converted into 'Syndicaat bons', bearing an interest of 5%. He mentions the fact that Reinwardt has also informed him about the sum of money a Batavian merchant firm still owes him.

He ends his letter by expressing his well meant wish that Reinwardt's dangerous journey to the East Indian islands will end well and that it will turn out to be less perilous than his trip across Java. He hopes that Reinwardt will stick to his last decision (an unchangeable plan) and that his friends will enjoy the happiness of seeing him soon in good health.

[NA-RANH 529-20b; BOT, ZOC, COB; see also NA-RANH UBL-BPL 2922]

**503. ?? Swarthoff (??) to C.G.C. Reinwardt (Batavia); 19 July 1821**

Report, made by lieutenant Swarthoff in the Roads of Sollo, between 13 and 19 July 1821, probably the record of an interrogation; two pages in Dutch and one page in German. It mentions the fact of many cadavers found floating in the seawater, off the coast of Sollo.

[NA 2-21.204(11)]

**504. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); July 1821 (provisionally)**

In this account of the meeting of the 'Eerste Klasse' of the 'Koninklijk Nederlandsch Instituut van Wetenschappen, Letterkunde en Schoone Kunsten' Van Marum explains why until now his friend and colleague Reinwardt has not had the opportunity to carry out experiments with the bathometer designed by Van Stipriaan Luiscius. The reasons have been the seasickness, which has lasted too long, and the turbulent sea. So Reinwardt had to wait for another occasion. Thereupon Van Marum has offered to send him a personal letter, in which he will once more try to explain Van Stipriaan's wishes. He assumes that Reinwardt will inform the government.

The 'Klasse' has agreed and therefore he asks him to carry out these experiments in the deep seas, during his return passage. They are all very eager to know the results. Van Stipriaan Luïscius will be informed about the details of these decisions.

[NA-RANH 529-20b; PHY]

**505. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 21 August 1821**

Shortly after having sent his last letter, dated 7 July 1821, in which he has given his opinion about Reinwardt's intended return to Holland, he has received the message of the loss of the 'Arinus Marinus', the vessel on which Reinwardt had initially planned to book his return passage. He has almost been scared to death and now he is happy that his friend has abandoned this plan. Regrettably the cargo has also been lost. On his demand an article has been published in the *Letterbode*.

He also spends a few words on the two sisters, living in Lüttringhausen. Because they were very upset about the rumours, he has put their heart at rest.

He did not receive any letters from his friend since the one sent on 25 February 1821. He has answered it in his letter, dated 7 July 1821. Now he adds an inventory of the two shipments of living plants, which have been stored in the 'Hortus' of Leyden. He has asked the chief gardener Schuurman Stekhoven to send this inventory to Reinwardt, in order to give him the opportunity to take the contents of these shipments into consideration, when he is going to collect the plants for the last shipment. He is eagerly looking forward to receiving the 24 living plants sent to Holland with the 'Dijkzigt'. This ship has already delivered goods in Hellevoetsluis and Rotterdam. Maybe he will receive these plants even before he sends this letter. He also hopes that Reinwardt will have the opportunity to carry out the experiments with the bathometer as promised. Van Stipriaan seems to be very disappointed about the fact that Reinwardt has not had the opportunity to carry out these experiments during his voyage to Batavia. He has even complained about this fact in a meeting of the 'Eerste Klasse', because Elout and Buyskes had explicitly promised to arrange these experiments. Van Stipriaan has asked to commend this invention to the attention of the government and to advise to carry out new experiments in the deepest seas.

Therefore Van Marum asks his friend once again to do so and to inform him about the results, as soon as possible, after which the 'Eerste Klasse' will decide about the advice to be sent to the Minister of the Interior.

[NA-RANH 529-22; ZOC, COB, BOT, PHY]

**506. C.G.C. Reinwardt (Ternate) to M. van Marum (Haarlem); 2 September 1821**

Although the ship, which will take his letters from Ternate to Batavia, is on the verge of leaving, Reinwardt has decided to write a few lines to his friend, among others in order to inform him about his perfect health. Since he has left Batavia more than six months ago he did not receive any letters from Haarlem. From an article published in the *Bataviaasche Courant* (which had already been published in a Dutch newspaper in January 1821), he has learned that meanwhile the 'Johanna' has arrived safely in Holland. He supposes that it has been written by Van Marum. He is also happy about the fact that the cargo sent in April 1820 has also arrived in a good condition in Holland. Meanwhile, this vessel has anchored in the Roads of Batavia. There is no doubt about the fact that many letters are waiting for him in Batavia. He reminds the loss of the beautiful and large merchant vessel 'Arinus Marinus', with which he had initially planned to return to Holland. Not only a collection of objects of natural history has been lost, among others the Dugong skeletons and the skeleton of the Sumatran tapir, but also 36 living plants destined for his friend. Besides, many men have lost their lives. Since he has left Java the cholera morbus has raged on the island. Thousands have died and among them were many friends. He has to be very grateful to God! He has tried to acquire another specimen of the Dugong, but unfortunately he did not succeed.

On the other hand he rejoices about Van Marum's good health, about the fact that the Governor-General has been spared and because the military expedition to Palembang, which has been necessary in order to re-establish the Dutch authority, has been successful. Once again colonel Keer has distinguished himself. Van Marum and Keer's relatives will be pleased by this news.

During this last trip he has collected many objects of natural history, like birds, fishes and butterflies, which are not present on Java. This trip has also been successful from a botanical point of view, although the vegetation of

Amboina and the Moluccan islands is by far not as splendid as it is on the island of Java. He has also collected many young trees, which will produce various spices. They are growing well. He will take these plants to Holland, together with many other living plants.

A vessel from China has arrived in the roads of Ternate. It has brought the specimen of *Enkianthus*, Van Marum had asked for. Looking back he regrets that he has not made this trip earlier, because he has found many beautiful plants on Amboina, Saparua and Maruku. Although these islands are mainly composed of basalt, their headlands (capes) are mainly consisting of limestone. The Moluccan islands in a proper sense, to which Tidore and Ternate are also belonging, are much younger and they are completely volcanic. The volcano of Ternate is constantly breathing fire, while the volcano of Tidore has stopped meanwhile. Reinwardt has climbed both mountains. The first one is 5.567 English feet high, the volcano of Tidore measures 5.600 feet. The view from their tops is magnificent. On the limestone slopes of Amboina he has discovered a new species of *Marumia*, *Marumia dioica* R. More and more he is admiring the achievements of Rumphius, who has carried out research here. The day after tomorrow he will leave for the northern cape of Celebes, where he will visit Gorontalo and Menado. Thereafter he will sail through the Strait of Makassar and return to East Java. He hopes to arrive there in October. By the end of the year he will be back in Batavia, after which he will return directly to Holland.

[NA-RANH 529-20b; ZOC, COB, BOT, AGR, GEO, MIN]

**507. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 4 September 1821**

On 23 August 1821, Van Marum has received the 24 crates, containing one living plant each. These plants have been taken to Holland with the 'Dijkzigt'. Almost every plant had died. The ship-owner Mr. Hoboken has called the captain to account, after which Hoboken has declared that on the day of departure from Batavia the resident had ordered the captain not to touch the plants. So the resident must be mad or perhaps hostile towards Reinwardt. It is also possible that big lies have been told in Rotterdam. Everybody who wants to send goods to Holland has to be informed about this bad experience. Van Marum has send the whole collection to Leyden. Perhaps it is possible to revive at least a couple of plants. With regard to the

experiments, which have to be carried out with Van Stipriaan's bathometer, he repeats what he has written already. The 'Eerste Klasse' is still waiting for the results of the measurements, which Reinwardt has been able to carry out in the neighbourhood of the Moluccas, before it will decide about what to advise to the Minister of the Interior. He hopes that his friend will agree with his acting without authorization.

[NA-RANH 529-20b; BOT, PHY]

**508. C.G.C. Reinwardt (Menado, Celebes) to M. van Marum (Haarlem);  
31 October 1821**

Reinwardt – knowing that each of his letters (arriving in Holland from such a long distance) is very welcome and agreeable – again sends a letter to his friend, with an English whaler. He has sent his last letter from Banda and Ternate. From these islands they have sailed to Gorontalo on the north coast of Celebes. There his main object was to visit the goldmines. Thereafter they went to Menado. Its soil is extremely fertile, perhaps even more fertile than the Javanese soil. He gives a short geological description of the sandstone of Gorontalo, which is containing gold and pyrite. The gold is extracted from the sand, which has come into being from the sandstone (through erosion). The extraction is carried out by washing the sand. The natives are good-tempered. Although they are pagans, they have a better character than most of the so-called Christians living in the Moluccas. Only the central part of the Menado residence has a volcanic origin. Everywhere the subterranean fire is active and it finds its way out through the tops of the mountains. Again he has climbed several tops, the heights of which were varying between 5.000 and 6.000 feet. The vegetation of Menado is less abundant than it is on Java, although there is a distinct resemblance. Again he has discovered several new plant species, among others belonging to the genus *Marumia*. Regrettably he has not had the opportunity to collect young plants. Furthermore he has observed several male and female specimens of an antelope species. Initially he thought that they belonged to a bovine species. He hopes to take these animals to Holland alive. He has also caught two Babyrussas, which appeared to be both females, so they will probably not develop tusks. He has taken these animals aboard too. He has also collected several new species of birds. The two draughtsmen Bik are still accompanying him, together with Landré junior. Unfortunately, he had to send Kent back to Batavia, when they were

in Ternate. After having taken a break for several days, he will return directly to Batavia, in order to prepare his return journey.

Since February he did not receive any letters from his friends, not from Holland and not even from Batavia. He is anxiously waiting for news, especially from his friend Van Marum. These letters will be waiting for him in Batavia, there is no doubt about that. Of course his friend kept on sending letters, at least as long as he believes Reinwardt will receive them. He has also sent letters from Ternate to his sisters and to De Vries. He asks his friend to send his greetings on to them.

He keeps on collecting interesting living plants for his friend's garden, although in the hot weather it is very difficult to keep these plants alive aboard a ship. Besides the brig 'Experiment' is not very spacious. He is really grasping every opportunity to send letters to Batavia. He has ordered to prepare a part of the collection of living plants, growing in the 'hortus' of Buitenzorg for shipment to Holland. He is rather sure that the plants which have been sent to Van Marum after he has left Batavia, will arrive in Holland in a good condition and he hopes that they will not have shared the fate of the plants which were sent to Holland with the 'Arinus Marinus'. He hopes that he will return to Holland aboard a spacious ship. He asks his friend to greet Mrs. Van Marum and the other housemates.

[NA-RANH 529-20b; BOT, COB, GEO, MIN]

**509. C.G.C. Reinwardt (Besoeke, on Java) to M. van Marum; 1 January 1822**

Once returned to Batavia, Reinwardt was pleasantly surprised by the fact that a couple of letters from Van Marum were waiting for him – n<sup>o</sup> 40 (dated 17 September 1820) and n<sup>o</sup> 41 (dated 22 November 1820). From these letters he has learned that his friend enjoys good health. He hopes to receive a couple of letters soon again. He is sure that his friend will keep on sending letters, since he knows that he will stay on Java for some time. He reminds him of the letters sent by him during the last few months, from Menado (on Celebes) and before that, from Ternate, Banda and Timor. He hopes that Van Marum will have received these letters. Yesterday he left Banjoewangie (on East Java), where he had the opportunity to visit the 'Idjeng' volcano, which is breathing fire. In that region he has also discovered a specimen of the famous gum tree, Pokon upsas tree (*Antjaris topiaria*), of

which he could collect seeds. He has sent them to Buitenzorg. Nowadays hardly any native still knows how to collect and prepare its poison. He has also received a couple of letters from the Governor-General, informing him that the government is already booking cargo space aboard several ships.

He promises to satisfy as much as possible Van Marum's wishes with respect to exotic living plants. He regrets that most of the plants sent to Holland, had already died and even more that his friend has not had the opportunity to keep at least a part of these plants for himself. The decision made by captain Duyff to demand such a high freight for six crates is contravening all agreements. Unfortunately he has already been paid. It is easy to explain why most of the living plants taken to Holland by the 'Prins Frederik' have died. The journey has taken too much time and the ship has been in England too long. From a letter sent to him by Vollenhoven he has learned that a part of the collection sent to Holland with that ship has arrived in a good condition. Probably most of the plants sent with the 'Admiraal Buyskes' and the 'Henriëtte en Betsy', will have died too, because these vessels have been anchored too long in the harbour of 'Isle de France'. He hopes that his friend will have received the plants, sent with the 'Soerabaya'. Unfortunately the 'Arinus Marinus', which was carrying 15 crates of objects of natural history and six crates of living plants (36 plants in total), has been lost. He hopes that enough stowage will be put at his disposal, prior to his return journey. He wants to take many living plants with him to Holland. Regrettably most of the living plants sent from the Moluccas to Batavia did not survive.

Before he answers the various letters sent to him by his friend he wants to thank him for handling his affairs so well. He hopes that the bill of exchange has been converted into cash in time and that meanwhile the other bill of exchange, which has been written out to Mr. C. Blankenhagen (Rotterdam), has also been converted. He has not been informed yet. He is pleased that Temminck is so very delighted with the objects of natural history sent to him. Until now Temminck has not sent him a letter, in order to acknowledge the receipt of that shipment. He has already been informed about the acquisition of the collection of birds and about the merging of the two cabinets. He agrees with Van Marum that this change has to be the last act and that further changes, which may result from Vrolik's intriguing, will fail to occur. He is also pleased that Temminck has been appointed director and that he (Reinwardt) has got the chance to keep well away from disputes.

If it will turn out to be possible for him to collect plants in the Cape Province during his return journey, he will see Mr. Poleman, in order to purchase South-African plants. As much as it has been to Falck and Temminck, the sudden death of Kuhl must have been a shock to his friend. This young and very promising scientist has been very zealous. The draughtsman Keultjes, who was accompanying him, has also died.

He asks his friend to thank Van den Ende for his kind letter. The death of Van den Ende's brother, during the expedition in the Palembang region, must have made him very sad. This man had seen him in the Roads of Batavia, when he was setting out for his trip to the Moluccas. The cholera morbus has raged all over Java meanwhile. Nowadays it is haunting the island of Bali. He promises to send his friend a letter as often as possible, before he will leave for Holland. He wishes him the very best and asks him to convey this wish to his wife, his housemates and his friends.

In a postscript he observes that he has received positive news from De Vries about Caroline. He keeps on recommending her to Van Marum's attention and care. The bill of exchange, worth 200 guilders, which has been written out to his niece, has been lost with the 'Arinus Marinus'. Therefore he asks him to give her some money. She should not be in needy circumstances!

[NA-RANH 529-20b; ZOC, COB, BOT, MED, ART]

**510. C.G.C. Reinwardt (Lembang) to an unknown person (?); 6 March 1822**

Yesterday – during his return journey from Surabaya to Batavia – Reinwardt has received the warm and concerning letter, dated 24 February 1821, and he thanks the sender and his wife for their concern with respect to the dangerous disease, which he has survived. His mouth is still painful ('an annoying inconvenience in his mouth'), a consequence of the strong medicines, which have been administered to him. Fortunately he has recovered again and so his condition allows him to travel to Batavia. Here, in Lembang and in Samarang, he will take a couple of days of rest. He has not been able to send them (the addressee and his fiancé) a letter until now. His many activities and his illness have kept him from doing so. They must believe that he is very happy about their successful journey and their safe arrival in Batavia. He has already heard about it, when he was still in Ternate. He congratulates the addressee with his promotion. He can imagine that he

has been welcomed by the Governor-General. Of course he had to hurry and find a nice and spacious house.

After having stayed in his house in Buitenzorg he will end his journey in Batavia. Of course he would have been pleased to accept the invitation if he had not been invited already by Mr. Van der Vinne. He could not return to the house of Mr. Merkus, Procurator General, because it had to be vacated and sold. His personal belongings have already been moved to Van der Vinne's house. Nevertheless he would be pleased if they would be willing to receive him regularly. He confides them that even after having been on Java for almost six years he is still feeling a stranger, so they should not have too high hopes of encountering friendship and cordiality. He thanks them for the messages from Holland, which they have sent on to him.

Recently he did receive a couple of letters from Holland, among others a letter from Van Marum, dated September 1821, in which he did apologize for having written this letter in a hurry.

The resident of Lembang will send this letter for him. He assures the addressees of his feelings of sincere friendship and esteem.

He underlines that Van Marum and Van den Ende have to be informed about the contents of this letter. [Perhaps it has been addressed to the niece of Betje, who is going to be married, or has already been married to the officer Van der Goes]

[NA-RANH 529-20b; MED]

**511. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 25 March 1822**

Perhaps Van Marum has already been informed by the Governor-General that shortly after his return from the Moluccas to the eastern part of Java, he has been affected by a severe illness. Therefore his return to Batavia has been delayed and of course the same goes for his return journey to Holland. Meanwhile he has fully recovered from this life threatening disease, which has kept him in bed in Surabaya for almost two months. Among others he has suffered from catarrhal complaints, high fevers, severe congestions (to the head), probably caused by exhaustion as a consequence of a couple of trips through East Java. Yesterday, 24 March, he has returned to Batavia. Not until now he has been able to prepare his return journey to Holland. These preparations have to be completed within the next few months. He has also

to find enough stowage, as well as a cabin.

He hopes that his friend will have received the letters sent by him since he returned from Besoekie in January 1822. Meanwhile he has received Van Marum's letters, dated 7 July, 21 August and 14 September 1821. For two reasons the one, dated 7 July, has made him very sad. First of all he had to read the sad news of the death of Van Marum's wife, secondly he was upset because Van Marum has expressed his disapproval of the postponement of his return to Holland, although there are so many good reasons which justify that decision. He is also sad about the loss of several new shipments. One of the most important losses suffered by him, has been the one in which the 'Arinus Marinus' had been involved. Among others it had loaded a beautiful collection of Javanese rock samples, collected by him during his trips. Of course he will have to take care of the living plants destined for Leyden and for Van Marum, during his return journey to Holland. The number of living plants, which will be taken to Holland, will depend on the available cargo space. Most plants collected by him in the Moluccas have died meanwhile. The same goes for the Moluccan animals. He is happy about the fact that the shipments sent with the 'Johanna' and the 'Schoon Verbond' have arrived in Holland in a rather good condition, as he has learned from Van Marum's letter. Much to his surprise Temminck's collection has been bought by the 'Museum'. He has also been surprised that Temminck has been appointed director. He does not understand why Temminck did not send him any letters until now. He and Van Marum will have been upset by the news of Kuhl's sudden death. Van Hasselt and Van Raalte will continue his work.

Until now he has not been able to carry out experiments with Van Stipriaan's bathometer, although he had asked the rear admiral Buyskes to assist him during the journey to Batavia, about six years ago. During his stay in the East Indies he had to do without the help of the Department of the Navy. There has not been any opportunity to assist him. Besides it is impossible to carry out these experiments in the seas off the coast of Java. The rough sea off the coast of the Moluccas (especially during the eastern monsoon), have also blocked these experiments. He is not sure if he will be able to meet the desires of the government and the 'Instituut' with respect to this subject during his return journey!

It pleases him that the two bills of exchange have meanwhile been converted into cash and that Van Marum has received the money. Unfortunately there

is no more time for sending an extensive letter to De Vries. The last letters received from him were dated 29 June and 20 September 1821. In one of these letters he has read that the governors of the 'Athenaeum' have held the point of view that he – Reinwardt – should have tried to be saved for Amsterdam. He does not understand why. It was not up to him to decide to abandon that position! If he would have done so he would have done himself a bad turn! He has made the right decision, when he decided to return to Holland first, before abandoning his professorship. After all Van Rossum is still delivering lectures. Now Van Marum's hope to see him soon again is the only motive, which is directing his actions. He will try to speed up the completion of his activities as much as possible. Finally he adds the last greetings to his dear friend.

[NA-RANH 529-20b; MED, BOT, ZOC, COB, GEO, MIN]

**512. ?? Duyvené (Batavia) to C.G.C. Reinwardt (Batavia); 1 April 1822**

Through the 'Extract uit het Verbaal van den Hoofd-Directeur van Financiën over Nederlandsch-Indië' the secretary of the General Directorate of Finances informs Reinwardt that his letter, dated 30 March 1822 (n° 19), has been read, in which he has asked to deliver seven large crates with tin fittings, which are still stored in the governmental clothing depot. Reinwardt wants to use these crates for the shipment of objects destined for the 'Koninklijk Museum van Natuurlijke Historie' in Leyden. After the Council of Finances has been consulted it has been decided to put six of these crates at Reinwardt's disposal, because they cannot be used for sending cloth (sheets) to Japan.

[NA 2-21.204(4), ZOC, COB]

**513. Acting Resident of Batavia (Batavia) to C.G.C. Reinwardt (Batavia); 11 April 1822**

The acting resident of Batavia meets with the decision made by the General Director of Finances, to put six large tin fitted crates from the governmental clothing depot at Reinwardt's disposal (according to the decision, made on 1 September 1821, n° 5)

[NA 2-21.204(4)]

**514. Acting Resident of Batavia (Batavia) to C.G.C. Reinwardt (Batavia);  
1 May 1822**

The acting resident of Batavia informs Reinwardt that one crate and one basket, both containing wood samples, have arrived from Samarang aboard the 'Admiraal Buyskes'. These samples have to be picked up at the governmental clothing depot and delivered at Reinwardt's department.

[NA 2-21.204(4); BOT]

**515. C.G.C. Reinwardt (Batavia) to ?? Gilbert (Berlin); Spring of 1822  
(early May 1822)**

In Gilbert's *Annalen* Reinwardt has found a report about a lake and a creek on Java, situated in the neighbourhood of a mountain. These are said to be containing sulphuric acid. In his view there is no doubt that Gilbert has meant to indicate the 'Gedeh' mountain ('Groote Berg'), which – as Reinwardt approves – is situated about 60 miles from Batavia. Unfortunately the author has given this mountain the name of 'Idjen', another volcano, situated about 700 miles east of Batavia (on East Java). Perhaps Gilbert has thought that there is only one volcano on Java. As a matter of fact it would be better to characterize Java as 'one immense volcano'! This volcano can start breathing fire and rocks any moment and at various locations. During his journey through Java he has climbed several of these mountains. Reinwardt would be pleased if Gilbert would allow him to send him more details with regard to the above mentioned article.

[NA 2-21.204(9); GEO, MIN, PHY, CHE]

**516. ?? Mogendorff (Buitenzorg) to C.G.C. Reinwardt (Batavia); 11 May  
1822**

In reply to his letter of 11 May 1822 Mogendorff informs Reinwardt that he has ordered to spin (twist) a sample of hay, after which the result will be presented to him.

[NA 2-21.204(4); BOT, AGR]

**517. C.G.C. Reinwardt (Buitenzorg) to the Governor-General (Batavia);  
23 May 1822**

Reinwardt sends the Governor-General his claim of expenses with regard to the acquisition of objects of natural history and their wrapping and

packaging. This collection is delivered today aboard the 'Elisabeth'. It is destined for the 'Koninklijk Museum'. He has also drawn 270 guilders, in order to buy nine samples of gold dust from nine different gold mines on Borneo, which have recently been taken to Batavia by the Commissioner Tobias. This collection will also be handed over to the 'Koninklijk Museum'. He has informed Mr. Tobias already that he has paid a fair price. Now he asks the Governor-General to reimburse him after his claim has been discussed. [NA 2-21.204(4); GEO, MIN]

**518. C.G.C. Reinwardt (Batavia) to J.Chr. Baud (Batavia); 30 May 1822**

Reinwardt opens his report on the cultivation of nutmeg and mace by giving an explanation of the added drawings [which are missing in this document]. This explanation is followed by a diagram of the chemical constituents of the nutmeg. Thereupon he discusses the botanical characteristics of the nutmeg tree. These trees do not develop any flowers until they are seven to nine years old. The ones, being between 20 and 30 years old, are the most productive. The older they are, the smaller their nuts are. They can live about 80 years. He also adds many details about the arrangement of the nutmeg pitches and about the expertise of the gardeners. He underlines that there are several causes for the loss of quality of this important merchandise, about the various types of nuts and about the optimal physical, climatological and meteorological circumstances for their cultivation. The quality of these nuts is mostly guaranteed by preserving them in heated crates, after they have been powdered with chalk. He does not at all agree with Crawford, who rejects this procedure and if wanted so, he is willing to prove that he is right! He ends this report by giving a few remarks on the quality of mace, of which several types are existing.

[NA 2-21.007.58-98 (Collection J.C. Baud); BOT, AGR, CHE, PHY]

**519. A. Payen (Buitenzorg) to C.G.C. Reinwardt (Batavia); 31 May 1822**

Payen informs Reinwardt that it has been very difficult for him to find a house in Bandung. Until now he has not had the opportunity to answer Reinwardt's letter, but he did not forget that he has to. He promises to inform his superior about the details, which he has collected about the 'Papandaijang' volcano. However he is not a geologist, nor a scientist, so Reinwardt will have to decide about the value of the information. From

this dormant volcano with several tops, sulphur is collected in a mine. Two adjacent and very high and very steep tops are only covered with herbs and shrubs. Probably a long time ago the lower part of the highest of these tops has been split into two parts. Its most recent eruption occurred in 1772. Payen has seen two witnesses of that event. Especially the eastern face of the volcano has been crumbled.

[NA 2-21.204(9); GEO, MIN, BOT]

**520. C.G.C. Reinwardt (Buitenzorg) to the Governor-General (Batavia); 31 May 1822**

Reinwardt informs his superior that meanwhile he has passed on several cabinets, crates, instruments and other objects needed for the preservation and storage of objects of natural history, to his successors Blume and Van Hasselt. He has added the respective explicatory documents to this letter. The same goes for the electrostatic generator, the pneumatic pump (with bell jar) and the standard meter, which has been produced and adjusted by the 'Instituut' (Amsterdam). The fact that this meter has got rusty does not affect its quality. He asks the Governor-General to offer these three important instruments to the 'Bataviaasch Genootschap van Kunsten en Wetenschappen'.

[NA 2-21.204(3); ZOC, COB, PHY]

**521. Secretary of the General director of Finances (Batavia) to C.G.C. Reinwardt (Batavia); 6 June 1822**

Duyvené, the secretary of the General Director of Finances of the Dutch East Indies, informs Reinwardt that his letter, dated 31 May 1822, has been read and that it has been decided to order the resident of Ternate to reimburse the Radja of Gorontalo for the samples of gold dust, which he has given to him in exchange for a signed receipt. The deputy resident of Ternate has to hand over the money as soon as the General Director knows what has to be paid. The sum will be put to the account of 1821, under the category 'Worship, Agriculture, Arts and Sciences and General Management'.

[NA 2-21.204(7); MIN]

**522. C.G.C. Reinwardt (Batavia) to M. van Marum (Haarlem); 9 June 1822**

Reinwardt informs his 'high-principled' friend that this letter may be the very last one, which he will receive from Batavia. It has to be considered the covering letter to a last bill of exchange, the 'primo' of which has already been added to the letter sent by him on 9 May 1822. He also adds several inventories, among others one regarding the goods, which will be taken by him to Holland. He asks Van Marum to keep this inventory until after his return. The same goes for another inventory of living plants, which he will take care of himself. He hopes that on arrival the unpleasant autumn weather will not harm these plants too much. He has decided to return to Holland aboard the 'Elisabeth' (captain Pakes). This vessel will be ready for setting sail within the next eight to ten days. Meanwhile he has made all preparations and he is ready to leave. It will be at least by November before he will arrive in the Netherlands. Of course he is very happy to see his old friend again. That day will be the happiest day of his life.

[NA-RANH 529-20b; BOT, COB]

**523. J. Schneither (Batavia) to C.G.C. Reinwardt (Batavia); 11 June 1822**

In this document Schneither discusses in detail the proposals made by Reinwardt with respect to the supervision of the educational system, to the supervision of the civil medical service and to the supervision of the Botanical Garden. Schneither also acknowledges the receipt of an inventory of the collection of natural history, which will be sent to Holland with the 'Elisabeth' (captain Pakes). This collection has been addressed to the 'Koninklijk Museum'.

Schneither has added the following proposals:

1. Reinwardt's dismissal as commissioner for the civil medical service (in which position he has been appointed by the royal decree of 11 April 1820. He will be thanked by the government for his benevolence and for his good service, not only in this field but also with regard to the promotion of our knowledge of the natural conditions of the East Indies.
2. Liquidation of the Department of Agriculture, Arts and Sciences. The government wants him to continue the correspondence with his former employees, through the Governor-General.

3. Taking up Reinwardt's proposals with respect to the draughtsmen A.J. Bik and J.Th. Bik and the employee N.J. van IJsseldijk.
4. Charging J. van der Vinne (until now school supervisor and secretary of the Commission for Education, at a monthly salary of 300 guilders) with the general supervision of the schools, in the rank of inspector. Van der Vinne will have to continue his monthly reports on the governmental schools and from now on he will have to report every two months to the Governor-General. The residents of Java and Madura will be ordered to obey the 'Algemeen Reglement voor het Schoolwezen' (according to the decree of the Governor-General, dated 16 January 1818, n° 29). They will have to appoint supervisors for their schools. A librarian, residing in Batavia, who will manage the fund of school books, at a monthly salary of 50 guilders, will also have to teach at the primary school of Weltevreden. In that position J.K. Meis is appointed. Instructions have been added.
5. Appointment of N.J.J. Bowier, Azn, as chief of the civil medical service, at a monthly salary of 400 guilders. While replacing Reinwardt he will receive a bonus of 1.000 guilders. The article with respect to the vaccination is not withdrawn but is changed.
6. The supervision of the Botanical Garden will be given to Dr. C.L. Blume, who will be appointed director, at a monthly salary of 300 guilders. The salary of Hooper, first gardener, will be raised from 40 to 200 guilders monthly. Reinwardt's proposal to raise Kent's salary is not accepted, but it will be kept under consideration. Instructions have been added.
7. Dr. Blume is also appointed inspector for the vaccination. He will have to report regularly and to send his proposals directly to the Governor-General. His salary will be 400 guilders monthly. He will be dismissed as deputy director of the Department for Agriculture, Arts and Sciences.
8. A copy of these decisions will be sent to the Minister of Public Education, National Industry and Commerce in The Hague.
9. An inventory giving insight in the composition of the collection of natural history, which will be taken to Holland aboard the 'Elisabeth', will be sent to the Governor-General. Reinwardt, the General Directorate of Finances, the residents of Java, the National Audit

Office, the Inspector of Education, Meis (librarian), the Commissioner of the Civil Medical Service (Bowier), the Director of the Botanical Garden of Buitenzorg, the Inspector of the Vaccine and Hooper (first gardener in Buitenzorg) will receive an extract of these decisions.  
[NA 2-21.204(3); BOT, ZOC, COB, AGR, ART, GEO, MIN, MED]

**524. P. Merkus (Batavia); C.G.C. Reinwardt (Batavia); 15 June 1822**

Through this 'Extract uit het Register der Handelingen en Besluiten van den Secretaris van Staat, Gouverneur-Generaal over Nederlandsch Indië', the secretary of the Governor-General informs Reinwardt that he has read his letter, dated 31 May 1822, n° 56. In it he has informed his superior that because of his near departure he has given several machines and instruments, cabinets and other material, necessary for collecting objects of natural history, to his successors Blume and Van Hasselt. He has presented the documents in which these transfers have been described. Several of these instruments, which are still in his possession, have been bought recently, that is to say an electrostatic generator (fully equipped), a pneumatic pump (with bell jar) and a standard meter (made of steel). In his previous letter he had asked to allow him to give these instruments to the 'Bataviaasch Genootschap van Kunsten en Wetenschappen'. Now he is informed that all his proposals have been approved. The 'Bataviaasch Genootschap' and the 'National Audit Office' will receive an extract of these decisions.

[NA 2-21.204(3); PHY]

**525. M. van Marum (Haarlem) to C.G.C. Reinwardt (Batavia); 21 August 1822**

Van Marum reminds his friend of the last letter he sent to him (dated 7 July 1822), in which he expressed his feelings regarding Reinwardt's decision to postpone his return from Java to the Netherlands. Afterwards he received the news about the shipwreck of the 'Arinus Marinus', aboard of which Reinwardt had initially decided to return to the Netherlands. Now he is very happy that Reinwardt did change his plans, although he realizes the consequences of the fact that again a collection of objects of natural history, ethnography and art has been lost. He has published this letter in the *Algemeene Konst- en Letterboode*, of which he has added a copy to this letter, as well as a letter from Reinwardt's sisters (Lüttringhausen), from which

Reinwardt can learn how they have been worrying about his well-being. Van Marum has put their mind at rest as good as possible. He has also added an inventory of the two successful shipments of plants sent to Holland by Reinwardt, as far as they appeared to be alive upon arrival. This inventory has been drawn by Schuurman Stekhoven, chief gardener of the Leyden Hortus. Van Marum has asked this man to send a copy of the inventory to Reinwardt, in order to enable him to compose the inventory of the plants to be sent to Holland with the next shipment. He gives an enumeration of the most wanted species. He also informs Reinwardt about the plants which at the time of arrival of the 'Maria Reygersbergen' appeared to be still alive. Van Marum is eagerly looking forward to be informed about what the 'Dijkzigt', meanwhile arrived in the port of Hellevoetsluis, will bring ashore. He hopes that Reinwardt during his return to Holland, but still sailing in the East Indian waters, will have the opportunity to carry out experiments with the bathometer designed by Van Stipriaan Luiscius. Van Stipriaan has, while delivering a lecture at the occasion of a meeting of the 'Eerste Klasse' of the 'Koninklijk Nederlandsch Instituut', complained about the fact that these experiments had not been carried out until then, although Elout had promised to ask Reinwardt to do so. Van Marum promises to try to prevent a letter about this affair from being sent by the 'Eerste Klasse' to the government. Elout, nowadays Minister of Finance, has informed him that until now Reinwardt has not had the opportunity to carry out these experiments.

Yesterday Mr. De Wilde has visited him. At that occasion they also discussed the postponement of Reinwardt's return to the Netherlands, as well as the fact that Leyden needs Reinwardt and the many dangers Reinwardt is exposing himself to while making a journey to the Moluccas and even the rumour that he has been killed on one of these islands. In De Wilde's view the Governor-General will undoubtedly succeed in putting off Reinwardt's return and in keeping him on Java, in spite of the fact that he had already accepted the professorship at Leyden University. Van Marum himself has always affirmed that his friend had decided to return soon. He adds a prayer that Reinwardt will do so. De Wilde has told him that he has decided to return to Java soon, in the company of his young wife, his adopted daughter, six cows and a load of hay and water. He adds greetings from several friends as well as his best wishes.

[UBL BPL 2922; BOT, PHY]

**526. Th. Van Swinderen (Groningen) and S. Stratingh (Groningen) to C.G.C. Reinwardt (Leyden!); 25 October 1822**

First of all Van Swinderen and Stratingh sound Reinwardt praises for what he has performed in the field of science. Thereupon they speak highly of his devotion to duty and of his zeal. Since many years the members of the Academic Senate of Groningen University are deeply impressed by his unique achievements. Their thoughts have often been with him, when he was defying the many dangers and when he was running the risk of severe illness and even of death. In their view Reinwardt's safe return to the Netherlands is an event of utmost importance. Therefore the Senate wants to express its feelings of joy and respect. They wish him to be granted a long life and enjoy God's blessings.

[UBL BPL 2425; ZOC, BOT, GEO, MIN, PHY, CHE, AGR. MED]

**527. C.G.C. Reinwardt ('Roads of Texel') to M. van Marum (Haarlem); 31 October 1822**

Finally Reinwardt has arrived in Holland, although he is still aboard the 'Elisabeth', which has anchored in the Roads of Texel. He expresses his happiness and informs his friend about his safe arrival. His happiness will be complete as soon as they will have seen each other again, safe and sound. Tomorrow he will leave through Den Helder and arrive in Haarlem by the evening. He asks to send somebody to wait for him in town. He asks Van Marum not to inform all his friends immediately about his arrival in order to give him a couple of days rest. He ends his letter by calling himself 'his extremely happy friend'.

[NA-RANH 529-20b]

**528. C.G.C. Reinwardt (Haarlem) to J. de Vries (Amsterdam); 2 November 1822**

Reinwardt observes that of course all his friends will already have been informed about his arrival and about the fact that he is staying at Van Marum's. He hopes to have the opportunity to embrace his friends soon. He is really swooning with happiness. On arrival he has received a letter from His Majesty the King, ordering him to come to Brussels immediately. So he has to leave for Brussels soon, after having made the necessary arrangements in Leyden for the reception of the goods, which will arrive from Texel.

Immediately after his return from Brussels he will come and see De Vries.  
He asks him to inform D'Ailly and Caroline also.

[KB 121 B 8; BOT, ZOC, COB, GEO, MIN]





## CHAPTER 8 – THE ‘LEYDEN’-PERIOD (1822-1854)

### 529. **J.M. Kemper (Brussels) to C.G.C. Reinwardt (Leyden); 13 December 1822**

Kemper thanks his friend for sending him such a kind letter. He observes that ‘God may give that all his wishes may come true and that they may even surpass his expectations!’ He is really interested in Reinwardt’s happiness, like a brother would be. However, Kemper fears that it will not be possible to speed up the granting of the dispensation, which is needed for appointing Reinwardt in Leyden University. There has been a discussion about the question if this decision has to be made in the meeting of the ‘Staten-Generaal’, yes or no. The consultation about these dispensations has always been put in the end of such meetings. Meanwhile Kemper has decided to consult Arntzenius and to send the result of this reference also to Walraven. It pleases him that Reinwardt is still staying at his house. He promises to do everything in order to keep him there for the time being and to keep him from looking eagerly for another house.

[UBL BPL 2425; UNI]

### 530. **Chr.G.D. Nees van Esenbeck (Bonn) to C.G.C. Reinwardt (Leyden); 28 January 1823**

Nees von Esenbeck thanks Reinwardt for his letter, dated 16 January 1823. Its joyful content has embarrassed him, while he was still awaiting Reinwardt’s safe return. He has been very concerned. Therefore he has delayed the sending of the certificate of the ‘Königlich-Kaiserliche Naturforschende Gesellschaft-Leopoldina Carolina’, with which this institution wants to honour Reinwardt at the occasion of his return. Now he is hoping that Reinwardt is willing to accept this certificate as a sign of his deepest feelings of devotion and highest esteem and of the feelings of congeniality of the members of the ‘Gesellschaft’. The thoughts of many German scientists have been with him all those years. They have prayed God for his safe return. Every lover of the science of nature is eagerly looking forward to receiving a few lines with which Reinwardt will undoubtedly inform them about his many discoveries. Nees von Esenbeck knows that Reinwardt is going to send a treatise to the academy. It is very willing to meet his wishes with

respect to that entry. Therefore he gives his editorial advice, making several remarks about the plates and informing him about how to enter it. He adds an issue of the *Acta* and a copy of a plate. He ends his letter by expressing his strong feelings of veneration and esteem. [The original letter is written in German]

[UBL BPL 2425; BOT, ZOC, MIN, GEO, PHY]

**531. Governors of the Athenaeum Illustre (Amsterdam) to C.G.C. Reinwardt (Leyden); 5 February 1823**

The governors inform Reinwardt that H.W. van Rossum (Amsterdam), *Medicinae Doctor* will be appointed professor of natural history (with the exception of botany) in the 'Athenaeum', while Hendrik Cornelis van der Boon Mesch will be appointed professor of pharmacological and technological chemistry. These appointments will date from 1 April 1823.

[UBL BPL 2425; ZOC, BOT, CHE, TEC]

**532. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 18 February 1823**

After having judged the treatise on mortar and a second one on the preparation of broth, Reinwardt returns these documents. He asks his friend not to send other treatises for the time being, because he has already too much work to do. The author of the second treatise should withdraw his entry, because it makes no sense to extract substances from good and nutritive meat, because it is already excellent food in itself.

According to his friend's wish Reinwardt also adds a collection of seeds of 103 different species. In his turn he asks him to write a short note on his electrostatic generator in behalf of D'Ailly junior. He also needs his assistance with respect to another affair. Furthermore he has received a letter from the 'Commissie van Liquidatie', about an arrears of payment. Besides there is a letter from his friend Kieser, who has added his greetings to Van Marum. Parmentier (Enghien) has invited them both to visit him. Finally, in 1820 the 'Maatschappij' has awarded him two medals (for two treatises, the questions of which had been entered by him). He wants to receive these medals when he will be seeing him again.

[NA-RANH HMW 444-401; CHE, PHY, AGR]

**533. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 22 February 1823**

Reinwardt returns the signed certificate of posting for the three treatises to be judged by him. He adds a note on the French version of the Programme of the 'Maatschappij', already entered by him. He is suffering from pains in his lower limbs. As a consequence he has to stay at home. It will not be possible for him to come to Amsterdam.

[NA-RANH HMW 444-401]

**534. C.G.C. Reinwardt (Leyden) to N. Cornelissen (Ghent); 22 February 1823**

A couple of days ago he has been very pleasantly surprised and also very honoured when he was informed about the very positive reception of his modest collections of plants from the Dutch East Indies by the botanical garden of the University of Ghent. Through this message he has also learned that Cornelissen has ordered to attach a commemorative plate at the box, in which a specimen of *Olea europaea* has been planted. This news has been published in the issue of the *Algemeene Konst- en Letterbode* of 27 December 1822. Ghent has a high opinion of him. The expression of these feelings urges him to serve the academic botanical garden of Ghent as much as possible. Today he has sent a fine collection of fresh seeds to Ghent, several species of which have been collected on the island of Java. He wants to continue pleasing Cornelissen and his garden. He hopes that the Javanese seeds will germinate well. Possibly this collection will be sent by boat.

[UBG Hs 675-Reeks 2-25a; BOT]

**535. Chr.G.D. Nees van Esenbeck (Bonn) to C.G.C. Reinwardt (Leyden); 5 March 1823**

Having received a fine collection of Javanese seeds, Nees von Esenbeck wants to thank Reinwardt on behalf of himself and of the 'Akademie der Naturforscher', for the very kind gesture, with which Reinwardt has accepted the certificate sent to him. The treatise, which has meanwhile been sent to the 'Akademie', has been considered a most welcome addition to the *Acta*.

Recently Reinwardt's bookseller Weber must have received a copy of part II of Volume 10 of the *Acta*. Nees von Esenbeck does not understand why,

but Weber seems to have sent it to Van Mons. He asks Reinwardt to accept this book. He wonders why Volume 11 is not present in the Leyden library, because already on 22 April Weber has given it as a present to the Leyden Academy. He will order Weber to deliver a copy of his *System der Pilze und Schwämme* (as a present) at Reinwardt's. So his colleague will see at a glance with which the German scientists are occupying themselves. The same goes for the issues of the *Botanische Zeitung*, which have been published during the last few years, for part II of his botanical works and for a couple of prints, representing Spiridens. He asks Reinwardt to send him a copy of the work on the various types of gardens (*Hortus Mornacensis?*). If possible he wants to receive two copies, because he has intended to give one of these to his friend Hooker.

Perhaps Reinwardt is also acquainted with Hoffmanssegg's *Flora Portugaise*, Von Humboldt's *Nova genera et species plantarum*, and the works on Brazil, written by Von Martius and Spix. He also points at Fries's *Systema Mycologica* and Agardh's *Species Lichenum*. He presumes that Reinwardt is already familiar with these works, as well as with Sprengel's new discoveries, which have been published recently. If he wants to receive one or several of these books, he should notify Weber. He also promises to send him a couple of notes, after he has been informed about the best way of sending these to Holland.

His colleagues will thank him directly for the instructive information about the various *Laurus* species from Java. He wants to express his gratitude – among others for the beautiful and rich collection of seeds, which has been given to the botanical garden of Bonn. He calls himself Reinwardt's most obedient servant. [The original letter is written in German]

[UBL BPL 2425; BOT]

**536. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1823**

Reinwardt discusses the treatise under the maxim 'Pro scientiis et Patria', sent to him for assessment. Its author puts that the Amsterdam artificial mortar has not always been satisfying. This is supposed to be mainly a consequence of the use of impure 'molenklei' (?) and less of incomplete mixing. This clay must be fired and ground well. In the author's view the Amsterdam artificial mortar is not superior to the mortar from Dordrecht. In order to prove that

he is right the author has quoted several French experts, who have stated that the mortar made of trass is a perfect mortar. The author did not try to compare the two mortars. Besides the comparison of mortar made of trass and mortar made of ground red bricks does not matter. The results of the chemical analysis carried out by the author proves his total lack of chemical expertise. Furthermore the treatise is incoherent. All in all, the author has not made any contribution to the improvement of mortar. His treatise does not deserve to be considered.

[NA-RANH HMW 444-419.222 R; CHE, PHY]

**537. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1823**

Reinwardt is very positive about the German treatise on the 'water bloom' ('Byssus flos aquae'). The author has carried out his research very meticulously and he has proved that the green substance found on stagnant water is first of all a slimy substance, mainly of animal origin and mixed with many small, living vegetal corpuscles, threadlike and of many other shapes. Anyhow this substance contains *Oscillatoria* and *Bacillaria*. Its reproduction can be stopped by preventing the affluence of animal substances, by feeding fishes and water birds with this green substances and by drying out the pools or by adding lye or acids to the water. These stagnant pools exude harmful emanations into the atmosphere. To Reinwardt's regret the author keeps silent about the animal or the vegetal character of these corpuscles, although they are at least of a vegetal nature (the greenish colour, their positive reaction to light and their capacity to produce oxygen). On the other hand these corpuscles also show an animal nature, because they have the capacity of movement (showing their desire or their aversion). He understands that the author prefers to classify these substances under the animal kingdom. Although it is a valuable treatise, giving several new ideas, several important aspects have been described too briefly. Other important subjects are lacking completely, such as a concise description of the majority of the many *Infusoria* species. The author did not explain which experiments have been carried out by him, nor did he explain any results. He should have based his postulations much better than he has done. Why did he not explain the reproduction of these organisms? He has not carried out any chemical analysis. This has kept him from proving definitely the animal or vegetable character of these organisms.

However because this treatise has been written so well, the subject has been elaborated so sufficiently and the question has been answered (almost) completely, Reinwardt would not oppose against awarding the gold medal. [NA-RANH HMW 444-419.225 R; BOT, ZOC, CHE]

**538. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1823**

Reinwardt reminds his friend that in January 1823 the 'Maatschappij' has received two new treatises about the question if it is possible to improve fructification by improving the pruning method, yes or no. The authors had to explain and prove their statements on physical grounds. Although they have given many rules, neither of the two has answered the question completely. The author of the Dutch entry under the maxim 'Natura Minerva perficit ... etc.' ('A') has only stressed the importance of pruning in order to produce beautiful fruit trees, which of course will produce beautiful fruits, because the right way of pruning has improved the quality of the saps of these trees. The French author (of the treatise under the motto 'Il est plus aisé ... etc.') ('B') has underlined that in order to produce good fruits one should have a deep and theoretical knowledge of the anatomy and the growth of plants. He has really tried to explain the anatomy and physiology of fruit trees and to base his rules on these principles. However he is far from being a scientist, but more a practical cultivator of fruit trees. Most of his statements are contravening with well-known anatomical and physiological facts. Reinwardt gives a few examples. Both answers are unacceptable. [NA-RANH HMW 444-419.226(2) R; BOT]

**539. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1823**

The contents of the treatise on the 'meat extract' is completely contravening with the maxim, which has been added by the author: 'Door onvermoeiden arbeid komt men alles te boven'. Its incompleteness and superficiality prevent its awarding. In the author's view the extract is the result of the evaporation of a cold meat broth, after it has been treated with alcohol. In French scientific literature this substance is called 'osmazone'. The author appears to stick to that misconception until the bitter end. He does not discuss the results of a precise chemical analysis of osmazone and does not

even explain if it is an animal substance, yes or no. Reinwardt knows that Berzelius has already proved that it is not. The author supposes that meat extract sometimes has a more powerful nutritive force than gelatine has, but he does not explain why he thinks so. His statements are very unreliable, all the more because Berzelius has already proved that its major constituent is lactic acid soda. All in all, his statements are very questionable.

[NA-RANH HMW 444-419.243 R; ZOC, BOT, CHE, PHY]

**540. Chr.G.D. Nees van Esenbeck (Bonn) to C.G.C. Reinwardt (Leyden);  
4 May 1823**

As soon as possible Nees von Esenbeck thanks his colleague and friend for the collection of seeds sent to him. They have arrived in a good condition. He promises to send him in return as many seeds as possible from the species marked by him in the inventory of the botanical garden of Bonn. He especially thanks him for sending the description of the many precious Javanese plants. Of course he will also ask him to send several of the less well-known species, such as *Calamus draco*, *Piper cubelia*, etc. He adds a plate of a young tree, which is growing in his garden. It must be a specimen of *Laurus cassia* (see: C. Rheede, p. 107). Its cortex has a delicate cinnamon-like taste, but more pervasive than *Laurus cinnamomum*. The specimen of *Laurus cinnamomum* has already been flowering twice. In Von Esenbeck's view most of his colleagues are taking the new species for *Laurus cinnamomum*, because of that resemblance. He has seen a representation of its leaves for the first time in C. Rheede, 5 and 33, under the name of *Laurus malabathum*. Soon he will examine the cortex of *Aliaia aromatica*. He asks Reinwardt to send him of couple of seeds from this plant. He ends his letter by expressing his feelings of high esteem. [The original letter is written in German]

[UBL BPL 2425; BOT, COB]

**541. G. Vrolik (Amsterdam) to J. Kops (Utrecht), C.G.C. Reinwardt  
(Leyden) and G. Moll (Utrecht); 14 May 1823**

Vrolik informs the addressees about a couple of notes, which have been written recently about the ploughs, kept in the 'Cabinet of Agriculture' in Amsterdam (in the 'Trippenhuys').

[NA-RANH KNI 175-36.205, AGR]

**542. A. Payen (Buitenzorg) to C.G.C. Reinwardt (Leyden); 15 May 1823**

Antonie Payen asks his friend not to doubt his safe return to Europe. He counts on receiving Reinwardt's wedding invitation. He wishes him good luck. Of course his friend deserves a very happy future, because he has always behaved irreproachably. Does he not regret that he has not had the opportunity to witness the volcanic eruption of the 'Galoengoeng' (or 'Galongong')? This experience would have been an important contribution to volcanology. He has stayed in that region for about six weeks. He has also drawn a map. Now he wants to know if Reinwardt allows him to send detailed information about these phenomena. He has already informed others about it. Most probably the Governor-General has meanwhile ordered to send the three copies of his report about that eruption and Reinwardt has already been informed. He continues by giving a detailed description of the event, adding his personal experiences. The events between June and November 1822 have been disastrous, especially for the natives.

[NA 2-21.204(9); ART, GEO]

**543. G.A.G.Ph. Baron van der Capellen van Berkenwoude (Buitenzorg) to C.G.C. Reinwardt (Leyden); 31 May 1823**

Van der Capellen informs Reinwardt that he has received his letters, dated 1 September (sent from Saint Helena), 17 and 26 November and 26 December 1822. He has been very pleased by receiving so much happy news about Reinwardt. From the day he has left, Van der Capellen and his wife have accompanied him in their minds. He wonders when they will be informed about his safe arrival and his good health. He thanks him for having sent him all these messages, through which he has been informed about Holland, in spite of his busy occupation. By doing so Reinwardt has proved his true friendship. Van der Capellen has especially been surprised by his forthcoming marriage. They know that his feelings with respect to the woman he is going to marry are very sincere and that he adores her already for a long time. These facts will guarantee his happiness. They share his feelings. Van der Capellen asks him to convey their sincere wishes to his friends. Hopefully one day they will see him again in Holland as a happy head of the family. He thanks him for having seen his father and mother-in-law and for having informed him about their well-being. Meanwhile they have reported about his visit. Of course Reinwardt has been welcomed

heartily everywhere! He has also been informed about the Leyden 'Hortus' and the Leyden 'Museum', where the many beautiful Javanese objects have been exhibited meanwhile.

Furthermore he pays attention to the work on Buffon ('Voortzetting van Buffon'), which has been sent to him, in order to hand it over to Blume. He is very honoured by the fact that Temminck has named a Javanese bird after him. He would like to receive both volumes about the birds ('one of which has been published already'). He asks his friend to have it delivered at his mother-in-law's, Mrs. Van Tuyll van Zuilen.

Since Reinwardt has left, Dr. Bowier (Van der Capellen's personal physician), has died. He wants to decide in peace and quietness if it is necessary to ask the Dutch government to send a substitute, but only after having consulted Reinwardt, because he knows them so well. Bowier was a very amiable and experienced physician. As a friend of the family he is irreplaceable. Mr. Radijs (?), the next in rank and the oldest, has provisionally succeeded him, for his military and his civil function. Although he recognizes the deservingness of this man they will not get familiar with each other so easily. Anyhow he only wants to appoint an excellent and meritorious successor. He begs Reinwardt to give his advice. He expresses his hesitation with respect to the 'Geneeskundige Commissie'. He has never thought much of that commission. He is sure that Reinwardt would never have recommended Petit (?) for the position of committee member.

Dr. Blume is working very zealously, especially with regard to the botanical garden. As far as he can see it is really in good condition. Although Blume has not asked for that job, he would be an excellent deputy commissioner. Unfortunately he is already too much occupied. The inspector Van der Vinne is not very active. He had to be reminded of his obligation to send reports regularly. Probably his employees do not supply him with the necessary data. Since several months Van Hasselt is staying in the Bantam region. This man is really very zealous. He is collecting many objects of natural history. Van der Capellen has assigned the youngest of the Bik brothers to him. He wonders why he did never receive an answer to the letter sent by him immediately after the deserving Kuhl had died. Meanwhile the text devised by Reinwardt, has been engraved on a modest gravestone, after which Payen has indicated how to erect it on Kuhl's grave. Landré is doing very well. He is asking for an additional job and Van der Capellen will think something up.

Van der Capellen's brother – also living on Java – has been suffering from extreme exhaustion, especially as a consequence of the eruption of the 'Galoengan' ('Galoengong?'). After having stayed in Buitenzorg, he has fully recovered.

While writing this letter, the evening sky is lit by the 'Gedeh' mountain, a phenomenon Reinwardt is so familiar with. From day to day the beauty of the botanical garden is increasing. There is no doubt that, once returned to Europe, he will always remember this place with pleasure, as Reinwardt himself will do of course. Nevertheless they are all longing for their return to Europe. But first of all they will set out on a journey to the Moluccas. If possible he will sail from Java in an eastward direction and visit Timor and after that Banda, Amboina, Ternate, Tidore, Menado, Gorontalo, Makassar and Banjermassing. Payen and Bik will accompany him. He wishes his friend good health and fortune and asks him to send a letter to Batavia from time to time. He assures him of his feelings of friendship and esteem. Finally he adds the best wishes from his wife ('Vale et me amare perge!').

[UBL BPL 2425; MED, ZOC, COB, BOT; See also: W.H. de Vriese (1854, pp. 287–289): identical letter]

**544. C.G.C. Reinwardt (Soest, Germany) to J.Chr. Baud (The Hague);  
29 June 1823**

Reinwardt underlines that it is less recommendable to establish a printing office in Java, which is influenced by the English, because abuse is on the lurk. So a strict surveillance is needed. He reminds him that in the past the government had already planned to found a Javanese printing office. Several persons had been commissioned, but they have never entered a report.

With respect to Baud's question about Christianity on the Moluccas, he states that the so-called Christians of these islands are lazy and proud, which is quite contrary to the nature and character of the gentle and industrious Muhammadans. The Moluccans are only nominally Christians. Unfortunately education did not influence that situation in a positive way. Reinwardt wants to use the term 'parrotry' ('papagaayentaal'), while describing how the Moluccans are practising their Christian religion. If the government wants to achieve better results it should send more experienced and better trained professionals in the fields of education and religion to these islands.

Last Thursday he has got married. It pleases him very much that Baud wants to show his interest in this important event and that he wants to share in Reinwardt's happiness. At the moment Reinwardt and his wife are making a short trip through Germany. In a month from now they will be back in Holland. After his return they will see him. Reinwardt expresses his feelings of friendship and esteem.

[NA 2-21.007.58(102)]

**545. A.R. Falck (Brussels) to C.G.C. Reinwardt (Leyden); 11 July 1823**

Having taken notice of Reinwardt's inaugural address, Falck congratulates him with the fact that he has entered the 'arena of science' in such a top form. He also congratulates him with his marriage. He hopes that this event will render his happiness permanent.

On 9 November 1822 his large portfolio of drawings, made by the Bik brothers, has been sent from Brussels to Holland. These drawings have pleased everybody. They will undoubtedly surpass the drawings which have already been sent to Holland from the East Indian archipelago. Falck hopes that the engravings, which he has ordered to make, will please Reinwardt. Several prints have been added to the contents of the portfolio. In his view the Bik brothers have meanwhile developed their skills with respect to the use and application of colours. Their ability will be improved further if they will be given a more comprehensive assignment.

Falck also informs him that he has made more detailed arrangements with respect to the production of the plates. He asks Reinwardt to inform him about his own ideas and conclusions and to send him his suggestions, also with respect to the publication of his travel book, about its translation into French and about the suggestions, which may have been made by the bookseller. He expresses his feelings of devotion.

In a postlude he announces that Baron Pasquier Paix (Minister of State) will arrive from Paris next week. He will bring several letters for Reinwardt (among others a letter from Cuvier). Falck asks him to show Pasquier at least the botanical garden, the 'Koninklijk Museum van Natuurlijke Historie' and the anatomical collections and perhaps also the library. He suggests to demonstrate its most beautiful and most rare objects. Finally he stresses that the lithographies will also be made available to the public at give-away prices.

[UBL BPL 2425; ZOC, COB, BOT, ART]

**546. C.G.C. Reinwardt (Leyden) to G.Vrolik (Amsterdam); 16 July 1823**

Reinwardt sends a copy of his inaugural address, entitled *Oratio de augmentis, quae Historia naturalis ex India investigatione accesserunt*, in which he discusses the results of scientific research in the East Indies.

[NA-RANH KNI 175-45; BOT, ZOC, GEO, MIN]

**547. C.G.C. Reinwardt (Leyden) to G.Vrolik (Amsterdam); 22 July 1823**

On behalf of the 'Eerste Klasse' of the 'Instituut' Vrolik thanks Reinwardt for the copy of his inaugural address, which he has received through C.H. à Roy.

NA-RANH KNI 175-36.221; BOT, ZOC, GEO, MIN]

**548. J.Th. Bik (Batavia) to C.G.C. Reinwardt (Leyden); 10 September 1823**

Bik, the younger of the two brothers, informs Reinwardt that everybody is feeling well, except for himself. He had only just returned from a very exhausting trip with the poor Van Hasselt, when he was affected by the same disease, Van Hasselt was suffering from. If this event would have taken place earlier, none of them would have returned to Batavia. Quick help has saved him (Bik) from the opposite fate, the certain death of Van Hasselt. He presumes that Reinwardt wants to be informed about the last days of Van Hasselt's life. He thinks that Blume knows best how to describe Van Hasselt's last days, because he and Van Maurevert have constantly accompanied him on his trip through the Bantam region. On 20 March 1823 Blume has left Anjer, after having found Bik and Van Hasselt there. For about three months they have stayed at the coast of the Strait of Sunda, where Van Hasselt has collected many fishes, insects and a number of plants. Drawing these plants was rather difficult. They have also climbed the Anjer peak, called the 'Goenoeng Poulousarie', with its crater. Thereupon they travelled from the region west of this mountain to the beach and from there they traversed the inland to the southern beach, an almost uninhabited and impassable part of Bantam. During that part of the journey Van Hasselt told his companions that he had never felt better. Hereafter the company travelled through the inland to the most western part of Java. There they collected many rare objects of natural history. Although this region was very near to the seashore, it was very unhealthy, because of its swampy character. Here, two days later (on 15 August 1823) Van Hasselt fell ill. Immediately the company went to

the mountains. In the evening they arrived in the Tjitando Kampong. After having taken calomel, Van Hasselt felt already better. From there they went to Tjilankakan, a two days travel. This very healthy kampong is almost situated at the seashore. On 29 August Van Hasselt fell ill again. In accordance with his wish they decided to return to Batavia as quick as possible. The track turned out to be very difficult. They have carried him in a provisional chair. Maurevert stayed behind with most of the luggage. On their way to the Preanger regencies they had to cross several rivers, among others the Tji-madi and the Tji-madja. Van Hasselt was far too weak to get out of his chair. He severely suffered from diarrhoea. They were very happy when they arrived in inhabited regions. From the Tjijanka kampong it would be possible to arrive in Buitenzorg. They left without Van Hasselt and a few others. Bik sent a letter with Mr. Van Raalte to Dr. Heijl, in which he asked him to meet them part of the way. Several hours later, Bik fortunately saw Heijl and Van Raalte again and together they returned to the spot, where Van Hasselt had been left behind. They arrived there at two o'clock that night. Heijl's drugs had an immediate effect. The next day already Van Hasselt could travel again. In the afternoon they arrived in Buitenzorg. Bik was very happy about the fact that he had saved Van Hasselt's life. Unfortunately Van Hasselt fell critically ill the next morning. About noon he was already completely unconscious. At 11 o'clock they bade him farewell. At 3 o'clock that night he passed away. The Governor-General ordered to bury him next to his colleague Kuhl. Van Raalte and MacGuellavry have been appointed executors of Van Hasselt's legacy. Thereupon Van Raalte has asked if it was not possible to appoint Bik executor in stead of MacGuellavry who is assistant resident of Solo. [SLK; ZOC, COB, GEO, MIN, BOT, MED, ART; The sender has been identified through comparison of content and handwriting.]

**549. C.G.C. Reinwardt (Leyden) to Chr.G.D. Nees von Esenbeck (Bonn);  
30 September 1823**

Reinwardt informs Nees von Esenbeck that he will receive a couple of fruit bearing specimens of *Spiridens* through Hagenbach. The other specimens, which are meant for Hooker (in England) and which Nees von Esenbeck has promised to deliver personally, will be brought to Kew by his friend and colleague Hornschuch, who has paid him a visit, quite surprisingly. Making his acquaintance has given him great pleasure, like receiving several

botanical objects from India has done also. He hopes that his friend will agree that he has given him several specimens of mosses from the Dutch East Indies for examination and determination. Meanwhile the prints, made of the drawings of the fruits of *Mangifera*, have been ordered. He hopes to have the opportunity to send these plates to Bonn finally, together with the text of his treatise. Perhaps it would be advisable to have a new drawing made. Fortunately, he and his family have returned safely from Germany. He still remembers the many happy hours they have spent together in Bonn, at the occasion of their first talks. Reinwardt recommends himself to his attention and calls himself his friend, stressing his esteem and devotion. Finally he adds a request with respect to a possible rendezvous between him (Nees von Esenbeck) and Blume. [The original letter is written in German]  
[UBL BPL 2425; BOT]

**550. Academic Senate (Groningen), Th. Van Swinderen (Groningen) and S. Stratingh (Groningen) to C.G.C. Reinwardt (Leyden); end of December 1823**

This very honourable letter stresses Reinwardt's strong and continuing love for the sciences, feelings, which have been so strong that he has voluntarily made many sacrifices and endured many perilous and life-threatening situations. It is really remarkable that he has always kept his cheerfulness. Most probably it is because he has continually understood the necessity of his efforts. It has always been his aim to enlarge his collections of natural history. No wonder that these sacrifices have drawn the attention of the Senate of the University of Groningen. This fact has deeply moved its members. In their thought they have always accompanied him during his difficult, dangerous, breath-taking and adventurous journeys. Every time when they were informed about the loss of a collection of objects of natural history, they have shared his disappointment and grief. Regularly they have been shocked by the news of life-threatening diseases and sudden deaths. More than once they have been moved by the thoughts of his severe illness or even of his death, every time when they received a death announcement. More than once they have been embarrassed by the lively depictions of a death, like only Reinwardt could paint these. They seemed to be the predicting announcement of his own death. Now he has returned safely to the mother country and now the members of the Academic Senate of Groningen have

received this message, they want to consider this fact as the most important news for science and for the glory and honour of His Majesty the King. Therefore the Senate has decided in its meeting to express its feelings through this letter. It hopes that this message will please Reinwardt. Their only additional wish is that it will please 'Heaven' to give him many healthy and happy years in which he will have the opportunity to enlarge and to embellish the 'kingdom of science and truth' [This letter has been signed by Th. van Swinderen, rector and S. Stratingh, secretary].

[UBL BPL 2425; ZOC, COB, BOT]

**551. C.G.C. Reinwardt (Leyden) to C.J. Temminck (Leyden); 1 February 1824**

Undoubtedly Temminck will have been shocked when he was informed about the sad news of the death of the honest and zealous Van Hasselt. The same goes for Reinwardt himself. Everybody who is interested in his work and in the sciences, which he had devoted himself to, will regret Van Hasselt's death. He has already been informed in detail about his illness and about the last days of his life. This report has been made by the only one, who has been capable of doing so, the youngest of the two Bik brothers, who has accompanied him on his last scientific journey. Therefore he adds a copy of his report. He assumes that Temminck is eager to learn these details. Perhaps he agrees with Reinwardt that this document should be given to Van Hasselt's mother. He is very pleased that – as he has been told – the Governor-General has already allowed her an annual pension of 1.200 guilders. Reinwardt would be very obliged if Temminck would be so kind to send him a copy of the *Index Ornithologicus* soon, as well as a copy of the *Planches Columb.*, which have both been written by their late friend Kuhl. He would be pleased if Temminck would also send him a copy of the catalogue of the Museum.

Meanwhile Boie and Macklot are preparing themselves for the voyage to Batavia. He sincerely hopes that their expedition will be successful. He wishes Temminck constant prosperity and hopes they he will often think of him. He calls himself his obedient servant and asks him to convey his compliments to his highly regarded colleagues.

[SLK; ZOC, COB]

**552. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 19 March 1824**

Reinwardt underlines that this treatise should have given the whole compilation of usable measures against the insects, which may harm collections of natural history. In the author's view it is impossible for one man to be an expert in all possible measures, or even to know them all. Because he is not a physicist, he has confined himself to the answer to the last part of the question – about the best way of getting rid of these insects. The author has only given one advice: to brush off every object. This would help against every small animal. In his view it does not matter to which species, genus, family, order, or class of the animal kingdom these vermins belong, because this procedure never fails. He does not think much of the use of so-called 'preservatives', like camphor or turpentine, or of aromatic substances. He does not at all believe in the procedures proposed by other authors. The author's experience with respect to this question is far below the level, to be expected from an expert. Even if the author would not have said so, it is obvious that he is not at all an expert in the field of natural history. In Reinwardt's view this superficial and insignificant document has no value at all. It does not deserve the attention of the 'Maatschappij'. Reinwardt concludes by observing that 'one should not disdain one's enemies, even not the smallest ones!'

[NA-RANH HMW 444-416.197(2) R; ZOC, CHE, PHY]

**553. Chr.G.D. Nees von Esenbeck (Bonn) to C.G.C. Reinwardt (Leyden); 2 April 1824**

Humbly and contrite Nees von Esenbeck admits that he should already have sent a letter of thanks, for sending him the interesting manuscript, together with its enclosed notes on the *Mangifera*. Afterwards he has decided to add a plate to Reinwardt's treatise. This has made him dependent of the sluggishness of the printer. Through this letter he once more wants to express his thankful feelings and to inform Reinwardt that the print of the new lithography will arrive at Reinwardt's at the end of this week or at last early next week, in order to be corrected. He hopes that Reinwardt will soon return the corrected print. In behalf of him he has ordered 25 extra copies of the text of the treatise. He has added the names of the *Hepaticae* species, which Reinwardt has sent him for determination. Reinwardt's entry

is a welcome and important addition to the treatise, which he is preparing himself. He promises to try to add these treatises to the Volume, which is due to appear. [The original letter is written in German]  
[UBL BPL 2425; BOT]

**554. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1824**

The English treatise entered under the maxim 'Soon shall thy arm ...', gives a detailed, precise and well-illustrated explanation of the heating of hothouses. It is the question if these propositions can be applied to the Dutch situation. Anyhow it gives insight into the possible output of such a construction. The results are obvious. The plants, which are cultivated in hothouses, grow better and their fruits are much more tasty. Heating by means of steam should be preferred. It is even possible to heat several hothouses by using a single fire. This works out better and is less dangerous than using open fires or ducts, through which the heated air is circulating ('vuurkanalen'). Besides, it is possible to adjust a specific temperature. The author has completely answered the question. Besides he has carried out experiments. The solution given by him, is serviceable; it has already proved its usability. Therefore there is no doubt that this treatise should be published, together with its most useful illustrations.

[NA-RANH HMW 444-420.234 R; BOT, AGR, TEC, PHY]

**555. K.Fr.Ph. von Martius (Munich) to C.G.C. Reinwardt (Leyden); 2 May 1824**

First of all Von Martius expresses his feelings of highest esteem and admiration for his colleague Reinwardt, who has managed to travel through the East Indies. This journey has yielded many new facts in the field of natural history. Therefore he would feel very obliged if Reinwardt would be so kind to enter into correspondence with him. During his journey through Brazil, which took him four years, he has had the opportunity to collect and to examine a very considerable number of plants. This fact has made his desire grow stronger to learn more about the vegetation of other continents. He would be very happy if Reinwardt would be so kind to agree with a regular exchange of Brazilian plants from his botanical garden for Javanese plants from the Leyden Hortus. He indulges himself with the hope that Reinwardt



Karl (or Carl) Friedrich Philipp von Martius (1794-1868)

is eager to enter into this exchange business. He has been informed already by Baron Von Gräf, former envoy of the King of Bavaria in the Netherlands, that the Dutch government would appreciate such an exchange. He asks Reinwardt to answer his letter as soon as possible. He observes that he has taken with him to Bavaria about 7.000 to 8.000 different plant species. It is possible to offer many duplicates. Among these duplicates are about 120 different palm species. He assumes that the first part of his 'Genera et Spec. palm. bras.' [= *Nova genera et species plantarum, quas in itinere per Brasiliam*], sent to Leyden, will have pleased Reinwardt. Three more volumes will follow. He has decided to write an introduction, in which he will describe the general nature of the palm family, followed by a detailed description of the various genera and species insofar these are known until now. His travel companion Dr. Spix will bring Reinwardt these documents, together with this letter and a first version of this chapter. He asks Reinwardt to allow him to study the palm species collected in the East Indies. In exchange he promises to share with him every information about the Palmae, or about other families, which Reinwardt might be interested in. He begs him to comply with his request and assures him of his feelings of highest esteem, sincere devotion and obedience. He signs as a member of the 'Königlich-Kaiserlichen Leopoldina Carolina', governor, second conservator of the Royal botanical garden and 'Ritter des 'Civil Verdienstordens'. [The original letter is written in German]

[KB 121 D 6; BOT, COB]

**556. Ph.Fr. von Siebold (Decima) to C.G.C. Reinwardt (Leyden); 30 October 1824**

Von Siebold, surgeon major of the Dutch East Indian army and employed by the Governor-General Baron Van der Capellen in order to collect the numerous treasures of natural history, geography and ethnology of the Tropics especially of Japan, seizes the opportunity to inform Reinwardt about the headway he has made until now in that country about which so little is known. He is really very satisfied about these results. Since his arrival he has tried to discover and to work out as many facts in the field of natural history as possible. He reminds the fact that last year he had the honour of offering His Excellency the Governor-General a treatise, entitled *De Historia Naturalis in Japonica Statu. etc.* At that occasion he also added a number of

facts in the field of zoology. Unfortunately he is lacking scientific literature. This year he has already written the following treatises: 1- *Epitoma linguae japonicae*, 2- A short discussion of the origin of the Japanese people, 3- An answer to several questions put on Japanese midwifery, given by his pupil Chima Zunzo, physician in Nagasaki, to which have been added a Preface and Observations, written by himself (the whole document has been offered to the 'Batavian Society, Batavia), 4- Fragments, discussing the various languages of Japan (destined for the Society of Arts and Sciences of Calcutta), 5- *Tentamen Characterum in peninsula Corea, cui accedunt Positiones XII*. After having received the consent of the Dutch government, he has presented this account of the discovery of the Korean characters to the Royal Academy of Sciences in Paris. In his view – by doing so – he has given new and interesting facts to the scientific world. He is eagerly looking forward to its annotations and critiques. He has ensured himself of the excellent support of several Japanese scientists, who will undoubtedly assist him in his Japanese studies in the near future.

At the moment he is mainly occupying himself with the study of botany. After the government of the Dutch East Indies had approved his plan, he has laid out a botanical garden at Decima. Meanwhile he has planted 500 plants, of which 128 have been sent to Batavia already, together with other plants. In this way he will be able to send at least 200 plants through Batavia to the Netherlands annually. He points at the fact that from Osaka, Mjako and Jedo a lively trade of the most rare Japanese plants exists with the neighbouring countries. These specimens will become important ornamental plants in the Dutch botanical gardens and perhaps some of these will even be planted in ordinary gardens and will be grown for general benefit. There is no doubt that many will take a lively interest in most of the Japanese trees, shrubs and herbs. In order to keep them alive, they should be packed in straw. Besides he has already received dried plants from all over Japan, among which are many new species and genera, a number of which are doubtful. Anyhow, he did already determine several new species, but not any new genus until now, because the only botanical works he has in his possession are Thunberg's *Flora Japonica* and Persoon's *Synopsis Plantarum*. On the other hand he does everything possible to contribute to the improvement of the *Flora Japonica* in the future. For example a Japanese artist is making beautiful watercolours of every unknown Japanese plant, while he is carrying out microscopic

research on these plants in order to add these descriptions to the plates. At the moment already more than 100 representations have been completed until now. He hopes to be able to send about 500 of them. More and more he has to express his admiration with respect to the job Professor Thunberg has done. Nevertheless a large number of plants living in this enormous empire turned out to be still unknown to this renowned naturalist. In his view there is no doubt about the fact that the Japanese flora will comprise more than 2500 species, cryptogams included. Meanwhile he is already familiar with the existence of more than 200 species, which were unknown to Thunberg. His student, the Japanese Doctor Riosai, whom he has sent on a journey to collect and to buy objects of natural history and who is by the way one of the most renowned Japanese botanists known to him, has meanwhile collected more than 500 living plants in Osaka, Semenosegi and Mjuko. He expects him to return before the ships will set sail to Batavia. As soon as his library has been completed he will write and publish a Prodrumus on the new species. In the field of zoology the acquisitions are also most promising, because animal life of Japan has hardly been explored until now. Assisted by his students he has completed a list of the mammals living in Japan and on the neighbouring islands. It comprises the names of about 40 different animals, 33 of which are already known. Among these are two species of Otaria (one of which is a new one) one species of Naphitis, one species of Mustela (perhaps *M. sybirica*?). Besides he has a skeleton of Otaria in his possession, which is eight feet long. He has also received a couple of beautiful hides, among others several beautiful 'Phoken' [Phoque = French for seal]. Furthermore he has collected about 40 species of birds (he hopes to receive about 200 different species), three turtle species, six species of snakes and a couple of lizards, while amphibians are extremely rare in Japan. Many species of Fishes, Crustaceans, Insects and Molluscs have been collected too. Next year he will send a rich collection of objects of natural history to Batavia, to which he will add an accurate description of the most peculiar mammals and birds. He will try to supply Reinwardt with all the information needed for inserting these new species in the systema. He is not able to determine the Japanese birds which are unknown to him. He will leave that to Mr. Temminck. Temminck has already been informed by him about it. If Reinwardt might have any scientific questions to be answered by him, Von Siebold, he will be most delighted to be of service to him and to

show him how much he has devoted himself to the advancement of science. He commends himself to Reinwardt's benevolent attention and asks him to support his research in Japan. [The original letter is written in German] [UBL BPL 2922; ZOC, BOT, COB, ETN]

**557. C.G.C. Reinwardt (Leyden), J. Kops (Utrecht) and M. van Marum (Haarlem) to G. Vrolik (Amsterdam); January 1825**

Reinwardt feels very familiar with the botanical subject of this treatise on the Crassulaceae, written by B.C. Dumortier, which has to be considered a contribution to the *Prodromus Florae Belgicae*. There are four parts. Part 1 gives a concise description of the Dutch Crassulaceae (according to De Candolle), of *Sempervivum* (in accordance with De Jussieu), of the *Sedum* species (according to Sprengel) and of the succulents (in accordance with Linnaeus). The author describes the characteristics of this family and the relationships with other families. He also describes the division into the Protopetala and the Monopetala, gives the various names, describes the sites where these plants are growing, informs his readers about the season and duration of flowering and has added illustrations as well. In total he has described 16 species of *Sempervivum*, 1 species of *Crassula*, 1 species of *Tillaea* and 1 species of *Cotyledon*.

From this example of what will apparently be the layout of the *Prodromus*, Reinwardt deduces that the author has decided to follow Linnaeus's 'Systema Naturae'. Of course this decision is a good one for experienced botanists, but less suitable for beginners, who simply want to find out the names of certain plants. Therefore the author will have to add a simple key, in order to make a simple identification possible. Although the author displays a too servile imitation of De Candolle, he proves to be an industrious and experienced botanist. So Reinwardt has high hopes of the author with respect to the completion of his work. The publication of a complete inventory of domestic plants will also be a valuable contribution to botany. The author absolutely deserves to be encouraged by the 'Eerste Klasse' However he has to refine his language. Several Latin terms and French expressions are defective. He has not solved the problem of the indistinctness with regard to the complex of *Sedum* species. He has not sufficiently defined the characteristics of *Sedum schistosum*. He has made the wrong decision with regard to the distinction between *Crassula* and *Sedum*, while on the other hand he has united the

distinctly different genera *Rhodiola* and *Sedum*. The author has not been consistent. Finally the genus *Cotyledon* is not growing in the Netherlands, although he has called it a domestic plant, founding himself on Boerhaave's *Index alter Plantarum*. He should have been aware of the fact that Boerhaave is not always right!

[NA-RANH KNI 175-70(135).24 R; BOT]

**558. L.C. Treviranus (Bonn) to C.G.C. Reinwardt (Leyden); 18 February 1825**

Treviranus refers to a list of objects Reinwardt is interested in and informs him that it is possible for him to send a part of this collection to Leyden. He would like to receive several objects in return, such as seeds and fruits, which have been collected by Reinwardt in the Dutch East Indies. [The original letter is written in German]

[KB 121 D 6]

**559. G.A.G.Ph. Baron Van der Capellen van Berkenwoude (Buitenzorg) to C.G.C. Reinwardt (Leyden); 19 February 1825**

Van der Capellen opens his letter by informing his friend that he will first of all answer his letters dated 13 April, 20 June, 27 September, 5 November 1823, 10 April and 5 May 1824. He did not receive these letters in September and October 1824, until after his return from the eastern islands. If he would have received a copy of the inaugural address given by his friend in Leyden and the announcement of his forthcoming wedding, he would have sent him a grateful answer, expressing his well meant congratulations. He was very pleased by the fact that his name has been mentioned in relation to that important address. He did not receive this document until late 1824. Reading it has given him much pleasure. He did not know Reinwardt was not in good health. It must have been very exhausting for him to be charged with his many duties so shortly after his arrival in the Netherlands. It would have been better if he would have been exempted from these duties for the first two years in order to prepare the many facts collected by him for publication. In Van der Capellen's view this situation will make it impossible for Reinwardt to contribute to national glory. He is disappointed about the little assistance he received from his fellow countrymen with respect to the publication of his reports. He is eagerly looking forward to receiving them.

Van der Capellen and his wife give Reinwardt their compliments. Soon he hopes to receive any news about the collections brought together by Kuhl and Van Hasselt, which have been sent to Europe by Van Raalte. Van der Capellen has ordered to make duplicates of the most important drawings and of the various manuscripts. Copying these manuscripts has been very difficult because of the many abbreviations and the foreign languages which have been used. Dr. Kolman has taken care of that job, because Dr. Heil has died in Surabaya, after the company had returned from the round trip. Van der Capellen assumes that Reinwardt will have been informed already some time ago that he and his wife will have to stay on Java until the end of the year. The postponement of their return is very disappointing. It will not be easy to accept this fact. His roundtrip to the eastern Islands has been very instructive to him. Reinwardt will have been informed about this trip through the newspapers and through his dedicated correspondent Van der Vinne. Bik has already given him several details about the trip he made to the Aroe and Key islands. Besides he has made important records of it and collected birds and plants as well. As soon as Van der Capellen will have arrived in the Netherlands he will show Reinwardt these objects. The volcanic eruption the company witnessed during their trip was most impressive. They have even had the chance to take a close look at the interior of the smoking crater, un forgettable spectacle. The Banda islands turned out to be very beautiful. Menado made him think of Java. Because of their traditions the Alfoer people is one of the strangest peoples he has ever met. The government on these islands has been neglected for a number of years. Since has visited Amboina, his aversion to the 'Monopoly System' regarding the trade of clove has grown. If he would have been informed earlier, he would have suppressed it personally. Now he could only give the initial impetus to that operation. Now the Makassar affair has to be settled by force of arms. It will bring peace forever.

From time to time cholera is rearing its head in Java, although Batavia seems to be a healthy place for the time being. The fevers which have been raging on the island of Banka, have snatched away every European. Colonel De Lafontaine has died also. Dr. Blume is working very hard, among others in behalf of the botanical garden of Buitenzorg. This year it has received a lot of Japanese plants through Dr. Von Siebold, who has also sent an extensive

letter on this subject to Reinwardt. Van der Capellen adds a proof of what Von Siebold has had printed in Japan. The 'Batavian Society' is babbling on. Volume 10 of the *Verhandelingen* will soon appear. Diard has returned to Batavia, after having spent three and a half year in Cochin-China. He has made himself very useful with respect to the decision to build a collection in behalf of the 'Society'. He is eager to contribute. Meanwhile its members have put their names for the sum of 3500 guilders. The archaeological commission is performing poorly. Payen has promised to finish a series of drawings of the 'Boro Bodur'. They will be completed before Van der Capellen will return to the Netherlands. Unfortunately Bik has been charged with too many activities, since he has been appointed assistant resident of Batavia. Van der Vinne is really doing his utmost, but his knowledge is insufficient. Dr. Petit will soon inform Reinwardt, at least if he will live long enough. He is looking ill. Van der Capellen is pleased with Dr. Radijs. Among the physicians sent to Batavia by Dr. Harbauer are several medical doctors from the 'Cape'. Meanwhile the medical commission of Batavia has been suppressed, because it did not do a thing. Van der Capellen's brother, who has been appointed resident, is doing well. He has witnessed the eruption of the 'Galoengon'. Van der Capellen has reported on that event to the Minister of the Interior. He wonders why this account has not been published by the Dutch newspapers. Is it possible to publish it yet? He has also added a beautiful drawing, made by Payen. Generally little is learned about the accounts sent to the Netherlands. Like many others Van der Capellen fears the Dutch climate, once returned. So he has decided to make a long journey to Italy and to stay there for a considerable time, after his return to the Netherlands. He is eagerly looking forward to living a secluded life. Steamboats are urgently needed in Batavia and so is the lithograph, Reinwardt has promised to send to Bik. Blume has found a specimen of *Rafflesia*, as Reinwardt will know already. Exact drawings have been made meanwhile. This news could have been made public if a lithograph had been made. He sincerely hopes that this letter will be duly received by Reinwardt. He hopes that his friend will send him a letter before he will leave Batavia. He adds his best wishes and kindest regards and expresses his feelings of esteem and ever-lasting friendship. In a postlude he informs Reinwardt that Dr. Blume is writing a catalogue. Nowadays he is staying in Rembang, because of a fatal epidemic disease,

which has broken out recently. The government has not been very lucky with the physicians sent to Batavia until now.

[UBL BPL 2922; ZOC, COB, BOT, MED, GEO]

**560. C.G.C. Reinwardt (Leyden) to J. Geel (Leyden); 17 March 1825**

Reinwardt thanks Geel for his commendable letter, dated 12 March 1825. He did not have the opportunity to answer this letter until now. As Hazenberg has informed him that certain works on natural history are not present in the library of the university, he asks Geel to try to acquire these books from the heritage of the late Mr. Roye van Breukelerveen. The list opens with the cheapest books of the highest priority. Unfortunately the beautiful works of Vaillant on the birds are also missing in the library. He has not put it in the inventory, because these books are too expensive. He hopes that this time Geel will also succeed in enriching the library. He expresses his feelings of esteem and calls himself his obedient servant.

[UBL AC 607 A(4); ZOC, UNI]

**561. B.H. Bentinck (Zwolle) to C.G.C. Reinwardt (Leyden); 24 March 1825**

Bentinck (Governor of the province of Overijssel) informs Reinwardt that after the flood, caused by the breach in the Kamper sea dike, a giant skull has been found, which was in an excellent condition (almost completely mineralized). This object has been given to Bentinck by the secretaries of the town of Genemuiden. In his view it deserves particular attention of experts. Therefore he has ordered to make four life-size drawings, which represent the various aspects of the skull. The horns are missing. He continues by giving its various dimensions. He asks Reinwardt's opinion with respect to the possible importance of this object for the science of natural history and is eagerly awaiting his answer and of course, if it is worth while to be exhibited in the 'Royal Museum of Natural History'. He expresses his feelings of obedience and esteem.

[UBL BPL 2922; ZOC, COB, GEO]

**562. A. von Humboldt (Paris) to C.G.C. Reinwardt (Paris); about 26 April 1825**

Von Humboldt informs Reinwardt that today, Wednesday, between 2 and 3 o'clock, he and his amiable family will be most welcome at Baron Denon's (n° 5, Quai Voltaire), who is a famous traveller and collector of objects of art. Reinwardt will not only have the opportunity to see him, but also to admire his beautiful collections. Van Humboldt will be present and introduce him. He asks Reinwardt to accept his strong feelings of friendship and esteem. These feelings are the consequence of the recognition of Reinwardt's talents and many deserving activities, through which he has proved his courage [This letter must have been written before 28 April 1825, when Denon died].

[UBL BPL 1886; ART]

**563. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1825**

The treatise on the constituents of the various types of food has turned out to be complete, correct and based on a thorough scientific knowledge. The author is not only an expert in the preparation of food, he is also a trained chemist, who knows all about the chemical changes of food as a consequence of its preparation. He has also answered the question about the possible influences of the changed food on health. On this knowledge he has based his prescriptions for its preparation. In spite of this positive judgement it is impossible to award this treatise, because the author fully restricted himself to theoretical considerations. As a consequence he has only given well-known facts, at least known to those who are not complete ignorant with respect to chemistry and physics. Less known suggestions have not been founded sufficiently. He did not even describe, nor analyse the results of experiments and observations, which have been carried out in the past by other authors. He has broadly borrowed from the *Technologisch Handboek* (by J.A. Uilken) and from *Sur l'origine des lois des arts et des sciences* (by Unger and Goguet). The second part of his treatise – about the vegetable food – is very superficial and incomplete. He should have known that its chemical properties are considerably changed by its preparation. He should have investigated these changes. Brief and pithy argumentations are lacking completely. Several of his statements are completely groundless,

among others that boiled muscle fibres have lost their nutritional value, that uncooked potatoes are poisonous and that the toxicity of mussels is caused by the use of copperware (copper kitchenware, kitchen utensils). It is absolutely impossible to award this treatise.

[NA-RANH HMW 444-419.223 R; AGR, CHE, PHY, BOT, TEC]

**564. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1825**

The treatise on the nature and properties of mushrooms under the maxim 'Erfahrung ist die beste Lehrerin' does not at all meet the requirements, made by the 'Maatschappij'. The author did not describe the way in which mushrooms should be killed. It is absolutely necessary to know the nature of these organisms, as well as the way in which they affect all kinds of wood. The author persists in his opinion that mushrooms develop in inferior pine and that they can spread widely, even through defective brickwork. He advises several means, like sprinkling salt and ash on the floor and using oak in stead of pine. In several enclosures he sketches the various damages, caused to his house by mushrooms ('a true hotbed of mushrooms'). All his efforts to end the existence of these harmful organisms have been in vain. The treatise does not deserve to be awarded.

[NA-RANH HMW 444-419.224 R; BOT, CHE, PHY]

**565. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1825**

In this treatise on the applicability of air pumps in various factories, under the motto 'Voordeel, nut en veiligheid', the author explicitly presents a proposal for the use of these machines in brandy distilleries, in order to facilitate the production of brandy. This procedure would decrease the needs for fuel and copperware and increase the yield of the process. In Reinwardt's view the author's ideas are very informal. He has not given any explanation or drawings, nor did he give any results of experiments or a calculation of the costs. This entry does not at all deserve to be published.

[NA-RANH HMW 444-422.268 R; CHE, PHY, TEC]

**566. C.G.C. Reinwardt (Leyden) to G.Vrolik (Amsterdam); 25 May 1825**

Reinwardt thanks Vrolik for his letter, in which he asks him to propose a couple of prize contests. He has thought up a contest regarding the observation that apparently different plant species do not tolerate each other. [NA-RANH KNI 175-28(67).201, BOT, CHE]

**567. C.G.C. Reinwardt (Leyden) to the members of the 'Eerste Klasse' of the KNI (Amsterdam); 26 May 1825**

Reinwardt has cautiously formulated the prize contest on the intolerance between different plant species, a phenomenon which has been observed for the first time by Brugmans. He questions if this phenomenon is due to the excretion of certain substances by the roots of these plants. This problem might even present itself between plants of the same species. The prize winner should prove the chemical and physical causes of this phenomenon through observations and experiments and he should fully explain the causes. He points at Brugmans's dissertation *De solio ejusdem que varie specie noxa et usu* (1785) and also at the dissertation of J.Vitringa Coulon, entitled *Dissertatio de mutatu in regno organico indole a vi Vitali vasorum derivanda* (Lugd. Bat., 1789, p. 44). [See also: 'Missives van Leden', II, p. 44] [NA-RANH KNI 175-45; BOT, PHY]

**568. C.G.C. Reinwardt (Leyden) to the members of the 'Eerste Klasse' of the KNI (Amsterdam); 9 June 1825**

Reinwardt informs his fellow members that he will enter into correspondence with the secretary of the 'Hollandsche Maatschappij der Wetenschappen' in order to get informed about the proposition for a prize contest about the contribution of the new chemistry to a better knowledge of the nature and properties of various medicines and about their influence on the solid and liquid constituents of the human body, which has been made in the past by Andreas Bonn. The outcome of this contest has to contribute to the advancement of medicine and surgery. Reinwardt knows that G. Vrolik has been ordered today to revise the text of this contest. Reinwardt promises to ask Van Marum to send his remarks to Vrolik. He knows that the 'Maatschappij' is occupying itself already for several years with the same question.

[NA-RANH KNI 175-45; CHE, MED]

**569. G.Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden); 14 June 1825**

Vrolik returns the concept of a prize contest proposed by Van Marum in behalf of the 'Eerste Klasse'. At the occasion of its last meeting comments have been made. Vrolik advises Reinwardt to make good use of these comments. He wants to receive the final version before the next meeting will take place.

[NA-RANH KNI 175-36.396; CHE, MED]

**570. B.H. Bentinck (Zwolle) to C.G.C. Reinwardt (Leyden); 6 August 1825**

Bentinck reminds Reinwardt that he has received his letter dated 25 April 1825, discussing the drawings of the skull found near Genemuiden. Thereafter he has brought it to the notice of His Majesty the King. From the following correspondence it appeared that the skull will be acquired by the Leyden Museum. It will be sent on 9 August. So Reinwardt will have the opportunity to compare the object with the drawings. Awaiting Reinwardt's conclusions as well as the drawings, he ends his letter by expressing his feelings of esteem and obedience.

[UBL BPL 2922; ZOC, COB, GEO]

**571. B.H. Bentinck (Zwolle) to C.G.C. Reinwardt (Leyden); 22 August 1825**

Bentinck assumes that Reinwardt will have examined the skull meanwhile. Therefore he asks him to inform him about his findings. Did it meet the expectations? Are the drawings completely corresponding with the object? He worries, because on 17 August, at the occasion of his visit to The Hague, he found out that the Bureau of Education and Science was still unaware of the present he had sent to The Hague. He expresses his feelings of esteem.

[UBL BPL 2922; ZOC, COB, GEO]

**572. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyen) and M. van Marum (Haarlem); 26 September 1825**

At the occasion of its last meeting the 'Eerste Klasse' has been informed about a letter sent by the Minister of the Interior sent on 6 September 1825 (n<sup>o</sup> 2), in which the discovery of mussels, containing pearls, in the neighbourhood of Dinant (Province of Namur) is discussed. His Excellency

wants to know if it is possible and worth the effort to encourage the various mussel species to grow pearls. The Minister has added 68 of these pearls, as well as a report, written by somebody else. Vrolik wants to be informed by the commission about the advice to be given by him.

[NA-RANH KNI 175-36.424; ZOC]

**573. C.G.C. Reinwardt (Leyden) and M. van Marum (Haarlem) to G. Vrolik (Amsterdam); 27 October 1825**

Reinwardt reports extensively about the 'native' pearls of freshwater mussels. He has written the first draft of an answer to the Minister of the Interior (to his letter of 6 September 1825). In Reinwardt's view not only *Mytilus margaritiferus* or *Unio margaritifera* from the Dutch East Indies, but also European freshwater mussels may contain pearls. Sometimes its large, brilliant and perfectly spherical pearls are even equalling the exotic ones in beauty, lustre and preciousness. They have undoubtedly been sold as oriental pearls. The above mentioned pearls are also known as 'European pearls' and 'Scottish pearls'. The pearl containing mussels have been harvested for some time in Denmark, Norway and Sweden, but this was hardly profitable. Anyhow one has to collect large numbers of mussels in order to get an acceptable number of pearls. None of the 68 pearls from Dinant is a perfect one. All in all, founding itself on the report, made by the Commission of the District of Dinant, the commission decides that collecting pearls in the rivers of the Kingdom makes no sense. The government should not try to show activities in that field.

[NA-RANH KNI 175-60(135).20 R; ZOC]

**574. G. Vrolik (Amsterdam) to N.C. de Fremery (Utrecht), C.G.C. Reinwardt (Leyden) and M. van Marum (Haarlem); 31 October 1825**

Vrolik asks the addressees to assess a treatise written by Gerard Moll (Utrecht) on the question at which temperature water has its highest density.

[NA-RANH KNI 175-36.432; PHY]

**575. A. von Zandt (Munich) to C.G.C. Reinwardt (Leyden); 31 October 1825**

Antoinette Baroness Von Zandt fears that Reinwardt has already forgotten her for a long time, although her name will still be present in his notes. Of course an old friend will have the right to be recalled once. She thanks Providence and she is eagerly looking forward to seeing her dear friend in his adopted country. She confesses that with anxious feelings she has been awaiting the news of his safe return to the Netherlands. Insofar it has been possible to secure Reinwardt's health through her ardent wishes and sincere prayers, she has done her utmost. She has learned that Reinwardt's dispatching to the island of Java has been most successful. She really hopes that Reinwardt will confirm this. She begs him to set his great erudition aside for a moment and to gratify her curiosity. She knows that he has got married meanwhile. Undoubtedly he is happy and so he deserves. She also wishes that his personal situation has been brought into accordance with his merits. It has really been a long time since they have seen each other in Amsterdam for the last time. Much has happened since then. She remembers the happy days they have spent together, as well as their mutual friendship with C.H. à Roy, who has died meanwhile. Her own happiness is also complete! She has found an outstanding husband and God has given her three promising children, two boys and a girl. This fact has made her the most enviable mother. She wishes that Reinwardt will experience the same happiness. She expresses her husband's wish to be promoted to the rank of colonel of the royal 'Garde de Corps' in the capital. Life offers many advantages there. Her husband is a lover of the arts and of nature. He already possesses a modest collection. Mrs. Spix and Wagler have given her many details about the Chinese furnishing of Reinwardt's house in Leyden. Pauline, one of her relatives has told her that she is still very grateful to Reinwardt for the benefaction he has conferred to her and her children in the past. At the moment she is again in troubles. For more than two years already she has not had news from her husband, who is an inspector of the tin mines in Bancal Pinang (Dutch East Indies). She knows that he wanted to be transferred to Java or rather to Batavia, where he would earn more money, needed for the education of his children. Antoinette Von Zandt hopes that Reinwardt knows about his whereabouts. Is he still alive? Pauline fears the worst. On the other hand any news is better than these agonies of

doubt. Antoinette hopes for an answer, says goodbye, underlines her feelings of esteem and true friendship and commends herself to his wife's friendship.

[The original letter is written in German]

[UBL BPL 2922; ART, ZOC, GEO, MIN]

**576. C.H. Persoon (Paris) to C.G.C. Reinwardt (Leyden); 4 November 1825**

Persoon informs his colleague that early last winter (December 1824) he has sent him a letter. He assumes that Reinwardt did receive it, because a certain Dr. Verstedt has told him that he has seen Reinwardt and that he has been waiting for an answer from Paris. Therefore he asks permission to repeat the essentials of his letter. First of all he reminds Reinwardt of his promise to send him a couple of cryptogams and mushrooms collected by him in the East Indies. He hopes that Reinwardt is willing to allow him to study the drawings made of those mushroom species which could not be preserved by their discoverers Dr. Kuhl and Dr. Van Hasselt, the two young scientists, who have been snatched away from science by their sudden deaths. He expects that Dr. Blume, who is still in the East Indies, will have the opportunity to collect many interesting objects. Undoubtedly Blume will enrich the science of botany with many new species. He assumes that the Dutch government is paying his travel expenses and that therefore Blume has to maintain contact with Reinwardt. He is eager to be informed about the many discoveries in the field of cryptogammic botany. He knows that Blume maintains a close relationship with professor Nees von Esenbeck and that he is also selfish, which means that he wants to present every botanic novelty himself. Probably Mr. Held, a young botanist from Vienna, will return from England to Paris through the Netherlands. So Reinwardt can send a letter and a parcel with him to Paris. If Reinwardt is interested he should inform him. Persoon promises to send him a small collection of European cryptogams. He only needs a couple of hours to prepare this parcel. He recommends himself and expresses his feelings of high esteem and obedience. [originally in German, sent from: n° 3, Rue des Postes, Paris] [KB 121 D 9; BOT]

**577. Directors of the 'Teylers Foundation' (Haarlem) to C.G.C. Reinwardt (Leyden); 11 November 1825**

The Directors of the 'Teylers Foundation' inform Reinwardt that they have been pleasantly surprised by the present given by him: a collection of rock samples, among others of volcanic origin from the island of Java and from several other islands in the Dutch East Indies. Besides they have learned that he is still missing several volumes of the Transactions of their society. Therefore they have decided to give him these volumes as a present, as far as they are still available. They ask him to inform them about the missing volumes and express their feelings of deep esteem.

[UBL BPL 2922; GEO, MIN]

**578. B.G. Dumortier (Tournay) to C.G.C. Reinwardt (Leyden); 28 November 1825**

His busy occupation has kept Dumortier from informing Reinwardt about his botanical journeys in the Southern Provinces of the Netherlands. Today he takes the liberty of rectifying that omission. He hopes that Reinwardt is willing to accept this enumeration, because he knows that in the past he very much enjoyed to study the flora of the Netherlands. Last year he has made a botanical journey through the northern provinces, starting on the islands of Zeeland. This trip has yielded several interesting new contributions to the *Flora Batavae*. Thereafter he has visited North Brabant and the coastal region of Holland, between Rotterdam and Den Helder. He returned through Amsterdam, Harderwijk and Utrecht. Zeeland really deserves the attention of botanists, because there are living many interesting coastal plants (tidal plants, etc.). He continues by giving an enumeration of more than 100 species. He assures Reinwardt of his feelings of gratitude and esteem and asks him to convey these feelings to his wife and to the charming Miss Reinwardt. Yesterday he has taken the liberty of sending a small casket of fruits and seeds to Leyden, because they are famous in a certain way. He asks him to hand it over to Mrs. Reinwardt. [The original letter is written in French]

[UBL BPL 2922; BOT]

**579. Directors of the 'Teylers Foundation' (Haarlem) to C.G.C. Reinwardt (Leyden); 9 December 1825**

Directors of the 'Teylers Foundation' have received Reinwardt's letter dated 16 November, through which they have been informed which volumes of the *Verhandelingen* they are supposed to send. Therefore they send him the volumes 1 to 18, 20, 24 and 26 of the *Verhandelingen* of 'Teylers theological Society' (Teylers Godgeleerd Genootschap) and the volumes 1 to 4 of 'Teylers Second Society' ('Teylers Tweede Genootschap'). Unfortunately the other volumes he wanted to receive are no longer available. They express their feelings of deepest esteem for the man the fatherland and 'Teylers Foundation' owe so much.

[UBL BPL 2922]

**580. G. Vrolik (Amsterdam) to N.C. de Fremery (Utrecht), C.G.C. Reinwardt (Leyden) and H.C. van der Boon Mesch (Amsterdam); 28 December 1825**

In the last meeting of the 'Eerste Klasse', P. Driessen (Groningen) has handed over the remarks and objections made by the late J.C. Driessen (his nephew) with respect to the patented Amsterdam artificial mortar. The author of this report has put that the limekilns have to comply with certain requirements. The calcification process has to occur steadily and equally through the whole quantity of lime. The 'Eerste Klasse' asks the commission to design and build such an ideal kiln, of course at the lowest possible price.

[NA-RANH KNI 175-36.447; MIN, CHE, PHY]

**581. P.N. Quarles van Ufford (The Hague) to C.G.C. Reinwardt (Leyden); 30 December 1825**

Quarles van Ufford lists the documents sent to him by the lieutenant general C.R.T. Krayenhoff, Inspector of fortifications. These documents have been added to the letter, dated 30 December 1825, which was sent to Quarles van Ufford. He lists the following documents:

- Mineralogical report on Aruba, Bonaire and Curaçao, dated 17 November 1824 (n<sup>o</sup> 94), completed with seven annexes and two maps;
- Letter from the Governor-General of Curaçao, dated 26 July 1824 (n<sup>o</sup> 71), with ten appendices;

- Letter from the Governor-General of Curaçao, dated 28 February 1825 (n° 39), with eight annexes;
- Letter from the Governor-General of Curaçao, dated 28 February 1825 (n° 50), with 2 enclosures;
- Letter from the Governor-General of Curaçao, dated 24 June 1825 (n° 81), to which five appendices have been added;
- Letter from the Governor-General of Curaçao, dated 16 August 1825 (n° 126), with three annexes;
- Letter from the Governor-General of Curaçao, dated 19 August 1825, n° 132), to which 1 appendix has been added;
- Maps: five views of Aruba, made by the commander, in the service of the Governor-General of Aruba, added to a letter (written by the Governor-General on 21 November 1825).

This inventory is ended with a remark about a mineralogical catalogue, written by Krayenhoff.

[NA 2-21.204(24); PHY, GEO, MIN]

**582. C.G.C. Reinwardt (Leyden), M. van Marum (Haarlem) and N.C. de Fremery (Utrecht) to G. Vrolik (Amsterdam); December 1825**

The 'Eerste Klasse' has been confronted with the striking discovery that in deeper seas as well as in deeper rivers the water never gets completely frozen. The physicist Gerard Moll (Utrecht) has written a treatise on this subject and has sent it to the 'Eerste Klasse'. So it has commissioned several of its members to unravel this secret. In its report the commission has focussed on the observation that the density of water gradually increases, when its temperature is raised from below freezing point, until it reaches a temperature of 4° C. (about 39° F). If the water gets warmer its density is decreasing again. The experiments have been carried out by Moll in the course of the winter of 1822-1823. He has used very accurate thermometers. During this procedure the experiments previously carried out by Hope and Hallstroem have been followed. Moll's experiments resulted in minor differences from the results of the other physicists. The jury decides that Moll's treatise has to be published in the *Verhandelingen* of the 'Eerste Klasse'.

[NA-RANH KNI 175-60(135).25 R; PHY]

**583. C.G.C. Reinwardt (Leyden) to A. Thouïn (Paris) and L.A.G. Bosc d'Antic (Paris); 16 January 1826**

Reinwardt thanks Thouïn and Bosc for their letter, dated 10 December 1825, through which they have honoured him and sent him an inventory of the latest harvest of seeds in Paris. He is eager to accept this obliging present. He informs them about the species, which he is interested in. He encloses an inventory of the seeds to be offered by him in return. He asks Thouïn to inform him as soon as possible about the seeds which he wants to receive and assures his old friend of his feelings of esteem.

[MNHN Ms 1982c; BOT]

**584. P.N. Quarles van Ufford (The Hague) to C.G.C. Reinwardt (Leyden); 24 January 1826**

Quarles van Ufford reminds Reinwardt that it has already been a long time since he has sent him the mineralogical report and appendices of the islands of Aruba, Bonaire and Curaçao, written by the lieutenant general Krayenhoff. He asks him to consider the contents of these documents and to inform him about his ideas, especially with regard to the island of Aruba. It is about the future administration of its gold mine. Since he has sent his letter, Mr. Bohr, head of the department of the Interior, has sent a memorandum to His Majesty the King. His Majesty has asked the Department of the Interior and the Department of the Navy for advice. Quarles van Ufford wants to receive Reinwardt's advice.

[NA 2-21.204(24); MIN, GEO, PHY, CHE]

**585. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden); 27 January 1826**

Vrolik informs Reinwardt that in 1825 Van der Borch van Verwolde has offered a treatise on the partition of higher waste lands to the 'Eerste Klasse'. Meanwhile its members Kops, Serrurier and Uilkens have judged this document. Because Uilkens has died the report still has to be completed. The commission has asked Vrolik to appoint Reinwardt in this vacancy. Vrolik sends him the treatise and the unfinished report and asks him to enter his judgement within the next two months.

[NA-RANH KNI 175-36.452; BOT, PHY, AGR]

**586. C.G.C. Reinwardt (Leyden) to G. Vrolik (Amsterdam); end of January 1826**

Reinwardt reports on Van der Borch van Verwolde's treatise on the necessity of a partition of higher waste lands. When Van der Borch was still a member of the 'Agricultural Commission' of Guelderland, this question has been discussed by several committees for the improvement of agriculture, by improving vast sand plains, heaths, moors and marshes. Reinwardt still remembers that the first attempts, which have been made in the past, turned out to be very fruitful. If this improvement is not continued, this land will remain unfit for pasturing. Van der Borch van Verwolde has described several ways in which this work could be carried out, 'in order to open the soil for manuring elements'. The author has really made valuable contributions to these experiments. In Reinwardt's view the proposed techniques have not changed during the last 20 years and the situation has even grown worse. He fears that this problem has escaped the government's notice. However, with regard to the question of the necessity of the improvements and with respect to the publication of this treatise by the 'Eerste Klasse', Reinwardt's initial answer is a straightforward 'yes', although he does not see how this document may contribute to the knowledge of agriculture. At a later stage he complies with Serrurier, who has decided that this treatise should not be published. Perhaps the government might prefer to keep it in its archives. Anyhow it could be published in the first public protocol of the 'Eerste Klasse' of the 'Instituut'.

[NA-RANH KNI 175-60(135).27 R; BOT, AGR, PHY, CHE]

**587. C.G.C. Reinwardt (Leyden) to Chr. Hohe (Bonn); 11 February 1826**

Reinwardt informs Hohe that he has sent Dr. Wagler a couple of drawings made under his supervision. Recently Wagler has given high praise of the lithographer and he has asked him to have a series of drawings lithographed, because it has been decided to publish a series of drawings entered by Reinwardt and several other authors. Since then he did not receive a sign of life. Now he asks Hohe to send one more printer's proof, because it has to be judged by several other Dutch scientists. Otherwise the publication might be delayed. He expresses his feelings of high esteem and calls himself Hohe's most obedient servant.

[UBB; BOT, ART]

**588. C.G.C. Reinwardt (Leyden) to J.Fr. Blumenbach (Göttingen); 25 March 1826**

In his short note Reinwardt expresses his feelings of highest esteem and adoration and adds a skull of a male Javanese.

[SUG; ANA]

**589. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 9 April 1826**

Reinwardt announces the submission of seven drafts of prize contests. He hopes that at least a few will meet general approval.

[NA-RANH HMW 444-104]

**590. C. Th. Elout (The Hague) to C.G.C. Reinwardt (Leyden); 26 April 1826**

Elout, Minister of the Navy and Colonies, informs his friend that he and the Minister of the Interior have been ordered by royal decree (dated 30 October 1825, n<sup>o</sup> 120) to examine the gold sample sent to Holland from an Aruban mine. They have also been ordered to select the most beautiful rocks of gold ore to be given as a present to the 'Rijksmuseum voor Natuurlijke Historie' (Leyden). Elout still has to contact the Minister of the Interior. He would be very pleased if Reinwardt would be willing to attend this meeting, which will be held next Friday 28 April 1826.

[NA 2-21.204(24); GEO, MIN, ZOC, CHE, PHY]

**591. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1826**

Reinwardt discusses the quality, or better, the lack of quality, of a treatise of only five pages, which has been submitted under the maxim 'Men moet zijne vijanden, al zijn ze klein, niet te gering achten'.

First of all he gives a short account of the author's view that an author who wants to compete in this contest, has to be an expert in natural history and in the science of fighting harmful insects. This fact makes it almost impossible for one man to answer this question. Immediately he confesses not to be a physicist or a scientist who masters the science of natural history. Therefore the author has decided to occupy himself completely with the question of fighting these insects, in order to preserve the objects which are susceptible

to these animals. There is only one effective measure – to brush off, to beat out and shake out the various objects. In his view the fight should concentrate on moths, small black beetles and multi-legged segmented annelids. The author does not hold with applying aromatic substances, such as camphor, white spirit (turpentine oil) and so on. Because he is very ignorant with respect to natural history, he does not bother about how to fight the propagation of the various insects. So his answer is very incomplete. All in all, this document does not deserve any further consideration.

[NA-RANH HMW 444-416.197(3) R; BOT, ZOC, CHE, PHY]

**592. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1826**

The author of the treatise on the testing of French red wine, entitled 'Beproeving van den roden franschen wijn', immediately comes to the point. He gives the procedure for examining red wine from Bordeaux. He does not worry about its chemical composition or about its physical properties, like its specific gravity. The author emphasizes that one should also take notice of the deposits. Unfortunately he does not explain the results of his scarce experiments. He lists the possible additions and distinguishes between the harmful and harmless ones. A solution of litmus is an example of a dangerous addition. Reinwardt decides that the author demonstrates a misconception, by arguing that litmus is a watery solution of 'Spaansch Groen', sal ammoniac and calcium. Thereupon the author describes the possible additional colouring of wine by using 'verfhout', 'Blauwbessen' and elderberries. Reinwardt knows that the author has borrowed from Vogel, professor in Munich, whose treatise on the same subject has appeared in the *Journal*, published by Schweiggert (Volume 20). He also knows that Vogel has only carried out scarce experiments with French Bordeaux wine and with a Tyrolean wine. The author has not understood that first of all the wines had to be tested, which are generally drunk in the Netherlands and that he should have paid attention to their preparation. The example given by the author – the addition of lead acetate ('loodsuiker') – is hardly practised.

[NA-RANH HMW 444-419.227 R; CHE, BOT, PHY, MED]

**593. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1826**

The treatise submitted under the maxim 'Ondervinding is het beste bewijs' is far from being complete. It does not completely answer the question. The author did not at all discuss the nature, properties, physiology and propagation of the various harmful small animals, which are living in the hothouses. This should have been the main subject of the treatise. The author admits that he is not a physicist, nor a naturalist, but only an experienced gardener. Therefore he opens his treatise with a couple of very humble remarks, among others about the fact that he is not able to describe the natural history of these tiny animals. He has completely focused on the description of the various means of fighting them. His proposals have all been based on his experience of many years. His treatise is about the red spider mite, the white and the green aphids and the cottony maple scale. Because he has not given any descriptions, it is not possible to find out exactly, which animals the author had in mind. The most important pesticide he describes is soapy water (in which certain garments of an indisposed woman have been washed). His suggestions are completely based on empiricism. In Reinwardt's view several of the suggested methods are rather harmful. Other suggestions are not practical at all. For example, nobody will burn the fresh branches of a tree in order to fight harmful insects and other animals. Once again this treatise proves that generally spoken scientific knowledge and scientific skills are essential if a sensible judgement is asked with respect to a practical problem. [NA-RANH HMW 444-420.235 R; ZOC, BOT, CHE, PHY, AGR]

**594. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 26 May 1826**

Reinwardt enters the French translation of the six prize contests, which have been formulated by him. He has added a message from the naturalists Hedwig and Schwaegrichen. With respect to a list of books he promises to inform his friend about several titles which are missing. He is very unhappy about the fact that his spectacles are still lost. He begs Van Marum to make inquiries at De Vries's.

[NA-RANH HMW 444-104; BOT, ZOC]

**595. G.Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden) and A.H. van der Boon Mesch (Leyden); 20 July 1826**

Vrolik asks Reinwardt, first member of the jury, to enter his report on Bouesnel's treatise, entitled 'Notice sur un moyen particulier de rendre jusqu'à la fonte du minéral de plomb (looderts), mélangé d'une grande quantité de pyrites de fer'. He wants to receive it within the next two months.

[NA-RANH KNI 175-36.489; MIN, CHE]

**596. J.G. Lenz (Jena) to C.G.C. Reinwardt (Leyden); 18 August 1826**

Lenz eagerly wants to enter into correspondence with Reinwardt, because he wants to be informed about what his colleague has collected in the island of Java and about what has been inserted into the collections of the Leyden cabinet. [The original letter is written in German]

[KB 121 D 6; ZOC, COB, BOT]

**597. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden) and H.F. Thyssen (Amsterdam); 28 August 1826**

The administrative director of education has sent a couple of documents to Vrolik, which he has received from the surgeon major Dr. Ph.Fr. von Siebold, who is in office at the Dutch 'Factorij' at Nagasaki (Japan). He asks to inform him about the best way to make these documents useful to science. Among these documents are a letter from the Japanese physician Mimazunzo, in which he answers several questions about Japanese midwifery and a comprehensive and general report, sent by Von Siebold to the Governor-General of the Dutch East Indies. Since Von Siebold is a member of the 'Eerste Klasse', the Administrative Director of Education has sent this document on to Vrolik. The 'Eerste Klasse' has decided to present these documents to Reinwardt and Thyssen and to ask them to give their opinion in a report. Besides they have to think up a couple of questions – if possible regarding the natural sciences – which will be sent to Von Siebold.

[NA-RANH KNI 175-36.502; MED, ZOC, BOT, COB, CHE, PHY, ANA, ETN]

**598. L.C.Treviranus (Bonn) to C.G.C. Reinwardt (Leyden); 5 September 1826**

Treviranus takes the liberty of commending Dr.M. Remer, the son of his famous colleague Professor Remer, to Reinwardt's benevolent attention. Remer junior has devoted himself to the study of the natural sciences, especially to botany. Treviranus, knowing Reinwardt's amiable character, is convinced that he will at least grant him a conversation. He hopes that he will also help him, after his arrival in Leyden. He expresses his feelings of friendship, veneration and affection. [The original letter is written in German]

[KB 121 D 6; ZOC; BOT, ZOC]

**599. C.G.C. Reinwardt (Leyden) to G.Vrolik (Amsterdam); 12 October 1826**

Reinwardt reports on a treatise submitted by Bouësnel about the production of lead from lead ore, which is dug in the mines of Veldrin (?) In the forges the lead glance (= lead pyrite) is turned into lead. This lead glance is found in two different types of rocks, one of which is rich in sulphurous iron ochre and the other is rich in iron pyrite. The author has also described the procedures, through which the lead glance is isolated, as well as the average proceeds. It is very difficult to separate it from iron pyrite. In Reinwardt's view these facts are justifying the publication of this document in the *Verhandelingen* of the 'Eerste Klasse'.

[NA-RANH KNI 175-60(135).37 R; CHE, PHY]

**600. C.G.C. Reinwardt (Leyden) and J.A. Susanna (Leyden) to P. de Munnick (The Hague); 15 November 1826**

Reinwardt sends a report to Mr. De Munnik, head of the Department of the Ministry of the Navy and Colonies. It has been written in the 'Rijksmuseum voor Natuurlijke Historie' (Leyden) and it has been co-signed by its administrator. The report gives the final results of the examination of the Aruban gold sample. The grade of the gold has been determined in the common way and in the 'wet' way ('natte wijze'). The value of the sample is 1.449 guilders and 91 cents by the Dutch pound.

[NA 3-12.17.2; GEO, MIN, CHE, PHY]

**601. Chr.F. Schwaegrichen (Leipzig) to C.G.C. Reinwardt (Leyden); 20 January 1827**

Schwaegrichen sends his colleague an issue of a work recently completed by him. He hopes that Reinwardt will be pleased. He sketches his plans for the near future: trying to get together a complete knowledge of all known moss species in a 'supplement'. He adds a remark about new species, which have been determined by other scientists. In his view they have been wrong most of the time. [The original letter is written in German]

[KB 121 D 6; BOT]

**602. C.G.C. Reinwardt (Leyden) and H.F. Thyssen (Amsterdam) to the members of the 'Eerste Klasse' of the KNI (Amsterdam); about January 1827**

Reinwardt and Thyssen report on a couple of documents written by the surgeon major Dr. von Siebold, which they had to assess at the request of the 'Eerste Klasse'. First of all they have examined a Latin note by Van Siebold to the 'Bataviaasch Genootschap van Kunsten en Wetenschappen', covering a treatise on the Japanese language and a second note on Japanese midwifery (written by Mr Mimazunzo, one of Von Siebold's pupils). Mimazunzo has answered a series of questions put by Von Siebold. They refer to its publication in Volume 10 of the *Verhandelingen van het Bataviaasch Genootschap van Kunsten en Wetenschappen*. Secondly they have discussed a letter sent to the Governor-General of the Dutch East Indies, in which Von Siebold informs him about his occupations in Japan. Several of these activities have been completed meanwhile, while others are still going on. Von Siebold mentions among others his large medical and surgical practice in Decima and Nagasaki, the medical and surgical education programme (he is teaching many Japanese students), his growing collections of Japanese objects of natural history and the many plants, which he is cultivating in his garden in Decima. Many of these plants have already been sent to Batavia. He also mentions the drawings which are made of most of these plants, his efforts to enlarge his knowledge of the Japanese language and his geographical, geological and ethnological knowledge of Japan. He has already sent a treatise on these subjects to the 'Bataviaasch Genootschap', which will be published in the 11th Volume of its *Verhandelingen*. Furthermore he mentions a treatise on the origin of the inhabitants of Japan (which he has already presented to the



G. Sandifort (1779-1848)

Governor-General in Batavia). He has also written and added a meticulous translation of the Japanese Annals. He has offered a treatise on the Korean language to the 'Académie Royale' of Paris. He has discovered traces of the Sanskrit language in Japan (a discovery, which he has reported to the 'Society of Calcutta'). He is also writing a description of the island of Jeso, a Japanese-Dutch dictionary and a Dutch-Japanese dictionary. Finally he mentions the drawing of a nautical map of Japan.

The jury is embarrassed, or better overwhelmed by the many activities and achievements of Von Siebold, although it is very difficult to get access to this land. There is no doubt that the 'Instituut' may expect a lot more from him. It is impossible for them to think up any question. They are very glad that the natural sciences are so prominently present in Von Siebold's achievements and projects. Perhaps one of the members will be able to think up a question, after having thoroughly studied the works of Kaempfer, Thunberg, Titsingh and a couple of others. Besides the 'Eerste Klasse' has already been informed about Von Siebold's activities in the field of natural history through his 'Historia Naturalis in Japonica situ'. They wish Von Siebold good luck and lots of success with regard to his plans. It is really an important job. Of course the government of the Dutch East Indies will support his efforts. By doing so it will be possible to neutralize the trade barrier and to facilitate the increase of a commercial relationship with Japan. Once again the commission points at the fact that one of Von Siebold's important writings – the one on Japanese midwifery – has been published meanwhile in the *Verhandelingen van het Bataviaasch Genootschap van Kunsten en Wetenschappen*. Von Siebold's important activities deserve to be protected by His Majesty the King and by the government of the Dutch East Indies. [NA-RANH KNI 175-60(135).39 R; MED, ANA, BOT, ZOC, COB, GEO, PHY, ETN]

**603. G. Sandifort (Leyden), C.G.C. Reinwardt (Leyden) and H.F.Thyssen (Amsterdam) to G.Vrolik (Amsterdam); 1 February 1827**

Reinwardt and Thyssen have co-signed the report, written by Sandifort about a treatise on a case of insanity, which appeared to have been caused by a large number of round-worms (or in other words, 'by a worm-stimulus'). This treatise has been submitted by Petrus Koning (Utrecht). The jury is very satisfied with the meticulous pathological analysis carried out by the

author, although he has not given an explanation, nor did he describe a possible discharge of these worms. In spite of these defects they advise to publish this treatise. The fact that such a large number of worms has caused insanity is very peculiar.

[NA-RANH KNI 175-60(135).43 R; MED]

**604. Ch.Fr. Brisseau De Mirbel (Paris) to C.G.C. Reinwardt (Leyden); 5 February 1827**

De Mirbel sends Reinwardt a list giving the names of the plants and seeds he wants to receive, after Decaisne has received the catalogue sent to him by Reinwardt. Meanwhile his French colleagues have tried to bring together the collection he is eagerly looking forward to receiving. It will soon arrive in Leyden. In De Mirbel's view the Leyden Hortus and the 'Jardin du Roi' will both take advantage of the exchange of plants and seeds. Nowadays the conveyance of goods goes faster, easier and more securely than formerly. They should keep in touch and send each other catalogues of duplicates regularly, as far as it concerns rare plants. If Reinwardt does agree he should let him know. After having done so they will have to make further arrangements, each of them in their own garden. He sends his learned friend his greetings and expresses his feelings of highest esteem. [The original letter is written in French]

[UBL BPL 2922; BOT]

**605. K.Fr.Ph. von Martius (Munich) to C.G.C. Reinwardt (Leyden); 20 February 1827**

Von Martius has received Reinwardt's letter dated 14 January. It pleased him very much and thanks his colleague for it. In order to prove his gratitude for having sent him his travel story, he now sends him a description of 77 palm species, collected by him. Doing so required a great deal of effort. He has added descriptions of the vegetation in which these palms were found. He is surprised about what Reinwardt has told him about Blume. [The original letter is written in German]

[UBL BPL 2922; BOT]

**606. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 25 February 1827**

Until now Reinwardt has not had the opportunity to judge the treatise on the physiological aspects of botany. He is very surprised that Van Marum wants to reject this entry. In his own view the author has written a document full of original and valuable ideas. He has done more than any other author has done before. Furthermore he has undermined several indefensible statements and ideas. His ideas with respect to the distinction between the various saps in plants are really ingenious. He has explained the physiology of plants as far as possible, considering the actual state of the botanical science, among others with respect to his ideas about the 'motus fluidorus'. However not every part of the subject has been treated as good as possible. In this respect he agrees with Van Marum. A few aspects have been discussed superficially. Sometimes the author has made hazardous statements, which are in contradiction with the prevailing scientific views, for example that simple vessels do originate from spiral vessels and that the 'raw saps' are ascending through these spiral vessels. Apart from these objections it is really an excellent treatise. In a very effective way the author has made use of the knowledge brought together by other authors. Besides he has promised to send several improvements of his treatise and also to add a couple of drawings, after the 'Maatschappij' will have accepted his contribution. Although Reinwardt agrees with that, it is necessary to ask a couple of other experts for their advice. He has Gerard Vrolik in mind. Van den Bosch is less fit for the job. After he has returned from Utrecht, Reinwardt will leave again, because the Minister of the Interior has ordered him to attend the examination of the veterinary trainees. After that he will once again examine the treatise and send his final report.

[NA-RANH HMW 444-105; BOT, PHY, CHE]

**607. C.G.C. Reinwardt (Leyden) to Chr.G.D. Nees von Esenbeck (Bonn); 5 March 1827**

In addition to this letter Reinwardt sends his highly esteemed friend and colleague a collection of seeds, marked by him on a list. He thanks him for his very kind letter and for his promise to send him a copy of the last supplement of the *Species Muscorum*. He is eagerly looking forward to receiving this present. He is satisfied about the fact that the version of his

work on mosses, made by Hornschuch and one of his colleagues, is on the verge of being published in the *Acta* of the Academy. He is very happy that the elaboration of Willdemann's species has been conferred to Nees von Esenbeck. Finally a complete document on these interesting class of plants will be presented! Everyday new species are discovered. Perhaps he will have the opportunity to send him a couple of treatises again in the future. Blume has also taken with him many interesting botanical objects from Java. If Blume has discovered new species, he will inform Nees von Esenbeck himself. He expresses his feelings of friendship and devotion. In a marginal note he observes that the addressee should not hesitate to ask for new seeds. [The original letter is written in German]  
[UBL BPL 1886; BOT]

**608. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); probably end of March 1827**

Reinwardt sends a negative report on a treatise judged by him. One of its problems is that there is almost no coherence and that the author is not capable of improving his entry. Van Marum should also ask the opinion of scientists like Wttewael, Kops and Serrurier. Another entry, a treatise in German, is for its major part a verbatim copy of an already existing work. By the end of next week he will also return that document, together with his report. He agrees with Van Marum's suggestion with respect to the honorarium for the man who is going to copy the treatise on the gold of Aruba. In every way it is a reasonable sum. Finally he invites his friend to make his choice from the list of seeds added to this letter.

[NA-RANH HMW 444-105; BOT, PHY]

**609. G. Vrolik (Amsterdam) to M. van Marum (Haarlem), C.G.C. Reinwardt (Leyden) and J. Kops (Utrecht); 6 April 1827**

Vrolik offers his treatise on the development of white lilies to the commission for judgement. The jury has to submit its report within three months.

[NA-RANH KNI 175-36.542; BOT]

**610. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Ghent); 7 April 1827**

Having already answered Van Breda's kind letter about the botanical heritage of Kuhl and Van Hasselt, a document which has been added to the enclosed official letter. He informs Van Breda that he has been told that the elaboration of the Orchideae, Apocynae and Asclepiadeae has been entrusted to him. Of course he is willing to send the dried plants of these families to Ghent. However he has not informed the governors of the university until now.

With respect to the grave stone of the late Petrus Camper in the 'Pieterskerk' (Leyden) he observes that he has sent a letter to the Church commissioners. He will not be able to inform Van Breda until next week, because he has to await their answer. It will be sent to him after they have held their next meeting.

It pleases him that Van Breda has been pleasantly surprised by the reception – last year – of a small collection of Javanese minerals. He hopes that his friend will send him several objects from his own collection, which will enable him to decide about the soil conditions of the countries visited by the addressee.

[BTS 2289; BOT, GEO, MIN]

**611. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Ghent); 7 April 1827**

In reply to Van Breda's letter, dated 2 April 1827, he informs him that it is only possible to consult the collection of dried plants of the Leyden 'Hoogeschool' on the spot. The plants collected by Kuhl and Van Hasselt, have already been inserted in its herbarium. Furthermore it only makes sense to publish about the plants, which have been drawn and described on the scene, while they were still alive. Only specimens of the species belonging to the Orchideae, Apocynaceae and Asclepiadeae have been drawn. So the orders given to Van Breda by the government should be confined to the species of these families. He offers to assist his colleague. He is very interested in Van Breda's results. He even offers to separate the Javanese species of these families, which have been collected by Kuhl and Van Hasselt, from the rest of the collection and to send them to Ghent. Finally he wants to know which group his friend wants to receive first of all.

[BTS 2289; BOT]

**612. C.G.C. Reinwardt (Leyden) to G.Vrolik (Amsterdam); April 1827**

In Reinwardt's view Vrolik's treatise on the abnormal development of the flowers of white lilies is an excellent contribution to botany. It deserves to be published in the *Verhandelingen* of the 'Eerste Klasse'. From his own experience and observations, as well as from those of others, he knows that there is a close relationship between the common leaves of a plant and its petals and sepals and that through a series of gradual developmental changes, common leaves can turn into sepals and petals [Reinwardt uses the term 'bloembladen'] and that a development into the opposite direction is also possible. The works of Link, Goethe, Jäger and Röper prove that Vrolik is right.

[NA-RANH KNI 175-60(135).47 R; BOT]

**613. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1827**

It would have been advisable if the author of the German treatise, submitted under the maxim 'In omni plantarum specie est calor naturalis', would have based his views about the harmful effects of the cold on plants on the situation in the Netherlands. However this treatise has been well-written, so Reinwardt is willing to overlook this objection, because the climate of the Netherlands and the climate of Germany are rather alike. Evidently this excellent treatise has been written by an expert. He has described the effects of the extreme cold winter of 1822-1823 on the plants, especially on fruit trees. He explains the various phenomena and he emphasizes the effects on various useful plants. He rejects all kinds of misconceptions, for example that the vessels of a plant would tear apart or burst as a consequence of the severe cold. The author is completely right when he puts that the frosty spell of spring causes the most severe damage to plants. Thereupon he gives valuable prescriptions for the protection of plants against the cold. All in all, this treatise is very important, so it should be published in a Dutch translation, although there are also demerits (verbosity, repetition of statements and arguments). Besides the author did not investigate the damaging process itself, nor did he analyze or describe the anatomical and chemical details of these phenomena. Because of these facts Reinwardt cannot fully agree with the author's conclusions. Nevertheless this treatise deserves to be

awarded, after the author has abridged it, according to the indications given by Reinwardt.

[NA-RANH HMW 444-422.267 R; BOT, AGR, PHY]

**614. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1827**

The treatise on the movement and the composition of the sap streams in plants, which has been submitted to the 'Maatschappij', is a very interesting document. In his judgement Reinwardt pays attention to the function of the nutritive and productive 'plant sap', or 'cambium', as it is called by modern botanists. Although many discoveries have been made in the last few years, there are – with respect to the secret causes and effects of the hidden phenomena related to the silent plant life – still many secrets to unveil. So each effort aiming at the discovery of these secrets must be judged carefully. The same goes for this entry. Its author is right when he puts that the various phenomena have to be considered in their interdependence. On the other hand the various saps should be considered separately, because they differ from each other in their composition and in the direction in which they are flowing. Thereupon the author discusses the properties and composition of the first plant sap, the watery and diluted 'raw sap', which has just been absorbed by the plant. He puts that this sap flows upward and downward and that a transversal flow or in other words a flow through the radial medullary vessels does not exist. He also states that the upward flow only passes through the spiral wood vessels. Furthermore the author denies that the only force behind the upward flow is of a physical or a chemical nature. In his view a vital force is responsible. However he does not explain this statement.

In his discussion of the second sap flow, the flow of the more condensed and transformed saps, the author underlines that there are two categories of saps: saps without a distinct direction of flow ('saps, which are simply excreted, or secreted') and saps with a distinct direction of flow (for example the milky juice). In the rest of his treatise the author especially discusses the saps of the second category, which he calls the 'nourishing saps' and 'the saps, producing new organs or elements'. In Reinwardt's view this is the most valuable part of the treatise. The author not only discusses their origin, but also their function and their recurrent flow to the bast ('phloem') and the other parts

of the plant. The author stresses that Schultz has been the first to observe the flow of this sap through separated vessels. He describes the differences from the 'raw sap' and its producing capacity. He gives the results of his own observations and of those carried out by other botanists. He makes good use of these results. All in all, the author has elucidated and explained these aspects in a clear, brilliant and original way. As a matter of fact the resemblance between the ideas of the author and Schultz's theories is obvious. Perhaps Schultz is the author of this treatise. Never mind! This entry offers more than a simple translation of Schultz's work, because it presents many new observations and discoveries, among others with respect to the milky juice. Unfortunately the author does not distinguish between the 'main causes' and 'secondary causes' (seconding causes). Finally Reinwardt wants to point at a certain phenomenon described by the author – the effect of light on germinating plants (by influencing its direction of growth). Reinwardt concludes that the author has explained what could be explained. In his last chapter the author discusses the significance of the 'cambium' and again the similarity with Schultz's ideas is striking: The cambium is distinctly differing from the other saps, it is secreted from the phloem, it does not move and it has already got a texture (structure). This structure produces phloem and xylem. The author has proved the correctness of this statement in a brilliant way by showing that where tears do occur in the xylem and phloem, the cambium is producing new phloem and xylem. The author ends his treatise by giving valuable advices with respect to the production and the improved treatment of useful plants.

All in all, the author is a very experienced botanist, who has elucidated this subject in an excellent way. Therefore he should be awarded the gold medal. However this is impossible, because he has not discussed every aspect of the question. Reinwardt would prefer to encourage the author to rewrite and to complete his fine treatise, as he has promised to do in his covering letter. After having done so he surely deserves to be awarded.

[NA-RANH HMW 444-425.294 R, BOT, CHE, PHY]

**615. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1827**

In his own way the author of this verbose treatise (160 pages in folio) has developed a number of dogmas in the field of chemistry. It is more a general

introduction to chemistry than an answer to a prize contest. Nevertheless he has excellently succeeded in linking the subject of the contest with what is already known in this respect, although it has been a hard job to assemble all these fragments of knowledge of the last decades, especially with regard to the chemical reactions and the influence of electricity on these processes. On the other hand the author did not present any original idea. He has accepted the atomistic theory with open arms. Hardly any experiment has been carried out. In his view every chemical reaction (the combination of elements or 'zelfstandigheden' and the reverse reactions) is caused by electricity. Only if the constituents are put together in the right proportions a reaction will follow. In his view these electrical phenomena are not visible, although they do occur. The author jumps very easily to the conclusion that as a consequence of these phenomena different, changed or completely new entities do arise. And that is the difference between the 'mechanical mixing' and the 'chemical merging'! Reinwardt wonders why the author did not spend a word on the changed refraction of light as a consequence of a chemical merging, which means a chemical transformation, for example when two gasses are merged and have transformed into a new entity. The author did not dare to discuss the question whether the various constituents of the atmosphere have been merged chemically, or not, in which case they have only been mixed. He avoids every testing and he does not dare to express his personal points of view. All in all, the various uncertainties and failures of this treatise will do for the assembly to decide about it. This treatise has not elucidated this subject. Therefore it cannot be awarded.

[NA-RANH HMW 444-425.296 R; CHE, PHY]

**616. C.G.C. Reinwardt (Leyden) and some fellow members to the members of the 'Eerste Klasse' of the KNI (Amsterdam); May 1827**

On behalf of his colleagues Reinwardt reports on the treatise submitted by F.A.W. Miquel, entitled 'Revisio critica Casuarinum' [This treatise was not published until 1848, see: *Nieuwe Verhandelingen der Eerste Klasse*, Vol. 13, pp. 267-350].

[NA-RANH KNI 175-45; ZOC, BOT]

**617. M. van Marum (Haarlem) and C.G.C. Reinwardt (Leyden) to G. Vrolik (Amsterdam); May 1827**

On behalf of Reinwardt his friend Van Marum reports on the treatise on the malformations of flowers, written by their learned friend Gerardus Vrolik. Reinwardt has fully agreed with Van Marum's judgement. The treatise discusses the annually recurrent malformation of the flower of the water lily, which is growing in the 'Hortus Amstelodamensis'. This unique malformation absolutely deserves to be described. Vrolik's description and drawings have been made so clearly and meticulously that it is impossible to improve these illustrations. Of course a comparison with the malformation of a tulip flower, as it has been described by Von Schlechtendahl in the *Nieuw Botanisch Journaal* and in *Linnaea*, is completely appropriate. However Vrolik's statement that the parts of a flower are only higher developed leaves, just like Von Schlechtendahl has put after having examined his monstrous tulip, is quite a different matter. So Vrolik adheres to that theory, while in Van Marum's view, it should be rejected. Although Van Marum has once adhered to daring theories in the natural sciences he is now more and more abandoning these ideas, because they turned out to have been founded on spurious bases. Now he wants to found his theories completely on the results of observations and experience. Because the 'Eerste Klasse' has to practise the natural sciences, the author should clearly separate the proven facts from the ideas founded on assumptions. Vrolik's treatise has to be published in the *Verhandelingen* of the 'Eerste Klasse', but without being marred by the hypothesis thought up by that German naturalist and Reinwardt fully agrees with this judgement.

[NA-RANH KNI 175-60(135).47\* R; BOT]

**618. Minister of the Navy and the Colonies (The Hague) to C.G.C. Reinwardt (Leyden) and C.L. Blume (Leyden); 25 July 1827**

Elout asks Reinwardt for an advice with respect to the possible economic benefit of a large-scale culture of the cochineal in the Dutch East Indies. The Dutch ambassador in Madrid has pointed this possibility out to him. He asks Reinwardt to examine the various documents on this subject and to give his opinion.

[UBL BPL 2425; ZOC, AGR, CHE, TEC]

**619. G.Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden) and A.H. van der Boon Mesch (Leyden); about 11 August 1827**

After Driessen had considered the treatise, written by his late nephew, on the Amsterdam artificial mortar as well as the jury's report, Vrolik asks the jury to judge the adapted treatise again and to enter their report within the next two months.

[NA-RANH KNI 175-36.569; CHE, PHY]

**620. C.M.Fr. von Bönninghausen (Münster) to C.G.C. Reinwardt (Leyden): 17 August 1827**

Von Bönninghausen [Clemens Maria Franz Freiherr von Bönninghausen (1785-1864)], lawyer, agriculturist and botanist, sends Reinwardt a couple of Orchid tubers and begs his advocacy towards the chief gardener of the Leyden Hortus [The original letter is written in German].

[UBL BPL 2922; BOT, COB]

**621. Minister of the Navy and the Colonies (The Hague) to C.G.C. Reinwardt (Leyden) and C.L. Blume (Leyden); 23 August 1827**

Elout sends Reinwardt and Blume a letter, in which the possible culture of Indigo in the Dutch East Indies is discussed and recommended. This letter has been written by P. van Gruithuizen (Utrecht) and has been addressed to H.M. the King. Although in the view of the Minister the author is grossly exaggerating with respect to the origin of the indigo of Bengal, putting that it is made of *Wrightea tinctoria*, he would like to be informed more closely by Reinwardt and Blume. He wants to know if this tree species is really growing in Java. If the answer is yes, he wants to be informed about the region where it is growing, about the production of indigo from it and about its possible profit.

[UBL BPL 2425; BOT, CHE, AGR, TEC]

**622. Minister of the Navy and the Colonies (The Hague) to C.G.C. Reinwardt (Leyden) and C.L. Blume (Leyden); 1 September 1827**

Elout thanks Reinwardt and Blume for their advice with respect to the possibility of breeding cochineals in the Dutch East Indies. Reinwardt has informed him that the fine or hairy cochenille can be introduced, but that the wild species – *Cochinille sylvestris* – should not be transferred

to the colonies. In the view of the author of the document, examined by Reinwardt, this species is the result of hybridization. Reinwardt does not at all agree with this assumption.

[UBL BPL 2425; ZOC, BOT, AGR, CHE, TEC]

**623. C.G.C. Reinwardt (Leyden) and C.L. Blume (Leyden) to C.Th. Elout (The Hague); 7 September 1827**

Reinwardt answers the letter Elout has sent him on 1 September. It discusses the possibility of introducing the cochenille to the Dutch East Indies. He commends the useful information which has been given in the covering documents, written by the canon Cabreza. He knows that Reinwardt and Blume did already recommend the transfer of these insects to the Dutch colonies. Of course the men who will be put in charge of this operation must be well instructed. Again he discusses the species problem. He ascribes the varying features to hybridization.

[UBL BPL 2425; ZOC, AGR, CHE, TEC]

**624. A.W.C. Baron van Nagell van Ampsen (Arnhem) to C.G.C. Reinwardt (Leyden); 9 October 1827**

Baron Van Nagell informs Reinwardt and Mr. Van Westerveld (Harderwijk) that he has sent them copies of the 'Statistics of the province of Guelderland' as a sign of gratitude from the Agricultural Commission of that province.

[UBL BPL 2922; AGR]

**625. Minister of the Navy and Colonies (The Hague) to C.G.C. Reinwardt (Leyden) and C.L. Blume (Leyden); 23 October 1827**

Elout refers to the second advice given by Reinwardt and Blume with respect to the cochenille, given in their letter dated 9 September 1827. As a result he has decided to advise His Majesty the King to start an experimental culture of these insects in the Dutch East Indies, as he has learned from preceding information that carrying out such an experiment in the West Indies would not make any sense, because its culture would not yield any profit. Besides, through the Dutch envoy in Madrid the Dutch government has asked to carry out an experiment in Cadiz. There the plants (nopal plants) on which the cochenille is used to live, will be cultivated in boxes. Meanwhile these experiments have been started. By doing so it will be

possible to determine how old the trees must be before the insects can be hosted on them. He also wonders if it is possible to breed these animals on other species of the same plant genus, growing in the Dutch East Indies, yes or no. Furthermore he wants to be informed about the various precautions to be taken in this respect.

[UBL BPL 2425; ZOC, BOT, AGR, CHE, TEC]

**626. S. Stratingh (Groningen) to C.G.C. Reinwardt (Leyden); 9 November 1827**

Stratingh informs his colleague about his recently published treatise, entitled *De chlorineverbindingen, beschouwd in hunne scheikundige, Fabrijkmatige en Huishoudelijke betrekkingen*. He also refers to the epidemic, which has haunted the northern provinces and especially the province of Groningen. This fact has been the immediate reason for writing this treatise. He underlines the importance of an emphatic discussion of this subject for the various sciences.

[KB 121 E 2; CHE, MED]

**627. ?? Van Lussenburg (aboard the corvette 'De Leye', Nieuwediep) to C.G.C. Reinwardt (Leyden); 9 November 1827**

Van Lussenburg informs Reinwardt that the Minister of the Navy and Colonies has ordered him to go to Leyden in order to see Reinwardt personally. Reinwardt is asked to instruct him in detail about the conveyance of a couple of boxes of living coxhenille insects to the Dutch East Indies. Soon he will arrive in Leyden. He asks Reinwardt to inform him as best as he can.

[UBL BPL 2425; ZOC]

**628. C.G.C. Reinwardt (Leyden) to G. Cuvier (Paris); 18 November 1827**

Reinwardt sends a letter of recommendation in behalf of J. Schneither, secretary of Baron G.A.G.P. van der Capellen van Berkenwoude, to G. Cuvier. [The original letter is written in French]

[IDF Ms 3249-56]

**629. C.G.C. Reinwardt (Leyden) to the Ministry of the Navy and Colonies (The Hague): end of November 1827**

Reinwardt discusses the properties of various types of coal. Surprisingly, the islands are yielding less coal than is suggested by the lush vegetation and the influx of decaying plants. Perhaps the dissociation process is going too fast and too completely to give rise to the development of coal-beds. Sandstone coal is one of the types occurring in the Dutch East Indies. It is hardly inflammable, while, once burning, it produces much smoke and only little heat – at least less than true coal does. In the island of Madura coal and brown coal (lignite) have been found in various regions. These lignite layers are less than two feet thick. In Reinwardt's view the differences between lignite and coal have to be put down to the different genesis of the various layers of rocks. He continues by giving a description of the various layers of rocks in which the coal layers may have developed and of the various fossils embedded in these layers. It is also possible to produce coke from the coal layers. This fuel produces a lot of heat. Nevertheless, the coal from Madura is better than charcoal. The same goes for the coal found on Bantam. It is also possible to extract tar from the Madura coal. Reinwardt has his doubt with regard to the information, given by Macklot (Heinrich Christian Macklot) about the coal from Bantam. He ends his letter by giving a few chemical details and microscopical aspects of the coal layers and their inclusions.

[NA 2-21.204(7); GEO, PHY, CHE, BOT, PHY]

**630. Société d'Horticulture de Paris (Paris) to C.G.C. Reinwardt (Leyden); 17 December 1827**

The Chevalier Soulange Bodin, secretary general of the 'Société' informs Reinwardt that C. Bailly de Merlieux, his colleague and friend, has the pleasure and the honour to inform him about how a horticultural society should be organized. Therefore he has decided to send him a notice on this subject as soon as possible. This Society will be able to realize its aims more quickly if it succeeds in appointing member many renowned scientists. The secretary general considers himself lucky that maybe he can be an intermediary between Reinwardt and his Society. He expresses his strongest feelings of esteem. [The original letter is written in French]

[UBL BPL 2922; BOT, AGR]

**631. C. Bailly de Merlieux (Paris) to C.G.C. Reinwardt (Leyden); 17 December 1827**

Bailly de Merlieux, editor of the *Annales de la Société d'Horticulture de Paris*, informs Reinwardt that in September 1827, at the occasion of his visit to Leyden, he has really been impressed by the abundance and richness of its Hortus. Therefore he has decided to propose to the governors of the 'Jardin du Roi' and to the secretary general of the 'Société d'Horticulture' to make arrangements for an exchange programme between these institutions, which will be advantageous both for Paris and Leyden. Besides he wants to write an abstract of the 'Tableau de l'Etat de l'Horticulture et de l'Agriculture dans le Royaume des Pays-Bas' and asks Reinwardt to send him the facts, relative to this subject. He will add the facts relative to the situation in France, brought together by him. He takes the liberty of presenting this suggestion to Reinwardt. He asks him to provide him with the facts needed by him. Added to this letter he will receive various documents received by the 'Société' as well as the prospectus of the encyclopaedia which will be written by De Mirbel. [The original letter is written in French].

[UBL BPL 2922; BOT, AGR]

**632. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); about 30 December 1827**

Meanwhile Reinwardt has completed the German translation of the submission to a prize contest held by 'Teylers Tweede Genootschap' (Haarlem), which has been awarded meanwhile. Now he returns this translation, together with two treatises judged by him in behalf of the 'Hollandsche Maatschappij der Wetenschappen'. He also adds a document very recently sent to him by the German naturalist Treviranus. Treviranus has discussed a subject in which 'Teylers Tweede Genootschap' had also shown its interest. Van Marum should decide if this text has to be added to the text of the contest, yes or no. Because he is on the verge of leaving for Amsterdam, it is not possible for him to check if he has samples of the basalts of Stolpe(?) in his possession. He hopes to see Van Marum coming Saturday in the 'Instituut'.

[NA-RANH HMW 444-106; GEO, MIN]

**633. F.G. Hayne (Berlin) to C.G.C. Reinwardt (Leyden); 18 January 1828**

Hayne – professor of botany – apologizes for having kept silent for such a long time. Unfortunately he had to leave Reinwardt's letter (dated 22 September 1827), unanswered until now, because he has attended the meeting of the 'Akademie der Naturforscher', which has been held in Munich. He asks Reinwardt to forgive him. Immediately after his return to Berlin he was affected by a disease. He has not recovered until 29 December 1827, the day of his marriage. His wife is a sister of Professor Fischer, professor of physics and mathematics in Berlin. Reinwardt will probably know him. Furthermore he asks his colleague to send him a copy of his geological dissertation of 1823 in behalf of Professor Von Buch, whom Reinwardt is also acquainted with. Hoping that Reinwardt will accept his apology for having been unable to fulfil his orders until now, he commends himself to his continuous friendship and calls himself Reinwardt's very devoted servant. [The original letter is written in German]

[KB 121 D 6; BOT, GEO]

**634. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden), M. van Marum (Haarlem) and A.H. van der Boon Mesch (Leyden); 13 February 1828**

In the last meeting of the 'Eerste Klasse' Vrolik's son, Dr. Willem Vrolik, has presented a treatise, entitled 'Over een vermoedelijk tweede soort van rendier' ('On the possible existence of a second reindeer species'), together with four drawings. Vrolik asks the commission to enter its judgement within the next two months.

[NA-RANH KNI 175-36.626, ZOC]

**635. S.Th. Soemmerring (Frankfurt-am-Main) to C.G.C. Reinwardt (Leyden); 5 March 1828**

Soemmerring insists on sending Reinwardt a copy of his treatise, which will be published in the forthcoming issue of the 'Akademie der Wissenschaften' (Munich). He wants to learn the judgement of a man who occupies in such an honourable way the chair of Boerhaave, Gaubius and Brugmans and whom he has learned to hold in such great esteem, since he has met him personally. He also wants to know Reinwardt's opinion about several observations, the results of which are still problematic to him, because he is

not able to explain these phenomena. These results are especially interesting, because they seem to be contradictory to the results, which have been collected until now. He wants to know why the alcohol, resulting from a gradual distillation, initially has a higher specific gravity and why it has a lower specific gravity later on. None of his colleagues is able to explain this phenomenon. Other scientists before him will undoubtedly have observed the same changes. Besides it is easy to repeat this experiment. Recently he has witnessed its repetition for the 40<sup>th</sup> time. He would be very obliged if Reinwardt would be willing to investigate this phenomenon and to inform him about his results. Meanwhile he has found in Henderson's *History of ancient and modern wines* (London, 1823), 'an elegant and truly classical work', the validation of the results of his own experiments. [The original letter is written in German]

[KB 121 D 6; AGR, PHY, CHE]

**636. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); early March 1828**

Reinwardt agrees with Van Marum with respect to the drafts of four questions, to be used for prize contests by the 'Maatschappij'. Because in the first question a complete 'chemia corporis organicorum' is asked, it is less suited for a prize contest ('One could write several volumes') Question 2 is acceptable. Question 3 – on the pigment of the 'gomlak' hardly differs from the one on the cochineal (cochenille). If cochineal is not available, the question about this pigment should be replaced by another one. However the question should keep its technical character. Just now enough cochineal is available. The fourth question is no longer a topic, because it has already completely been answered by the investigations carried out by Berzelius (See: Kästner's *Archiv*, XI. 1; Poggendorff, *Annales*, X, pp. 100 and 117, Liebig, 'Ann. Chem. Phys.', 1827, July, p. 269 and finally Buffon, *Schweiz.*, 1827, Heft 9, p. 38). Furthermore the first question is largely a duplicate of a question, which has already been put in the past. In his view the questions, which have not been answered until now, should be repeated. He deplores that the 'Maatschappij' wants to abandon one of these questions, 'which is at least as important as the one about the migration of birds'. Tomorrow morning he will leave Leyden and see Van Marum in Heemstede about noon.

[NA-RANH HMW 444-106; ZOC, CHE, TEC]

**637. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 11 March 1828**

Reinwardt returns a very wordy treatise on charcoal, after having judged it. He has added a proposal for its abridgement. As soon as possible he will judge the treatise on the migration of birds. First of all he has to examine a number of treatises send to him by another scientific society. He hopes to have finished this job by the time when Temminck is returning (about April 1828). Anyhow his first impression of the treatise is a good one, it has been written well. Furthermore he hopes that Van Marum will soon have recovered from his cold and that he will have the opportunity to see him next week. Does his friend have the *Annals of Philosophy* in his possession? He would like to throw a glance at the contents of volume 15. It is said that in this volume the final analysis of several chemical substances has been described. Meanwhile he has ordered the apparatus, which has been described in that volume. It has already been delivered at his address. He asks Van Marum if he can borrow the instructions for its assembly, because he needs further explanation.

[NA-RANH HMW 444-106; CHE]

**638. P.N. Quarles van Ufford (The Hague) to C.G.C. Reinwardt (Leyden); 27 March 1828**

On 6 October 1827, Quarles Van Ufford, Secretary General of the Ministry of the Navy and Colonies, has received a letter from Reinwardt and Blume, in which the most preferable way of harvesting, packaging and storing of cotton seeds for the region of Pernambuco has been described. They have informed him that they have sent these proposals to the Department of Foreign Affairs. The consul of the Netherlands will have to supervise the execution of these prescriptions. At the end of January 1828 this man has sent two barrels of cotton seeds with the 'Prins der Nederlanden' (captain Jan Hilbrands) to Holland. This ship has recently arrived in Amsterdam. Quarles Van Ufford is not sure if the consul has already been informed about the detailed instructions. Therefore he wants to learn from Reinwardt and Blume if the seeds have arrived in a good condition. If the condition of this cargo has turned out to be less than expected, they have to improve its quality as much as possible. He has ordered to deliver the barrels today. He wants to receive the answer as soon as possible. Thereupon he will send this

cargo on to Batavia [An account of expenses has been added to this letter]. These expenses have been repaid by the Ministry of the Navy and Colonies]. [NA 2-21.204(25); AGR, BOT]

**639. A. van der Velden (Amsterdam) to C.G.C. Reinwardt (Leyden); 29 March 1828**

Van der Velden – Commissioner of the Colonies – informs Reinwardt that two barrels of cotton seed have been sent to him today by captain Jan Hilbrands of the ‘Prins der Nederlanden’, which has arrived from Pernambuco in Amsterdam. The barrels have been marked ‘M B Z N° 1’ and ‘M B Z N° 2’. He asks to inform him about their reception (in good condition).

[NA 2-21.204(25); BOT, AGR]

**640. Chr.Fr. Hornschuch (Greifswald) to C.G.C. Reinwardt (Leyden); 30 March 1828**

Hornschuch thanks his colleague for being so kind to send him a small collection of seeds. He immediately sends him what he has asked for and he hopes that the plants, specimens of 183 different species, will grow well. Among these are a number of rare specimens. He asks Reinwardt to hand the specimen of *Myosotis alpestris* over to his wife as a special token of his gratitude for what Reinwardt has sent to him. He would be very pleased if Reinwardt would be willing to send him and his colleagues a small collection of plants, which have been collected on Java. He has received a letter from Blume, observing that the Javanese mosses, which Nees von Esenbeck has been willing to share with him, have made him and his colleagues very curious. Boie’s death is a terrible loss to science. Hornschuch wants to know if Van Marum is still alive and what he is doing at the moment. He thanks his colleague from the bottom of his heart for the honour and friendship shown to him. He expresses his high esteem, adds his greetings to him, to Mrs. Reinwardt and Miss Esther and calls himself Reinwardt’s true friend.

[The original letter is written in German]

[KB 121 D 6; BOT]

**641. P.N. Quarles van Ufford (The Hague) to C.G.C. Reinwardt (Leyden); 2 April 1828**

Quarles van Ufford, Secretary General of the Ministry of the Navy and the Colonies, thanks Reinwardt for having carried out the examination of the cotton seeds, which have been sent from Pernambuco as well as for the advice he has given with respect to the repair of the barrels. He has asked Mr. A van Hoboken (Rotterdam) to send this shipment to Batavia with the 'Neêrlandsch Koning'. He will also send Reinwardt's instructions, dated 31 March 1828, on to Van Hoboken. He asks him to deliver the two barrels as soon as possible at Van Hoboken's, because the vessel is on the verge of setting sail to Batavia. The expenses made by Reinwardt will be reimbursed after he has received a claim of expenses.

[NA 2-21.204(25); AGR, BOT]

**642. A. van Hoboken (The Hague) to C.G.C. Reinwardt (Leyden); 4 April 1828**

Meanwhile Van Hoboken has received the barrels of cotton seed. He has also received the letter sent by the Minister of the Navy and Colonies. He has informed him that his ship is waiting for a favourable wind in the roads of Hellevoetsluis ('Helvoet'). Tomorrow – 5 April – he will try to ship the barrels. If this turns out to be impossible, the cargo will be sent to the East Indies with the 'Rotterdamsch Welvaren'. This vessel will be ready for departure by the end of April.

[NA 2-21.204(25); AGR, BOT]

**643. A. van Hoboken (The Hague) to C.G.C. Reinwardt (Leyden); 8 April 1828**

Van Hoboken informs Reinwardt that he has succeeded in bringing the two barrels of cotton seeds aboard the 'Neêrlandsch Koning', that its captain has received this cargo in a good condition and that it will be treated according to the instructions.

[NA 2-21.204(25); AGR, BOT]

**644. P.N. Quarles van Ufford (The Hague) to C.G.C. Reinwardt (Leyden) and C.L. Blume (Leyden); 16 April 1828**

Quarles van Ufford thanks Reinwardt and Blume for their letter, dated 24 November 1827, through which they have informed him about the production of indigo from *Wrightea tinctoria*. He also returns the treatise written on this subject by Jean Henri Jaume Saint-Hilaire. His Majesty the King has definitively decided to order the experimental cultivation of cotton in the Dutch East Indies, in order to find out if it will yield a considerable profit.

[NA 2-21.204(25); BOT, AGR, TEC]

**645. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 21 April 1828**

Meanwhile Reinwardt has received the drawings of the East Indien plants from Blume. He has checked these illustrations and added several names. He promises to return this collection of drawings to Van Marum. He also gives his opinion about four drafts of prize contests. He rejects the first proposed questions (about the composition and purification of 'beenzwart'). It is too much similar to the prize contest on the animal coal, which has already been held. The second question is not usable either, because it is impossible to discover the origin of bromine. With respect to the third question – dealing with human physiology – he observes that he is not sufficiently familiar with the recent publications on this subject. Anyhow he does not believe that the blood is able to have its own life outside the body. Of course the same goes for the vessels and the nerves. The fourth question – about the art of lithography – is not important. He has only been interested in this subject insofar the quality of these illustrations can contribute to the advancement of the science of natural history, which is of course very important to the 'Maatschappij'. He has not been able yet to devise other questions. Soon Van Marum will receive a couple of questions from Professor Van der Boon Mesch. He has added a prospectus from a certain Mr. De Haan to this letter. De Haan hopes that the 'Teylers Tweede Genootschap' will decide to subscribe to what he has to offer. Furthermore he has added the revisions of the questions on the 'beenzwart' and on the origin of bromine in seawater.

[NA-RANH HMW 444-106; CHE, ART, MED, TEC]

**646. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 24 April 1828**

Reinwardt is pleasantly surprised by the fact that the questions devised by him have survived the judgement of Professor De Fremery. Furthermore he has also been surprised that it has been observed that the cuckoo is building its own nest and that it hatches its own eggs. Nevertheless he keeps his doubts. With respect to this point one should not believe Darwin (Erasmus Darwin?), who is wrong, like his fellow-countryman Barrington is. He has a higher opinion of Bechstein, one of the best observers of bird life. In Bechstein's view this idea is wrong and he points at his *Naturgeschichte der Vögel Deutschlands* (2<sup>e</sup> Edition, p. 1120). Not any renowned ornithologist, like Buffon, Montbeillard, Vaillant, Latham, Naumann or Brex has observed these phenomena. In Reinwardt's view the fact that *Cuculus americanus* builds its own nest and that it hatches the eggs itself, does not proof anything, because it is a different species of birds.

Hereafter he discusses the prize contest on the presence of hydrochloric acid in the atmosphere. He proposes not to mention a series of towns and regions where this phenomena presents itself. The scientist who wishes to compete has to inform himself about what has already been published on this subject. Furthermore the question about the seawater, proposed by him, is too much similar with the contest held by the 'Provinciaal Utrechtsch Genootschap van Kunsten en Wetenschappen' (1826). It would not be polite to ask that Society to withhold this question.

With respect to the contests proposed by Moll, he observes that he has been surprised by the fact that a contest has been proposed about the origin of clay and sand, because everyone knows already how these types of soil are coming into existence. Furthermore there is no considerable difference between clay, which has been washed ashore and sea clay. The same goes for several other remarks made by Moll with respect to this subject. On the other hand it would be possible to think up a question about the differences between clay and sand, about the distribution of these soil types in the Netherlands and about their origin. Therefore he proposes to change these two questions and to devise a new question, based on their combination. He promises to propose a draft. With regard to the last question, about the black substance in sugar breads, he observes that this is a very important question.

He assumes that its devisers will already have seen Mr. Beck, the proprietor of a sugar refinery, about it.

[NA-RANH HMW 444-106; ZOC, GEO, MIN, AGR, BOT, CHE]

**647. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1828**

Unlike Stratingh, who has completely rejected the treatise, submitted under the maxim 'Der Chemie verdanken wir in unserer Zeit ... etc.', Reinwardt initially agrees with the contents of this treatise. It is a well written and complete answer to the question. Not only did the author give the results of a detailed analysis of the phenomenon of the lead poisoning, he has also given the results of a number of observations, which prove that the lead is easily affected by water and by the atmospheric air. Besides he has demonstrated how easily the 'loodkalk' (?) dissolves. He has given the results of the analysis demanded by the 'Maatschappij'. It is not his fault that these investigations did not produce any new facts, after the experiments carried out by renowned scientists like Fourcroy, Vauquelin and Berzelius. So the author has completed his job. He has given the answers to the questions been asked by the 'Maatschappij'. Furthermore he has proven that 'beenzwart' is able to decompose the lead solution. He has also given a filtering devise (the one which has been invented by Van Stipriaan Luïscius, and described by him in his treatise on the purification of water). The treatise is very readable and its ideas are very easily and clearly presented. Reinwardt accepts the fact that more than once the author has made statements about what has not been proved yet. In the author's view the main cause of the appearance of lead in drinking-water is the presence of chlorides. With respect to that point the author is exaggerating. He shows that he has not taken notice of the experiments carried out by Driessen (Groningen), proving that free hydrochloric acid is present in the atmosphere, although Driessen's ideas have been made public in Germany. Most probably he has borrowed the denial of these facts from Vogel. Furthermore the treatise also gives superfluities and prejudiced reasoning, for example that the various small organisms, which are living in the gutter, the stagnant water, decaying leaves, insects, dust, bird's droppings and so on, do not have any damaging influence on the lead, putting that most of the acids are producing insoluble lead-salts, when combined with lead oxide. Reinwardt knows better and so should everybody else!

Reinwardt has even more objections to the rest of this treatise, in which the author discusses and explains the effect of 'beenzwart' on solutions of lead salts. The chemical experiments proposed by him are insufficient. Besides he has carried out his experiments defectively, although he did follow the prescriptions given by Berzelius. His arithmetical skills are also defective. Erroneously he has not carried out experiments with various types of animal coal. Mistakenly he assumes that 'beenzwart' is nothing but a mixture of coal and 'phosphorzure kalk' ( $\text{CaHPO}_4$ ).

Now Reinwardt wants to recommend another treatise, which has just been received by the 'Maatschappij' – a treatise on a similar subject (dealing with the animal and the vegetable coal). Its author has attributed the absorption to the sulphur compounds, which are present in the coal. The author of the first treatise discussed by him should have paid attention to this phenomenon. Because the author has rushed off the last part of the question – giving detailed information about the possible filtering devices – his treatise cannot be awarded. In Reinwardt's view it would be better if the 'Maatschappij' would withdraw the contest definitely.

[NA-RANH HMW 444-423.277 R; MED, CHE, PHY, TEC]

**648. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1828**

The author of the German treatise on the wintering of migratory birds has made himself known as a keen and meticulous observer. Besides he is experienced in the general natural history of birds, especially of the ones living in the Netherlands. He has a sufficient knowledge of Dutch. Moreover he shows several misconceptions of Dutch scientists, who have translated foreign works on this subject. The treatise is extensive, well elaborated and precise. The author has been very complete and he shows himself as a man of wide reading. He has succeeded in adding new facts to our knowledge of ornithology. He has been very wise, when he divided the birds into 'trekvogelen', 'zwervende vogels' or 'strijkvogels' (*Aves erratus*) and resident birds ('standvogels'). Correctly the author has proved that lack of food is the main cause of this phenomenon and that it is not the cold. He also gives many facts with respect to the flyways and to the sites where these birds are wintering. He has added interesting facts about the kinds of food, the hatching period and the way of hatching for each of the categories. Besides

he has carried out many observations. Nevertheless several uncertainties have been left, although there is no doubt that this treatise can be awarded. The second treatise, written in Dutch, is less complete and less accurate. Its author is not experienced in the natural history of birds, not even in the one of the Dutch birds. In his view the Sternidae and the Hirundinae are having the same way of living, probably because in Holland the first category is often called 'swallows'. The author is rather inaccurate in the use of names and he ascribes wrong habits to several bird species as well. He still believes in the fairy tale that swallows are wintering in old hollow trees. Other birds are regarded as resident birds, while they are in fact migratory birds. His ideas with respect to the wintering regions of storks are also incorrect. A last example will do. In his view the fieldfare is hatching in Holland during the winter time. This treatise does not deserve to be considered by the 'Eerste Klasse'. [From the archives it is known that the author was Hermann Schlegel, a German zoologist, who is working in Leyden. About this date he became professor of zoology].

[NA-RANH HMW 444-423.280 R; ZOC]

**649. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1828**

First of all Reinwardt defines the term 'humus' – calling it a thorough mixture of substances, originating from the dissociation of organisms'. In his view these substances are consisting of humus acid and its salts. The fertility of the soil depends on these ingredients. These ingredients are mixed with many other salts, 'aarden' and metal oxides. The author of the treatise has described the properties of humus in detail, founding himself on the results of chemical analyses. He describes the fertile humus, the acid humus, the carbonized humus and the resinous humus, following exactly Dr. Sprengel's systema (Göttingen), whose treatise has been published in 1826 in Kästner's *Archiv für die gesammte Naturlehre* (Volume 8). As a matter of fact Sprengel's treatise already covers the major part of the prize contest of the 'Hollandsche Maatschappij'. Nevertheless the author has also given his own ideas about this subject. He has demonstrated that the fertility of the humus is depending on the concentration of the soluble compounds of the humus acid. This does not go for the complex of humus acid and iron, because the humus acid-iron complex does not dissociate easily. He has

answered every part of the question, also with regard to the advancement of agriculture. He has also tried to explain the differences between the qualities of the various farmlands. Maybe he exaggerated when underlining the importance of humus. Reinwardt also senses traces of prejudice and one-sidedness. Although the author has completely answered the question, the entry itself is not complete. On the other hand his contribution is so important that it should be brought to the attention of a wide audience. In this way it will generate new research. Therefore Reinwardt does not want to block its award and he proposes to publish this important contribution to the improvement of agriculture.

[NA-RANH HMW 444-426.303 R; BOT, CHE, PHY, AGR]

**650. C.G.C. Reinwardt (Leyden) and M. van Marum (Haarlem) to G. Vrolik (Amsterdam); May 1828**

In his discussion of Willem Vrolik's treatise 'Over een vermoedelijke tweede soort van rendier' ('On the possible existence of a second reindeer species') Reinwardt first of all observes that many scientists have already thought that, considering the shape of the head, several species of reindeer do exist, although it has been impossible to prove this hypothesis until now. Vrolik junior has compared two skulls, one from Norway and the other from Lapland. The differences are remarkable. The author has added beautiful drawings and puts that these differences do not originate from the difference of age or from individual differences, but that it is a matter of 'specific differences'. He has decided to propose two names – *Cervus platyrhynchus* and the old name for the other skull. In his view the specimen described by Petrus Camper belongs to the new species and he refers to Camper's drawing of this skull. In his view the American caribou belongs to the same species. In Reinwardt's view the scientific world owes a lot to Vrolik for this accurate analysis. Reinwardt decides that the existence of a second species is really possible. On the other hand examining two skulls and deciding that these objects have to lead to the conclusion of two different species, is going too far. In this case – so different from comparing the remains of prehistoric animals – one should compare many more skulls, before coming to the conclusion of the existence of two species. Reinwardt knows that the intraspecific morphological variation within the populations of many domesticated animals is considerable. These variations are not constant! He

also refers to other intraspecific differences, for example with regard to the shape of the horns. This also goes for what Vrolik has called the 'aanvullend opperkaaksbeen' ('supplementary maxillary bone'). In Vrolik's view this is an acceptable interspecific characteristic. In Reinwardt's view it is not. In his opinion there are many other constant interspecific characteristics, which have resulted from the comparison of large numbers of specimens. Nevertheless Vrolik junior has written an important treatise and so he has contributed to our knowledge of the natural history of the reindeer. Therefore he suggests to publish this treatise. In this way other naturalists will be able to examine the correctness of Vrolik's conclusions. In two of the beautiful drawings the horns should not be given, because this is not a constant characteristic. Finally the two skulls should be drawn from the same point of view. Van Marum, who totally agrees with Reinwardt, has co-signed the jury's report.

[NA-RANH KNI 175-61(137).12 R; ZOC, GEO]

**651. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden), M. van Marum (Haarlem) and N.C. de Fremery (Utrecht); 10 July 1828**

Vrolik asks the addressees to report on the treatise entered by J.G.S. van Breda, member of the 'Eerste Klasse' of the KNI, on the occurrence of dolomite in the region of Durbuy (Ardennes) and on the mineralogical composition of these mountains.

[NA-RANH KNI 175-36.652; GEO, MIN, CHE, PHY]

**652. C.G.C. Reinwardt (Leyden) to Jhr.G.J. Beeldsnijder van Voshol (Utrecht); 27 July 1828**

The herbarium of Reinwardt's late friend Römer is really beautiful, so he wants to acquire it. After Schulthess has informed him, he has decided that the 'Hoogeschool' should purchase it. He has decided to exercise his influence. He realizes that he has to inquire after its price. Schulthess has already told him that it will be about 5.000 Swiss francs (about 5.500 guilders). Probably it will be possible to negotiate. The government will not decide quickly. He again mentions the fact that he still has to send him a couple of autographs. The specimens of *Zamia*, received from the addressee, are growing well.

[KB 121 E 4; BOT]

**653. H. Reichenbach (Amsterdam) to C.G.C. Reinwardt (Leyden); 28 July 1828**

In Reichenbach's view today is one of the most agreeable days of his life, because he has had the opportunity of making Reinwardt's acquaintance. He encloses a note, in order to thank him. Besides he informs him that a certain Dr. Kreisig (a member of the 'Royal Society of Edinburgh'), is eager to see him in order to be informed about his botanical adventures and experiences in the Dutch East Indies. He also adds a remark about his private collection of Iridae and Amaryllidae and spends a few words on *Clarkia pulchella*. [KB 121 D 6; BOT]

**654. G. Vrolik (Amsterdam) to G. Sandifort (Leyden) and C.G.C. Reinwardt (Leyden); 15 September 1828**

Sandifort and Reinwardt are informed that they have been asked by the 'Eerste Klasse' to give their opinion with respect to the objects excavated at 'Arentsburg'. Recently Reuvens has sent these objects to Vrolik. Vrolik underlines that the major part of the site of the excavation has not been disturbed yet.

[NA-RANH KNI 175-36.674; ART, ANA]

**655. C. Th. Elout (The Hague) to C.G.C. Reinwardt (Leyden), M. van Marum (Haarlem) and G. Vrolik (Amsterdam); 15 September 1828**

Elout – Minister of the Navy and Colonies – assumes that it will please Reinwardt to receive a sample of the coal which has recently been found in large quantities in a new mine. This sample has been added to this letter. The mine is situated in the beds of the Tjoedjang river in the Bantam-residence on the island of Java. He also adds a note on a gold mine in Benkoelen. Besides he has added two samples of unpurified gold sand and a sample of gold, after it has been processed after its arrival on Java, as well as a copy of Macklot's report (among others about the way in which the sample has been treated). If Reinwardt may have some remarks, he should inform the sender. [NA 2-21.204(24); GEO, MIN, CHE, PHY]

**656. A. von Humboldt (Berlin) to C.G.C. Reinwardt (Berlin); 20 September 1828**

Von Humboldt sends his colleague a note, announcing that Fr. Von Schuckmann, Minister of Foreign Affairs of Prussia, is willing to receive Reinwardt in audience tomorrow, Sunday at 15.00 hours. The envelope bears a remark written by Beeldsnijder van Voshol esq., to whom Reinwardt has sent this announcement on 2 December 1828. [The original letter is written in German]

[KB 121 D 6]

**657. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden), M. van Marum (Haarlem) and G. Vrolik (Amsterdam); 24 September 1828**

In the last meeting of the 'Eerste Klasse', Van Breda has read a treatise on a probable new species of Delphinus, which he has called *Delphinus planiceps*. He has added a drawing of the complete animal as well as a drawing of its skull. Vrolik asks the commission to report within the next two months.

[NA-RANH KNI 175-36.676; ZOC]

**658. C.Th. Elout (The Hague) to C.G.C. Reinwardt (Leyden); 8 October 1828**

Elout – Minister of the Navy and the Colonies – underlines the importance of the fact that Reinwardt receives a copy of the *Annalen van Wetenschappen, Landbouw, Koophandel en Kunsten* (n<sup>o</sup> 11), because it contains a message about the mines, which have recently been discovered on Cuba, together with a letter from Mr. G. Lobé, consul of the Netherlands in Havana. This report has already been sent to the Minister of the Interior. In accordance with His Majesty's decree this news has also been sent to the Department of the Interior, in behalf of the administration of the National Industry.

[NA 2-21.204(24); GEO, MIN]

**659. C.G.C. Reinwardt (Leyden) to Jhr.G.J. Beeldsnijder van Voshol (Utrecht?); 30 October 1828**

When Reinwardt – shortly before he left for Berlin, early August 1828 – had returned Schulthess's letter to Beeldsnijder van Voshol, a letter discussing a collection of dried plants owned by Römer, he felt the need to buy this collection. He wanted to propose its purchase to the government, after his

return. Because his return was considerably delayed, he has not had the opportunity to send a letter on this subject until now. Now he wants to receive more detailed information on it, before he will decide to take further steps. He is not aware yet of the actual condition of this collection. Besides he has not been informed about the reliability of the determination of these plants yet. Therefore 5.500 guilders is far too much money, although this collection might also contain drawings and manuscripts. He hopes that Schulthess will try to get every possible information. Furthermore he will pay his debt to Beeldsnijder van Voshol, which he owes him for a couple of autographs. Furthermore he adds a few lines on his experiences during the meeting of the German naturalists, which has been held in Berlin, last September. On that occasion he has met professor Wenderoth (Marburg), whose compliments he sends on with pleasure. He is still looking forward to receiving specimens of *Zamia spinosa*. The specimen of *Nyrosnia cannaeformis*, recently sent to him by Beeldsnijder van Voshol, has died. He asks him to compensate this loss.

[KB 121 E 4; BOT]

**660. G. Vrolik (Leyden) to G. Moll (Utrecht), C.G.C. Reinwardt (Leyden) and A.H. van der Boon Mesch (Leyden); 31 October 1828**

In the last meeting of the 'Eerste Klasse' Van Beek (Utrecht) has delivered a lecture on a colorimeter. This treatise is sent to the addressees, together with a drawing of the instrument. The commission has to report within the next three months.

[NA-RANH KNII 175-36.684; CHE, PHY]

**661. H.F. Thyssen (Amsterdam) to C.G.C. Reinwardt (Leyden); 10 November 1828**

On behalf of the 'Eerste Klasse', Thyssen wants to know Reinwardt's opinion on a document, written by Mr. Gobbel Schrooy about the 'Medico-Botanical Society' of London. The laws of this society have been added, together with a letter from John P. Josy, dated 20 September 1828. On behalf of the Minister of the Interior, Van Gobbel Schrooy has offered these documents to the 'Eerste Klasse'. The Minister wants to know its opinion with regard to the contents of these documents.

[NA 2-21.204(26); MED, BOT]

**662. C.G.C. Reinwardt (Leyden) and M. van Marum (Haarlem) to G. Vrolik (Amsterdam); 18 November 1828**

In this letter Reinwardt answers a letter from the Minister of the Interior, dated 20 October 1828 (n° 153), sent to him by Vrolik. It is about the request to advise about the question if it is wise, yes or no, to put the name of His Majesty the King on the list of royal and high-ranking patrons of the 'Medico-Botanical Society' of London. Reinwardt, knowing this society, underlines its honourable objectives and plans. It is aiming at the completion of the knowledge of botany and through that, at the development of new medicines, the healing powers of which have to be tested. It also promotes the diffusion of these achievements and, through that, advances medical science. This ambitious plan deals with one of the most important fields of botany and medicine. In Reinwardt's view this society makes a very favourable impression. Several very important names have already been entered on the list, for example the names of several sovereigns. The intentions of this society will absolutely win His Majesty's approval, so the 'Eerste Klasse' has no doubt that His Majesty is willing to favour it. His access to the circle of royal patrons will considerably further its activities. The authors want to submit the draft of this letter to the fellow members of the 'Eerste Klasse' for approval.

[NA-RANH KNI 175-61(136).18 R; BOT, MED]

**663. C.G.C. Reinwardt (Leyden) and M. van Marum (Haarlem) to G. Vrolik (Amsterdam); early December 1828**

Perhaps no other part of the science of natural history knows so many uncertainties and obscurities as our knowledge of the aquatic mammals, for example the dolphins. It is very difficult to trace and to observe these animals in the ocean. Their way of life and their development are still largely unknown. Probably full knowledge will never be acquired. Many facts needed for the development of a systematic classification, are still lacking. Besides specific characteristics are often varying. For example the number of teeth of dolphins varies between 64 and 188. Generally it is difficult to determine the species. For example Gmelin, in his edition of Linnaeus's *Systema Naturae*, distinguishes four species of Dolphins, while Desmarests, in his *Mammalogie*, lists 34 species. Reinwardt knows that Cuvier does not at all agree with Desmarests and that he did reject his lists of species. Cuvier has

proposed a new way of specifying species. In Reinwardt's view, Van Breda's contribution to zoology, entitled 'Aanteekeningen omtrent een nieuwe soort van Dolfijn' ('Notes, regarding a new dolphin species'), should be considered from that point of view. In his *Recherches sur les ossemens fossiles* (Part V, p. 128) Cuvier has already given a short note with respect to a Dolphin, which seems to differ from *Delphinus delphis* L., the common dolphin. Unlike the common dolphin, the other animal has a very round, but in its nasal part flattened forehead and a prolonged and narrowed mouth. Cuvier has only one specimen in his possession, which is displayed in the 'Muséum National d'Histoire Naturelle' in Paris. A second specimen is preserved in the museum of Lisbon. Cuvier has assumed that a couple of the skulls present in the Lisbon collection are belonging to a new species, which he has given the name of *Delphinus frontatus*, because these turned out to be similar to the specimen described by him in Paris. Later on Van Breda has shown Cuvier a drawing of the specimen examined by himself. Its skull turned out to be completely similar to the one described by Cuvier, while the rest of the body completely differed from the Lisbon specimen. Because of the unique characteristics of his specimen, Van Breda has decided that it might be a new species and he decided to call it *Delphinus planiceps*. In Reinwardt's view the characteristics of this animal are remarkable. Never before a dolphin has been found bearing a fin on its back and having a narrow mouth. Reinwardt decides that on the other hand these features alone do not justify the creation of a new species. First of all a complete analysis has to be carried out, as well as a comparison of the results with the characteristics of the already known species. However, to a certain extent, Reinwardt agrees with Van Breda. Furthermore more specimens of the same 'new' species have to be caught. Van Breda should also follow the rules of analysis and description of a specimen. Finally he has to mention the location where this animal has been caught. Reinwardt adds several other technical remarks. He agrees with the publication of Van Breda's treatise after the author has given a detailed and complete description. Van Marum fully agrees with his colleague. He also agrees with the new name *Delphinus planiceps*. By using this name it will be easy to distinguish between this species and *Delphinus globiceps*.

[NA-RANH KNI 175-61(136).19 R; ZOC]

**664. C.G.C. Reinwardt (Leyden) and M. van Marum (Haarlem) to G. Vrolik (Amsterdam); 12 December 1828**

Reinwardt advises positively with respect to the publication of Van Breda's treatise on the mountains of the Ardennes. It has been written well and it proves that its central part is a transitional mountain ('overgangsgebergte'), mainly consisting of 'grauwacke', slate, quartz and limestone. In one of the larger valleys these rocks are resting on the coal basin. To the North this formation descends and it is more and more covered by Secondary and Tertiary formations. All these mountains are directed from the north-east to the south-west. On various places fissures and cracks have been filled up with 'poddingssteen', among others consisting of quartz, 'lapis lidisis' (?) and sandstone. A rocky and ferriferous cement keeps the various constituents together. Van Breda presents his ideas about its origin, in which he suggests a raising of the rocks. Reinwardt has been pleasantly surprised by the fact that Van Breda has – at least partially – succeeded in tracing and identifying the deeper rocks. He has devised a cross-section of the mountains, which proves the existence of vertically positioned limestone formations. Van Breda's discovery is a valuable and beautiful contribution to the knowledge of the dolomite formations. His discoveries prove the correctness of what has already been put by Von Buch. Besides Van Breda has proved that there is a close relationship between the dolomite and the limestone formations. Van Breda should have mentioned the observations, made by Von Buch in the Val di Fassa (Italy). His discoveries have also been described in the *Verhandelingen* of the Berlin Academy, as he (Reinwardt) has already reported to Alexander Von Humboldt himself. The text of his letter has been published in the *Annales de Physique et de Chimie*, Vol. 13. Reinwardt continues his report by giving more details about Von Buch's description of the geology of the Val di Fassa. He concludes that having read Von Buch's descriptions and having considered his sketches, one comes easily to the conclusion that dolomite originates from limestone. Having done so one has still to explain the presence of magnesium in the dolomite rocks. Van Breda continues by giving Von Buch's explanation and he fully agrees with the ideas of Von Buch, like Reinwardt himself does, at least in general, even with respect to the development of the Alps. However in Reinwardt's view several questions still remained unanswered, among others with respect to Von Buch's explanation of the presence of magnesium in dolomite. He knows

that Von Buch is still struggling with that problem. Reinwardt subsequently adopts Leonhard's ideas with respect to the classification of dolomite rocks (Leonhard, *Charakteristik der Felsarten*, p. 281). Finally Reinwardt has to admit that the members of the jury are still of a different opinion with respect to the origin of dolomite and to the various phenomena accompanying the presence of dolomite. However the news presented by Van Breda is so important that it has to be published in the *Verhandelingen* of the 'Eerste Klasse'. Of course the cross-section of the mountain of Durbuy has to be added ('the plates 1, 8 and 13'). A last remark is made about the shape of the dolomite crystals. Their shape is not cuboidal (Van Breda, p. 3) but rhomboidal. Van Marum – who is not quite satisfied – wants to observe that the theoretical considerations, as far as they have been borrowed completely from Von Buch, as well as the proof of his theory, can be skipped, because they are less important.

[NA-RANH KNI 175-61(136).22 R; GEO, MIN, CHE, PHY]

**665. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 30 December 1828**

Reinwardt is writing this letter while being aboard the towing barge headed for Amsterdam. He adds the translation of the prize contest, which is (going to be) held by 'Teylers Tweede Genootschap', together with the two treatises entered to a prize contest held by the 'Hollandsche Maatschappij der Wetenschappen'. Furthermore he has added a note received from Treviranus, respective to the request made by 'Teylers Tweede Genootschap'. Perhaps it is still possible to cite this note in addition to the main text of the contest. He has not had the time yet to read it. The same goes for Van Marum's request to see if he has a couple of samples of the basalts of Stolpe in his possession. He will do so immediately after having returned. He hopes to see Van Marum coming Saturday in the meeting of the 'Instituut'.

[NA-RANH HMW 444-106; GEO, MIN]

**666. C.G.C. Reinwardt (Leyden) to G. Vrolik (Amsterdam); 3 January 1829**

In reply to a request, made by Caspar Reuvens, member of the 'Derde Klasse' of the 'Instituut', Reinwardt enters a very detailed report on the results of the excavations carried out at 'Arentsburg' in 1828 (see: Van Heiningen, 1995). It

especially deals with the archaeological objects, planks, beams, jewellery and other precious objects, iron remains, copper ware, animal and human bones minerals (lime), fragments of glazed pottery, mortar, floor tiles, pieces of marble (from Carrara), fragments of lava, sandstone, trash, horseshoes, lamps of stoneware, shells, several minerals, which have been shown to him on the site by professor Reuvens, one of the members of the 'Derde Klasse'. These objects have been sent to Reinwardt, in order to be examined. In his detailed enumeration he discusses the properties and characteristics of these objects. A chemical analysis carried out by him has proved that glazing has been carried out by using iron ochre or red earth. A fragment of another vessel, differing from the rest by its golden colour, turns out to have been glazed by using an earthen paint, which has been applied, before burning it. Thereafter he discusses the quality of the well, because Reuvens had asked him to do so. The quality of its water did not turn out to be better than the water, which is found there in our days. Furthermore Reuvens has asked questions with regard to the physical and chemical changes of coins and to the a rainwater well, the bottom of which partly consists of a limestone floor. Several questions will remain unanswered. If Reuvens would like to have these answered, Reinwardt has to visit 'Arentsburg' once again.

[NA-RANH KNI 175-61(136).23 R; CHE, PHY,ART]

**667. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 14 January 1829**

Yesterday, after having returned to Leyden, he has found a parcel, containing three treatises. Because of his many occupations, among others in behalf of the two Ministries and of the 'Hoogeschool', he will not have the opportunity to judge these writings. His friend has to find another reviewer. [NA-RANH HMW 444-107]

**668. C.G.C. Reinwardt (Leyden) to A.Th. Brongniart (Paris); 24 January 1829**

At last Reinwardt has found the opportunity to thank his colleague for sending him several interesting treatises. He has read these documents very attentively, convinced that Brongniart's work deserves that attention. Besides he had to keep in mind the friendship Brongniart's respectable 'grandfather', Coquebert de Montbret, is still demonstrating towards him. He especially

wants to thank him for the last of these treatises, in which the very complicated subject of the fructification of plants is discussed. Brongniart's beautiful observations have elucidated this most beautiful and most complicated part of plant physiology. He adds a copy of the programme of 'Teylers Tweede Genootschap'. Brongniart will learn from it that his important contribution to science has not eluded the notice of the 'Maatschappij'. The fact that the addressee had to wait so long for his answer is due to the fact that he did not receive Brongniart's letter until a couple of days ago. Reading that Brongniart has decided to add his works to the ones written by Mr. Bory, in order to facilitate the continuation of the journey of the naturalists Duperrey and d'Urville, has made him very happy.

With respect to Brongniart's request, he answers that he has indeed taken a large herbarium with him from the East Indies. Of course the addressee is aware of the fact that Blume has continued his botanical research on Java, after he has returned to the Netherlands. At the occasion of his return to the Netherlands Blume has also taken a large botanical collection with him. Since his arrival in Holland, Reinwardt has not done anything else but editing his many notes and observations, made in the Dutch East Indies and he realizes, that he will probably never have the opportunity to elaborate the many plant species collected by him. Therefore he finally had to decide to hand his collections and notes over to Blume. So Blume, who is living and working in Brussels, is in charge of the collections of the East Indies. This explains why he – Reinwardt – is only partially able to meet Brongniart's wishes. His colleague should realize that it will be difficult to lend him specimens from that collection, which has not been examined and described until now. On the other hand he wants to show his affability. Therefore he has made a selection from his private herbarium, especially covering the part of the collection, which Brongniart is most probably interested in. He has made a selection of plants from the Moluccas and the adjacent islands, because he knows that the herbaria of Paris are already containing many species from Java, which have been collected by Commerson, Leschenault and other botanists. This small but interesting collection will be added to this letter. He hopes that it will be of help to him and that it will convince him of Reinwardt's wish to serve him. Finally he wants to warn Brongniart that these plants have not been determined under the most favourable conditions, because in the East Indies he has not had the most important

professional literature at his disposal. He asks Brongniart to inform him about the correctness or incorrectness of the determinations. He has decided to send this package to the 'Jardin Royale' in Paris, fully prepaid.

[MNHN Ms 1970a; BOT]

**669. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden), M. van Marum (Haarlem) and G. Sandifort (Leyden); 4 February 1829**

Vrolik informs the addressees that they have to assess Dumortier's treatise, entitled 'Recherches sur la structure comparée et le développement des animaux et des végétaux'. The 'Eerste Klasse' wants to receive their judgement within the next three months.

[NA-RANH KNI 175-36.702; ZOC, BOT]

**670. G. Vrolik (Amsterdam) to M. van Marum (Haarlem), C.G.C. Reinwardt (Leyden), J. Kops (Utrecht), G. Moll (Utrecht) and H.F. Thyssen (Amsterdam); 4 February 1829**

On behalf of the 'Eerste Klasse' Vrolik informs the addressees that it has been decided to award the best treatise in the field of the natural sciences, which has been published by the 'Eerste Klasse', or the most important discovery made until now.

[NA-RANH KNI 175-36.703]

**671. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 11 February 1829**

Reinwardt promises to judge three treatises. He also wants to receive a copy of the programme, in order to be better informed. He has sent his own copy to Soemmerring. He ends his letter by informing his friend about the health of his family and himself. He hopes that Van Marum is in good health too.

[NA-RANH HMW 444-107]

**672. L.C. Engel (Amsterdam) to M. van Marum (Haarlem), C.G.C. Reinwardt (Leyden) and J. Kops (Utrecht); 24 February 1829**

At the occasion of the last meeting of the 'Eerste Klasse' of the KNI, G.Vrolik has delivered a speech on the changes of the tulip bulb during development, growth and blooming. Now the addressees are asked to judge this entry. They have to report within the next two months.

[NA-RANH KNI 175-36.710; BOT]

**673. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 29 March 1829**

At last Reinwardt has finished the reading and judging of a treatise of more than a 1.000 pages. Since Van Marum has seen him for the last time he had to spend all his spare time on this most disgusting job. If it would not have been in behalf of Van Marum, he would never have accepted this useless order. After having taken some rest and after having completed other more important tasks, he will judge the treatise on the seawater. His health is rather good, although he is still a bit ill-tempered and although he still feels weak. He adds his greetings to Mrs. W. and to his niece Caroline. Hornemann has informed him that one of these days he will send Fascicle 33 of the *Nomenclature*. Furthermore he wants to observe that Gerardus Vrolik has written a dissertation on the same subject. Therefore it would perhaps be wise to invite him also to become a member of the jury.

[NA-RANH HMW 444-107; BOT, PHY, CHE]

**674. M. van Marum (Haarlem), C.G.C. Reinwardt (Leyden) and J. Kops (Utrecht) to G. Vrolik (Amsterdam); 29 March 1829**

Never before, the jury had to judge such an excellent and clear explanation of the development and changes of the tulip bulb, as Vrolik's entry is. His drawings are also very explicative. Therefore this treatise simply has to be published by the 'Instituut'.

[NA-RANH KNI 175-61(136).25 R; BOT]

**675. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 13 April 1829**

Yesterday Reinwardt has received a treatise written by Wttewael on the hearth-ashes. He has read this document without delay and he has added a concise judgement, as well as several other documents. He adds his greetings to Mrs. (W.?) and the other ladies.

[NA-RANH HMW 444-107; CHE, PHY]

**676. C.G.C. Reinwardt (Leyden) to A.Th. Brongniart (Paris); 22 April 1829**

Reinwardt informs his French colleague that a certain Dr. De Haan, director of the 'Koninklijk Museum voor Natuurlijke Historie' will leave for Paris, in order to admire his rich collections. He wants to recommend this man to Brongniart's attention. He hopes that the addressee will grant him a rendezvous. Already in January 1829 he has sent him a letter. It was addressed to the 'Jardin Royal' and covering a collection of plants from the Moluccas. Brongniart had asked to send him this collection. At that occasion he had also added a parcel for Professor Mirbel. Mirbel had suggested to send the whole package to the French consul in Rotterdam. Until now he did not receive any sign of life from Mirbel. He asks Brongniart to inform him about the arrival of these parcels and of the letter, as soon as the occasion will present itself. [The original letter is written in French]

[MNHN Ms 1970b; BOT]

**677. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1829**

Reinwardt has judged two treatises on the healthy effects of medicinal sea baths. They have both been written well. The authors are very experienced physicians, who are of course both living at the seaside. They have had the opportunity to examine the medicinal effects of these baths. They have both borrowed from the most renowned authors. They have confined themselves to the reliable facts. Perhaps they are prejudiced to a certain extent. However they did prove the good aspects of this treatment. Their prescriptions look very promising. These honest authors have also indicated which diseases can be treated and for which diseases this treatment is less appropriate or even harmful. The author of the French treatise has tested this remedy during many years. In Reinwardt's view he has proved its positive effects on health. The author of the Dutch treatise has elaborated the subject even more completely. He has also given a survey of the diseases, which can be treated. Both treatises also show their weak aspects. Furthermore the French treatise shows signs of prejudice. In Reinwardt's view both treatises can be awarded. The Dutch treatise deserves the gold medal and the French one deserves to be awarded the silver medal.

[NA-RANH HMW 444-428.313 R; MED, CHE, PHY]

**678. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1829**

The relation between the anatomy of plants and their medicinal effects has always been a favourite subject of the herb-doctors (or herbalists). These ideas are especially based on the assumption that similar causes generate similar effects. This hypothesis has never been examined properly. For the overwhelming majority of cases this supposition turned out to be false. If this statement is accepted as being right, the impossibility of proving this relationship has – in Reinwardt's view – to be ascribed to the incompleteness of our scientific knowledge. Meanwhile the sciences of botany, chemistry and medicine have made headway. In the opinion of the 'Maatschappij' the time has come for further investigations. The work of De Candolle can be taken for a starting point. The 'Maatschappij' has received three treatises from experienced scientists. Two of these entries are very extensive. So judging these documents has been a very tiring job. The most comprehensive treatise ran as much as 666 pages. Its author has taken De Candolle's *Prodromus Regni Vegetabili* for a starting point for his description of 169 plant families. He has given the chemical properties and active ingredients with respect to the human and the animal body. He did not only mention the medical facts which have sufficiently been proved already, but also those 'facts' which are supposed to be true. The second treatise (written in Dutch) is more concise, although it is still massive. The author has restricted himself to the description of those families, of which it is advisable to mention their important medicinal properties. He is really an expert in the fields of modern botany, in the botanical chemistry and in medicine, although he did carry out less observations. Because these two treatises are very similar in their contents and elaboration, Reinwardt wants to combine his judgement of both documents. They both give many superfluities. On the other hand the information is very important. Both authors have based on the most reliable and renowned scientists. However they should have been more consistent in their search for the interdependence between the morphology and anatomy of the plants on the one hand and the medicinal properties of their chemical constituents on the other hand. They have both been too servile adherents to De Candolle. They have not been persuaded enough of the necessity of a thorough chemical analysis. Especially this part of the treatise is very briefly-worded. The same goes for their conclusions and considerations.

With respect to the German treatise Reinwardt observes that the author has described in a concise way what he knows about the exceptions of the rule that there is a certain correlation between the shape and anatomy of the plants on the one hand and their medicinal properties on the other hand. The author even puts that he who wants to unveil these secrets has to proceed quite differently from De Candolle. Reinwardt, who does not agree, wants to end his discussion of this entry.

The third entry, the French treatise, is towering above the other two, although it is very concise. At least its author has consistently and continually tried to find the relationship between the shape and anatomy of the plants and their possible medicinal properties. Besides, he has omitted what was unprovable. Quite correctly he has admitted that a meticulous chemical analysis is very important. In his discussion the sequence of the families has been determined by the extent of the conformity between the shape and the medicinal capacities. He has dared to abandon De Candolle's sequence, to examine and to test his statements and to refute them if necessary. He has also demonstrated that, during the last years, botany and medicine have almost been at a standstill. In the author's view science has not made enough progress to deliver a completely satisfying answer to this question. Although Reinwardt seems to prefer this French treatise, it also has its weak aspects. Even this author has based his treatise too much on the ideas of De Candolle and his botanic approach has been too weak and too concise. All things considered, the French author has been the most consistent in his quest for the interdependence, which the 'Maatschappij' wanted to be unveiled. So it deserves to be awarded the gold medal, while the other two entries are deserving an honourable mention in the next programme.

[NA-RANH HMW 444-428.316 R; MED, BOT, CHE]

**679. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1829**

The manuring experiments with hearth ashes on various soils have demonstrated that what is harmful for lower and marshy grounds, is good for the improvement of higher sandy soils. The experiments carried out by the author of this treatise, have produced important and rather decisive results. The rest of the treatise is rather meaningless, especially with respect to the chemical and physical statements. All in all, this treatise is rather

superficial and incomplete. The author has not given any proof. In some cases he considers the 'combining power' of the ash an advantage, in other cases he regards it as a disadvantage. In his view the 'stimulating power' of the ash will facilitate the dissociation of the fertile substances, which are present in the soil. He did not spend a word on how the ash can stimulate the plant directly. The chemical analysis of the ash is both primitive and meaningless. The author has borrowed on a large scale from Humphrey Davy. He did not consult any other source.

[NA-RANH HMW 444-428.318 R; AGR, BOT, CHE]

**680. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1829**

The treatise in which the presence of large rocks in the Netherlands and in northern Germany has been explained, is without any value and does not deserve much attention. The author did not carry out any observations. What he has given is only a hotchpotch of items from scientific works, which have been published before. It is a chaotic approach of the subject. The author has presented a catalogue of 67 kinds of rocks occurring from the Netherlands to the most remote borders of Russia and the Mediterranean. In the author's view these rocks originated from the mountains of Northern Europe. They must have been transported by the ice through the Baltic Sea to Western Europe. He also bases his ideas on the study of rocks seen by him in Sweden. He did not at all contribute to the discovery of this secret. To a certain extent the author seems to be acquainted with the works of Brongniart, Burkland (?), Von Buch and Hausmann (Göttingen). He has also borrowed many ideas from other authors. Reinwardt rejects this entry and is looking forward to receiving a real important treatise on this subject.

[NA-RANH HMW 444-428.319(1) R; GEO, MIN, PHY]

**681. G. Moll (Utrecht), C.G.C. Reinwardt (Leyden) and A.H. van der Boon Mesch (Leyden) to G. Vrolik (Amsterdam); 4 May 1829**

Van Beek has delivered a speech in the meeting of the 'Eerste Klasse' on the colorimeter, invented by Biot. Now Moll has examined this instrument. He has decided that it seems to function satisfactory. In his view it is not necessary to explain its functioning, because most of the members have witnessed its demonstration. Van Beek has declared that he has based his

own devise on that invention. Its most important element is a prism made of Iceland Chrystal ('dubbelde spaath'), which has been 'achromatized'. In Moll's view the major problem is that most instrument makers are not able to built such an instrument. Van Beek's new instrument differs from the one invented by Biot. Even mediocre instrument makers are able to construct it. Another advantage of this instrument is that Van Beek has used the new knowledge of the nature of light –to be precise: the 'doctrine of polarization' – in the most ingenious way. Moll also honours Huygens, the founder of this theory and Malus, who has elaborated this theory on a more modern scientific basis a couple of years ago. All in all, Van Beek's invention is new, ingenious and useful. So it is an important contribution to the *Verhandelingen* of the 'Eerste Klasse'. The only problem is that the treatise has to be reshaped, before the 'Maatschappij' can decide to publish it. Reinwardt and Van der Boon Mesch are willing to agree with Moll's advice.

[NA-RANH KNI 175-61(136).27 R; PHY, TEC]

**682. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 18 May 1829**

Yesterday night, when he returned at a very late hour, he found a letter from his friend. Not until now he has got the time to answer it. He has read and edited the (printed) drafts of the botanical and chemical questions, which will figure in the new prize contests, insofar it was necessary. With respect to the subject of one of these questions – about 'anti-hydrophobic plants' (?) and toxicological subjects – he suggests the author to consult among others the following sources: Hufeland's *Journal*, Ruct's *Magazin* (?), the *Allgemeine Medizinische Annalen* (1822), p. 1681, the *Observations sur l'hydrophobie* (by Docteur Marichetti, Saint Peterburg, 1825), the *Archives Générales de Médecine*, Tome IX, p. 80 and the *Bulletin des Sciences Médicales* (Août 1825). Finally he mentions Hooker's *Muscologia britannica*, sent to him by Frank (Brussels), through Van den Ende.

[NA-RANH HMW 444-107; MED, BOT, CHE, GEO]

**683. G.Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden); 10 June 1829**

In the last meeting of the 'Eerste Klasse' Gerard Moll (Utrecht) has presented a treatise on the heating of hothouses, together with seven drawings. Reinwardt is asked to report on it within four weeks.

[NA-RANH KNI 175-36.730; AGR, PHY]

**684. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden) and N.C. de Fremery (Utrecht); 17 July 1829**

Vrolik informs the addressees that he has received a letter from the Minister of the Interior (dated 6 July 1829, n° 211), covering a report from the Administrator of the Direct Taxes, regarding the adoption of a new hydrometer ('areometer' or 'vogtweger'), destined for the testing of brine, which has been devised by Van der Toorn. The Administrator has added a copy of the rewarded treatise. The Minister wants to receive an advice from the 'Eerste Klasse' with respect to this invention and to the documents he has added. In his treatise Van der Toorn refers to a table, which he has sent to the 'Eerste Klasse' previously. Unfortunately it has not been possible to examine Van der Toorn's contribution, because he had ordered not to open the sealed tin box until after a written permission has been given. The author did not give his permission until now.

[NA-RANH KNI 175-36.742; CHE, PHY]

**685. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden), N.C. de Fremery (Utrecht) and A.H. van der Boon Mesch (Leyden); 17 July 1829**

At the occasion of the last meeting of the 'Eerste Klasse' Hermann Schlegel (Leyden) has offered a treatise on the anatomy of the fin whale, which has been washed ashore on the beach of North Holland in 1826. He has added three drawings. The jury has to report within the next two months.

[NA-RANH KNI 175-36.744; ZOC]

**686. C.G.C. Reinwardt (Leyden) and G.Vrolik (Amsterdam) to G.Vrolik (Amsterdam); July 1829**

Moll's treatise on the heating of hothouses by means of steam is an excellent contribution to science. He has elaborated this subject brilliantly. He has explained the technical and physical aspects of a new way of heating. This presentation proves the advantages of the new system, compared with the old way of heating hothouses. The appliance has been described in detail. It is possible to see this apparatus at work on 'Sparenburg', the country estate of Mr. Van der Hoop. It has functioned perfectly during the last severe winter. In Reinwardt's view this heating system should be generally introduced in the Netherlands. Without hesitation he advises the quick publication of this

document. Besides it must be made generally obtainable, together with the drawing (by means of a copper engraving or a lithography).

[NA-RANH KNI 175.61(136).31 R; AGR, BOT, PHY, TEC]

**687. C.G.C. Reinwardt (Leyden) to A.Th. Brongniart (Paris); 10 August 1829**

Against his will Reinwardt has been forced to postpone his answer to Brongniart's letter, dated 30 May 1829. He has been rather occupied, because he had to help Blume with the completion of his issue of the *Synopsis*. Hardly any complete or undamaged copy of this work, which has originally been published in Batavia several years ago, was available in Holland. Finally he will be able to send Brongniart a complete copy, together with the Parts 1 and 2 of the *Enumeratio*. Regrettably it is still impossible to share his collection of ferns, grasses, Cyperaceae and orchids with him, because Blume is still busy writing his 'Flora of the Indies' ('Flora van de Indiën'). Because Blume is staying in Paris just now, which means that he might be able to serve Brongniart, the addressee should try to get a few objects out of him. He will undoubtedly succeed. Besides for the same reason his collection of Cyperaceae has been sent to Professor Schrader (Göttingen), while Professor Van Hall is studying his collection of grasses at the moment. He would be very pleased if Brongniart would be so kind to send him double specimens from his herbarium. He is especially interested in American plants, because these are still almost absent in the Leyden collection. [The original letter is written in French]

[MNHN Ms 1970c; BOT]

**688. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden), M. van Marum (Haarlem) and A.H. van der Boon Mesch (Leyden); 14 August 1829**

In the last meeting of the 'Eerste Klasse' N.C. de Fremery has offered a treatise entitled 'Over eenen hoorn en gedeelte des bekkeneels van een Bos primigenius, in februari 1825 bij de Eembrugge gevonden; en dezelve opgehelderd met daarnaast vervaardigde teekeningen' ('On a horn and part of the skull of a specimen of *Bos primigenius*, found in February 1825 at the Eembrugge; illustrated by means of a couple of drawings'). The commission has to enter its report within the next three months.

[NA-RANH KNI 175-36.754; GEO, ZOC]

**689. C.G.C. Reinwardt (Leyden) to his relatives (Amsterdam?); 14 August 1829**

On behalf of his wife Reinwardt sends his condolences to an uncle and aunt (perhaps related to his wife) in response to the message received with respect to the death of Mr. W.G. Koopman.

[UBL BPL 2922]

**690. N.C. de Fremery (Utrecht) and C.G.C. Reinwardt (Leyden) to G. Vrolik (Amsterdam); 24 August 1829**

Through his letter, dated 6 July 1829 (n° 211) the Minister of the Interior has asked the 'Eerste Klasse' of the 'Instituut' to give its advice with respect to a recently devised 'areometer', designed for the testing of brine. The commission has decided that for the time being it is impossible to meet the demand of the Minister. The commission has also read the letter sent by the Administrator of the Direct Taxes and the Excises, relative to Van der Toorn's invention. The commission decides that Van der Toorn's instrument is still defective and that its introduction might work out badly for both parties, on the one side for the government and on the other side for the owners of the 'salthuts'. Before being able to advise finally this instrument must be examined meticulously. Besides the commission is still ignorant about the table (with data), enclosed in a sealed tin box. So Van der Toorn has to authorize them to unseal this box.

[NA-RANH KNI 175-61(136).35 R; CHE, PHY, TEC]

**691. C.G.C. Reinwardt (Leyden), G. Sandifort (Leyden) and M. van Marum (Haarlem) to G. Vrolik (Amsterdam); 24 August 1829**

Reinwardt has judged Dumortier's treatise, entitled 'Recherches sur la structure comparée et développement des animaux et des végétaux'. This author has tried to determine the similarities of plants and animals with respect to their growth. He has started his hypothesis by stating that the very beginning of plants and animals consists of liquids, soft and solid ingredients. The author's classification of the plants: 'acotyledones', 'monocotyledones' and 'dicotyledones' is rather inconspicuous. Immediately after having done so he prefers to introduce new names: 'plantae celluloses', 'plantae vasculosae endogenae' and 'plantae vasculosae exogenae'. Thereupon he is giving new names: 'axyles' (plants without wood), 'exoxyles' (plants, having its wood at

the exterior of the stem) and ‘endoxyles’ (plants, having its wood in the interior of the stem). The author did not only give well-known facts but also new and interesting ideas, among others with respect to the growth of the ‘conserva’, regarding the anatomy of knots and lids (of the stems) and with respect to the basal part (ring or ‘collet’) between the root and the stem. He underlines that the hairs of the plant are serving for absorbing water from the atmosphere. In his view the organs of motion of the plant are developing from the exterior cellular layers of the stem. He has carried out experiments in order to prove that statement. In the view of the jury – and especially of Reinwardt – these proofs are less deciding than the author wants to suggest. Other scientists, especially German botanists, have already proved the most reliable of these ‘facts’. Surprisingly enough the author denies every difference between the animals and the plants. In his view the most obvious difference between plants and animals is that in plants growth and development are always directed centrifugally, while in animals these processes are always directed centripetally. Reinwardt fears that the scientist, who will once have discovered and accepted this difference, will no longer try to find other differences. Fortunately the author did not stop his quest. He has pointed at various resemblances between animals and plants. In the author’s view the animals should be divided into animals without a skeleton, animals with an external skeleton (Crustaceae and Insecta) and animals with an internal skeleton (Vertebrates). In his presentation of similarities (analogies) between plants and animals the author has given many wrong and meaningless examples. They are unnatural and useless. Because the most sensible part of his treatise, in which he has described many observations, has already been published (in: ‘Message des Sciences et des Arts’, n° 2 and 3, Ghent, 1829), this entry has to be returned to the author. The ‘Eerste Klasse’ might add that it is pleased by the fact that his observations have already been published elsewhere.

[NA-RANH KNI 175-61(136).36 R; ZOC, BOT]

**692. C.G.C. Reinwardt (Leyden), N.C. de Fremery (Utrecht) and H.C. van der Boon Mesch (Leyden) to G. Vrolik (Amsterdam); 27 August 1829**

The fin whale, which has been washed ashore on the coast of North Holland and which has been anatomized by Hermann Schlegel, has been acquired

in behalf of the 'Koninklijk Museum van Natuurlijke Historie' in Leyden. Schlegel has determined the species, after which the jury has decided that it is a specimen of the Greenland whale (or bowhead whale, *Balaena mysticetus* L.) A problem is still that the descriptions of the other whales are very vague and incomplete. Therefore Schlegel has added a complete enumeration of the writings on the various kinds of fin whales. After having judged these documents he has decided that the various animals known under the name of *Physalus* (or *Physeter*), *Balaena Boops*(?), *Balaena musculus*, *Balaena Rorqual* (?), *Balaena rostrata*, *Balaena nodosa* and *Balaena gibbosa*, all belong to the same species as the specimens of the fin whale do, which have been washed ashore in 1791, 1811, 1826 and 1827. Reinwardt has not been surprised by this result, given what Cuvier has written on this subject in his excellent work on the fossil bones. This scientist has demonstrated the clear differences between the fin whale of the southern seas and the Nordic fin whale. He has also put that a third species of the fin whale is living in the Mediterranean. Schlegel has questioned this classification. In his view there are only two species of fin whales, a Nordic and a southern species. Therefore he urges to call the other fin whales '*Balaena sulcata*'. A common characteristic of these animals is the presence of distinct folds on their belly. Furthermore he divides the species *Balaena mysticetus* L. in '*Balaena mysticetus* L. arctica' and '*Balaena mysticetus* L. antarctica'. In the view of the jury Schlegel has done a good job. This accurate treatise and its fine drawings must be published by the 'Eerste Klasse'.  
[NA-RANH KNI 175-61(136).37 R; ZOC, ART]

**693. C.G.C. Reinwardt (Leyden), M. van Marum (Haarlem) and H.C. van der Boon Mesch (Leyden) to G. Vrolik (Amsterdam); late Summer of 1829**

Reinwardt has judged a treatise on a part of the skull of an animal belonging to the genus of the bullocks. This skull fragment, also bearing the bony part of one of the horns, has been found in February 1825 at the 'Eembrug'. The author has made precise drawings. There is no similarity with the skulls of the modern species. The remains are belonging to an extinct species, of which bone fragments have already been found before. The renowned Cuvier has already put that these remains belong to the original species ('stamsort'), from which our modern cattle have developed, while the late L.H. Bojanus,

who had an almost complete skeleton of this extinct animal in his possession, which has been excavated near Weimar in 1821, has put that these rests belong to a different species. He has also published a treatise on this animal, in which he has compared it with the aurochs (living in the Lithuanian woods; see: *Nova Acta Academiae Leopoldinae* 'Nieuwe Verhandelingen van de Keizerlijke Akademie van Natuurkundigen', Bonn), to which drawings had been added. He had given it the name of *Bos primigenius*. N.C. de Fremery, the author of the treatise, has recognized enough characteristics to call the remains described by him '*Bos primigenius*'. This animal has lived during the diluvial period. It is the era of the *Elephas primigenius*, *Rhinoceros primigenius* and several other extinct species. The jury is unanimous about this treatise and its drawings; It is an important contribution to our knowledge of the ancient natural history of our country. It must be published in the works of the 'Eerste Klasse' of the 'Instituut'.

[NA-RANH KNI 175-61(136).42 R; ZOC, GEO]

**694. W. Landré (Batoe-Santhar) to C.G.C. Reinwardt (Leyden); 11 November 1829**

Already sometime ago Willem Landré has sent Reinwardt a letter with the 'Hypomenes', with which also General Holsman and Mr. Van Riemsdijk have returned to Holland. On that occasion he has asked to help him financially, in order to enable his younger brother Charles to complete his studies at the university. He has promised to repay him as soon as possible. Because Reinwardt may not have received this letter he repeats his demand. He hopes that his financial position will improve, because he has learned that again some money has been transferred to his brother Jan Daniël. This has made it possible for him to send once more 800 guilders to Padang. Furthermore he will buy a bill of exchange (payable in Holland) as soon as possible. It will be sent to Holland.

Willem Landré informs Reinwardt that he has climbed the volcano in that region for the second time. MacGillavry – at the moment resident – had invited him. They have made camp near the top, on the bare ridge, which had been fully covered with 'burnt out' rocks, along which they have climbed the mountain. Fortunately it did not rain. Although they came very close to the crater, it was impossible to determine its diameter and depth, because of the smoke. All in all, they could not see more of this Sumatran

fire-breathing mountain than they could see of the volcano of Banda. On the other hand the weather was very bright and the sky was very clear, so they were able to take many bearings, which will help Mac Gillavry to draw his geographical map of the inlands. The natives have told them that on a certain part of the slopes of the mountain the animals are dying. Until now they have not had the opportunity to visit that site. According to the natives this mountain is provided with six more craters, so it is a huge volcano. MacGillavry has told him that it is about 12.000 feet high. Mr. W. van IJsseldijk, who has accompanied the resident during his journey through the inland, did not want to experience all these tiring activities. Landré had just decided to prepare a collection of minerals for shipment to Reinwardt, when he was told that the 'Mercurius' was on the verge of leaving. He had to decide to send this collection at the next possible occasion. To that shipment (which will probably be sent to Holland through Antwerp) he will also add a collection of weapons, which are used by the Malaysian natives. Furthermore he asks Reinwardt to inform him which translation of the Holy Koran is the most appropriate for helping to end the war about religious concepts. His brother Jean had promised to send him this document. He recommends himself to Reinwardt's friendship and asks him to inform his brother Charles about the publication of important books. He also asks to convey his greetings to Van Breda, to Mrs. Reinwardt and to Miss Caroline. He finally expresses his strong feelings of esteem and sincere gratefulness.  
[NA 2-21.204(4); GEO, MIN, ETN]

**695. E.L. Baron van Heeckeren (Paramaribo) and ?? Vlier (Paramaribo) to C.G.C. Reinwardt (Leyden); 30 November 1829**

Van Heeckeren, Governor-General of the Dutch West Indies and president of the Agricultural Society of Surinam, and Vlier, its secretary, inform Reinwardt about the recent foundation of this Society, adorned with the maxim 'Prodosse bonamur' (16 May 1829). A copy of the 'Transactions' of the Society has been added as well as a membership list. At the occasion of its meeting held on 26 October it has been decided to appoint Reinwardt honorary member of the Society. Van Heeckeren hopes that Reinwardt will be willing to contribute to its flourishing when the occasion will present itself.

[UBL BPL 2922; AGR, BOT]

**696. C.G.C. Reinwardt (Leyden) to J. de Vries (Amsterdam); 10 January 1830**

Reinwardt is very pleased by the fact that he has the opportunity to welcome the son of De Vries in his home. De Vries has always welcomed him very heartily. Meanwhile most of his friends have died. Among those who are still alive, there are only very few like De Vries. Even his ties of friendship with Van Marum have been detached to a certain extent. He still appreciates that De Vries has watched over his niece Caroline in the past, until he could take care of her personally. He very much regrets Thyssen's death. He was one of the most brilliant physicians of Amsterdam.

[KB 12 B 8; MED]

**697. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 11 January 1830**

Reinwardt enters the translation of the botanical contest, as well as the translation of the announcement of the geological contest. He hopes that Van Marum will accept the text. He should present these translations to Mr. D'Ange. He also returns the 'Courant'. He advises his friend to send the programme immediately to Henschel and to Treviranus. Sending it to Schelver is useless, because he is living in a mental institution ('Verbeterhuis'). Furthermore he observes that the cold weather has affected his health. He is frequently catching a cold and he often has to keep his room. He hopes that Van Marum is enjoying good health and asks him to convey his greetings to Mrs. W.

[NA-RANH HMW 444-108; BOT, GEO]

**698. C.G.C. Reinwardt (Leyden) to H. Schlegel (Leyden); 4 February 1830**

Perhaps Schlegel has already been informed that Reinwardt was ill when he received his letter. As a consequence he could not show his pleasure about the fact that Schlegel had not forgotten him. A severe catarrhal infection and fever had affected him. Meanwhile he has completely recovered. His many activities, which had to be postponed, have kept him from answering Schlegel's letter. Although the recovery went very slowly, he is again looking forward into the future. He regrets Schlegel's misfortune, although he could have predicted this outcome. He hopes that Schlegel will soon recover

and so do his friends. He can imagine that for the time being the 'world', Schlegel is living in, is showing hardly any similarity with what he is striving for. He sincerely regrets Schlegel's fate. Since Schlegel has left Leyden and so many other friends are absent, Leyden has become very quiet. The same goes for the Museum. They are all longing for his quick return. Mr. Mulder, a brother of the Franeker professor, is occupying himself with zoology. He is making zoological drawings for Mr. Von Siebold and they often see each other. Blume is assisting Von Siebold with the elaboration of the Javanese Crustaceae. Blume will stay in Leyden, together with his adjutant, Dr. Fischer, a very industrious man, who feels more attracted by zoology than by botany. Unfortunately there is no important literary news. Because the transit is hampered, almost no French publications arrive in The Netherlands. On the other hand writings from the various corners of Germany are easier to be had than ever before. Most of these publications are rather meaningless. In this hackwork the Munich professor Wrogler beats the lot. He has published a couple of new atlases in folio. Reinwardt recommends himself to Schlegel's friendship. They are all longing for favourable news about him and they are hoping to have him in their midst soon again. He signs as Schlegel's true friend.

[UBL BPL 2742; ZOC]

**699. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 4 February 1830**

Reinwardt has to deliver lectures. He observes that he has nothing else to add to his report enclosed in this letter. The treatises and the case of preparations have already been delivered at Temminck's, in accordance with Van Marum's request. He also promises to send the programmes. Because the weather is very cold he will poke up the fire. Fuel has been scarce lately. He is happy about Van Marum's condition of health.

[NA-RANH HMW 444-108]

**700. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 28 March 1830**

Reinwardt has spent his last days off on reading the treatises on tannin. Now he returns these documents. He promises to return the report later, although he does not know what to do about it. Why did Van Marum not

inform him about the problem of these treatises? Of course Professor Van der Boon Mesch must have noticed too that several parts of the two entries are identical. So the authors must be identical. In his view the treatise 'B' is the original one, while 'A' is the copy. He wants to see Van Marum and Van der Boon Mesch about it. He prefers to advocate the award of 'B'. This treatise gives a number of important experiments and observations. The author deserves to be awarded.

[NA-RANH HMW 444-108; CHE, BOT]

**701. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 13 April 1830**

The last few days the obligation to devise new contests has troubled Reinwardt's mind. Now he has thought up a couple of them and he hopes to have met Van Marum's wishes. He also adds a couple of seeds his friend wanted to receive, as well as the *Litteraturblätter* and a note from Meyen on the contents of plant cells. He does not possess a treatise on *Secale cornutum*, although he knows that in several renowned journals and books writings on this subject have been published. He will have to look for these publications.

[NA-RANH HMW 444-108; MED, BOT]

**702. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 19 April 1830**

Reinwardt does not understand why Stratingh has not discovered too that the two treatises are identical. Now he has learned from Van Marum that 'A' has been submitted a couple of years after 'B' had been entered, the mystery has been solved. It is not necessary to invite a fourth assessor. Stratingh fully agrees with him: the author of 'A' has to be awarded. Both treatises have been written by the same author. This man may have thought that his first entry has been lost, because it was not mentioned in last year's programme, or that the 'Maatschappij' had decided that the treatise was far too sloppy, because it was not a regular journal of his observations and experiments. Afterwards the author has had the opportunity to improve, to polish up and to abridge his treatise. He has understood that the 'Maatschappij' especially wanted him to do so. Anyhow he has not made himself known. If Reinwardt would have been informed previously, he would perhaps have decided otherwise. He dislikes the way Van der Boon Mesch has formulated his judgement;

it is very low. He advises the 'Maatschappij' to take up his judgement. He returns the documents and adds his suggestion for a contest on the warmth of plants.

[NA-RANH HMW 444-108; BOT, CHE]

**703. M. van Marum (Haarlem) to C.G.C. Reinwardt (Leyden); 20 April 1830**

Yesterday Van Marum has received the two treatises on tannin, which have been returned by Reinwardt. He agrees that – after having compared these entries – the contents of the two documents are very similar. Reinwardt is absolutely right. The treatises have been written by the same author. Yesterday evening he has seen the president of the 'Maatschappij' about this problem. The president has decided to share Van Marum's and Reinwardt's opinion. Therefore he proposes to put treatise 'B' aside and not to mention it at all in the next programme. Once again he returns the report to Reinwardt and asks him to reconsider his advice and to restrict himself to the treatise 'A'. He has already deleted the lines, which have been written with respect to the treatise 'B'. He will inform him, at the occasion of the sending of the new programme.

[NA-RANH HMW 444-423.278 R; BOT, CHE]

**704. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 22 April 1830**

Reinwardt has met Van Marum's demand – to rewrite his report on the treatises on tannin. In accordance with the wishes expressed by Van Marum and the president of the 'Maatschappij', he has distinctly simplified and elucidated the drafts of the contests. He wonders why none of the 99 other members and the many directors are able or willing to devise drafts of contests. He also returns the note entered by Schultz. As a matter of fact he has decided that he wants to regard his report as an anti-criticism. If he has to judge this treatise he must of course have it in his possession in order to read it.

[NA-RANH HMW 444-108; BOT, CHE, PHY]

**705. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1830**

Reinwardt gives several important aspects of the treatise on the tannin. First of all the author has put that tannin is a rather common substance in the vegetable kingdom. Besides it has almost always the same composition, especially after it has been refined. This substance is easily combining with animal glue, which produces a solid combination. Furthermore the author puts that tannin does hardly colour the dissociated iron salts. In Reinwardt's view this is contradictory to what chemistry has proved with regard to tannin. With respect to other aspects the author has been more convincing through his many observations and experiments, both analytic and synthetic. All in all, the author has been convincing with respect to the first two parts of the question. He is really an expert. The answer to the third part of the question – about the production of synthetic tannin from coal, camphor and indigo – did not convince Reinwardt. The answer to the last part of the question – about its possible applicability to works and to the fine arts – is also less convincing. The author did not carry out any experiments in order to find the answer. In Reinwardt's view many of the experiments will have to be rehearsed and their results must turn out to be affirmative. Several statements are untenable. This does not mean that one should doubt the truth and the precision of this treatise. Besides the author has dealt with one of the most difficult subjects of chemistry. He has really tried to unveil the secrets of this subject. He has made quite an effort. He has made a valuable contribution to the extension of our knowledge of tannins. These results are very challenging to other scientists, who want to continue these investigations. So Reinwardt does not hesitate and he pleads to award and to publish this treatise.

[NA-RANH HMW 444-423.278 R (1830-I); BOT, CHY, PHY, TEC]

**706. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1830**

The author of the awarded treatise on tannin, to whom an incentive bonus has already been promised, has taken the jury's remarks to heart. He has sent after a supplement, in which he has especially discussed those subjects, which have been criticized. He has also carried out new experiments. He has tested more different tannin containing plants. Nevertheless he has stuck

to his deviant concepts. The results of the new experiments have encouraged him in his conviction, although he has decided that there is only one type of tannin present in many plants. Minor differences between the substances are caused by impurities. If this concept will be confirmed by new experiments, he will have made an important discovery on the way to the completion of our knowledge of this peculiar substance. Yet Reinwardt keeps his doubts with respect to a number of the author's experiments. These are too laborious and they have been carried out at a too small scale. In his view the author has been more successful in his painstaking analysis of the artificial tannin. Because these results turned out to be surprising, the author had to correct his point of view. The nature and the composition of the artificial tannin are completely different from the natural substances. He has clearly improved this part of the treatise. The same goes for the part in which the possible use of tannin is discussed. So All in all, the author has met with the demands of the 'Maatschappij'. He is entitled to receive the bonus now.

[NA-RANH HMW 444-423.278 R (1830-II); BOT, CHE, PHY]

**707. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1830**

Of the four treatises, submitted in response to the contest on the cuckoo, only the German entry under the maxim 'He who gathers his learning from books ...' (marked 'A') deserves to be discussed. Only this author did prove to be familiar with the nature, anatomy and way of living of the cuckoo. He is the only one who is capable of explaining the way of living of this bird. His treatise has been written well. The author has given an excellent analysis of the natural history of this bird, in which he has combined its way of living, the anatomy and the physiology. He is well informed about what other naturalists have already written on the subject. He has explained why the female is not able to hatch the egg herself. He has also added beautiful and detailed drawings, as well as an egg and a couple of anatomical sections.

[NA-RANH HMW 444-429.331 R; ZOC]

**708. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 9 May 1830**

Of the drafts of contests sent from Groningen, the first and the second suggestion are the most appropriate, although Reinwardt does not expect a

lot from these concepts. Most probably they will only fill up the programme. Of the two drafts entered by N.C. de Fremery, the first one is the most interesting. Reinwardt proposes to add the information that other physicians do not expect much from iodine against struma (goiter), although it is absolutely one of the most recommended medicines. De Fremery's second draft is less fit for a contest, because the chemical character and the nature of the iodides (iodine salts) is too variable. Most of these compounds are dissociating in water. Therefore they cannot be used for the production of stable pigments. The third question – on the mortar – really pleases him. He has no opinion with respect to the question discussing the artesian wells, because he is not an expert in that field. Finally he adds a few remarks with respect to the possible repetition of old prize contests. He would like to have lunch at Van Marum's on 21 May 1830. He does not know yet if his wife will accompany him, because they will have guests in Leyden. He adds his friendly greetings to Van Marum.

[NA-RANH HMW 444-108; MED, CHE, PHY]

**709. Administrator of the Ministry of Education, Arts and Sciences (The Hague) to C.G.C. Reinwardt (Leyden); 13 May 1830**

With pleasure the Minister of Education, Arts and Sciences presents Reinwardt a copy of the issues 1 to 29 of the *Flora Javae*, written by C.L. Blume. He also promises to send further issues. If this work is needed in The Hague, Reinwardt has to return all issues.

[UBL BPL 2425; BOT]

**710. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden), G. Vrolik (Amsterdam) and J.G.S. van Breda (Ghent?/Leyden?); 25 May 1830**

The 'Eerste Klasse' has received a treatise entitled 'Ontleedkundig Onderzoek der Walvisschen' ('Anatomical investigations of the whales'), together with several drawings, which has been submitted by G. Sandifort (Leyden). The addressees have to judge this treatise.

[NA-RANH KNI 175-36.857; ZOC]

**711. G. Vrolik (Amsterdam) to N.C. de Fremery (Utrecht), C.G.C. Reinwardt (Leyden) and A. van Beek (Utrecht); 23 June 1830**

The commission charged with the examination of Van der Toorn's proposal of an areometer for the determination of the concentration of brine, has expressed its wish to carry out several experiments in order to test the instrument. So it has reported to the Minister of the Interior through its letter of 1 March 1830. The Minister did not answer this letter until now, not even after Vrolik had sent a reminder. The commission has received a letter from the Administrator of Education [see also NA-RANH KNI 175-36.835, dated 23 June 1830], in which he asks to be informed about the additions (additives), needed for making the common salt fit for human consumption and to keep it usable for manuring farming land, for feeding cattle and for cattle breeding. In the last letter the government asks the 'Eerste Klasse' to occupy itself with this problem. Vrolik informs the members of the commission that he will send them copies of the various documents.

[NA-RANH KNI 175-36.834; CHE, PHY, AGR]

**712. ?? Dalton (Batavia) to C.G.C. Reinwardt (Leyden); 6 August 1830**

Reinwardt gives a survey of the contents of the document sent to him by Dalton. It deals with various notes, which have been written about observations carried out in Borneo, early 1828. Dalton has travelled through Java, in the company of Raffles. In the opening lines of his letter he also refers to J. Chr. Baud. Dalton discusses the customs of the Daijaks and other peoples, cannibalism and religion (which – in his view – is related to the religion of the Indian continent). In the inner regions he has also seen beautifully sculptured Hindu statues and monuments. Several of these have been found more than 400 miles from the coast. He also gives historical facts about Borneo and the other islands. The peoples, who have lived there, had the highest degree of development of the whole archipelago. Anyway they had a higher development than the Malaysians now have. He describes the relation with the Moluccans and with the people of Makassar, discusses the ways in which these peoples were governed and also spends a few words on the colonization of this island from India and from China. He adds several geographical facts and descriptions of weapons and tools. He describes a number of animal species, among others several species of orang utan, of

which one tailless species always goes upright. There is also another orang utan species, which is even stronger than the already well-known species. Furthermore there are bears, deer, rhinoceroses, tiger cats and many snakes, small and large ones (among others the *Boa constrictor*). Most of these animals are also common in the rest of Asia. Finally he discusses the way in which the houses and palaces are built. He also describes the hatred for foreigners, especially for the Dutch.

[UBL BPL 609-2; ZOC, GEO, ART, ETN]

**713. C.G.C. Reinwardt (Leyden) and G.Vrolik (Amsterdam) to G.Vrolik (Amsterdam); November 1830**

The members of the jury, who had to assess Sandifort's treatise on the whales, underline that the author has paid special attention to the structures of the frontal part of the respiratory organs, especially to the larynx, the trachea and the surrounding parts. The author has made his observations in the anatomical museum of Leyden. The results are based on the examination of a cadaver which had been washed ashore on the coast of the 'Zuyderzee', near the village of Marken. In his view it is a specimen of *Balaena rostrata* Fabr. Sandifort has carried out the dissections himself, insofar it was still possible, given the condition of the cadaver. He has completed his observations through the examination of two foetuses of the Greenland whale, *Balaena mysticetus* L. The jury decides that the dissections and their descriptions are extremely accurate. This treatise is really an important contribution to our knowledge of the anatomy and function of the respiratory organs of the whales. This contribution is even more important, because the opportunity to dissect and to analyse such animals is very rare. The possibility to study the vital functions and life of these animals is even more exceptional. Although other researchers, like Hunter, Camper and Rudolphi, have already discovered many facts, Sandifort's contribution excels them all, because of its exactness and completeness. He has also given an important addition, by adding information about the anatomy and function of the respiratory organs of the dolphin. Furthermore he has also made a new discovery with respect to the *Labyrinthus rugosus*, a large paired bladder, or pocket, filled with air, which has a communication with the opening through which the whale is breathing. Besides he has demonstrated that the crania of *Balaena rostrata* and of *Balaena mysticetus* have a circular opening, through which

the olfactory nerves have their passage. Finally the author explains how these animals breathe and how the water is expelled. The jury is pleased by the very beautiful drawings. This treatise must absolutely be published by the 'Eerste Klasse'.

[NA-RANH KNI 175-62(137).4 R; ZOC, PHY,ART]

**714. C.G.C. Reinwardt (Leyden) to J.A. Susanna (Leyden); probably the end of 1830**

Through this document Reinwardt informs the administrator of the 'Rijksmuseum van Natuurlijke Historie' (Leyden) that Mr. W.A. Schimmelpenninck van der Oijen offers a fossilized fragment of an elephant's tusk to the museum. He has bought this object from a farmer, living near the Lake of Perugia (formerly called 'Lake of Trasimeno'). He also offers several objects, which have been exhibited in the museum of Florence. These have been excavated on the site, where once Hannibal has defeated the Romans for the second time. Mr. Schimmelpenninck assumes that the above mentioned tusk fragment has remained from one of the last elephants, which was left after the battle of Trebia. In Reinwardt's view this object has to be much older, because it has already been fossilized. Most probably it does belong to an elephant species, which is already extinct, for example to *Elephas primigenius*.

[NAT; GEO, ZOC]

**715. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 6 January 1831**

Meanwhile Reinwardt has been ill for about three weeks. He is suffering from a febris intermittens larvata, which has been hidden under a severe catarrhal affection, accompanied by an abundant mucous excretion and painful coughing. The most severe attacks have occurred during the night. However the fever has been ended by using quinine sulphate. This disease has exhausted him, but he hopes to recover soon ('Good food and roberantia will help'). Unfortunately he has lost much precious time. He had to inform The Hague that he has to postpone his work for the government. For the moment it is impossible for him to combine this task with his academic activities and his other duties. Being aware of these duties, he promises to do his utmost. Unfortunately he has to ask Van Marum not to send him further

treatises for assessment for the rest of this year, even those, which have been based on the prize contests devised by him personally. At the moment the 'Maatschappij' has more than enough members, who are capable of judging these treatises and who are experts in the fields of chemistry and botany. Goeppert (Breslau) has sent him a book on the body heat of plants and he will send it on to Haarlem, but not until the barge will be able to sail again. Otherwise he will send it to him with Van der Hoek, who is often staying at Van Marum's. He is pleased by Van Marum's letter, bringing him the news about his good health. He hopes to inform him soon about his complete recovery. He adds his well meant greetings for him and for Mrs. Woestenberg, also on behalf of his family.

[NA-RANH 529-22; CHE, BOT]

**716. G. Vrolik (Amsterdam) to N.C. de Fremery (Utrecht), C.G.C. Reinwardt (Leyden) and A. van Beek (Utrecht); 15 February 1831**

Vrolik informs his colleagues that Van der Toorn, who has been suffering from a severe disease, has refused to lend two areometers, saying that his illness has interrupted his activities. He sticks to his refusal. Besides he has asked the 'Eerste Klasse' several questions. He has stressed that in his view the description of his devise, given by him on 10 June 1829, is clear enough. He also refers to his 'Tableau', dated 19 March 1829. He wants to know why the 'Eerste Klasse' is so very suspicious. On behalf of the 'Eerste Klasse', Vrolik wants to express his surprise. He has decided to send Van der Toorn's questions on to the commission. He hopes to convince him soon.

[NA-RANH KNI 175-36.875; PHY,TEC]

**717. Ch.Fr. Brisseau De Mirbel (Paris) to C.G.C. Reinwardt (Leyden); 16 February 1831**

De Mirbel thanks Reinwardt for having sent him a description of the steam engine with which he is heating the greenhouses of the Leyden Hortus. These documents are really complete. He also thanks him for having expressed his appreciation with respect to his treatise on the ovule. He has written it in order to stimulate his fellow scientists to investigate other spermatophytes, although he realizes well that these microscopic investigations are extremely exhausting. If he might be of help to Reinwardt in another way he should ask him. He expresses his feelings of friendship and esteem. In a postlude

Leyden, 5 Mei 1831

Amiceogind! Het genoege dat ik uwe  
 Romey op aanstaand, maandag, afwaekten;  
 dat myne falligien vindingen niet voor twee  
 Ured, waerom ik geheel tot ude diend  
 tal eyn. Inmiddels dat ik nog eens  
 op vraging beducht syn; in de loop  
 myner falligien en te midden van  
 ander werk vallen ~~te~~ my ~~niet~~ geene  
 ind. Het is een laagst moogelyke  
 fammissie dat eenig vraging  
 nitdenken.

Wy bedanken u voor dat ges  
 zonden Page waerom ik u op uwe  
 Romey het nitstel in dank ~~offtueer~~  
 met viedelyke gructen aan  
 hart. M.

C.G. Reinwardt

he informs him that De Blainville, Cuvier and Desfontaines, having the most pleasant recollections of Reinwardt, have asked him to add their kind regards. [The original letter is written in French]  
[UBL BPL 2922; BOT]

**718. N.C. de Fremery (Utrecht), C.G.C. Reinwardt (Leyden) and A. van Beek (Utrecht) to G. Vrolik (Amsterdam); 5 March 1831**

On behalf of the jury Reinwardt enters his report on Van der Toorn's treatise on the areometers. The jury has understood the author's explanation, but there are still a few questions to be answered. First of all the commission wants to receive a 'metrieke vogtweger', exactly like the one which has been devised by the author, as well as a specimen of the third model, which the administration of the 'Eerste Klasse' seems to prefer. Thereafter the 'Eerste Klasse' wants to decide which instrument should be preferred. In the jury's view the problems are due to the fact that the question, which has been proposed by Vrolik, has not been clear enough.  
[NA-RANH KNI 175-62(137).3 R; PHY,TEC]

**719. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1831**

After having read the treatise entered under the maxim 'Vitandum est ne incognito pro cognitis habemus hisque temere assentramur', Reinwardt understands that the author is of the opinion that the harmful effects on living creatures are not produced by the gasses generated by burning coals, such as carbonic acid and carbon (di)oxide, but by the vapours, which are produced by lighting coals. So he has restricted his research to these vapours. The author has carried out his experiments and he has tried to analyse the constituents of these vapours, which in his view are the cause of suffocation. Reinwardt points at the defective way in which the author has carried out his experiments. He does not understand why the author has given such meticulous descriptions of his numerous observations of living beings. The author has believed in the existence of a harmful emanation, given off from lighting coals, although he did not succeed in identifying these volatile substances. He did not pay attention to the important discovery made by Berzelius, that the real poison is the inflammable gas, which is produced

by lighting coals ('aanglimmende kolen'). Besides he has carried out his experiments in a defective way.

[NA-RANH HMW 444-426.307(2) R; MED, CHE, PHY]

**720. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1831**

Reinwardt is enthusiastic about the quality of the treatise on the origin of the boulders scattered over the Netherlands and Northern Germany. This time the problem has been solved by a scientist, who has the expertise to discuss it more completely and more thoroughly than anyone else could have done. So the 'Maatschappij' has to be proud of the fact that this contest has produced such an excellent geological treatise, which has to be considered a credit to its *Verhandelingen*. The author was excellently prepared for his job. He has visited every region, where these boulders are found. It does not matter that other authors have written about the same subject before him. His analysis is really exact. He has proved the relation between the dispersed boulders and the mountains, especially with those of Scandinavia. He has been able to explain their origin. He has also been able to value the observations and explanations given by other authors. In the author's view Norway and Sweden must have been united with the rest of Europe, more than nowadays. The boulders must have been laying in a giant lake in the Gothland region in Southern Sweden. After the southern border of this lake had collapsed, a giant flood must have carried these boulders to Northern Germany and the Netherlands, perhaps together with boulders of ice. In Reinwardt's view this is an acceptable explanation, although he does not fully understand how boulders of 5.000 cubic feet can be dragged along as far as the Lippe county or even as far as in Hessen, Brunswick and Saxony. The author has even suggested that these boulders have been carried uphill and upstream. He decides that it should not be held against him that he has not been able to explain every phenomenon, because it is impossible to witness these events. All in all, this beautiful, satisfying and well-written treatise deserves to be awarded the gold medal and the bonus.

[NA-RANH HMW 444-428.319(2) R; GEO; PHY]

**721. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 5 May 1831**

Reinwardt is eagerly awaiting Van Marum's visit next Monday. However his lectures will not be finished before two o'clock in the afternoon. He will also try to think up a couple of questions. Devising new contests is rather difficult. He thanks his friend for having sent him a sample of sago. On Monday he will give him the substance, resulting from the turning process ('uitschot').

[NA-RANH HMW 444-109; BOT, AGR, CHE, PHY, TEC]

**722. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Leyden); 30 June 1831**

Reinwardt has decided to make a trip to Paris through the Grand-Duchy of Berg (where his relatives are living), Cologne, Aix-la-Chapelle, Liège and Namur to Paris. For more than one reason he wants to inform his friend about his plans. First of all he might be able to serve him and secondly he wants to prevent that letters addressed to him should remain unanswered too long. He will leave next Saturday, 10 July. His major objective in Paris will be to see its rich collections of natural history. He will be accompanied by one of his students, a very inquisitive young man. In Paris he hopes to solve many problems. As a matter of fact he wants to find the answers to many questions in the field of natural history, especially with regard to the true identity of 'his' Balaenoptera species. To his regret he has learned that most probably Cuvier will not have returned from his journey to Italy by then. He reminds Van Breda that he has asked him several questions on the Cetaceae in his last letter. If possible he would like to receive these answers before he will leave. How are Van Breda's wife and children doing? He ends his letter by expressing his heartiest good-bye. [This letter has been dated by taking into account the following facts: Cuvier's day of death, the beginning of the Summer holidays and the date of Reinwardt's departure].

[BTS 2349; ZOC]

**723. G.Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden) and G.Vrolik (Amsterdam); 2 July 1831**

The addressees are formally invited to assess a treatise written by A. van Beek and C.H. van Dijk on the black substances occurring in refined sugar. The

‘Eerste Klasse’ wants to be informed about the outcome of the judgement within the next two weeks.

[NA-RANH KNI 175-36.890; CHE, PHY, BOT, TEC]

**724. C.G.C. Reinwardt (Leyden) to J. de Vries (Amsterdam); 6 July 1831**

Reinwardt has (just) been informed that De Vries’s son has taken his doctoral degree, a most joyful message! Therefore he sends his friend his congratulations. Having such a good father will guarantee his promising future!

[KB 121 B 8]

**725. Ministry of the Interior (The Hague) to C.G.C. Reinwardt (Leyden); 13 July 1831**

In response to Reinwardt’s request, made on 19 July 1831 and received through the governors of the university, Van Ewyck informs him that His Majesty has decided to honour Reinwardt’s wish to be discharged of some of his academic duties. His Majesty is counting on his promise to proceed the edition of his writings on the various collections brought together in the Dutch East Indies enthusiastically and diligently, in order to publish a work on that subject. His majesty expects the governors of the university to present a proposal with respect to the increase of his annual salary, made retroactive to 1 January 1831. Reinwardt will receive the respective decree, to be made by His Majesty through the governors of the university. [In an undated annex to this letter, to be considered his concept answer, Reinwardt underlines that these favourable decisions are a new stimulus for him to devote himself to this occupation].

[UBL BPL 2922; ZOC, BOT, COB]

**726. G.Vrolik (Amsterdam) to G.Vrolik (Amsterdam), C.G.C. Reinwardt (Leyden) and G. Sandifort (Leyden); 2 August 1831**

Alexander Numan has entered a treatise entitled ‘Beschrijving van een misvormd schaap, met overtolligheid van deelen’ (‘Description of a sheep, malformed in many respects’). The commission has to report within the next three months.

[NA-RANH KNI 175-36.895; ANA, ZOC]

**727. G.Vrolik (Amsterdam), C.G.C. Reinwardt (Leyden) and G. Sandifort (Leyden) to G. Vrolik (Amsterdam); 8 August 1831**

Numan's treatise has provoked several important remarks. As a governor of 's Rijksch Veeartsenijschool' and as a professor of veterinary medicine, the author of the treatise has had the exceptional occasion to keep up with the development and life of a malformed sheep, during four years. This animal had four hind-legs. Numan has even been able to give a precise description of the pregnancy of this female sheep, during the third year of her life and of the birth of the completely healthy lamb, which had been developed in the left uterus. The female had suffered from the wet and cold summers of 1828 and 1829. Therefore its health became failing after it had given birth to her lamb. So it had been decided to end its life and to preserve the anomalous parts of its body, especially the arterial and venous system. The major part of the treatise is dealing with the anatomy of this malformed animal. In Vrolik's view it is essential that Numan has studied several renown authors in the field of malformations, before giving his final judgement on the causes of these anomalies and on the final results of this development. He has especially taken into account what Fr. Tiedemann has written on this subject. However he does not agree with Tiedemann, because this author has put that the excessively developed nervous tissue was its main cause, while the author himself has decided that the primary cause must be the fact that initially this animal had been created with double 'principles', followed by a partial fusion of similar parts. In Vrolik's view, it is almost impossible to express the contents of Numan's ideas in a few words. The jury is satisfied about the quality of Numan's treatise, not in the least because his writing also explains why it is often so difficult to merge different races of sheep.

[NA-RANH KNI 175-62(137).9 R; ANA, ZOC]

**728. C.G.C. Reinwardt (Leyden) and G. Vrolik (Amsterdam) to G. Vrolik (Amsterdam); probably late August 1831**

Reinwardt underlines that the treatise judged by him last spring is a supplement to the treatise on the black substances in sugar breads, written by Van Beek and Van Dijk. This document has already been published in Volume 2 of the *Nieuwe Verhandelingen* of the 'Eerste Klasse' of the KNI. He briefly discusses its contents, in which the origin and the development of the 'Conserva mucoroides' are described. The authors have examined

this 'organism' and they have concluded that it is a slimy white reticular tissue, bearing brown or black globules. They have witnessed its formation in sugar solutions in distilled water. They did also prove that the sugar solution contains the nutrients for this plant and that its growth is furthered by warmth, humidity and dirty (unpurified) kitchenware. Meanwhile the refiners are taking the precautions suggested by the authors. Since the use of glass moulds for the production of sugar breads has been introduced, this impurity has almost completely been removed. Reinwardt agrees with Vrolik that this treatise has to be published in the *Verhandelingen* of the 'Eerste Klasse', among others because the authors have given additional observations and suggestions.

[NA-RANH KNI 175-62(137).8 R; CHE, PHY, AGR, TEC]

**729. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden), J.G.S. van Breda (Leyden) and G. Vrolik (Amsterdam); 8 November 1831**

At the occasion of its last meeting, the 'Eerste Klasse' has received a treatise written by G. Sandifort, entitled 'Beschrijving der Onderkaak van een Olifant, welks gedaante van den gewonen vorm afwijkt' ('Description of the lower jaw of an Elephant, the shape of which differs from the usual appearance'), to which three drawings have been added. The jury has to report within the next three months.

[NA-RANH KNI 175-36.915; ZOC, ART]

**730. C.G.C. Reinwardt (Leyden) to C.J. Temminck (Leyden); 9 January 1832**

The university is needing minerals for the chemistry lessons. Because the 'Rijksmuseum van Natuurlijke Historie' has a number of duplicates in its collection, Reinwardt asks Temminck to give him these minerals. The money needed for this transaction can be paid from the subsidy, which is still kept in reserve. He is sure that Temminck will meet his demand and expresses his feelings of high esteem.

[NA 3-12.17.5; CHE, MIN]

**731. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Leyden) and G. Vrolik (Amsterdam); 14 January 1832**

Reinwardt has judged Sandifort's treatise on the anomalous lower jaw of an elephant. This treatise really deserves to be considered, especially because of the beautiful drawings, which have been added. The object has been a part of Brugmans's collection of comparative anatomy. Sandifort has analysed every feature of the jaw and he has been able to determine the probable age of the animal at the time of death. Comparing this jaw with the jaws of the two known species only leaves two possible conclusions: it is the remains of a new species, or it is the result of a freak of nature. In Sandifort's view these facts should provoke new investigations. The members of the jury agree with him. This subject should be brought to the notice of naturalists, who are planning to travel to the regions, where these animals are living. The treatise should appear in one of the first *Verhandelingen* of the 'Eerste Klasse' of the 'Instituut', to be published.

[NA-RANH KNI 175-62(137).12 R; ZOC, ART]

**732. Ministry of the Interior (The Hague) to C.G.C. Reinwardt (Leyden); 24 January 1832**

Reinwardt is informed that the Academic Senate of Leyden University has nominated him for next year's rectorship. The Minister would like to present this nomination to His Majesty the King, if he would not know that Reinwardt is already snowed under with many duties. Besides Reinwardt still has to meet his promise to prepare the publication of his detailed account of his scientific journey to Java. In the view of the Minister further delay should be prevented. In order to avoid less desirable decisions with respect to Reinwardt, the Minister has decided to inform him extensively beforehand. He awaits Reinwardt's answer.

[UBL BPL 2922; UNI, BOT, ZOC, COB, GEO, MIN, PHY, CHE, ANA, ETN, AGR, TEC]

**733. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 23 February 1832**

Because Reinwardt has had an audience yesterday, he has not been able to answer Van Marum's letter until now. He promises to examine the treatises sent to him as soon as possible, although he is very busy. In eight days (on 1

March) he will probably come to Haarlem in order to attend the meeting of the board of the 'Huishoudelijke Maatschappij'. At that occasion they will have the opportunity to see each other and to discuss several subjects. He would be delighted if Van Marum would receive him and have lunch with him. He could possibly stay with him until 6 or 7 p.m. In his view, Buchner has meanwhile met the demands of the 'Maatschappij', so he should be awarded the gold medal. He hopes to see Van Marum in good health next week. He adds his hearty greetings, also for Mrs. Sientje.

[NA-RANH HMW 444-110]

**734. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); about 20 March 1832**

Until now Reinwardt has not been able to find information about the processing of the 'elastieke gom', although he has consulted the authors, who have written on this subject. Nevertheless he is able to describe how this substance has to be processed in order to use it. He has even seen shoes, which have been made of fresh 'gom' (rubber, latex) in the Colonies.

He reminds Van Marum that he had promised to send him the draft of a contest on bromine, but in a later stage he has decided that this subject has already been discussed extensively and completely and he points at Löwig's monograph. It will only be possible to discuss the medical aspects, especially because the healing properties of the water of Bad Kreuznach are ascribed to this constituent. So it will be possible to focus this contest completely on the medical aspects. The same goes for the powerful chemical substances, the effects of which have not been examined until now. Therefore he has devised a question about fusel. Furthermore he mentions a treatise about the volatile substances, which are resulting from the distillation of field beets ('mangelwortelen'), potatoes, yellow turnips, etc., written by a certain Dr. Hensmans, which has been awarded and published by the 'Académie Royale de Bruxelles' in its *Mémoires*, of which he only knows the German translation by Dr. R. Brandes (*Denkschrift über die geistigen Flüssigkeiten*, Lemgo, 1826).

[NA-RANH HMW 444-110; BOT, CHE, PHY, MED, AGR, TEC]

**735. Edward T. Bennett (London) to C.G.C. Reinwardt (Leyden); 30 March 1832**

Bennett, vice-secretary of the 'Zoological Society' (London), sends Reinwardt the diploma as a foreign member. He has added a copy of its 'By Laws'. It shows that the number of foreign members is limited to 25 persons. He has also added a copy of the *Proceedings* of the scientific commission of the Society of last year. The future issues will be sent as soon as they have appeared. Besides the annual reports of 1830 and 1831 and a catalogue of the mammals and birds, which have been exhibited in the menagerie of the Society, have been added. Meanwhile the Society has acquired many new species. The collection of the museum has also been extended. As a consequence the catalogue is incomplete, especially with respect to the mammals and the birds. Bennett calls himself Reinwardt's most obedient servant. [The original letter is written in English]

[UBL BPL 2922; ZOC]

**736. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 26 April 1832**

Again Reinwardt sends his friend a couple of drafts of prize contests. He hopes that at least a few will please him. Meanwhile he has devised five questions, including the one on fusel, and even six if the question on the human races ('menschelijke geslachten') is included, the contest which has been postponed last year. He is able to show several instruments with regard to the fourth question. He wants to read the question on the mortar invented by Fuchs (see the *Journal für Technische Chemie*), more accurately. Mr. Van der Boon Mesch, who has left for Delft today, has allowed him to ask Van Marum to send him the respective volume. He ends his letter with his kindest greetings.

[NA-RANH HMW 444-110; CHE, PHY]

**737. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1832**

In Reinwardt's view awarding the treatise entered under the device 'Tendre à la perfection sans jamais y prétendre' is out of the question, because of two aspects. First of all the author has made himself known. Reinwardt knows that it must be Justus von Liebig (Giessen). Secondly it has been at least

two years, since this treatise has been written. As a consequence the author did not consult the latest writings on the subject of the composition of inorganic and organic compounds. The question is also about the possibility of finding the proportions of the various components ('principia remota') of organic and anorganic compounds in an easy way. Too much of what he has presented now, is already widely known, first of all through the work of Gay-Lussac, Thénard and Berzelius and secondly because of what the author has already published before. Many facts have already been made public through the article, which has been published in Volume 25 of the *Annalen der Chemie und Physik* (1824), among others about the dissociation of fulminating silver ('knalzure zilveroplossing') and about the dissociation of organic substances. He is aware of the fact that nowadays Von Liebig is one of the leading chemists. Therefore he is embarrassed about the fact that Liebig has delivered such a meaningless treatise, an entry, which is even worse than the memoirs, which are written by his own students. Furthermore it was not necessary to describe the instrument, like the author has done. It is not needed for the analyses the 'Maatschappij' had asked for. He wants to point at Poggendorff's *Annalen* (n° 7, 1831), at the work of the English chemist Prout (?), at the articles written by the French chemists Dumas and Pelletier (*Annales de Chimie et de Physique*, 24, 1823) and at the beautiful article written in 1831 by Henry and Plisson in the *Journal de Pharmacie*. The author did not carry out any experiments with regard to the changes of the properties of compounds, which are probably caused by a variation of its constituents. The miserable quality of this entry is really an insult to the 'Maatschappij'.

[NA-RANH HMW 444-429.321 R; CHE, BOT, MIN, PHY]

**738. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1832**

Reinwardt is not satisfied about the quality of the treatise on the properties of compressed air, which has been entered under the motto 'Vous, qui combinez l'air, l'eau, la terre et le feu, Vous observez en sage et Vous créez en Dieu!'. Although the author is a well experienced chemist (at least familiar with what has been published in this field), he has not performed well. He has borrowed his ideas from a 'physical and chemical movement', which prefers to present and explain simple phenomena as complicated

and as incomprehensible as possible. The author did not dare to introduce new terms and concepts. His only merit has been that he has made the question more complicated, in stead of contributing to its solution. In order to illustrate his objections Reinwardt gives a few examples of the author's ideas and statements. Furthermore the author has not answered the question completely, nor did he present the results of experiments carried out by himself. He does not deserve to be awarded.

[NA-RANH HMW 444-429.329 R; CHE, PHY]

**739. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1832**

First of all Reinwardt stresses that the entry on the nature and the composition of diluvial soils cannot be awarded. The author has developed his own deviant ideas with respect to the diluvial formation. In his own view local floods have caused the transport of boulders from Northern Europe southward and all diluvial soils are containing granite boulders, while as a matter of fact the remaining diluvial formations are belonging to the 'alluvium' or to tertiary formations. So he is rather unique in his perception of the term 'diluvium'. The author demonstrates the same peculiarity in his discussion of the reason why – a long time ago – animals from the hot regions of the world have been living in our countries. He has found this reason in the changing position of the earth's axis. This event, which in his view has been provoked by the collision of a comet with the earth, must have been the cause of the cooling down of our regions. It must have taken place after the Tertiary period had ended. In the author's view the presence of the comet must have compressed the air, which has caused shock wise floods and a warming up of the inner parts of the earth. Reinwardt who does not believe a word, concludes that the author's ideas are based on mythological stories and he regrets that he has to judge in this way, because the author has also demonstrated a considerable knowledge of geology. Unfortunately he has said good-bye to observation and experiment too soon, reason why he got lost in his own labyrinth of hypotheses. All in all, this treatise cannot meet the intentions and demands of the 'Maatschappij'.

[NA-RANH HMW 444-431.351 R; MIN, GEO]

**740. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1832**

This time the author has sufficiently met the demands of the 'Maatschappij', with respect to the composition of a mortar of good quality. He has carried out many experiments with the various constituents – ground stones (stone powder or 'kei-aarde'), sand and lime – mixed with water. The author has found out that this mixture hardens and that – after this process has been completed – the mortar has become silicate rich. This mortar is ideal for use below the water surface. This stone powder has even turned out to be acid-resistant or at least almost acid-resistant. The author has given many more results of chemical and physical experiments, which are very convincing. In a word every good mortar, which hardens under water, turns out to be a silicate of lime, or in other words a compound of lime and stone powder, alumina ('aluinaarde'), lime and iron peroxide. In the author's view the quality of the mortar is decreasing, if too much alumina is added to the mortar, while the opposite is true if extra lime is added. The absorption of carbon dioxide seems to improve the quality of the mortar, while adding trass powder decreases its quality. All in all, the author has completely answered the question. Unfortunately the most essential part of this entry has been published before. Reinwardt has found it in Erdman's *Journal für Technische und Oekonomische Chemie* (Part VI, 1, Fasc. 29–2–1). Its author is Fuchs, professor of mineralogy in Munich. Furthermore he has only carried out small scale experiments and he did not try to build brickwork under water. So he has not made any attempt to prove that his theory is right and he has not been able to formulate any practical rules. It is not possible to award this treatise.

[NA-RANH HMW 444-329.352 R, MIN, CHE, PHY, TEC]

**741. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 14 May 1832**

Reinwardt enters the corrected drafts of the contests devised by him. He has added a quotation to some of these concepts. Unfortunately a copy of Sprengel's *Chemie für Landwirthe* is not in his possession. He does not know if the chemical aspects of the subject of the third question have already been discussed, yes or no. This time Van Marum appears to have agreed. Reinwardt also adds a copy of Volume VI of Erdmann's *Journal*, received

from Van Marum, together with Mitscherlich's *Chemie*. Probably he will not have the opportunity next Thursday to come to Amsterdam. He has decided to come on Friday, because he has to attend the meeting of the directors of the 'Huishoudelijke Maatschappij'. He adds his kind greetings, also on behalf of his wife.

[NA-RANH HMW 444-110; CHE, AGR]

**742. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 24 May 1832**

Reinwardt sends his friend the translation of the drafts of the four contests devised by him. He informs his friend about the probable year of publication of the *Mémoires de l'Académie de Bruxelles*, relative to one of these questions, which is preserved in the library of 'Teylers' Foundation'. Furthermore he points at an error in the Dutch programme.

[NA-RANH HMW 444-110]

**743. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); end of May 1832**

Reinwardt enters a couple of facts of chemical nature. He stresses the fact that Semantini has published on 'acidum iodosum' ('iodig zuur'), which appeared in Schweigger's *Journal*, XLI, 158). He points at Pleischl's treatise 'Vom Iodum', published in Schweigger's *Journal*, XLI, 1. Besides Gmelin has put that acidum iodosum is not a stable acid ('eigen zuur'), but a chloric acid ('chlorisch zuur'. See: *Handbuch*, 3er Druck, L, 251). He promises to send the translated questions as soon as possible.

[NA-RANH HMW 444-110; CHE]

**744. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden) and J.G.S. van Breda (Leyden); 16 July 1832**

In its last meeting, held on 26 June, the 'Eerste Klasse' has received a lump of friable mortar. In Reuven's view this substance has been a part of an ancient road. In his covering letter he has tried to prove his assumption. Vrolik wonders if this discovery is important to the old 'geography'. If the answer turns out to be positive the 'Eerste Klasse' considers to call in the assistance of the government.

[NA-RANH KNI 175-36.968; CHE, ART]

**745. C.G.C. Reinwardt (Leyden) and J.G.S. van Breda (Leyden) to G. Vrolik (Amsterdam); 26 July 1832**

The commission reports on the chemical and physical properties of the lump of mortar. After a thorough analysis it has decided that it is not at all an archaeological object of any importance. A detailed description of the substance is given. In the view of the commission this substance can develop spontaneously in calcareous water. For example it is found in a small lake near Rockanje, South of Den Briel. Rests of plants are easily calcified ('Beenbreuk', or 'Osteocolla'). Anyhow it is a product of nature. Because Reuvens has also put that the bottom of the 'Zuyderzee' is consisting of solid rocks, the naval officers, who have been charged with the drawing of a new map of that sea, should be asked to make precise observations and to make detailed notes.

[NA-RANH KNI 175-62(137).18 R; CHE, PHY, BOT]

**746. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); about 11 November 1832**

Reinwardt informs his friend that Van Breda has told him all the details about Vrolik's offensive behaviour. He is highly indignant about the way he has treated Van Marum. So Reinwardt has definitely decided to come to Amsterdam on 14 and 15 November. He hopes that the other members will keep on resisting against the scheming. Through this machination it will not be able to bar T. from membership of the 'Eerste Klasse'. The day after tomorrow he will see Van Marum, together with Van der Boon Mesch. His agent has bought two books in behalf of Van Marum: the work of Pennant (for nine guilders) and the work of Schwindel (also for nine guilders). He had to write this letter in a hurry.

[NA-RANH 529-20b]

**747. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 21 November 1832**

Reinwardt informs his friend that the auction of minerals, which had been planned for next Monday, has been postponed to 2 December (a week later). The auction of the books will begin next Tuesday, 27 November. Van Marum will have the opportunity to inspect the minerals any time he wants, until the day of the auction. If he sticks to his plan to see him next Saturday

in Leyden, he and Mrs. W. will be most welcome. Reinwardt assumes that the selection of new members of the 'Eerste Klasse' has been proposed by a few members in particular. Again he expects the machinations to occur, which he has mentioned in his last letter. He fully agrees with Van Marum that finally a certain zoologist, who has been kept out of the 'Eerste Klasse' for such a long time, has to be elected. He wants to discuss this affair with his friend personally. He adds his hearty greetings for his friend and for Mrs. Woestenbergh.

[NA-RANH 529-20b; GEO, MIN, ZOC]

**748. A. von Zandt (Munich) to C.G.C. Reinwardt (Leyden); 30 November 1832**

First of all Antoinette van Zandt informs her friend that Dr. Von Siebold is well disposed towards him and that he venerates him, feelings which Reinwardt certainly deserves. Von Siebold has promised to deliver this letter personally at Reinwardt's. She has confessed to him that she is very fond of Reinwardt. She has stressed the importance of the old ties of friendship, which have been a great joy to their mutual excellent friend à Roy. They will never forget these feelings, because she feels as close to Reinwardt as their deceased friend à Roy has done. She will never forget these recollections. Because there are only a few happy recollections, which are not mixed with sorrow, the news about Reinwardt's poor health and his almost constant suffering has made her sad. There is no doubt that this poor health has been caused by his long-term stay in the Dutch East Indies and by his constant strenuous work. She knows that his love for the arts and sciences and for the fatherland has made him to do so. It makes her happy that her friend has found a good, witty and amiable wife and that this fact has brought him all the blessings of heaven and that he is entitled to it in every way. Therefore she feels sorry for him that he is missing one of the most important blessings, in other words, that he has a poor health. She has suffered from rheumatism for many years and she had to fight a life-or-death struggle; death has threatened her in the guise of various diseases. She will never be able to thank God to a sufficient extent for having good health now and nobody realizes better than she does its value. Her husband has had the privilege of making the acquaintance of Mrs. Von Siebold, a bright scientist and an amiable and interesting woman as well, a woman Bavaria can be proud of.

They have been received by His Majesty the King and his family, together with the elite of Munich. Unfortunately Von Siebold cannot put off his departure. Mr Von Zandt hangs upon Von Siebold's lips. Although he is a military man, he is a devotee of the arts and especially of objects from China. A couple of years ago he has started to collect Chinese objects of art. Von Zandt and Von Siebold have become close friends.

Almost four years have gone since she has heard from Reinwardt's protégé Hengst, her cousin, who thanks to Reinwardt's kindness acquired an excellent position in Bancal Pinang. Unfortunately he has lost that job as a consequence of the riots broken out on that island. The last letter received from him, was sent from Batavia. She knows that the government only pays him a modest pension, pending a new appointment. Von Siebold has offered to make every possible inquiry about his whereabouts and his adventures. Furthermore, at least if he is still alive, he will try to hand letters from his relatives in Holland over to him, among others from his sister. They consider it unlikely that he is still alive, after having kept silent for such a long time. After having expressed her wish that Reinwardt will soon regain his precious good health, she adds her greetings for Mrs. Reinwardt. [The original letter is written in German]

[UBL BPL 2922; ART, ZOC, COB, BOT]

**749. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden) and J.G.S. van Breda (Leyden); 4 December 1832**

The mortar sample presented by Reuvens some time ago has been examined by the commission. Meanwhile Reuvens has entered an extensive treatise on this object. He has expressed his wish to be informed about the results of the investigations. The 'Eerste Klasse' has decided to ask the commission to assess this treatise as well and to return its report within the next two months.

[NA-RANH KNI 175-36.1001; CHE, PHY]

**750. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 14 February 1833**

Yesterday, Reinwardt has received a letter from Fiedler (Hamburg), who has recently returned from Liberia. There he has collected many beautiful and rare minerals, among others aeschynite, baikalite, cancrinite, 'chlorietspaat',

‘diamantspaat’, ‘diaspoor-ilmeniet’, ‘monaziet’, ‘moroxiet’, ‘pyrochloor-pyrophylliet’, ‘zirkoon’ and ‘beryll’. Fiedler, who wants to sell, has offered these minerals to Reinwardt, knowing that he will be interested. Reinwardt thinks that he can ask this man to give him a couple of beryll crystals as a present. If Van Marum wants to receive a part of these samples, he has to inform him as soon as possible, because Fiedler wants to receive an immediate answer. He wants to leave Hamburg soon.

[NA-RANH 529-22; MIN]

**751. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 8 April 1833**

Because of his many occupations Reinwardt has not been able to judge the treatise, which has been sent to him lately, until now. Now he has read and assessed this wordy entry. He has not read the judgements of the other members of the jury, until after having judged the writing himself. He prefers to see Van Marum and to communicate his report. There is no doubt that this treatise deserves to be awarded (‘Ubi multa nitent, non paucis offendus’). He asks Van Marum to convey his greetings to Mrs. Woestenberg, also on behalf of his family.

[NA-RANH HMW 444-111]

**752. C.G.C. Reinwardt (Leyden) and N.C. de Fremery (Utrecht) to G. Vrolik (Amsterdam); 18 April 1833**

Stratingh (Groningen) has written his treatise entitled ‘Onderzoek of Essai van het zilver langs den natten weg’, because in his view the ordinary way of assaying silver sometimes produces different results and often a too low percentage. A couple of years ago the French government has appointed a special commission in order to examine this problem. Its members were among others the well-known chemists Chaptal, Thenard, Vauquelin (who has been replaced by Du Long after his death) and Gay-Lussac. This commission has advised to carry out two ways of testing silver. Their advice has resulted in a royal decree (6 June 1830). Gay-Lussac has devised a simple and efficient method. Reinwardt is very eager to be informed about the contents of the *Handboek voor Essayeurs*, written by Gay-Lussac and D’Arcet, which will soon be published. Stratingh has carried out his research very meticulously. Reinwardt expects him to repeat his investigations, in order to

get complete certainty about the results of his experiments. In this way he will be able to inform the readers of his treatise about the latest developments in this field. Reinwardt also points at Gay-Lussac's 'Instruction sur l'Essai des Matières d'argent par la voie humide', which has been published by the 'Commission des Monnaies et des Médailles' (Paris, 1832). This instruction suggests improvements with respect to the assaying of silver. Stratingh is the right man in the right place for the propagation of this method, because he is a most experienced man in technical chemistry. He has proved this by the publication of his *Handboek voor Essayeurs*.

[NA-RANH KNI 175-62(137).28 R; CHE, PHY,TEC]

**753. C.G.C. Reinwardt (Leyden) to G. Vrolik (Amsterdam); 19 April 1833**

Reuvs keeps on discussing his previous letters sent to the 'Eerste Klasse'. He is not satisfied about the outcome of the investigations carried out by the commission, which had been charged with the examination of a calcareous substance found by him a couple of years ago. So, on 18 November 1832 he has once more sent a letter to Vrolik. Reinwardt does not accept Reuvs's conclusion that this substance has been used in the Roman era as building material. Neither does the commission agree with Reuvs with respect to his ideas about the way in which this calcareous substance can lead to the production of a good mortar. Reuvs's suggestions for further chemical and physical investigations have not been accepted by the commission. The same goes for his suggestion with respect to the drawing of a new geographical map of the 'Zuyderzee', because his initial ideas with respect to the bottom of this sea appeared to be false.

[NA-RANH KNI 175-62(137).30 R; ART, PHY, CHE]

**754. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1833**

Reinwardt is satisfied about the treatise on the green substances in stagnant water, which presents many new and interesting microscopic facts. The author has also added a series of microscopic preparations. Reinwardt points at the investigations carried out by Priestley a long time ago. The author has given a complete list of names of the algae, studied by him. He has also consulted the most important algological authors. In Reinwardt's view he has

equalled them. The author has also paid attention to the changes, transitions, metamorphoses and transmutations of these primitive organisms and he has compared them with other more complex species, like the 'conserva' ('Vlap') and mosses. The author has given many good advices with respect to this field of botany. The same goes for the possible continuation of scientific research in this field. However the author has not answered the question. He did not discuss or explain the origin of this substance. He only seems to have grasped the opportunity to expose his own ideas with respect to this field of botany.

Reinwardt underlines that Priestley and Ingenhousz have been the most prominent authors on this subject and he points at their important discovery of the photosynthesis of these water plants, which takes place under the influence of sunlight. In the course of that process pure oxygen ('levenslucht') is produced. Later on it has been proved that this gas is needed for the development of this green substance. The author did not pay much attention to these facts, although he pretends to have carried out many experiments. He did not give descriptions or results. In his view the green substance originates from the slimy vegetable and animal remains. Besides this green substance cannot develop in pure distilled water.

Many of his statements are contradictory to those of the renown scientists. Their experiments have proved the opposite. The author has not elucidated what was still unknown and unexplained. His treatise has not met with the demands of the 'Maatschappij'. All in all, he has confined himself too much to the description of the morphology of these organisms.

[NA-RANH HMW 444-428.315 R; BOT]

**755. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1833**

The treatise on the harmful properties of *Lolium tomentosum* L. is very incomplete. It does not give any new facts. The author has only carried out one simple experiment – feeding a pigeon with the meal made of this plant. The bird fell ill, so in the author's view this plant is harmful. In Reinwardt's opinion far more experiments are needed, because it is still unknown if this plant is harmful to human beings and to other animals than pigeons, yes or no. This treatise cannot be awarded.

[NA-RANH HMW 444-430.338 R; MED, BOT, CHE]

**756. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1833**

The author of the treatise on the upward sap stream of plants has been much too ambitious, as is also obvious from his covering letter, in which he has described the various steps of his strategy, through which he wants to answer the question asked by the 'Maatschappij'. He did not only describe and discuss the experiments carried out by Dutrochet, but also his numerous own experiments. Reinwardt is very satisfied about their quality, insofar his explanation of the phenomena of endosmosis and exosmosis is concerned. Because it does not matter – at least in Reinwardt's view – that the author did not carry out all the experiments wanted by the 'Maatschappij'. Furthermore the results of the experiments carried out by Dutrochet and the author do not completely explain the movements of the saps in living plants. In Reinwardt's view Dutrochet's physiological theory is the result of pure imagination. The author should have shared Reinwardt's view and decide that Dutrochet's views are illusions. Besides he should have examined the sap streams himself. He should also have elucidated their secrets completely. Probably the author is also totally ignorant of the structure and development of plants. Finally the author has dared to agree with Kieser's statement that the 'raw saps' are only transported through the intercellular spaces and that the living cells are only excretory (or secretory) organs. The same goes for his unconditional acceptance of the ideas of Schultze and Meyen with respect to the anatomy and function of the milky vessels. Reinwardt decides that at the time the microscopes are still not good enough to make a final decision with respect to that point. Because the author did not present any new facts or ideas (based on the results of observations or experiments), this treatise has to be put aside. All in all, this contest has to be withdrawn.

[NA-RANH HMW 444-432.360 R; BOT, PHY, CHE]

**757. G. Vrolik (Amsterdam) to N.C. de Fremery (Utrecht), C.G.C. Reinwardt (Leyden) and G. Vrolik (Amsterdam); 15 June 1833**

Sandifort has entered a treatise entitled 'Beschrijving van het werktuig tot vorming van het geluid bij de *Simia seniculus* L.' ('Description of the sound producing organ of *Simia seniculus* L.'). The jury has to enter its judgement within the next two months.

[NA-RANH KNI 175-36.1032; ZOC, PHY]

Leyden, den 20 October 1833  
Eerdinge mevrouw.

Amiceissima!

Hat doet my leed, dat Gy haden  
te vergeefsch op het bevel van den H. R. Brouwer  
gewaakt hebt? Hy is in de vaast. nacht  
eenigen ongesteld geworden, en, hoewel  
thans reeds merkelyk beter, heeft hy het  
echter niet durven wagen. In vrees van  
hied te gerand, nu w, vreesde, dat de  
tyd hem sal te Root Schieten. <sup>desby</sup> en  
in de Haag en Rotterdam te doen heeft  
es met de eerste Stoomboot van London  
retournerend wil, heeft hy van Leyden  
mit Hap tot 11 maeten opfijer

met de beste glaste

S. J.

C.G.C. Reinwardt

**758. C.G.C. Reinwardt (Leyden) to J. de Vries (Amsterdam); 5 September 1833**

Also on behalf of his wife Reinwardt sends his sincere condolences to his friend, whose wife has recently died.

[KB 121 B 8]

**759. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 9 September 1833**

Unfortunately the various volumes of the journal of the journey made by Von Humboldt and Bonpland, are published so slowly that the booksellers seem to have forgotten which volumes they have already delivered. Reinwardt has found out that meanwhile a new volume has been published. He has recently received the sixth issue of the *Relation Historique* (which has been published a couple of years ago) through the bookseller Van der Hoek. So the third volume has been completed now. Soon Volume 4 will appear. Until now Reinwardt has only received 13 issues ('cahiers') of the *Observations de Zoologie et d'Anatomie comparée*. It has been more than four years ago since Volume 2 has been completed, as he has been told. Therefore he has informed Dufour & Co., that he is still waiting for the last part of Volume 2. Finally he has given the list of plants, which Van Marum wants to receive from him, to Schuurman Stekhoven. He adds his kindest greetings.

[NA-RANH 529-20b; BOT, ZOC, PHY, GEO, MIN]

**760. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 18 September 1833**

Probably Van Marum will already have seen or even have received the prospectus of a coming publication as well as the proof of a plate regarding the Ericaceae, which he has added to this letter. As he knows His Majesty will also subscribe. In Reinwardt's view it is not a new work, but rather a copy of a part of the writings of Andrews. Because he does not possess this precious book himself, he asks his friend to compare the plate with the original illustration. Is it a copy, yes or no? With respect to Van Marum's question regarding the 'termini botanici' he answers that his friend must probably have the *Genera plantarum Florae Germanicae* in mind, which has been written by Nees von Esenbeck. He reminds him that he has brought him the first part of this book already and that Van Marum has paid him 39

'stuivers' for it. Finally he wants to be informed about Van Marum's health condition.

[NA-RANH 529-22; BOT]

**761. Ministry of the Interior (The Hague) to C.G.C. Reinwardt (Leyden); 7 October 1833**

The Minister of the Interior sends Reinwardt a letter, received from D.C. Kerner (Stuttgart), dated 13 September 1833. In it Kerner explains that he wants to sell one or several copies of a work, written in the past by his late father, a former professor of botany in Stuttgart. The Minister has received the issues which are available. They will be sent to Reinwardt by barge. He wants to know Reinwardt's opinion about Kerner's proposal and asks him to send him a letter and to add the issues received for inspection.

[UBL BPL 2922; BOT]

**762. C.G.C. Reinwardt (Leyden) to J. de Vries (Amsterdam); 11 October 1833**

Reinwardt brings to mind the former days, when De Vries's wife was still alive. Meanwhile, more and more good old friends are dying. His sweet memories are becoming deeper and stronger. His niece Caroline, who is still with her aunts in Lüttringhausen, has been deeply shocked by the death of Mrs. De Vries.

[KB 121 B 8]

**763. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 20 October 1833**

Reinwardt regrets that his old friend has been waiting in vain for Robert Brown, the botanist who had planned to visit him. Yesterday night Brown has fallen ill. Although he has almost recovered now, he did not dare yet to leave the house early this morning. Now Reinwardt fears that there will not be enough time left for seeing Van Marum, because Brown still has to see a few people in The Hague and Rotterdam. As he wants to leave for London by steamboat at the first possible occasion, he has to abandon his initial plan to see Van Marum.

[NA-RANH 529-20b; BOT]

**764. C.G.C. Reinwardt (Leyden) to J. de Vries (Amsterdam); 27 October 1833**

Reinwardt asks his friend to pay some attention to Gaykema, painter, who wants to submit his flower piece to the judgement of some experts.

[KB 121 B 8; ART]

**765. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden), N.C. de Fremery (Utrecht) and S. Stratingh Ez. (Groningen); 28 October 1833**

At the occasion of a previous meeting of the 'Eerste Klasse' the 'Aqua Binelli' has already been discussed. In the last meeting it has been decided that each of the three members of the jury will be given one third of the contents of the two bottles, in order to carry out a chemical analysis and to deliver a thorough report.

[NA-RANH KNI 175-36.1072; CHE, MED]

**766. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden), N.C. de Fremery (Utrecht) and S. Stratingh Ez. (Groningen); 20 November 1833**

The jury has reported orally to the 'Eerste Klasse' on the chemical composition of the 'Aqua Binelli'. First of all it cannot stop bleeding. Probably this presumed favourable effect has to be ascribed to other causes. The 'Eerste Klasse' has decided that Numan and Vrolik, the other members of the jury, will be informed about the outcome of this investigation.

[NA-RANH KNI 175-36.1078; CHE, MED; see also: NA-RANH KNI 175-36.1070 and NA-RANH KNI 175.62(137).42 R].

**767. Ministry of the Interior (The Hague) to C.G.C. Reinwardt (Leyden); 29 November 1833**

The Minister thanks Reinwardt for his meticulous report, dated 23 November 1833, on the minerals from the island of St. Maarten examined by him. He has informed his colleague of National Industry and Colonies.

[UBL BPL 2922; MIN, GEO, CHE, PHY]

**768. C.G.C. Reinwardt (Leyden) to G.Vrolik (Amsterdam); 14 December 1833**

Apart from Stratingh (and the other member of the jury) Reinwardt has examined the sample of Aqua Binelli. He gives detailed information about its chemical and physical properties and about the volatile components of this solution. He has tried to identify their nature and origin. The acid and the aromatic components are both extremely volatile. The aromatic components are composed of two substances. The acid has turned out to be acetic acid. However, taken into account its deoxidative power, it could be formic acid. Because of its other chemical properties, Reinwardt decides that it has to be acetic acid. Having considered the results of the various experiments carried out by him he decides that the 'Aqua Binelli' is a mixture of water, ..... ('brandharst'), ..... ('brandvet'), acetic acid and a volatile aetheric oil. The last four substances must be the result of the dry distillation of an unidentified plant. Besides the flavour has to be identified as 'pyroaether' or 'pyrelaine'. Furthermore Reinwardt discusses the results of the experiments carried out by Berzelius. If Berzelius's results are reliable, he must have analysed another type of 'Aqua Binelli' than he has done himself. In Berzelius's view the 'Aqua Binelli' is a diluted creosote water. This point of view cannot be correct, because creosote has not been discovered until after the 'Aqua Binelli' was already widely known. The 'Aqua Binelli' also differs from the 'Aqua empyreumatica', prepared according to the prescriptions given by Reusch (Berlin).

[NA-RANH KNI 175.62(137).42 R; CHE, PHY, MED]

**769. C.G.C. Reinwardt (Leyden) to G.Vrolik (Amsterdam); 28 December 1833**

Reinwardt enters his final report on the 'Aqua Binelli'. Meanwhile he has become familiar with the creosote water through his colleague De Fremery (Utrecht) and through the pharmacists and chemists D'Ailly & Zonen (Amsterdam). According to Schweigger-Seidel and several others the 'Aqua Binelli' is only 'common creosote water'. Again he has carried out a series of meticulous analytical experiments. Finally he concludes that the 'Aqua Binelli', 'Aqua Creosoti' (or 'Aqua Empyreumatica') and Aqua Pyrolignosi (a solution of pyroaether in water) must be three different substances.

[NA-RANH KNI 175.62(137).42\* R; MED, CHE, PHY]

**770. G.Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden); 31 December 1833**

Because the various reports on the 'Aqua Binelli' have been received meanwhile, the 'Eerste Klasse' has decided that all the respective documents have to be sent to Reinwardt now. He is asked to see the other two members of the commission before the common final report will be written.

[NA-RANH KNI 175-36.1089; MED, CHE, PHY]

**771. C.G.C. Reinwardt (Leyden), N.C. de Fremery (Utrecht) and S. Stratingh Ez. (Groningen) to G.Vrolik (Amsterdam); early January 1834**

In his final report on the 'Aqua Binelli question' written by Reinwardt on behalf of Stratingh (Groningen) and De Fremery (Utrecht) the first member of the jury combines the various conclusions. The remarks added by the initial members of the jury – Numan and Vrolik – is of minor importance.

[NA-RANH KNI 175-62(137).42\*\* R; CHE, PHY, MED]

**772. P.W. Korthals (Padang) to C.G.C. Reinwardt (Leyden); 18 April 1834**

In response to Reinwardt's pleasant letter, dated 27 September 1833, Korthals first of all underlines that he hopes that the addressee will enjoy his married life and that he will be in good health. He hopes that the time will come in which he will have the pleasure of witnessing Reinwardt's happiness. He thanks him for having informed him about the short trip he has made recently to the garden. This description is not only important from a scientific point of view, but also because it proved that Reinwardt was still able to walk. He does understand that the visit paid to the 'Lacke-Lake' and to the volcano of Betrich has been important to a man who has already seen so many volcanos in the Dutch East Indies. He is sure that he could have learned much from Reinwardt if he would have had the opportunity to accompany him. Until now he did not receive the crate, sent to him through Van der Vinne, nor did he receive the books. He regrets the delay in the publication of the *Bulletin*, which is a very important source of information. He recommends himself for the sending of future publications. He will be glad to send Reinwardt minerals. This collection has been left behind in Java, together with de botanical collection, when he had to leave

within a couple of days. He will send them to Leyden as soon as he will have returned to Batavia. Meanwhile he has already collected 50 rock samples and minerals in the region visited by him, for example dolomite and granite. He has also collected samples of gold bearing rocks and samples of sand, but until now he did not have the opportunity to see the ores of the Selleda and Sepayang mines. One is not admitted to go everywhere like one is in Java. Several regions are not safe. Some time ago he made a trip to the region east of Padang. He fell seriously ill and returned considerably weakened. The surgeon major has prescribed a stay in the higher regions. He hopes to do so as soon as possible and to collect rock samples and minerals at the Singalang and Myragoe. Recently he has added a specimen of *Rafflesia Arnoldi* to his collection, together with a specimen of a small *Rafflesia* species, which flowers are about an inch high. Perhaps the last one belongs to a new species. He will keep both specimens in alcohol. He did also receive specimens of several new plant species and perhaps even of new genera. Last November he has sent a couple of nutmegs to the Netherlands. He hopes that they have meanwhile arrived and that they did germinate. He has also tried to acquire a living specimen of *Dryobalaenops*. As soon as it will be possible to send seeds to the Netherlands, he will do so. Furthermore he hopes to be put in charge of the direction of the garden. Diard, who has been appointed inspector of the silkworm-culture, does not have to do too much with them. He has read in the newspaper that Van der Vinne will be going on leave to Holland. Once arrived there he will be able to inform Reinwardt about Diard's activities and about the introduction of the sericulture in Eastern-Java. Here, along the coast of Sumatra, everything is quiet, thanks to the presence of an army. He reminds Reinwardt that through his letter, dated 30 August 1832, sent from Lembang, he has informed him among others about the Tamboekan prahoe crater and the presence of gyps in the Goenoeng sariba in the Buitenzorg region. He hopes that Reinwardt meanwhile will have received this letter. Or was it perhaps lost as a consequence of the embargo? Did he already inform him that coral rich lime deposits have been found at the foot of the Goenoeng goentoer? The Seles region, where this mountain is situated, is on the same altitude as Trogong. He continues by giving a map of the region, visited by him, to which he has added the results of the altimetry, carried out by him. Until now he has not had the opportunity to visit a certain cave in which *Antilopesum atraica*

an animal species, unknown to him, is living, as the natives have told him. They have also said that everybody who has seen it, will soon die. So he decided not to enter the cave. Furthermore he has made a couple of notes on Cucalus, among others that *C. validus* especially prefers to eat the fruits of *Cissus* and *Ficus* and that *C. lagubris* is eating caterpillars, just like the Dutch cuckoo is doing.

In the past he once asked Mr. Oosthoek to send him a small geological collection. Now he asks Reinwardt to repeat and to elucidate this request. It pleases him that Reinwardt has shown his satisfaction about the notes sent to Holland by him. He hopes to satisfy him and earn his appreciation also in the future. He adds his kindest regards for Mrs. Reinwardt, Mr. and Mrs. D'Escury and to Miss Caroline and he recommends himself to Reinwardt's protection.

[UBL BPL 2922; GEO, MIN, COB, ZOC, BOT, PHY]

**773. C.L. Blume (Leyden) to C.G.C. Reinwardt (Leyden); 27 April 1834**

Blume observes that Reinwardt undoubtedly knows that already since a considerable time he (Blume) is preparing a 'Catalogue Raisonné' of the collection present in the 'Rijksherbarium', which has been brought together by a governmental employee. In this catalogue he has given the origin of every object and of the various illustrations. He has found out that hardly any of these objects has been collected by Reinwardt. Even the largest plant families collected in the Dutch East Indies are almost completely absent, although in the past many specimens have been dried by Reinwardt personally. This must be very embarrassing for Reinwardt, because the Dutch government has paid him for this job. These collections should be present in the 'Rijksherbarium', since the zoological objects collected by him (Blume) are also present in the 'Rijksmuseum voor Natuurlijke Historie'. One might even suppose that the plants collected by Reinwardt have been stolen by Blume. It has been a long time since he (Blume) has been informed by Korthals that the plants, which have been taken to Holland from the Dutch East Indies, are still in Reinwardt's possession and that only a minor part of the dried plants has been inserted in the former academic herbarium. Blume cannot believe that somebody else has stolen the most interesting specimens from more than hundred packages of East Indian plants, which have been brought together by Kuhl, Van Hasselt, Zippelius and himself. He

does not like the idea that especially the plants collected by Reinwardt are missing. He suggests the addressee to take a small number of packages to the 'Rijksherbarium' every day, because it is the owner of this collection. Perhaps it would be wise if he (Blume) would – together with Reinwardt – draw an inventory of each of these packages, after the whole collection has been taken to the 'Rijksherbarium'. He is also willing to continue the selection of the plants at Reinwardt's, although it would be more convenient to finish this job in the herbarium. This would take less time. All in all, it will take many hours. The same goes for the botanical drawings, which have been made by the Bik brothers. He would prefer to draw a list of these plates also. Doing so would prevent the plants from being drawn twice, which would cause unnecessary expenses. This action is necessary, in order to give account afterwards and to protect Reinwardt from every suspicion. Therefore he thinks that they should settle this affair amicably and not involve others. He expresses his sincere feelings of high esteem.

[UBL BPL 2425; BOT, ART]

**774. C.G.C. Reinwardt (Leyden) to C.L. Blume (Leyden); end of April 1834**

Reinwardt has the honour to inform Blume that for the time being the plants, which he has collected in the Dutch East Indies for his private use, will not be handed over to the 'Rijksherbarium'. He needs this collection in order to complete his scientific work. The same goes for the drawings. He assures Blume of his high esteem and calls himself Blume's obedient servant.

[UBL BPL 2425; BOT]

**775. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1834**

This treatise on the peat moors is obviously incomplete. The author has not had the time, so he has said. He only did wanted to share his ideas with other scientists and to initiate further research. In the author's view peat bog and peat moor are the result of the same process. The peat plants have been washed ashore by a giant flood of sea water. First of all the heaviest substances must have been deposited. These deposits have given rise to the development of peat bog. The lightest substances have been deposited later on and these have given rise to the development of peat moors. Only

by assuming this the author is able to explain the enormous quantities of vegetable material of these peats. Sometimes these layers are more than 20 feet thick. In the author's view the fact that the covering vegetation is very poor is in favour of his hypothesis. Anyhow the author needs to assume a giant flood in order to explain why all the tree-trunks found in the peat are oriented in the same direction – to the South or to the South-East. In a certain way Reinwardt is susceptible to the author's ideas, which at least have been based on excellent observations, although he does not enunciate a new theory. It has also been advantageous to him that he has taken the peat moors of the provinces of Friesland, Groningen, Drenthe and Overijssel for an example. Unfortunately the author has not been able to complete his entry and to explain several important aspects, like the relation between this soil and other types of soil. Furthermore he has a rather poor knowledge of geology and chemistry. So it will be difficult for him to finish his treatise. Besides he is not enough familiar with the works of other authors. So this meritorious treatise cannot be awarded.

[NA-RANH HMW 444-433.367 R; BOT, PHY, GEO, CHE]

**776. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1834**

Reinwardt decides that the treatise on the measurements of the earth temperature is very complete. The author has proved to be familiar with the works of other authors. He has spent many years on studying warm springs and he has also examined every possible explanation of the origin of these springs. In his view the heat of the deeper parts of the earth is the only cause of this phenomenon. He argues that the heat of the air in mine galleries and the volcanic phenomena are the main causes of the earth temperature. Although the author has been very wordy now and then, although Reinwardt does not agree with every one of his ideas and although the structure of the treatise could be better, the author has shown his experience and zeal. So he deserves to be awarded. There is no doubt about that.

[NA-RANH HMW 444-433.371 R; GEO, PHY]

**777. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1834**

The treatise on the sensibility and motility of plant leaves, which has been entered under the motto 'Die Wahrheit der Natur ist Ernst, ihre Ewigkeit ist das bleibende und unveränderliche ... etc.', is an excellent contribution to science. It is completely up to date and it has been based on many observations and experiments. The author is an excellent physiologist. He has even discovered the cause of these movements. Their origin is located in the basal part of the leaf stalk. This part is extremely sensitive and it has a special structure. Besides the author has studied the sap stream and the influence of light, warmth and water on living plants. He has also described the periodical movements of plants. Although Dutrochet has already discovered these phenomena and their seats – especially by studying *Mimosa pudica* – the author has done more. He has repeated Dutrochet's experiments and he has proved the rightness of the results. He has unveiled more secrets and he has also proved the general character of these phenomena. He has shown the common character of the cause. He has been very cautious while explaining his observations. He has succeeded in abandoning what is not well-founded in Dutrochet's theories. Furthermore he has made a distinction between the movements, which are based on the sensibility of the plant and the pure physical movements. He has placed the first class of movements between the pure physical and mechanical movements and the movements, which are characteristic for animals.

Nevertheless there are a few objections to be made, among others that the author did not carry out a meticulous microscopic and anatomical investigation of the leaf stalk. He has only carried out a few experiments with *Hedysarum juglans* and he did not mention *Drosera* (see: Roth and Duvall). The author must be invited to complete his treatise within a certain term. Besides he has to improve his writing style and he has to act more cautiously with respect to his conclusions.

[NA-RANH HMW 444-433.375 R; BOT, CHE, PHY]

**778. P.W. Korthals (Padang) to C.G.C. Reinwardt (Leyden); 22 June 1834**

Korthals thanks Reinwardt for having sent him a copy of Reinwardt's lecture through the secretary of the 'Batavian Society of Arts and Sciences'. This makes him hope that Reinwardt will soon again have the opportunity to

publish a part of his travel report. He sincerely thanks him for the chemical information, which will ease his mineralogical research when travelling through the mountains. He gives the names of several minerals collected by him. He has also climbed the Myrapi, up to an altitude of 6.000 feet. At that occasion he again found several rare minerals. When he camped at the confluence of the Ané and the Singalang, it appeared that the vegetation and the animal world yielded up many secrets, which will be sent to Leyden in order to be added to the collections of the Museum and the Herbarium. Except for the species of birds described by Raffles, he has also acquired several new species, among others some beautifully coloured species. On the slopes of the Merapi, at an altitude of about 5.400 feet, he has discovered a rare species of Passiflora and a most beautiful Aristolochia species. At the next occasion he will inform Reinwardt more in detail.

After a heavy earthquake, which took place on 24 November, a heavy explosion occurred and the Merapi spat burning substances.

Finally he makes some remarks with respect to the temporary government of the region and adds his kindest regards for Mrs. Reinwardt, Mr. and Mrs. D'Escury and Miss Caroline. He recommends himself to Reinwardt's protection.

[UBL BPL 2922; BOT, ZOC, COB, GEO, MIN, PHY, CHE]

**779. E.L. van Heeckeren (Paramaribo) to C.G.C. Reinwardt (Leyden); 14 August 1834**

Especially because in his view the Leyden Hortus can take advantage of Surinam, major general Van Heeckeren, Governor-General of the Dutch West Indies, sends this letter to Reinwardt. He has recently been given a collection of Surinam plants and now he has decided to send this collection with captain Röperkopf to the Netherlands. Six cases of living plants have been loaded meanwhile. The plants have been collected in the woods of the 'Boven-Para divisions'. They are beautiful parasitic orchids, of peculiar shapes. One of these is two and a half feet high and already in full bloom. Captain Röperkopf has promised to take the best possible care of the collection. Once arrived in Amsterdam the plants have to be collected. He wonders if the collection is of any value to the Hortus, and if they deserve Reinwardt's attention, although the man who collected them has assured him that they are all very rare in Europe and that some of them are even

unknown in Europe. The present he has sent now has to be considered a sign of the ties of friendship between the two of them. [As it appears later almost every plant had died or had been destroyed.]

[UBL BPL 2922; BOT, COB]

**780. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 2 September 1834**

The German scientist Bisschoff has improved several important aspects of his treatise. Reinwardt expects Van Marum to see him in order to discuss these additional notes and corrections. He hopes that his friend has meanwhile recovered from a cold, which he has caught lately. At the moment, his own health is also defective. He will not come to Amsterdam. He asks him to give Mrs. Woestenberg his kind regards.

[NA-RANH HMW 444-112; CHE, GEO]

**781. P.W. Korthals (Padang) to C.G.C. Reinwardt (Leyden); 22 September 1834**

Korthals informs Reinwardt that because of the sudden death of Mr. Van Oort, member of the 'Second Commission', he has been recalled to Padang. Only Müller is left now. Müller has expressed his wish to return to the Netherlands and he, Korthals, has agreed. Because of his poor health Korthals himself is also longing for a leave. He complains about the fact that although they are public servants in the view of the government, it appears that they are not entitled to pension. Furthermore he informs Reinwardt that he has again collected a couple of specimens of *Rafflesia* and several specimens of a new fern species. Besides he succeeded in extending the collection of birds by the acquisition of several new species. Unfortunately, as a consequence of the approaching southwest monsoon, they will not be able to travel through the woods. Therefore they will try to travel around through the lower regions and try to collect various marine animals. He gives Reinwardt, Mrs. Reinwardt, Mr. and Mrs. D'Escury and Miss Caroline his kindest regards.

[UBL BPL 2922; BOT, ZOC, COB]

**782. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 29 October 1834**

Yesterday – 28 October – Reinwardt has been visited by Mr. Dassen, who has promised to improve his treatise, in order to meet the demands of the ‘Maatschappij’. He has not had the time to do so until now, because of his important scientific journey to the North. Furthermore he had to complete his thesis. In Reinwardt’s view the ‘Maatschappij’ has to award his entry the gold medal now, if Dassen has really improved it. It is an excellent essay, even if the author would not have the opportunity to continue his observations of *Hedysarum gyrans*. Because Reinwardt has already received many letters in which he has been asked to send a specimen of this plant, there is only one specimen left now. Besides it is very difficult to keep this plant alive in winter. Dassen is an excellent and most promising young scientist. He must be encouraged in every way. If it is possible for Van Marum to return to Haarlem through Leyden, they could see each other. He ends his letter by adding his compliments.

[NA-RANH HMW 444-112; BOT]

**783. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden) and N.C. de Fremery (Utrecht); 14 January 1835**

Vrolik informs his colleagues Reinwardt and De Fremery that Moll has reported about the results of the analyses of the substances, which have been brought to the surface at the occasion of the drilling of a well near the ‘Pyramide van Austerlitz’, situated between the villages of Zeist and Woudenberg. Vrolik asks the addressees to report in the next meeting about the geological and geognostical results of this drilling and to participate in the exchange of ideas.

[NA-RANH KNI 175-37.74; GEO, MIN]

**784. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 22 January 1835**

Reinwardt observes that he and Van Marum had already agreed to attend the meeting of the ‘Maatschappij’, next Saturday and to see each other. Initially he feared that he would not be able to come, because he had caught a terrible cold and he has not recovered yet. However since his health has considerably improved, it will perhaps be possible to arrive in Haarlem at

Van Marum's around 7 o'clock in the evening. He will leave Leyden about 4 o'clock in the afternoon. The final decision will depend on the weather. He has received several letters from Bonn (Germany), which prove that professor Bisschoff has not received the gold medal until now. Bisschoff is very indignant about that fact and so is the whole scientific community of Bonn. Therefore he begs Van Marum to send the award as soon as possible. He is still not sure if he will come to Haarlem tomorrow.

[NA-RANH HMW 444-113; PHY, GEO]

**785. C.G.C. Reinwardt ((Leyden) to M. van Marum (Haarlem); 11 February 1835**

Reinwardt returns the treatise on the theory of Dutrochet. He has read the 172 pages attentively, although he has been very busy. The treatise is meaningless and not important at all. The 'Maatschappij' should not allow the author to improve his entry and to carry out more of his incorrect and inaccurate experiments. The author is completely ignorant of the anatomy and physiology of plants. The contest should be withdrawn once and for all, because Dutrochet's theory makes no sense at all. As a matter of fact he has not been able to finish the reading of this meaningless document until now. Besides he has not had the opportunity to read the other treatise yet.

[NA-RANH HMW 444-113; BOT, PHY, CHE]

**786. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 22 February 1835**

Reinwardt informs his friend that Bisschoff (Bonn) has informed him through his confidential letter, dated 7 February 1835, that he had almost decided not to submit his important treatise to the judgement of the 'Maatschappij', to refuse the medal and to publish the treatise himself. After Reinwardt had persuaded him Bisschoff has decided to meet the demands of the 'Maatschappij'. Furthermore Reinwardt has promised him that the 'Maatschappij' would not mind if Bisschoff should decide to publish his treatise in German, but not until the Dutch edition has been published. Bisschoff has stressed that he has occupied himself already for many years with this subject and that he has carried out many conclusive experiments. In a second letter he has underlined that he is still worrying. Reinwardt explains that the professors of the Prussian universities have the obligation to publish regularly, in order to prove their scientific activities. In a certain

way Bisschoff has been forced to keep silent too long about his activities, because his treatise had to be judged by the 'Maatschappij'. Meanwhile this judgement has taken too much time. Bisschoff wants to publish a German edition of his work at the beginning of the Summer holidays. He begs the 'Maatschappij' to decide quickly and to send him the proofs of the Dutch edition as soon as possible. He asks Reinwardt to check these proofs, to arrange that they will be sent to him post-free and to add several copies. [Apparently Reinwardt has been authorized to decide in these matters on behalf of Van Marum and the 'Maatschappij'.]  
[NA-RANH HMW 444-113; PHY, GEO]

**787. C.G.C. Reinwardt (Leyden) to F.A.W. Miquel (Rotterdam); 11 March 1835**

The governors of the 'Klinische School' (Rotterdam) seem to have thought that Miquel was going to decide not to accept the offered post. In his letter, dated 5 March 1835, Miquel has asked him to inform Van den Bosch. Therefore Reinwardt has immediately informed him that Miquel was really fit for it. Miquel knows already Reinwardt's high opinion of him. This same opinion has been expressed in the judgement of Miquel's treatise, when he was awarded the gold medal. Reinwardt wishes him good luck and hopes that his wishes will be fulfilled. He assures him of his high esteem.  
[UBU 1873, MED, BOT]

**788. P.W. Korthals (Padang, mountain range) to C.G.C. Reinwardt (Leyden); 20 March 1835**

Korthals has not had the opportunity to answer Reinwardt's letters. He has understood that Reinwardt and his family are in rather good health. He wishes him the very best and he hopes to meet them one day. He had to endure many hardships and he has often lost his courage. These days he is following the advice of his physician and he feels much better. Meanwhile he has learned from a letter sent to him by Reinwardt that the crates of living plants from Java have been received. They contained hardly any new species. The success scored by Von Siebold has made him happy. He has been informed that the government in Batavia has received complaints from the Netherlands about the minor results of his efforts and his research in the Dutch East Indies. Much to his regret he has not been able to see the Governor-General about it until now. Of course he will not

need to explain to Reinwardt how much he appreciates the fact that the addressee has sent a letter about it to the Governor-General. He promises to send a large collection of new plant species with the next vessel setting sail to the Netherlands. Among these plants are also 150 fern species. He has added a sufficient number of specimens of the new species, among other of *Melostoma*. He also promises to send a new species, bearing the name of *Swindenia*, which is perhaps related to *Gronovia*. With respect to his geognostic research he informs Reinwardt that it appeared that the oldest formation found near Samawang Lake, at an altitude of about 1.000 feet above sea level, is a kind of gneiss granite, arranged in vertical layers. Because this formation is rich in mica this rock species sometimes resembles mica slate. This formation is covered by a formation of red sandstone. In it the gold mines are situated. The red clay soil contains tiny slivers of gold, quartz, brown ironstone and magnetite. The iron mines are also situated in this region and so is a formation of dense limestone in which gypsum layers are found. He adds more mineralogical data, proving his growing mineralogical expertise. He hopes that Reinwardt will be pleasantly surprised, when receiving these collections, brought together by him. He gives his kindest regards to Reinwardt, his relatives and friends and wishes him good health. [UBL BPL 2922; BOT, MIN, CHE, GEO, PHY]

**789. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 24 March 1835**

Reinwardt assures Van Marum that he has seen Van der Hoeven and that his colleague is willing to judge the documents. Van der Hoeven has asked to send him copies of the reports which have already been completed. Reinwardt has given him additional information. He knows that Van der Hoeven will be impartial and that his judgement will be decisive. Furthermore he has been waiting for the delivery of the receipt signed by Van der Hoeven. Finally he has been very pleased by the news of Van Marum's recovery and he hopes that it will soon be complete. He adds his compliments for Mrs. Woestenberg.

[NA-RANH HMW 444-113; ZOC]

**790. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 1 April 1835**

Reinwardt has read the long-winded treatise on the caves. Tonight he will write his report and tomorrow he will send it to Van Marum. The bargeman has informed him about Van Marum's recovery. Although he could make several objections, he might be willing to plead the award. Again he reminds his friend of the 'Bisschoff Affair', which has not been completely arranged until now. Bisschoff has sent him already a part of the improved treatise, without having explained why he did not send it directly to Van Marum. He sends the whole parcel on to his friend, Bisschoff's letter included. He is happy for Van Marum's continuing recovery and underlines his feelings of strong affection.

[NA-RANH HMW 444-113; GEO, MIN, PHY]

**791. M. van Marum (Haarlem) to C.G.C. Reinwardt (Leyden); 3 April 1835**

Yesterday Van Marum has finally received Reinwardt's report on the limestone caves. Unfortunately he has not been informed about Reinwardt's judgement before the beginning of the meeting. Van Marum had hoped that it would be in conformity with the other reports. But now Reinwardt's view appears to have changed from positive ('worth to be awarded') into negative. As a consequence his opinion is different from the view his colleagues Van Breda and Van den Ende are having. Van Marum has decided not to object if one of the other members of the commission would agree to read Reinwardt's report. He accepts that Reinwardt has proved the incorrectness of the author's explanations, interpretations and conclusions. If he would have known he would – to a certain extent – have tried to reconcile the different opinions, before bringing them into the open. Reinwardt must understand how difficult his position is, because he has tried so hard to prize off the qualification 'worth to be awarded the gold medal'. Being the secretary of the 'Maatschappij' and a member of the commission as well, he had to try to bring into line the various judgements. He fears that the four members of the jury will not be able to see each other soon and to solve this problem finally. He promises to agree before hand with Reinwardt if he will succeed in persuading Van Breda to accept his point of view. It will not

be very difficult to persuade this colleague if he knows the opinion of the three other members of the commission.

[NA-RANH HMW 444-113; GEO, MIN, CHE, ZOC]

**792. G. Bisschoff (Bonn) to C.G.C. Reinwardt (Leyden); 5 April 1835**

Bisschoff informs Reinwardt that he has completed his 'opus' and that he is pleased to send the rest of it to Van Marum. He is longing for the approval of the commission. Not only has he tried to complete his answer, he has also discussed the various phenomena, which are important with respect to the internal heat of the earth. He leaves it to the jury to decide if he has succeeded, yes or no. Anyhow, coming August he wants to make a holiday trip through the Alps. In this respect he observes that he has decided to add a couple of observations, which he still has to make in the 'Zevengebergte'. Among others he hopes to measure the soil temperatures in the proximity of the glaciers. He wants to return to Switzerland this winter. He promises not to publish his treatise in German before he has informed Reinwardt about the results of his observations and measurements, in order to give preference to the 'Maatschappij' and its *Verhandelingen*. He asks Reinwardt to speed up the arrangements with regard to the Dutch translation of his improved treatise and to check the facts and figures.

Recently he has received Van Marum's letter (dated 24 February 1835), in which he has apologized for the delay of his answer. From it he has learned that Van Marum has allowed him, although reluctantly, to publish his treatise in German. He hopes that through this new letter Reinwardt and Van Marum will stop worrying. He promises Reinwardt to inform Van Marum also and asks him to return this letter in due time. He has understood that Van Marum does not want to correspond with him anymore. Therefore he assumes that Van Marum will not object to his decision to send his manuscript directly to Reinwardt. He assures him of his feelings of high esteem. [The original letter is written in German]

[NA-RANH HMW 444-113; GEO, PHY]

**793. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 5 April 1835**

Yesterday – immediately after the reception of Van Marum's letter – Reinwardt has seen Van Breda. Although Van Breda is sharing Reinwardt's opinion with

respect to unfounded hypotheses, he thinks that the 'Maatschappij' is not authorized to correct or to change the text of a treatise, once it has been awarded. Doing so would lead to severe arguments. It would be much better to accept or to refuse the treatise completely. Together with Van Breda he suggests to award it. Reinwardt is willing to correct his own judgement, proposing not to publish the author's opinion with respect to the origin of the caves.

Because of its many valuable elements, Reinwardt wants to plead its award. The hypothesis has to be on the author's account. The publication of absurdities is not rare, not even in Haarlem! It is not possible to solve this problem otherwise.

Tomorrow he will see Pruys van der Hoeven and ask him to finish his reports about 14 May. He adds his greetings.

[NA-RANH HMW 444-113]

**794. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 11 April 1835**

In Reinwardt's view the judgement made by Pruys van der Hoeven (with respect to the entries to the contest on homeopathy) is contrary to the laws of the 'Maatschappij', because he suggests to award both treatises, although already two other members of the jury have given their votes to one of these entries. Because of this result, the other entry will be awarded the 'accessit' and the silver medal. Both entries will be published. A third entry – being of a far lesser value – does not deserve to be considered in detail. Reinwardt promises to come to Amsterdam together with his wife, next Wednesday, in order to attend the meeting of the 'Eerste Klasse' on Thursday. He hopes to see Van Marum at that occasion and he wants to witness his recovery. If needed so he is willing to see Van Marum on Wednesday morning and to stay there until 7 o'clock in the evening, also for Mrs. Woestenberg.

[NA-RANH HMW 444-113; MED]

**795. P.W. Korthals (Padang) to C.G.C. Reinwardt (Leyden); 20 April 1835**

At the occasion of the departure of a vessel to Europe, Korthals has sent Reinwardt a letter some time ago. At that occasion he has also informed him that he had heard that complaints about him had been received in Batavia.

Therefore he adds the verbatim text of this complaint. From it appears that it has been Temminck who has been the author of that letter. Korthals does not understand why at the same time Temminck has trumpeted forth Müller's praises at the same time. On the other hand Van Oort has praised him. Now he hopes that the letters sent by him to Reinwardt prove that he has really done his utmost, in spite of the miserable conditions. For example, during the trip through Sumatra, his collaboration with Van Gelder has been excellent. Besides when the members of the company who were responsible for the collection of zoological objects were absent they have taken their jobs, while the Javanese employees did not do so. Furthermore he has made the descriptions, carried out the analyses, drawn the plants and carried out many other duties. Much to his regret the objects collected by him did not arrive in a good condition in the Netherlands. Blume knows how difficult it is to dry plants in the humid woods. When Müller had uttered his wish to return to Europe, he – Korthals – has proposed to Temminck to complete Müller's job together with Van Gelder. All things considered he has in every respect shown his good will. He simply had to inform Reinwardt about these feelings.

He adds a couple of botanical facts. Recently he has received Sprengel's *Genera* and Lindley's *Introduction to the Natural System*. He thanks Reinwardt for these gifts. Especially Lindley's book is very useful. Finally he reports on a military operation and gives his kind regards to Reinwardt, his relatives, Mr. and Mrs. D'Escury and Miss Caroline. In a postlude he adds a brief description of the presents added by him, indicating the destination of these presents.

[UBL BPL 2922; BOT, ZOC, COB, MIN, GEO, PHY]

**796. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 23 April 1835**

Reinwardt informs his old friend Van Marum – secretary of 'Teylers Tweede Genootschap' – that he has found the right man for copying a certain document. It is Mr. Arkenhausen, an experienced botanist and draughtsman of German origin, who is employed at the 'Rijksherbarium' (Leyden). This man masters both German and Dutch. Arkenhausen has told him that he wants to think it over. Although he is very busy, he will be able to spend the early morning hours and the evening hours on this assignment. He is

willing to start soon, once he will have accepted the job, so it seems. After having examined Arkenhausen's first proof, Reinwardt will decide about the assignment. The payment should be agreed before Arkenhausen will start his job. A payment per day or by the page should be considered less advisable. Reinwardt assures his friend of his high esteem.

[NA-RANH 529-20b; BOT, ART]

**797. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1835**

In Reinwardt's view the various parts of the treatise on the caves in the limestone rocks are of a different value. The nature and details of these caves have been described very carefully and completely. The author is very well acquainted with what has been written on this subject. He has carried out many observations in the South of France. He has sufficiently proved that the deposits in these caves and fissures are almost independent of the local differences of the circumstances. The composition of the many deposits is very much alike. Rightly the author concludes that in all these cases the cause is the same. He has made it very probable that these deposits ('brèches osseuses') have been caused by large water floods, which may have occurred in various geological times, although they all must have taken place in the diluvial era. The human remains, objects of art and animal remains present in the same deposits prove that human beings and animals have been living in the same regions. The author has succeeded in determining the various animal species. He has also made clear if these species are extinct, yes or no. He has given complete lists of species. This treatise is really very complete. However the explanation is less consistent with the facts. The author has demonstrated his vivid and exaggerated imagination with respect to those events and phenomena, because they are still completely obscure. As a consequence the treatise has partially lost its quality.

[NA-RANH HMW 444-432.362 R; ZOC, GEO, MIN]

**798. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1835**

Reinwardt is very indignant about the treatise examined by him. It has been written by an author, who has borrowed from the most important authors in order to tease the 'Maatschappij'. Probably he has assumed that the members

of the 'Maatschappij' would not find out the truth about his activities. First of all he has lied when he said that he has always loved to practise microscopic anatomy. In Reinwardt's view the author must have discovered at a very early moment that microscopic anatomy is not his strong point. He has stolen from other authors, among others in his discussion of the anatomy and physiology of the Charae. With this respect he borrowed from Corti, who has published several books on this subject in 1774 and 1775. The same goes for *Ueber der Natur der lebendigen Pflanze* (Schultze) and for the works of Meyen and Agardh. Maybe he has never really consulted Corti's work. The same goes for the second chapter of his treatise in which he discusses the flow of cytoplasm in *Chara vullgaris* and *Chara flexilis*. He has even used the same notes as Corti has done. All in all, he has made a poor show. He is even ignorant about how to distinguish between the two species. It is even more remarkable that the author has even dared to describe eight more species. Reinwardt has been able to prove that the author has borrowed this 'knowledge' from Meyen (see: *Linnaea*, volume II). The author has not given any new facts. The same goes for his 'observations' of *Stratiotes*, *Hydrocharis*, *Vallisneria*, *Aloe* and other species (see also: Meyen). Reinwardt has been embarrassed and amused by the fact that the author has made use of the same microscope as Meyen did (which has been built by Mann; this instrument has a magnification of 220 times; see Meyen, '*Phytotomie*'). The author has even been so shameless to have put that he has seen the same peculiar structures as other scientists have seen before him. This even goes for structures, which cannot be seen because they do not exist at all. Finally the author discusses the movement of the cellular fluids. His comparison of the tissues with the structures of the electric organs of fishes and with the construction of electrical machines makes no sense. The same goes for the movements of plants, which in the view of the author, are also due to electrical phenomena. The author's name deserves to be mentioned, not only because of what he has said, but also in order to warn other scientists about his meaningless and weird ideas and to warn them not to trespass on the time of the members of the 'Maatschappij'.

[NA-RANH HMW 444-432.365 R; BOT, PHY]

**799. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 7 May 1835**

Reinwardt discusses a couple of questions proposed by his colleague Cl. Mulder. One of these questions – on the ‘politia medica’ – is not scientific enough. Mulder has to enter his draft before 14 May 1835. Reinwardt would prefer to discuss his suggestions with Van Marum personally, but he has to wait until he is feeling better again. His legs are causing inconveniences. He is suffering from rheumatism in the right leg. He fears that he will have to communicate by mail.

[NA-RANH HMW 444-113; MED]

**800. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 13 June 1835**

Reinwardt is very pleased about the fact that he is able to send his highly esteemed fellow members of ‘Teylers Tweede Genootschap’ a copy of the treatise on the structure of plants, together with the illustrations. As agreed the copy has been made by Mr. Arkenhausen (Leyden), to whom – in Reinwardt’s view – the sum of 100 guilders should be paid (being 10 cents for every three quarters of a page). Because Arkenhausen’s writing is very small and dense, he should be paid more than the amount of 70 guilders, which the ‘Genootschap’ initially owed him, considering the number of pages copied. Besides Arkenhausen is not only a copyist but also a botanist. Reinwardt hopes that the directors will agree with his proposal. Meanwhile Reinwardt has found out that the author of the treatise is the German botanist [Franz Joseph Ferdinand] Meyen himself, the author of *Phytotomie* (1830) and of many other important treatises in the field of botany, which have been published in the *Nova Acta Academiae Leopoldinae*. Meyen has travelled around the world aboard a Prussian vessel. This voyage has meanwhile resulted in the publication of a journal, of which two volumes have been published until now. Reinwardt stresses the strong relation between the treatise and *Phytotomie*, also with regard to the illustrations. He assumes that his fellow members of ‘Teylers’ will share his view and that this treatise has to be awarded and published as soon as possible.

[NA-RANH 529-20b; BOT]

**801. M. van Marum (Haarlem) to C.G.C. Reinwardt (Leyden); 15 June 1835**

Last Friday Van Marum has received a very unpleasant letter from Dr. Dassen (Hoogeveen). Through it the author reminded him that he had sent a supplement to his treatise, although his entry had already been awarded. He explained that he had hoped to receive the judgement with respect to this addition, immediately after the annual general meeting of the 'Maatschappij', which did not happen. Van Marum recapitulates the difficult correspondence between him and Dassen during that period. The author has simply submitted his supplement too late. According to Dassen this has been due to the fact that he had not succeeded yet to settle somewhere. Dassen has even informed him that he might decide to abandon the idea of entering a new supplement if this document should be rejected. Although Van Marum has high expectations of Dassen's attempt to improve and to complete his text, he is nevertheless willing to send him a copy (with remarks), at least if Dassen is willing to pay the copyist's salary. Reinwardt – being the first member of the jury – had already agreed with the conclusion that Dassen's treatise is a valuable contribution to science. Anyhow it has to be prepared for printing, because the author seems to have expressed his wish to end his relationship with the 'Maatschappij', as far as the publication of this treatise is concerned. At least this should be decided, given the unacceptable extract of his original treatise, Dassen has dared to send to the 'Maatschappij' now. Van Marum cannot imagine why the author has completely reconstructed his treatise meanwhile.

[NA-RANH HMW 444-433.375 R; BOT, CHE, PHY]

**802. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 15 June 1835**

Obviously relieved, Reinwardt informs his friend that he can finally complete his judgement of the phytotomical treatise, which has been submitted to 'Teylers Tweede Genootschap'. He points at his covering letter. He has read the whole document very attentively. He underlines the importance of Kieser's last treatise and he advises to read especially the last part of this phytotomical contribution. This document has to be awarded, especially because of its beautiful drawings. On the other hand the description and analysis of the circulatory system are rather defective. Furthermore the author

has added many new observations. Reinwardt has decided that it would be wise to show the drawings to the lithographer Ae. Saegmans Mulder, who is one of the best in his 'métier'. Saegmans Mulder has already told him that he is willing to make the lithographies. Reinwardt – who is eager to know the result of Saegmans Mulder's attempt – proposes to have a proof made. Reinwardt promises to send the copies of the French translation of the programme of the 'Maatschappij' to as many interested colleagues as possible. He is very pleased by the fact that Van Marum has reminded the date of 3 June (the day of Reinwardt's wedding). His friendship with Van Marum will last forever. He is also very pleased by Van Breda's message that he has seen Van Marum on the 'Veluwe' in good health, last Thursday. He hopes that Mrs. Woestenberg has fully recovered meanwhile. He adds his sincere greetings. If possible he will attend the meeting of the 'Eerste Klasse' next Friday and he will try to see Van Marum as well.

[NA-RANH 529-20b; BOT,ART]

**803. P.W. Korthals (Padang) to C.G.C. Reinwardt (Leyden); 20 June 1835**

First of all Korthals informs Reinwardt that he has been extremely pleased by the fact that he and his relatives are in such good health. After having reminded the previous letters sent to Reinwardt, he discusses the contents of his letter sent in February 1834, in which he has given a detailed account of the results of his geological research like Reinwardt had wanted him to do. He has needed 12 days to write this account. Unfortunately they had to leave for Indrapoera. He hopes that it will find favour in Reinwardt's eyes. In the second part of the account he will discuss the geological features of the region they have visited, together with the agriculture and the barometric pressures. He thanks Reinwardt for having informed Van der Hoek about the books he wants to receive and of course he is grateful for the present Reinwardt has sent him (the reference book, written by Walchner and Henschel). Through Van den Hoek he has also received several other books, which have informed him about the actual state of science in Europe. Books previously received by him have served him well, for example when he had to determine the plants which were sent to the 'Herbarium'. It is up to Reinwardt to judge the results of the determinations. Reinwardt will receive a small shipment of plants through Blume. At an altitude of 1.000 feet he has possibly discovered a new species of Dipterocarpus. He adds a

couple of other botanical data and informs Reinwardt that the experiment with seeds has failed. During his last trip he has acquired a specimen of *Gymnura*, of which he has already brought together several anatomical data. Because most of the Javanese members of the company had fallen ill, they could not bring together as many animal specimens as they had hoped for. On the other hand many plants have been collected. When the natives got a fever, they had to cut short the trip, after which the company returned to Padang. The travel account has already been sent to Blume, as far as it had been completed. He has asked Blume to inform Reinwardt about its contents. Now he asks Reinwardt to check the geognostic data. As soon as he will have returned to Batavia he will try to inform Reinwardt about the coral reefs. He adds a congratulation and his best wishes, in which he expresses his feelings of esteem.

[UBL BPL 2922; BOT, ZOC, COB, PHY, GEO, MIN, AGR]

**804. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 30 June 1835**

Reinwardt sends his friend a few copies of Plate IV, printed by Ae. Saegmans Mulder (Leyden). He wants to know the opinion of Van Marum and the other members of 'Teylers Tweede Genootschap'. He is rather satisfied about its quality. It will be better than copper engravings. Besides the lithographies are less expensive. Reinwardt adds the receipt of the copy of the text made by Arkenhausen, after having signed it. He expresses his kind regards towards his friend and Mrs. Woestenberg.

[NA-RANH 529-20b; BOT, ART]

**805. Ae. Saegmans Mulder (Leyden) to C.G.C. Reinwardt (Leyden); 12 July 1835**

Because of his many occupations, Saegmans Mulder has not had the time yet to send Reinwardt the second proof of one of the plates in accordance with Reinwardt's demand. Because Reinwardt has asked him to return the plate, he wants to underline that the gentlemen in Haarlem will have to believe him on his word that he is able to carry out the assignment. If they will not be satisfied afterwards he is willing to abandon the agreed payment.

[NA-RANH 529-20b; BOT, ART]

**806. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 13 July 1835**

Reinwardt is disappointed about the fact that Saegmans Mulder has not finished the first proofs until now. Therefore he has asked him to return the original drawings, because the other members have to read the manuscript now. Until now Saegmans Mulder has not answered his questions. Reinwardt knows that he will need about two months for printing three sheets, each bearing two plates. Fortunately the artist has indicated the he is willing to accept the assignment.

[NA-RANH 529-20b; BOT,ART]

**807. Ae. Saegmans Mulder (Leyden) to M. van Marum (Haarlem); 22 July 1835**

Saegmans Mulder sends the wanted proof. He wants to express his feelings about the fact that he might run the risk of not earning any money with this job. However, he will do his best and he promises to work very meticulously. The final prints will be better than these proofs. He will be able to print three plates every two months and he asks 50 guilders for each plate. These plates should be printed on French paper, which is of a far better quality than the Dutch paper, as Reinwardt will see for himself. He asks to return the print to him, because it is the only one he has got.

[NA-RANH 529-20b; BOT,ART]

**808. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 23 July 1835**

Again Reinwardt sends his friend a proof of a part of the second figure, together with Saegmans Mulder's last letter. Because the artist is afraid that the proof will not be accepted, he has printed it only reluctantly. Meanwhile Reinwardt has seen for himself that Saegmans Mulder is quite fit for the job. He will deliver excellent prints. The price is fair in any way as well as Saegmans Mulder's wish that the plates have to be printed on French paper. Because the artist has asked to do so, the prints should be returned to him after they have been judged. He adds his greetings to his friend and to Mrs. Woestenberg.

[NA-RANH 529-20b; BOT,ART]

**809. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 27 July 1835**

Reinwardt is very pleased by the news that 'Teylers Tweede Genootschap' has agreed with his proposals regarding the publication of Meyen's treatise. It should appear as soon as possible. If the 'Genootschap' should decide not to entrust the production of the lithographies to Saegmans Mulder, it will have to find another artist, which will be very difficult. Probably Reinwardt will be able to attend the meeting, which will be held on 7 August. He will try to visit his friend the day before. He will not stay very long, because the holiday arrangements have already been made. Today or tomorrow his friend will receive the cuttings of *Mesembryanthemum*. In a postscript he remarks that he will add a pot of six cuttings today.

[NA-RANH 529-20b; BOT, ART]

**810. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden) and J.G.S. van Breda (Leyden); 7 August 1835**

On behalf of the Minister of the Interior a letter – dated 31 July 1835 – has been sent to the 'Eerste Klasse' about a treatise entered by Friedemann (Stadt Oldendorf) and dealing with the following subject 'Over eene eigene wijze van turfverkoling en daaruit te trekken voordelen' ('On a specific way of carbonization and on the advantages to be taken from it'). The commission is asked to enter its report within the next two months.

[NA-RANH KNI 175-37.125; BOT, PHY]

**811. C.G.C. Reinwardt (Leyden) and M. van Marum (Haarlem) to the Directors of the 'Teylers Foundation' (Haarlem); 8 August 1835**

Reinwardt and Van Marum inform the Directors of 'Teylers Foundation' that they have decided about the best sequence of the illustrations of the treatise, which will be published by the 'Genootschap' (11 plates, covering 21 figures).

[NA-RANH 529-22; BOT, ART]

**812. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 11 August 1835**

Today Reinwardt has not been able to see Ae Saegmans Mulder. So the contract has not been settled yet. It will have to wait until after he has

returned from his holidays. The artist has promised to start the printing on 1 September. Buying the stones will also take some time. The same goes for preparing them and for printing the plates. Von Siebold will not be able to lent his stones to 'Teylers Tweede Genootschap'. Because it is not sure if the lithographies can be printed in Von Siebold's printing establishment, it will perhaps be better to contact the establishment of Bakker (Dordrecht). Bakker would probably be willing to lent his stones. If not, the 'Genootschap' still has the possibility of buying the stones itself. Meanwhile Saegmans Mulder has promised to try to acquire two stones.

Tomorrow Reinwardt will leave for Velp together with his niece Caroline. He will stay at Mr. Jansen's. Once returned, he hopes to see Van Marum soon again. He adds his greetings to Van Marum and to Mrs. Woestenberg.

[NA-RANH 529-20b; BOT,ART]

**813. P.W. Korthals (Padang) to C.G.C. Reinwardt (Leyden); 24 August 1835**

Korthals gives a list of the letters sent to Reinwardt by him in the last few months. He wishes him and his precious family good health. He describes the journey along the beach to the swampy village of Indrapoera, followed by a description of the structure of a couple of coral islands. Their inland vegetation can be very rich. The expedition camped at the beach of the sheltered Tjinko Bay. The soil of the isle of Tjinko is very fertile on which the present commandant cultivates giant bean plants (growing about 16 to 18 feet high) and other vegetables and vine. These plants produce delicious grapes thrice a year. From here the expedition has made a short trip to the old mines of the Dutch East India Company, near Sillida. De natives are not in the least interested in these mines. The mine galleries have been cut out in rocks which are rich in quartzite. He has also found that they were rich in magnetic iron ore and pyrite, but not in gold. Thereupon the company travelled on to Indrapoera, rowing upriver. He gives botanical details in relation to the condition and properties of the soil and some zoological remarks. From Indrapoera the expedition returned to Padang. During the return journey they were caught in a thunderstorm and they were almost wrecked. Nine of the 32 Javanese members of the expedition fell ill. Of one of these the fever degenerated.

Until now Korthals's letter to Temminck has remained unanswered, while

Müller's letter was unanswered. Temminck has advised Korthals not to return to the Netherlands. The latter assumes that Reinwardt has already been made acquainted with this affair. He will stop discussing it. He is looking forward to receiving Reinwardt's answer, because his future is also depending on it. According to the letter received from Diard, Dr. Horner has arrived in Java and he will come to Padang. Diard has also informed him that the expedition will soon have to travel to Borneo. Korthals is worrying about the situation because it is difficult to maintain authority. It even seems impossible to enter into that region. He adds a couple of facts about the military situation. He hopes that Reinwardt will be allowed to inspect the account sent by him to Blume. He thanks Reinwardt for the letters sent to him and asks him to convey his greetings.

[UBL BPL 2922; BOT, COB, AGR, GEO, MIN, PHY]

**814. J. Müller (Padang) to C.G.C. Reinwardt (Leyden); 26 August 1835**

In his letter Müller stresses that he has pleasantly been surprised by Reinwardt's letter dated 29 October 1834. He wishes him good health and hopes to see him safe and sound after his return to the Netherlands. He discusses several subjects which are occupying him and spends a few words on the concise essays presented by him to the 'Bataviaasch Genootschap van Kunsten en Wetenschappen' a couple of years ago. He has not heard from it since 1833. Its directors are constantly complaining that they were unable to support him financially. Of course Müller is willing to recognize that, but on the other hand he believes that he has really done his utmost and that a little encouragement would not be a bad idea. He would like to send Reinwardt a short essay for assessment. In his view he is highly motivated, but the constant travelling to various destinations, his natural shyness and the lack of scientific literature make it very difficult to put this plan into effect. Anyhow he wants to write a treatise about nature, fully based on his own observations. He assumes that meanwhile Reinwardt will have set eyes on the two accounts of the natural history and physics of the Dutch East Indian colonies sent by him to Mr. Susanna a couple of years ago. He has intended to use the report written by him about the region the expedition has travelled across as a basis for future detailed descriptions. He hopes that Reinwardt for the sake of their friendship will be so kind to inform him

about his judgement within a couple of month after having received this document.

He has added several notes, describing the condition of the island the expedition is visiting just now. He admits that it is often difficult to determine the various minerals in the right way. He thanks Reinwardt, adds his kindest regards, also to his relatives.

[UBL BPL 2922; BOT, GEO, MIN, CHE, COB, PHY]

**815. A.H. van Voorst (Leyden) to M. van Marum (Haarlem) and C.G.C. Reinwardt (Leyden); 28 August 1835**

On behalf of the Director's of 'Teylers Foundation', H. van Voorst, its secretary, informs Reinwardt that it has meanwhile been decided that the stones will remain in the possession of the Foundation. Reinwardt has to inform the artist about this decision. He has to arrange that the artist will agree. Reinwardt and Van Marum will also have to inform the Directors about the probable start of the printing procedures and about the number of copies of each plate.

[NA-RANH 529-20b; BOT, ART]

**816. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 12 September 1835**

Reinwardt returns a corrected proof to Van Marum. He has not seen Van Voorst yet, so he could not discuss the question of the stones. He does not fear that the stones will be abused by the artist or by others. Anyhow it does not matter. If the Foundation would be the owner abuse would still be possible. It will be impossible to supervise Saegmans Mulder. Reinwardt has been very busy these days, because of a visit paid by a couple of professors from Paris and because of several other occupations. He has not even been able to carry out his ordinary jobs. If he will succeed in preparing a short communication he will come to Amsterdam next Thursday. He will inform Van Marum and visit him Wednesday evening. He adds his kind regards.

[NA-RANH 529-20b; BOT, ART]

**817. C.F.H. von Ludwig (Cape Town) to C.G.C. Reinwardt (Leyden); 30 September 1835**

Von Ludwig, secretary of the 'South-African Society of Literature and Sciences', thanks Reinwardt for sending him letters on 31 July and 3 August 1834, through which he has confirmed the arrival of his letter dated 28 June 1833, to which the two diplomas had been added. He thanks his colleague for handing over one of these to Temminck. As soon as the annual report has been published in Cape Town, he will send a copy to Reinwardt, together with a copy of the Laws and the Regulations. He has conveyed Reinwardt's words of gratitude to Sir John Herschel, president of the Society and to the other governors. They have asked him to convey their thanks to him for his congratulation and his present. They are most willing to assist him in the future, both personally as in his quality of professor in Leyden University. In order to advance the flourishing of natural history the Society has sent an expedition to Central-Africa. They expect a rich harvest. The expedition is directed by the inexhaustible and professional Dr. Andrew Smith. Meanwhile the secretary has received his first letter. It proves that the company has already succeeded in collecting many objects of natural history, for example several new species of antelopes and a third species of Rhinoceros. If possible Dr. Smith wants to continue his journey until they will arrive at a large lake. From there he will probably return to the Cape Province through Tamaras- and Namaqualand. Anyhow this journey will last until mid 1836. Von Ludwig does not know yet how the new collections will be divided. The decision will be made by the shareholders after the expedition will have returned. He fears that the whole collection will be sold by auction. Much to his regret the 'National Museum' did not appoint a scientist member of the expedition, in order to acquire the new species, like his friend Dr. Van Horshock did in the past. Von Ludwig would have liked to undertake that task, but he could not because of his many duties in Cape Town. Dr. Smits (Cape Town) could have been the right man. Unfortunately there was no experienced botanist, who could be appointed member of the expedition. Now he fears that the company will let slide botany. Therefore the Genootschap has given a large quantity of paper meant for drying plants and wrapping collections of seeds. As soon as the expedition will have returned Von Ludwig will leave for Europe and take the collection with him, which has been awarded to him. He wonders if he has informed Reinwardt

already that he has laid out a small private garden after his return from Europe. Many plants, South-African as well as plants from other regions, are already in blossom. Since a couple of years he maintains a correspondence with the botanical gardens of Hamburg, Kew (Dr. Hooker) and Glasgow and with the Duke of Bedford and Northumberland. This correspondence also includes the exchange of plant seeds. He gives a list of seeds already sent and seeds still to be sent to Dr. Hooker. If Reinwardt should wish to receive certain zoological objects or plants, he must inform him. He will be happy to serve his friend. On the other hand he would be pleased if Reinwardt would be so kind to compensate him for the zoological objects to be sent to the Netherlands. In exchange for it he would be very pleased if Reinwardt would be so kind to send a similar collection of Javanese zoological objects to Württemberg, his fatherland. As far as it concerns the compensation for the seeds to be received from Cape Town, Reinwardt should send the seeds from Leyden directly to him because he wants to cultivate them in his private garden. He prefers to start the exchange programme immediately. It would be most convenient if Reinwardt should send the seeds from the Leyden Hortus to him through Messrs. B.J. and G.P. Ploos van Amstel, his correspondents in Amsterdam, to Cape Town. He is especially interested in specimens of *Primula auricula*, *Primula veris*, *Clarkia*, *Zinnia*, *Cheiranthus*, *Dictamus*, *Georgina*, *Fragaria*, *Grossularia*, *Ribes*, *Tilia*, as a matter of fact he is (also) interested in the seeds of every plant species growing in the Leyden Hortus. Mr. Schuurman should not think that by granting this wish would be carrying coals to Newcastle, because in Cape Town European plants are extremely rare. Finally he would be pleased to receive seeds of *Hyoscyamus niger*, *Atropa belladonna*, *Aconitum*, *Digitalis*, *Cicuta* and other medicinal plants. He ends his letter by adding his best wishes for him and Temminck and assures him of his feelings of esteem and obedience for Reinwardt.  
[UBL BPL 2922; BOT, ZOC, COB, MED]

**818. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden) and J.G.S. van Breda (Leyden); 9 October 1835**

In the last public meeting of the 'Eerste Klasse' of the 'Koninklijk Nederlandsch Instituut' Van Hall has submitted a treatise entitled 'Beschrijving en afbeelding eener nieuwe soort van varen' ('Description and representation of a new fern species'). A couple of dried specimens of this fern (perhaps

a new species), which have been added to this treatise, are also sent to the commission. The 'Eerste Klasse' has decided that the report has to be entered within the next two months.

[NA-RANH KNI 175-37.132; BOT]

**819. P. Korthals (Padang) to C.G.C. Reinwardt (Leyden); 26 October 1835**

Korthals reminds Reinwardt of the promise previously made by him, to inform him about the rocky coasts. He has tried to find the rock peculiar rock sample needed for the determination of the rocks which are found there. Initially he thought that there was a certain resemblance between that rock and the rock sample given by Zipfer to the 'Museum' for a present. Quite recently he has again visited the Padang mountain and reached the conclusion that it had to be an aphaniet-formation, turning into a wacke, or in other words a sediment which reeks of clay. The Padang mountain is a hill, about 300 feet high.

He adds a couple of physical data and continues by giving a description of the vegetation and a list of its most striking plants. Among these are several fern species. On the next couple of pages he describes a number of rock samples and minerals found by him and adds a couple of sketches of crystalline forms.

They are still waiting for the arrival of Dr. Horner. Diard has informed him that he has made the proposal to the Indian government to allow Müller to go on leave to Europe, after his return from Borneo. Korthals has suggested Diard to consider the journey to Holland as paid leave. This will give Müller (and of course also himself) the same rights as the government officials have when they are going on leave to Europe. The financial situation in the Netherlands is rather bad. After having returned to Batavia they can restart work. Korthals – in good health again – likes that idea. After having worked hard in the East Indies, his job has not been completed yet, although he did not have a break. Anyhow, he would like to return to the highly esteemed company of Reinwardt and his relatives. In the past he has informed Reinwardt already about the shipment of six crates, accompanied by a brief description of some of the objects contained in them. Because he would not impose upon Reinwardt's spare time, he has sent the notes to Van Hall, asking him to check them. He hopes that these notes will be

accepted as phytographic organographies. Unfortunately he has not had the opportunity to produce descriptions of the new species. He hopes to make that up another time. There is no more news besides the fact that he has recently had the opportunity to set eyes on an anonymous document dealing with the financial administration of the Dutch East Indies, for which Van den Bosch, the Governor-General is responsible. Sumatra also suffers the ill effects of the situation. The former Governor-General, Baud, will leave for the Netherlands in April. He hopes to see him before his departure. He sincerely hopes that Reinwardt's letter of recommendation to Baud will be of service to him, because he is aware of the fact that in the past Baud has had his objections with respect to him now and then. He gives Reinwardt, his relatives and the other acquaintances his kindest regards and expresses his feelings of friendship and esteem.

[UBL BPL 2922; BOT, PHY, CHE, GEO, MIN]

**820. C.G.C. Reinwardt (Leyden) to F.A.W. Miquel (Rotterdam); 30 October 1835**

Reinwardt sends his colleague a copy of the *Annales*, in which the treatise of De Vos and Bergsma on the incrustation of the 'Girl of Rockanje' has been published. He offers his service to Miquel. He hopes that Miquel will give him a sample of the incrustation, which has been examined by him (Miquel) and Mulder. He asks to send his greetings on to Mulder. He also asks him to send the parcel, added to this letter, on to Dr. Van Dalen. He expresses his feelings of high esteem and calls himself Miquel's obedient servant.

[UBU Hs 1873; PHY, CHE, ANA]

**821. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 1 November 1835**

Reinwardt sends the proof of the plates of Meyen's treatise. Only a few days ago Van Voorst has seen him and told him that 'Teylers Foundation' has to be the owner of the stones. They will be bought at Bakker's (Dordrecht). Bakker will also be asked to print the plates. Each stone, on which two plates will be prepared, costs seven guilders. Reinwardt has asked Van Voorst to inform him about the number of copies wanted. Van Voorst has told him that the Foundation wants to fix the edition on 300 copies. Meanwhile he has received a sample of the 'Papier de Vosges' (size: 'grand-Aigle'). Von Siebold

and General Van Gorkum are using the same type of paper. It will be possible to print eight plates (4°) on each sheet. He has also informed Van Voorst that the paper and the prints have to be paid in cash. The printer wants to receive 21 guilders per stone. Reinwardt wants to know Van Marum's opinion on that.

[NA-RANH 529-20b; BOT,ART]

**822. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 2 November 1835**

General van Gorkum has just offered to send him a ream of French paper ('grand-Aigle') at the price of 139 guilders. Reinwardt wants to accept this very reasonable offer. The package has been delivered today and he has paid the agreed price in cash.

[NA-RANH 529-20b; BOT,ART]

**823. C.G.C. Reinwardt (Leyden) to G. Vrolik (Amsterdam); early November 1835**

On behalf of the jury Reinwardt reports on the treatise on the carbonization of peat, entered by Mr. Friedemann (Stadt Oldendorf, Germany). The author has carried out large scale experiments in order to produce a good quality of peat coal.

Reinwardt gives a detailed account of the results of these tests. He also describes the nature and chemical properties of the accessory products. These products have several interesting properties, which could be made profitable, among others for the preservation of wooden objects and ropes. They can also be used as a clean fuel. Other residual products may serve in the improvement of poor wet soils, in forging, in purifying the air, in decolourizing coloured liquids and in purifying drinking-water. Peat coal is the purest charcoal there is. Under certain conditions the author is willing to offer his invention to the government. He has even more interesting inventions to offer, for example a simple device for lifting sunken vessels and for preventing the sinking of stranded ships.

In the view of the jury the author has kept too much of his secrets. Besides peat coal is not pure charcoal at all. This means that a number of applications can impossibly be carried out with a distinct profit. Furthermore it will be impossible to use peat coal for assaying gold and silver. It is also impossible

to turn peat into peat coal simply by compression. The gasses and vapours produced by burning the peat coal are very noxious. Finally the facts given by the author are not new for as far as they are reliable. The jury decides that the author is not experienced enough in this field of science and technology. So it will be useless to bring this treatise to the notice of the government. However finally the Minister of the Interior has to decide.

[NA-RANH KNI 175-63(138).9 R; CHE, BOT, PHY]

**824. C.G.C. Reinwardt (Leyden) to G.Vrolik (Amsterdam); 14 November 1835**

In this letter, covering the report on the treatise on the peat coal production, which has been entered by Friedemann (Stadt Oldendorf), Reinwardt observes that he has decided to discuss the subjects indicated in the letter sent to the 'Eerste Klasse' by the Minister of the Interior.

[NA-RANH KNI 175-63(138).9\* R; CHE, BOT, PHY]

**825. C.G.C. Reinwardt (Leyden) and J.G.S. van Breda (Leyden) to G. Vrolik (Amsterdam); November 1835**

With pleasure the jury has taken notice of Van Hall's treatise on a possible new fern species. And indeed, it is about a new species of Polypodium. Van Hall has called this specimen Polypodium Leeuwsive-pinnatum (?). He has given an extensive description of all its features as well as a comparison with neighbouring species. The added illustrations are distinctive. The species is growing in the 'Hortus Academicum' (Groningen). Van Hall thinks that it has been sent to Groningen from Japan. All in all, it is an important contribution to botany. So this treatise will be published in the next issue of the *Verhandelingen* of the 'Eerste Klasse'.

[NA-RANH KNI 175-63(138).11 R; BOT]

**826. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 7 December 1835**

Reinwardt sends his friend the lithographies of three illustrations. Van Marum has to judge their quality as well as the quality of the paper on which these illustrations have been printed. If the other members of the jury do agree, the plates can be printed.

He and his family are doing well. Everybody regrets the sad situation of Mrs.

Van den Ende. Van Breda is fine too. He adds his cordial greetings, also for Mrs. Woestenberg.

[NA-RANH 529-20b; BOT, ART]

**827. P.W. Korthals (Padang) to C.G.C. Reinwardt (Leyden); 14 December 1835**

Korthals observes that in his previous letter, he did not only discuss the geognostical peculiarities and properties of the Padang mountain, but that he had also added several remarks respective to the various collections the expedition had brought together. Since then they have continued their collecting activities. In the nearby higher mountains he has discovered a trap-tuff formation (wacke formation), similar to the one he had previously found in the Padang mountain. With respect to these facts he adds a number of mineralogical facts of that region. Some time ago Dr. Merklein (Padang) has given him a piece of quartz, containing numerous small vesicles of gold, found in these mountains. He adds a couple of facts relative to new plant genera, related to the Cunoniaceae, Nymphaeaceae and Frankeniaceae. He also proposes names for these genera. Furthermore he has carried out experiments relative to the velocity with which the leaves of the banana tree are growing. He has also observed the pollination of flowers of several plant species and the changes to which the stigmata are subjected after pollination has taken place. Although the hunters have brought together many birds, they did not catch many new species. He does not know if Reinwardt already knows *Gypsalis mysticalis* Boie, a tiny bird, a common species of the lower regions around Padang. Boie has given it its position in a new section of the natural system. He discusses several other bird species.

He did not hear from Diard since a long time. So he is not familiar with the outcome of the proposals made to him with respect to the journey to Borneo. Dr. Horner will probably be able to answer the unreturned questions. The resident of Padang has put a gunboat at their disposal. So they will have the opportunity to make a trip. Finally he gives a couple of geographical and geological facts brought together by him. He gives his kindest regards to Reinwardt, Mrs. Reinwardt, Miss Caroline and Mr. and Mrs. D'Escury and wishes them God's blessings.

[UBL BPL 2922; BOT, GEO, MIN, PHY, CHE, ZOC, COB]

**828. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 22 December 1835**

Once again Reinwardt has studied the improved supplement, which Dr. Dassen has added to his treatise. Now it can be published. Reinwardt has to correct many botanical terms and plant names as well as the citations. If the author is not able to do so, somebody else has to correct the text. Reinwardt hopes that Van Marum still enjoys good health. He adds his greetings, also meant for Mrs. Woestenberg.

[NA-RANH HMW 444-113; BOT, CHE, PHY]

**829. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden), J.G.S. van Breda (Leyden) and N.C. de Fremery (Utrecht); 28 January 1836**

The Director-General of the Navy and the Minister of the Interior have expressed their wish to be informed in detail about the usability of bichloride of mercury for the protection of ship's hulls against dry-rot (decay by fungi, or 'vervuring'). The jury has to report as soon as possible. The subject is of major importance and the answer to the government is urgent. The jury is allowed to carry out as many experiments and tests, as are needed. The costs will be advanced by the Ministry of the Navy and by the Ministry of the Interior.

[NA-RANH KNI 175-37.154; BOT, PHY, CHE, TEC]

**830. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden); 28 January 1836**

Vrolik reminds Reinwardt of the treatise entered by J. Howard Kyan on the usefulness of bichloride of mercury for the protection of ship's hulls. He has added information about the noxious effects on the health of those who are working with it. He also points at a previous letter, sent by Glavimans, covering a case of two bottles of a solution of this chemical substance. Reinwardt and his colleagues have to report as soon as possible. All wishes with respect to experiments will be accepted and the costs will be remunerated. The commission has to address its demands to the Director-General of the Navy or to the Minister of the Interior.

[UBL BPL 609-2; BOT, CHE, PHY, TEC]

**831. P.W. Korthals (Buitenzorg) to C.G.C. Reinwardt (Leyden); 6 February 1836**

Korthals emphasizes that he has sent his previous letter from Sumatra and that he has just arrived in Buitenzorg. He hopes that Reinwardt and his family are doing fine. Buitenzorg has changed a lot since he has left. As a consequence of the earthquake his house has become totally uninhabitable. Therefore he had to move into a bamboo hut. Because of his poor health he is looking for a better house. The palace is also being restored. Tomorrow the members of the expedition will have an audience with Mr. Baud, the Governor-General. Baud is rather occupied, because his successor will assume his duties within the next couple of days. Diard has informed him that Mr. Landré has good health.

Korthals gives an detailed description of the last day he spent in Padang. The expedition left there on 9 January. The defectively loaded vessel had to set a small sail. The unfavourable and light wind made the vessel drive on slowly. Not until 15 January they arrived in Benkoelen. Much to his regret his health became very poor, among others because of the fact that a diarrhoea turned into a dysentery. The situation there recovered little by little, but was far from being safe. Nobody dared to leave town. However his activities have not been delayed. He has been so lucky to put his hands on three Tedjang-skulls. They belonged to three members of a gang, who had been prowling around the region. Benkoelen is falling into disrepair, although its houses are large and although the house of the resident looks like a palace. There is no doubt that the stone fortress and the casemates can resist the attacks by European enemies.

Thereupon he gives several geological details respective to the soil of Benkoelen and its immediate surroundings. He has also succeeded in bringing several soil samples to Buitenzorg. On 6 February he has taken a walk through the garden there. It is in a poor condition. He would like the idea that the government would restore its past glory. After all, because the Governor-General does not receive hardly any visitors, there is only a minor chance for him to see him in person before he will leave for Holland, because the administration has not been turned over yet.

In spite of his poor health he still has a lot to do. He is not lacking in courage and willingness to work. He simply does his duty. The books received are most useful to him. He hopes that also in the times to come Reinwardt will

take care of his scientific education. He gives his best regards to Reinwardt and his family, to Mr. and Mrs. D'Escury and to Miss Caroline.

[UBL BPL 2922; BOT, ZOC, COB, GEO, MIN, ANA, AGR]

- 832.** C.G.C. Reinwardt (Leyden) to F.A.W. Miquel (Rotterdam); 24 February 1836

De Vrij (Rotterdam) is willing to deliver a parcel, containing a collection of mosses at Miquel's. Reinwardt has learned from Miquel's last letter that – although he does not possess any tropical mosses – he is studying these organisms. Reinwardt himself always enjoys observing these tiny plants. Undoubtedly Miquel will be pleased by this present. He hopes that his colleague has fully recovered meanwhile. He has also added a sample of *Spiridis* (*Spiridens?*), like he has done in his letters to most of his colleagues, who are familiar with this species. Now his reserve is exhausted. Besides thieves have stolen a part of his herbarium.

[UBU Hs 1873; BOT]

- 833. M. van Marum (Haarlem) to C.G.C. Reinwardt (Leyden); February 1836**

Van Marum, having examined and corrected the proofs of Meyen's treatise, has found an error in the numeration and lettering of the plates. This error must have been caused by the copyist. In order to correct it he needs the original illustrations, not the text. In a postscript he observes that on 8 February he has already returned the original of the explanations to Reinwardt, immediately after having received these captions.

[NA-RANH 529-20b; BOT]

- 834. Ch.Fr. Brisseau De Mirbel (Paris) to C.G.C. Reinwardt (Leyden); 2 March 1836**

De Mirbel acknowledges the receipt of Reinwardt's letter and of the collection of seeds, added to it. They undoubtedly are an enrichment to the 'Jardin du Roi'. Against his will he did not have the opportunity to thank Reinwardt until now. He has been too busy. Yet Reinwardt should know that he is very grateful.

He describes the problems produced by the fact that the collection of the garden and the catalogue, written by Desfontaines, appeared to be different

from each other. The present professor of botany, Adolphe Brongniart, even had to publish a new catalogue and Reinwardt knows that writing such a document is not completed in a wink of the eye. Meanwhile De Mirbel has ordered to draw up a list of the plants to be offered to Reinwardt by the Museum. Soon he will send it to him through the French consul in Amsterdam, at least if he will not add this document to the seeds which will be sent directly to Reinwardt. He gives his best regards and expresses his feelings of attachment.

In a postlude he observes that he has decided to add a short treatise to this letter, in which he opposes to several views committed to paper by Mr. Mohl with respect to Marchantia. De Mirbel explains that he has based himself on new research. He also adds a couple of reports, which have been handed out at the occasion of the meeting of 28 December 1835, among others giving his analysis of the anatomical and physiological work of Gaudichaud. De Mirbel has tried to pass a fair judgement on Mohl. [The original letter is written in French]

[UBL BPL 2922; BOT]

**835. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 29 March 1836**

The last catarrhal attack has caused so much pain and inconvenience that Reinwardt has not fully recovered yet. He is still totally upset and sometimes he has a fever. Therefore he will not be able to leave the house and see Van Marum at the end of this week, nor can he attend the meeting of the 'Eerste Klasse' of the 'Instituut'. He does not regret that last consequence. He has already attended the demonstration of the 'electromagnetic cart' at Van der Boon's.

If he would not have been ill, he would have come to Haarlem on 20 March, because it is Van Marum's birthday. He is really happy for him, because of his good health. He adds his best wishes and hopes that his friend will keep his good health. However he will attend the next meeting of the 'Eerste Klasse' and see Van Marum before. He expresses his friendly feelings towards him and Mrs. Woestenberg.

[NA-RANH 529-20b]

**836. E.L. Van Heeckeren (Paramaribo) to C.G.C. Reinwardt (Leyden); 14 April 1836**

Van Heeckeren informs Reinwardt that this letter has to be considered a letter of recommendation for H.H. Dieperink, government pharmacist in Surinam. After having served the government for many years Dieperink has been allowed to go on leave to the Netherlands for a short period. Because this man is a deserving scientist, there will be no doubt that he will be received well in the fatherland. Van Heeckeren has been pleased very much by Reinwardt's letters, received by him last year, as far as they expressed his warm feelings towards him. However he regrets that he had to learn from them that almost all the orchids sent to Holland appeared to have perished. He thanks his friend for having informed him about the best way of sending living plants to Europe. He asks him to give his regards to Mrs. Kemper (if she is still living in Leyden) and also to Reinwardt's colleagues Clarisse, Tydeman and Nieuwenhuis. He adds his wife's regards, meant for Mrs. Tydeman and Mrs. Nieuwenhuis. He gives his kindest regards to Reinwardt and assures him of his esteem.

[UBL BPL 2922; BOT, PHA]

**837. C.G.C. Reinwardt (Leyden) to N.C. Kist (Leyden); 12 May 1836**

Reinwardt asks his colleague Kist – professor of theology – to give his opinion about the document covered by this letter. He knows that Kist does not object against Wenckebach's wish regarding professor Tydeman's proposal. Reinwardt's wife and children will take his answer to The Hague. They will leave tomorrow.

[KB 121 A 12/61]

**838. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 11 June 1836**

Yesterday, Reinwardt has received the copies of the French translation of the programme. He will send them on as soon as possible. Meanwhile a couple of illustrations of Meyen's treatise have been coloured. He realizes that the completion of this publication will take much time. After having given a few technical details, he observes that colouring the plates is not necessary. If it would be considered necessary to do so, Ae. Saegmans Mulder is willing to carry out that part of the job. He wants to know Van Marum's opinion about

it. Again he adds a couple of plates and the respective drawings.

This afternoon he will leave for Utrecht. He hopes to have received Van Marum's answer at his return, next week. Regrettably the printing of the plates has been interrupted for some time, because paper was lacking. It has been very difficult to procure a new load of paper. He adds his greetings.

[NA-RANH 529-20b; BOT, ART]

**839. C.G.C. Reinwardt (Leyden) to Colonel Nepveu (The Hague); 1 July 1836**

Reinwardt asks Nepveu to send a passport in behalf of Mr. J.G. Lehmann (from Hamburg), who wants to cross the border at Groot-Zundert. Lehmann, Medicinae Doctor and professor, wants to travel from Ems through Aix-la-Chapelle, Brussels and Antwerp to Holland. Reinwardt, who had to enter this request officially, would be very pleased if his request will be granted soon.

[KB 130 G 38]

**840. P.W. Korthals (Banjermassing) to C.G.C. Reinwardt (Leyden); 10 August 1836**

Korthals informs Reinwardt that in one of his previous letters he had announced that they would soon leave for Banjermassing (South Borneo). Now he can confirm that the expedition has arrived in that town, after having left Batavia on 16 July. In Banjermassing all houses are built on high stills, which prevents them from being flooded. He has seen vessels here drawing a draught of 13 to 14 feet. A vessel of ironwood has been put at their disposal for a journey upstream, which in spite of that has an excellent buoyancy. Aboard this vessel and aboard a second one the expedition has paid a visit to the sultan. The kraton turned out to be extremely fallen into disrepair, but nevertheless it has remained the symbol of the former wealth and power of the sovereigns. This was also apparent from the outfit of the body-guards. The princes were beautifully dressed; their dresses were glittering because of the diamonds and the gold. The sultan showed them a 70 carat diamond. This precious stone had been dug in the mines of Karangintan, where platinum is also found. The son of the sultan has promised him to collect a small quantity of this mineral. Perhaps the sample

shown to him contained an impurity of other metals. Most o his regret he cannot inform him yet about the geological formation in which these minerals are found because they are still bivouacking alongside the coast, where the soil is mainly consisting of diluvial grauwacke.

This is really the most ideal country for collecting plants. Every day he discovers new species. Time runs fast. Unfortunately heat is keeping him from doing what he wants to do. During the daytime temperature is rising up to 93 to 96° Fahrenheit. Early in the morning, when it is around 60° Fahrenheit, he still has the opportunity to do some work. Soon he will go up the river. He knows that it will be a dangerous trip. The Daijaks have advised him to put out armed sentries at night. Because the rainy season will start soon, they will not have the opportunity to go upstream very far. He hopes that he will be able to inform Reinwardt more in detail later on. He gives his kindest regards to Mrs. Reinwardt and his family, to Mr. and Mrs. D'Escury and to Miss Caroline and he stresses his feelings of esteem and friendship.

[UBL BPL 2922; GEO, MIN, PHY, BOT]

**841. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 31 August 1836**

Reinwardt sends his friend a copy of the *Filices* (Hedwig) and of the *Bibliotheca Botanica* (Millitz). Meanwhile, thumbing out his own copy of the *Flore d'Ouware et de Benin* (19 issues, 114 plates), he has found out that Van Marum's copy is still incomplete, because it only has 15 issues, 90 plates). He expresses his feelings of friendship.

In a postscript he observes that Millitz has wrongfully made public that this flora comprises 17 issues, although the 20st issue has already been published in 1821, which means that the total number of plates is 120 now. Furthermore he observes that a catalogue of Cuvier's 'Règne animal' has been published in the *Annales des Sciences Naturelles* (February 1836).

[NA-RANH 529-20b; BOT, ZOC]

**842. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 4 September 1836**

Reinwardt advises his friend to ask the bookseller Van der Hoek to send him the missing issues of the *Flore d'Ouware et de Benin*. Reinwardt will also see Van der Hoek. Furthermore he has reprimanded the printer Bohn for working so slowly. He realizes that further reprimands will not help, because they will have to continue their collaboration. Perhaps Sybrandt should see him and remind him of his promises. Anyhow, it is a lesson for the future.

His niece Caroline has left for Amsterdam last week. She has not been able to see Van Marum, because she had so much luggage to take with her. Finally he adds his greetings, both for Van Marum and for Mrs. Woestenberg.

[NA-RANH 529-20b; BOT]

**843. C.G.C. Reinwardt (Leyden) to F.A.W. Miquel (Rotterdam); 5 September 1836**

With pleasure Reinwardt sends his friend a couple of works, written by Haworth, Link and Otto, as well as a couple of tables made by De Candolle. As far as Reinwardt knows, the Prince Van Salm-Dyck has not published anything on Melocactus besides his catalogue of succulents. Lehmann and Von Martius have published on this subject too. Van Dalen has sent him a specimen of the species, described by Miquel. To his pleasure Lehmann has spent a couple of days in Leyden. He has stayed at Reinwardt's, together with Splitgerber. They have discussed several botanical subjects for many hours. Splitgerber has told him that Miquel is fine. Reinwardt wishes him a continuation of his good health and adds his feelings of esteem.

[UBU Hs 1873; BOT]

**844. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 12 September 1836**

Immediately after his return and according to the agreement Reinwardt has asked his friend which plants have to be sent to him. Notes, which have been made shortly after, have made clear that specimens of *Eucalyptus globulus*, *Laxiopetalum dumosum*, *Laxiopetalum purpureum*, *Arum pictum*, *Bubon rigidus*, *Elichrysum sesamoides*, *Lobelia splendens* and *Linaria alpina* have already been sent to Van Marum on 20 July. The other species, which have been asked for – *Scabiosa prolifera*, *Campanula grandiflora*, *Reseda*

glauca, Achillea cristata and Hypericum pyramidale – will be sent after. He expresses his feelings towards his old friend and Mrs. Woestenberg ('Sientje'). [NA-RANH 529-20b; BOT]

**845. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 22 September 1836**

Having been invited to attend the meeting of the Directors and members of the 'Teylers Stichting', to be held on 14 October at 1 o'clock in the afternoon, Reinwardt answers that he is pleased to stay overnight at Van Marum's. He observes that his friend is possessing the complete works of Hayne, insofar they have been published until now (13 issues of 48 plates each). He knows that the 14th part is on the verge of being published, as Hayne's widow has stated. He mentions the 'Pharmacopeia Borussia' (see: Heinrich's *Catalogue*).

[NA RANH 529-20b; BOT]

**846. J.C. Loudon (Bayswater) to C.G.C. Reinwardt (Leyden); 29 September 1836**

Loudon reminds Reinwardt of the fact that in 1817 a special specimen of Fraxinus was growing in the Leyden Hortus. It has been said that this tree had been grafted by Herman Boerhaave personally. An engraving, made on the authority of the 'Caledonian Horticultural Society' (founded in 1823), has been published in the *Transactions of the Horticultural Society of London*. He gives several facts about the features of this tree and its measurements as far as they are known to him. Loudon has written about this tree in his *Arboretum et Fruticetum Britannicum*, which is published now.

He would really appreciate if Reinwardt would be so kind to give him the actual measurements of this tree, at least if it is still existing. As a matter of fact he would like to ask him to do the same for every special tree growing in the Leyden Hortus, in particular of the various species of Quercus, Juglans, Fagus, Castanea, Pinus, Populus and Salix. He apologizes for bothering Reinwardt with this request and signs as his most obedient servant. [The original letter is written in English]

[UBL BPL 2922; BOT, COB]

**847. C.G.C. Reinwardt (Leyden) to F.A.W. Miquel (Rotterdam); 3 October 1836**

On 2 October Reinwardt has received a package from Lehmann (Hamburg), in which a present for Miquel had been enclosed. He adds it to this letter, which will be sent to Rotterdam by barge. He gives his kind regards and expresses his feelings of high esteem.

[UBU Hs 1873; BOT]

**848. P.W. Korthals (Banjermassing) to C.G.C. Reinwardt (Leyden); 4 October 1836**

A couple of days ago the expedition returned from a trip on the Banjar river. Through the river they were able to penetrate into the inland, until about 3.5° north latitude. During this journey they have been very lucky with respect to collecting new plants. Specimens of many new plant families have been brought together. Among others Korthals has collected a couple of blooming branches of several Dammar trees. Now he will be able to determine the species. One of these species bears white flowers. Although he has found several species of Dipterocarpus, he has not been able to find out if these are the ones the Daijaks are used to collect the resin, yes or no. On the trees of one of these species honeybees are making their nests. Sometimes he found 10 to 20 nests on each tree. The most beautiful tree however is a Melastoma species, bearing large beautiful flowers of about the size of the Dutch moss rose. He has also seen specimens of other new Melastoma species. So he has to compare the various species carefully. Some of these species were growing all along the riverbanks, while others are only growing in certain parts. He gives details of the many other new acquisitions. He also reports the acquisitions of four specimens of *Simia satyrus*, as well as a couple of skeletons of these animals. Korthals describes the markings of the face and the skin of these animals. They have also succeeded in acquiring a small specimen of a Galago. There is no other zoological news. He hopes to have pleased and served Reinwardt by giving him this news and hopes that he will receive this letter in good health. He gives his kindest regards to him and his family and expresses his feelings of esteem.

[UBL BPL 2922; BOT, ZOC, COB, ANA]

**849. C.G.C. Reinwardt (Leyden) to J.C. Loudon (Bayswater); 6 October 1836**

In response to Loudon's letter, dated 29 September 1835 Reinwardt observes that he is pleased to give him the wanted information regarding the Ornus and several other treasures present in the Leyden Hortus. He adds the drawings of this tree. Its stem is almost completely hollow and one side of it is rotten. Unfortunately most of its branches had to be sawn off. Perhaps the disease has been caused by its removal, about 20 years ago, when the laying-out of the garden was changed. Finally he gives some information about the diseased tree, among others about its circumference. [The original letter is written in English]  
[UBL BPL 2922; BOT]

**850. Ministry of the Interior (The Hague) to C.G.C. Reinwardt (Leyden); 21 October 1836**

The Minister of the Interior adds a couple of documents to this letter in which the 'Natuurkundige Commissie op Java' is discussed. From these it will appear that during the last 20 years scientific research did not yield as much as the Dutch government had hoped for. Now the Minister wants to know Reinwardt's opinion about it and he wants to receive the answer together with the documents. He asks him to see Temminck, director of the 'Rijksmuseum van Natuurlijke History' about this question, now that the government of the Dutch East Indies has proposed to continue this commission.  
[UBL BPL 2425; BOT, ZOC, COB, AGR, MED, GEO, MIN, TEC, PHY]

**851. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 1 November 1836**

Reinwardt is pleased that Van Marum is still enjoying good health. He informs him about a recent geological discovery: Whole mountains seem to consist of the siliceous skeletons of infusoria. Fragments of these rocks are generally used for polishing and sanding (scouring). He has recently had the opportunity to throw a glance at a sample of these rocks, among others from Bohemia, which has been showed to him by an English scientist, who travelling from Berlin to England, has passed through Holland. Reinwardt has even been given a small fragment. He has examined it under his microscope.

He points at an article in Poggendorff's *Annales*. Maybe Van Marum has already read this notice. The printing of Meyen's treatise has been completed up to the 37th sheet. The job will soon be finished. On Van Marum's wish, he has insisted that the printing of this treatise will be speeded up. Van der Boon Mesch will urge Ae. Saegmans Mulder to produce the lithographies as soon as possible. For the time being his colleague Van Breda, who enjoys good health, will not be able to see Van Marum. The bad weather forces him to stay at home. He sends his heartiest greetings, also on behalf of his wife.  
[NA-RANH 529-20b; GEO, MIN, ART]

**852. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 23 November 1836**

Reinwardt sends his friend the last two volumes of the *Flora Londinensis*. He has arranged its plates and text according to the Linnaean system. Yesterday he has received the convocation for the meeting of the 'Teylers Foundation' on 16 December, so Van Marum will not see him before 15 December. He adds his greetings.  
[NA-RANH 529-20b; BOT]

**853. C.G.C. Reinwardt (Leyden) to the Minister of the Interior (The Hague); 1 December 1836**

With respect to the scarcity of publications about the activities of the 'Natuurkundige Commissie op Java' Reinwardt observes that maybe almost all important scientific discoveries made in the Dutch East Indies have to be ascribed to foreign scientists and that other discoveries made there have been kept back from the public and that as a consequence the Netherlands have not been able to achieve much fame in spite of the financial efforts made by its government, which leads to the conclusion that this adventure has not been profitable until now. All the same the members of the commission have made themselves very useful to the extension of the various collections of the 'Rijksmuseum van Natuurlijke Historie'. They have been constantly aware of the major importance of this job. There is no doubt that the government will understand this. The knowledge of the various regions of the East Indian archipelago has considerably been extended. Reinwardt wants to praise everybody who has travelled to the Dutch East Indies in order to contribute to these excellent results. Besides many of the

discoveries have already been published meanwhile. If the highly esteemed collaborators Kuhl, Van Hasselt, Boie and Macklot would have been so lucky to live longer, and if they would not have died so suddenly, they would have achieved much more. Others have also given their lives in the service of science and of their country. Because of the defective financial support Mulder, Korthals and Horner, the remaining members of the commission have not been able to edit their many notes, except for a number of reports and articles which have been offered to the *Verhandelingen* of the Bataviaasch Genootschap. Reinwardt knows that the government of the East Indies is favourably disposed to the continuation of the commission. Therefore he regrets the fact that the Dutch government has its doubts with respect to the usefulness of the 'Natuurkundige Commissie'. In his view he has explained more than enough why treatises and extended reports, in which the numerous discoveries have been linked with the actual state of the art, have failed to appear until now. He simply knows that the actual members of the commission will dedicate themselves to this job. He is the only one who knows how numerous and detailed the notes are, in which the many discoveries have been described. Editing these documents is still going on. Of course it is true that hardly any publications about the collections of the museum have appeared until now, but this is due to the unfavourable circumstances and the most unfortunate coincidence of circumstances. The publication of the discoveries will take many years and will require a great deal of effort from many scientists. Modern science requires the comparison of many objects. In his view it is wrong to put that foreign scientists should not publish the discoveries made by Dutch scientists in the Dutch East Indies. This is nonsense, because foreign scientists are allowed to study Dutch scientific collections!

The profit of these scientific efforts has to belong to everybody and not only to the Netherlands. Only narrow-mindedness can lead to such an unwanted point of view! In his view the government has been wrongfully and incompletely informed about this affair. He sincerely hopes that the Dutch government and the government of the Dutch East Indies will favour the 'Natuurkundige Commissie' in the most effective way. Only by doing so the advancement of science will be served, just like the 'Rijksmuseum van Natuurlijke Historie' and similar institutions are doing already.

[UBL BPL 2425; ZOC, COB, BOT, GEO, MIN, PHY, ART, ETN, TEC]

**854. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 9 December 1836**

The last few days Reinwardt has been very busy. Therefore he has not had the opportunity to devise a prize contest for 'Teylers Tweede Genootschap'. Probably he will be able to do so tomorrow or the day after tomorrow ('thinking up a really complex question'). Recently he has sent his friend – at his request – a list of book titles, including among others the *Zoological Atlas* (see: Rappel's *Reise im Nördlichen Afrika*), which is present in the library of the 'Teylers Foundation' (catalogue, n° 134). Next Thursday (15 December) he will see Van Marum together with his wife. They will leave Leyden at 10 o'clock in the morning. He is looking forward to seeing Mrs. Jacobson at that occasion. He adds his greetings.

[NA-RANH 529-20b; BOT, ZOC]

**855. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Leyden); 11 December 1836**

Reinwardt answers Van Breda's letter, in which he has been asked to enter a suitable physical question for 'Teylers Tweede Genootschap'. First of all he has a question in mind about the sap stream in living plants, a question which occurred to him when he took notice of Buzareingues 'Over de verspreiding en beweging der sappen in de planten' ('On the distribution and movement of the saps in plants'), published in the last issue of the *Annales des Sciences Naturelles* (April 1836), and also because Hermann von Meyer has recently entered a treatise on the same subject to the prize contest held by the 'Hollandsche Maatschappij der Wetenschappen'. This could really be an excellent subject for a new prize contest, for example by asking to what extent Buzareingue's observations and explanations are correct. He also refers to the many secrets and contrarities, which are still persisting. Besides this new treatise would be an excellent addition to Von Meyer's awarded treatise. He adds the drafts of two other questions and hopes that Van Breda will be satisfied.

[BTS 2285; BOT, PHY]

**856. C.G.C. Reinwardt (Leyden) to F.A.W. Miquel (Rotterdam); 2 January 1837**

Reinwardt thanks his colleague for his amiable letter, to which he had added the first part of his work on indigenous poisons. Miquel has done a useful job and he wonders why this subject has not been studied before by Dutch scientists, like it has been done in Germany already. He is very pleased by its quality. Miquel has succeeded in writing a very useful handbook, embellished by beautiful illustrations, which are true-to-nature. This book will be appreciated and it will find many interested readers. He thanks him for this present and expresses his feelings of high esteem.

[UBU Hs 1873; BOT, CHE, MED]

**857. J.H. van der Palm (Leyden) to C.G.C. Reinwardt (Leyden); 2 January 1837**

Van der Palm informs Reinwardt that Mr. Spengler and his family will arrive in Leyden tomorrow and that they will stay with him for several days. He would like to invite Reinwardt and his wife, and of course also Miss Caroline (if she is also in Leyden). He has decided to invite them for a visit coming Saturday. He hopes that it will suit Reinwardt. He promises to repeat the invitation as soon as the Spengler family will have arrived. He asks Reinwardt to let him now if he accepts the invitation, adds his New Year's greetings and expresses his feelings of esteem.

[UBL BPL 2922]

**858. M. van Marum (Haarlem) to C.G.C. Reinwardt (Leyden); 22 January 1837**

Van Marum informs his friend that last Wednesday (18 January 1837) he has received a very wordy treatise from Miquel (596 pages, 4°). This treatise is not only too extensive, it has also been entered too late, because it had to be submitted before 1 January 1837. The author had not asked permission to enter his treatise at a later date. He has even dared to observe that he has not yet been able to finish it. The directors have decided to inform the author about their decisions through the programme of May 1837. They will grant him a delay until 1 January 1838.

[NA-RANH HMW 444-115; BOT; This letter refers to the contest NA-RANH HMW 444-436.404]

**859. M. van Marum (Haarlem) to C.G.C. Reinwardt (Leyden); 23 January 1837**

Van Marum informs his friend that he has to judge a treatise on a contest held by the 'Hollandsche Maatschappij der Wetenschappen', on the upward sap stream in plant stems. He wants Reinwardt to answer as soon as possible. Most probably there will be no more requests to judge entries. Furthermore he has received an entry of no less than 596 pages in 4° on 18 January relative to another contest (on a paleontological subject). It has to be kept aside until January 1838. Through a covering letter the author has even informed him that lack of time has kept him from completing his treatise. He will be informed that he will have the opportunity to do so until 1 January 1838. On 22 January Van Marum has been informed by Van Breda that Reinwardt's laboratory assistant has died. Having in mind the days when he still taught physics, he can imagine how Reinwardt feels and how much this fact is hampering him. He hopes that Reinwardt will soon find a deserving successor. It might be a good idea to make use of the newspapers. He asks him to give his kindest regards to Mrs. Reinwardt.

[UBL BPL 2922; NAT, CHE, BOT, GEO, TEC]

**860. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 16 February 1837**

Reinwardt is pleased by the fact that he is able to return a treatise in time, together with his report. He has been forced to finish this judgement during the night. He is extremely busy, not in the least because his laboratory assistant has recently died. So he has to work in the chemical laboratory very often. Judging this treatise has been a very exhausting task. This document of more than 200 pages gives the results of numerous experiments. So he had to read it very carefully. It turned out to be an excellent and beautiful treatise. Until now he has not been able to read Gaertner's treatise carefully. He has already concluded that it has been adapted according to the editorial demands.

The day before yesterday his brother in law – Calkoen (Amsterdam), a true and obliging friend – has died. However he has not got the time to accompany his wife to Amsterdam. He promises to come to Haarlem as soon as possible. Fortunately the judgement of the most extensive treatise on the fossilia has been postponed until next year. The news that Van Marum

has recovered from his illness, which has affected him in Amsterdam. He adds a catalogue of the library of the late professor Schrader as well as an inventory of the *Acta ulisiponentia*. These *Acta* are offered for sale for a little more than 300 guilders ('an interesting and rare offer'). He greets his friend and adds his compliments for Mrs. Woestenberg.

[NA-RANH HMW 444-115; CHE, PHY, BOT]

- 861.** C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 26 February 1837  
Reinwardt sends his friend his preliminary report on the rewritten treatise on the artificial fertilization of plants (see Van Marum's letter, dated 24 February 1837). The author has completely met with the demands of the 'Maatschappij' now. In order to prove the correctness of his statements and observations he has also added a collection of 150 dried plants. Reinwardt agrees with Van Marum, who has pleaded the award and an extra bonus. Probably he will come to Amsterdam about mid-March and see Van Marum about several affairs. He would like to know if the library of the 'Teylers Foundation' is interested in the 'Lisbon Transactions', yes or no. He wants to send Van Marum's decision to the owner of this collection. He adds his regards for Van Marum and Mrs. Woestenberg.

[NA-RANH HMW 444-115; BOT]

- 862. C.G.C. Reinwardt (Leyden) to A. de Vries (Haarlem), P. van Lee (Haarlem) and A. van der Willigen (Haarlem); 28 February 1837**

Reinwardt expresses his feelings of deep sorrow with respect to the too unexpected death of his long-time friend De Vries. It is a terrible and irreparable loss, which he will never manage to overcome. This friendship has never stopped being a source of happiness and devotion. If needed he is of course willing to contribute to the commemoration of his friend, also if it is about unfinished affairs.

[UBL LTK 1868]

- 863. Ch.Fr. Brisseau De Mirbel (Paris) to C.G.C. Reinwardt (Leyden); 10 March 1837**

De Mirbel excuses himself for having forgotten to write a list of plant species to be offered to Reinwardt. Meanwhile he has drawn that list and has it given to the gardener, who is in charge of the greenhouses. He assumes

that having done so, he has kept his promise. Although the gardener did not remember this commission, he has found the list of duplicates in the registers of the garden. The list, added to this letter, is a copy of the original. He hopes that Reinwardt will find what he fancies in it. [The original letter is written in French]

[UBL BPL 2922; BOT, COB]

**864. C.G.C. Reinwardt (Leyden) to J. Decaisne (Paris); 7 April 1837**

Reinwardt informs his colleague and friend that Blume has delivered the beautiful treatise on the matter, which Decaisne has given him. This fact proves that Decaisne is still remembering him and that he still knows how much he has regaled him in Paris. Therefore, and of course because of its quality, he has been very pleased by the reception of this treatise. The observations are very accurate and pure, the drawings are of the finest quality. Decaisne has described the structure and development of these plants very well. Reinwardt has used it already in his lectures on plant anatomy. He will ask Blume to deliver a copy of Meyer's treatise at Decaisne's. [The original letter is written in French]

[IDF Ms 2457; BOT, AGR, CHE]

**865. C. Alewijn (Amsterdam) to C.G.C. Reinwardt (Leyden); 8 April 1837**

Alewijn informs his fellow member of the 'Eerste Klasse' that the Amsterdam members have been commissioned with the technical and physical aspects of the well drilling experiment on the 'Nieuwmarkt' (Amsterdam), while Reinwardt and Van Breda have been charged with its geognostical and geological aspects. The commission has been installed today. He has added a first collection of soil samples to this letter. Further samples will follow.

[UBL BPL 609-2; GEO, MIN, CHE, PHY]

**866. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 8 April 1837**

Reinwardt sends his friend the seeds he wanted to receive. Van Breda will return the treatise and its report today or tomorrow. His judgement is negative, like the advice of one of the other members of the jury is. So it will not

be too difficult to formulate the preliminary advice for the directors of the 'Maatschappij'. If a fourth judgement is needed, Reinwardt and Van Breda would like to propose professor Cl. Mulder (Franeker), who has occupied himself with plant physiology for more years than most other members have done. His niece Caroline has promised to send Mrs. Woestenberg a letter. Also on behalf of his family he adds his greetings to Van Marum and to Mrs. Woestenberg.

[NA-RANH HMW 444-115; BOT]

**867. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 19 April 1837**

Reinwardt has taken notice of the observations, made by Moll with regard to the drafts of prize contests entered by him. In most of the cases he fully agrees with Moll. Already sometime ago, he has observed that Dutrochet's ideas with respect to the process of endosmosis and exosmosis do not make any sense, if applied to the vital processes of animals and plants. The American scientist Rogers has even dared to use these terms in the explanation of the respiration process. New experiments are indispensable! All in all, two of the five proposed questions have been rejected. He hopes that one of the other members will be able to invent new questions. It would have been better if Moll himself would have suggested a couple of questions, instead of only criticizing the efforts of one of his colleagues.

Regarding his judgement of the treatise on the vineyard he observes that it will be the easiest for Van Marum to receive identical judgements. Therefore he expresses his willingness to withdraw his judgement, if necessary.

He is still suffering from a catarrhal disease. If he recovers in time he will try to pay his friend a visit, among others in order to receive the remuneration, which 'Teylers Tweede Genootschap' has granted him. He asks his friend to accept his most affable greetings, also meant for Mrs. Sientje and for Caroline.

[NA-RANH HMW 444-115; BOT, CHE, AGR]

**868. C. Alewijn (Amsterdam) to C.G.C. Reinwardt (Leyden); 29 April 1837**

In addition to the first dispatch of soil samples, which have been dug with the clack bit at a depth of 230 feet, Alewijn sends a new collection of samples. He hopes that Reinwardt is willing to examine these samples too and that he will consult his fellow members of the commission.

[UBL BPL 609-2; GEO, MIN]

**869. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1837**

Gaertner's treatise, entered under the maxim 'Opinionum commenta delet dies' is very important for the furtherance of plant cultivation. Unfortunately this subject has not been considered important until now. About 70 years ago Koelreuter has been the first to enter into this field of study. He has started artificial pollination experiments. These experiments have resulted in all kinds of new plants, which should be regarded as the most beautiful proofs of the sexuality of plants. The results of these experiments have also demonstrated the impossibility of a 'pre-existing germ' (existing before the pollination act). In his experiments, Koelreuter has produced hybrids ('tusschen-soorten' or 'bastaarden'). He has also succeeded in transforming the first species into the second species by having the first species fertilized with the pollen of the hybrid specimens. Koelreuter has not had many followers until now, who have continued these experiments. He realizes that – in order to answer the many questions – many more experiments will have to be carried out. These many results are needed for developing generally applicable laws. Most scientists will have been put off by these problems. Nevertheless scientists like Gaertner and Wiegmann have meanwhile carried out new and interesting experiments. They have confirmed Koelreuter's results and contributed to the promotion of botany.

The author of this treatise has tried to translate the results of his research into a large number of statements. He has made use of what has been published until now. In Reinwardt's view he has done well. However Reinwardt regrets that the author did not describe exactly how he has carried out his many experiments and that he did not describe the new life forms produced by him. Every scientist must feel embarrassed about the fact that the author has succeeded in thinking up such a large number of 'laws' and that he has

tried to apply these laws to the vegetal kingdom as a whole. He should have taken better notice of Gaertner's results. The same experiments carried out between different species do not always produce the same results, at least in Reinwardt's view. Furthermore hybrids, resulting from these breeding experiments, are sometimes fertile and sometimes they are sterile.

Anyhow this treatise proves that the author has carried out numerous experiments during many years. He has given the descriptions of almost 150 different hybrids. He has examined the off-spring of more than ten generations of plants.

Reinwardt knows that Koelreuter has observed the transition of *Nicotiana rustica* into *Nicotiana paniculata*. The author has succeeded in doing the same with 12 other plant species. Quite correctly he has distinguished between sexual affinity ('verwantschap') and botanical affinity ('kruidkundige, systematische verwantschap') existing between different species of the same genus. Gaertner has also proved that producing off-spring from two species of different genera is not successful most of the time and that trying to produce off-spring from the combination of two species of different families is never successful. The author has also proved that most hybrids are less fertile than the original parent plants. He has also correctly used the possibility of analogy. Therefore this treatise will definitely be a good and informative guide to those scientists, who want to continue these investigations.

The author has really performed well. This achievement is so very impressive that one can hardly believe that this has been done by one man. Unfortunately the structure of this most important document has still to be adapted. The author has to improve its coherence and to distinguish between his own discoveries and those made by others.

Reinwardt suggests to encourage the author to restructure his treatise, because his work is so very meritorious. The 'Maatschappij' should promise him the award and an extra premium before hand, under the condition of the above mentioned restructuring.

[NA-RANH HMW 444-431.350 R (1837-I); BOT; AGR]

**870. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); Spring of 1837**

In the recent past Reinwardt's judgement of the first version of Gaertner's treatise has been positive. In the second round it is again. Now this treatise

is coherent. In all respects the author has fulfilled the wishes expressed by the 'Maatschappij'. He has abandoned the incorrect statements and he has added a historical introduction. He has even succeeded in sending after a collection of cultivated hybrids. The author deserves to be awarded and to receive the extra premium.

[NA-RANH HMW 444-431.350 R (1837-II); BOT, AGR]

**871. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 4 May 1837**

Reinwardt is still suffering from a spasmodic cough. He hopes to see Van Marum next Tuesday and to attend the preparatory meeting. He plans to leave Leyden immediately after the morning lecture (which is held from 7 to 8 in the morning). He will hire a carriage, because his wife will accompany him. He promises to think up one or two physical questions. If he succeeds he will send them or deliver them next Thursday. He asks to convey his greetings to Mrs. Sientje and to Caroline.

[NA-RANH HMW 444-115]

**872. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 7 May 1837**

Reinwardt enters a couple of drafts of prize contests. He is regaining his health again. He promises to come to Haarlem next Tuesday. If possible he will arrive before 11 o'clock. He expresses his feelings with respect to Van Marum, Mrs. Sientje and his niece Caroline.

[NA-RANH HMW 444-115]

**873. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 28 May 1837**

Reinwardt returns the French translation of the programme of the 'Hollandsche Maatschappij der Wetenschappen'. He has completed Van Lennep's translation. Teissèdre l'Ange has to make the final decision. Unexpectedly he has to go to Amsterdam this Sunday, but he will be back in the evening.

[NA-RANH HMW 444-115]

- 874.** C.G.C. Reinwardt (Leyden) to F.A.W. Miquel (Rotterdam); 3 June 1837  
At Miquel's request Reinwardt sends him two volumes of the *Dictionnaire Classique*, containing the descriptions (analyses) of the Arthroquinae and Cahodinae. He also adds a copy of the atlas. He is very pleased that Miquel has agreed to write the texts of 'our Flora', which are still missing. The two species of Melocactus sent by Dr. Dale, will probably not survive, because of the cold weather. He thanks Miquel for having sent him this treatise on Cact. acanthoc. and expresses his feelings of esteem.  
[UBU Hs 1873; BOT]
- 875. C. Alewijn (Amsterdam) to C.G.C. Reinwardt (Leyden); 17 June 1837**  
Ordered by the commission, which has been charged with the supervision of the drilling of a well in Amsterdam, Alewijn again sends a case of soil samples to Reinwardt for analysis. The depths at which the various samples have been collected, have been marked in the table, which has been added to this letter [but is nowadays absent in the archives].  
[UBL BPL 609-2; GEO, MIN]
- 876. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Leyden) and N.C. de Fremery (Utrecht); end of June 1837**  
Reinwardt acknowledges the receipt of the third collection of soil samples from the 'Nieuwmarkt' (Amsterdam) sent on 8, 29 April and 17 June 1837, as well as of the inventory. Meanwhile he has already succeeded in finding out the names of a couple of shells, although in his view the determinations are not impeccable. Now he has finished his geological analysis, he has decided to return this collection to Vrolik. He promises to continue his job, if the commission will send him a new collection of samples. He will not be able to send his final report to the 'Eerste Klasse' until he has analysed the last collection of soil samples to be sent to him. He expresses his feelings of esteem and calls himself Vrolik's obedient servant.  
[UBL BPL 609-2; GEO, MIN]
- 877. C.G.C. Reinwardt (London) to M. van Marum (Haarlem); 31 July 1837**  
Reinwardt has not had the opportunity to inform his old friend about his

successful journey to London. He and his family have not suffered from seasickness. Now they are staying at the same address where Moll usually stays when he is in London. They have spent the first days after their arrival on seeing the sights of London. London has made a deep impression on him. He has also visited and admired several factories. He has even visited a tunnel. The 'Royal Mint' is also very impressive. He has been overwhelmed by the collections of natural history and by the very spacious 'Zoo', which is situated in 'Regents Park'. The numerous visitors yield about 1.000 annually. The many collections of the 'British Museum' are also very rich in the fields of natural history and art. Of course it is also famous for its enormous library. He has deeply been impressed by the most splendid fossils, among others those of *Ichthyosaurus platyodon*, measuring about 18 feet (Rhijnlandsch) length and of the spine of a second specimen of the same species, of more than 100 vertebrae. He has also admired other species of *Ichthyosaurus* as well as several specimens of *Plesiosaurus*. The cabinet of the Surgical School also hosts several large fossils, like a giant *Megatherium*. All these objects have been taken to London from Brazil, a few years ago. There is only one – more complete – specimen of that species present in Europe. It is preserved in Madrid. Besides the museum has also many exact plaster casts in its collection. Furthermore he has admired the beautiful collection of stuffed animals, preserved in the building of the 'Zoological Society'. Mackley's collection of insects has also made a deep impression on him ('It contains many rare species'). The quality of the collections of the 'Geological Society' turned out to be rather disappointing. On the other hand the visit paid to the 'Linnean Society' was very impressive, because the legacy of Linnaeus is preserved there. Reinwardt has also spent an agreeable afternoon in the beautiful gardens of Loddiger. The results of the plant cultivation experiments are really impressive. He has admired several tropical plants, which are difficult to cultivate, like *Myristica moschata*, *Eugenia caryophyllata* and various marvellous orchids, all beautifully flowering, like they use to do in the tropical forests. He wants to spend a few more days in London. Besides he wants to visit the towns of Liverpool and Manchester. In about 14 days he will return to Holland. Once returned in Leyden he wants to receive Van Marum in good health. He is eager to share his many new experiences with him. His wife is also enjoying her stay in London. He adds his greetings, which are also addressed to Mrs. Woestenbergh. Although

most scientists have left London, he has had the opportunity to see Robert Brown, who is preparing a trip to Russia. Together with his wife he has spent a couple of days at professor Henslow's.

[NA-RANH 529-22; BOT, ZOC, GEO]

**878. G.B. Sowerby (Bloomsbury) to C.G.C. Reinwardt (London); 4 August 1837**

Just now Sowerby has been informed by Nathaniel Wetherell (Highgate) that he would like to see Reinwardt and to show him his collection of fossils found in the London clay. If this proposal pleases him, Reinwardt should let him know next Monday. He should come to Wetherell at a quarter to two. Wetherell would appreciate if Reinwardt would be so kind to have dinner with him, after having admired his collection. [The original letter is written in English]

[UBL BPL 2922; GEO, ZOC]

**879. J. Decaisne (Paris) to C.G.C. Reinwardt (Leyden); 9 August 1837**  
**Decaisne does not know how Reinwardt has succeeded in sending him Volume 2 of the** *Verhandelingen* of 'Teylers Tweede Genootschap'.

The covering letter was dated 7 April 1837. Both gifts are most welcome to him. Through it he has perfectly been informed about the new trends and discoveries in the field of plant physiology. Since he has left Leyden he has worked on the Menispermata. Among others he has occupied himself with comparative anatomical research. Brongniart and De Jussieu have ordered him to express his gratitude towards Reinwardt. He expresses his feelings of esteem towards him and asks him to give his feelings of respect to Mrs. Reinwardt and her daughter. [The original letter is written in French]

[UBL BPL 2922; BOT]

**880. N.T. Wetherell (Highgate) to C.G.C. Reinwardt (London); 11 August 1837**

Today Wetherell has received Reinwardt's short letter. He will be pleased to receive Professor Reinwardt at his house tomorrow at the agreed time. He hopes that unforeseen occupations will not interfere with this visit. Of course Reinwardt will understand that he – Wetherell – being a physician runs the risk of being surprised by unforeseen events. So every arrangement

has to be made with a certain reservation. He expresses feelings of esteem and friendship. [The original letter is written in English]

[UBL BPL 2922]

**881. K.Fr.Ph. von Martius (Munich) to C.G.C. Reinwardt (Leyden); 20 August 1837**

Von Martius informs Reinwardt that Mr. MacPherson (The Hague), who had offered him to deliver a parcel on his behalf at Reinwardt's, without having written a nice letter meant for Reinwardt. He has asked MacPherson to invite Reinwardt and his wife to come to Munich. At the moment he is busy writing a book on the palms. He is just editing the part on Calamus, one of the most complicated genera which still have to be prepared. He hopes to be able to prove that Calamus Reinwardt differs from Calamus Willd., whatever Blume may think of that. Preparing the new facts with respect to the Palmae for publication he has to admit that Carl Ritter's *Geographie von Asien* has been of great help. He hopes that the day will come on which Reinwardt will publish a work on plant geography of the East Indian archipelago. He has decided to spend his Autumn leave in the Bavarian Alps. He spends a few words on the threatening cholera and wishes his friend God's blessings. He gives his kind regards, also for Mrs. Reinwardt.

[The original letter is written in German]

[UBL BPL 2922; BOT]

**882. J. Decaisne (Paris) to C.G.C. Reinwardt (Leyden); 3 September 1837**

Decaisne recommends professor Delille, director of the botanical garden of Montpellier, in Reinwardt's attention. Delille wants to visit Leyden during his journey through several countries and of course he wants to see Reinwardt. Decaisne asks Reinwardt to send him the list of plants, which he wants to receive from the 'Jardin des Plantes' (Paris). If Reinwardt does not have that list in his possession any more, Decaisne advises him to ask for a new copy. Decaisne promises to send his friend the wanted plants, immediately after having received his wish list. He is eager to serve his colleague. He has already discussed this affair with the chief gardener. Undoubtedly Reinwardt has already received his letter of thanks, relative to the book received by him. He asks Reinwardt to convey his feelings of respect to Mrs. Reinwardt and

to accept his words of esteem. He signs as Reinwardt's humble and devoted servant. [The original letter is written in French]  
[UBL BPL 2922; BOT]

**883. J. Decaisne (Paris) to C.G.C. Reinwardt (Leyden); 7 September 1837**

Decaisne emphasizes that he wants to recommend Professor DeLile, director of the botanical garden of Montpellier to Reinwardt. DeLile has informed him that he does not want to visit Leyden without having had the honour of paying a visit to the famous Leyden Hortus, the garden directed so diligently by Reinwardt. Decaisne asks Reinwardt to return the list of plants he wants to receive to De Mirbel. If he is no longer in the possession of that list he should not hesitate and ask to send him another one, or – before the cold sets in – send a note, which gives the names of the desired plant species. He assures Reinwardt that the desiderata will be send immediately after the list has been received. He will do his utmost to serve Reinwardt. He has already seen the chief gardener. Reinwardt has undoubtedly received his letter of thanks, which he wrote in response to the letter and the copy of Meyer's treatise. He gives his kindest regards, also for Mrs. Reinwardt and expresses his feelings of highest esteem. [The original letter is written in French]  
[UBL BPL 2922; BOT]

**884. C.J. Wenckebach (Leyden) to C.G.C. Reinwardt (Leyden); 8 September 1837**

Wenckebach wants to consult Reinwardt with respect to the arrangement of pensions for professors and their widows. Reinwardt is one of those, who have signed the petitions sent to H.M. the King last year by the Senates of the universities of Groningen, Leyden and Utrecht. He wants to know when the signers of the Leyden petition will be able to receive him.  
[KB 121 A 13]

**885. J.G. van Lynden van Hemmen (Hemmen) to C.G.C. Reinwardt (Leyden); 15 September 1837**

Van Lynden calls Reinwardt's attention to an aged women, in needs, who has evoked his compassion and to whom he has given some money. Later on he has received a letter from her, in which she explains that she had received

a modest financial support from the relatives of Van Alphen and Reinwardt in Leyden, whom she was acquainted with. Afterwards she was imprisoned in the 'Ommerschans', where she has a very miserable existence. Therefore Van Lynden has decided to send her letter on to Van den Bosch, Minister of the Interior, believing that he might be willing to soften her fate, at least if she turns out to be a decent woman, who had seen better days. This letter was returned to the directors of the prison, without having been answered. She has been asked if she had any complaints. She has to do forced labour. From four o'clock in the morning until seven in the evening she has to plough heaths. Van Lynden asks Reinwardt to let him know if she is really known in Leyden and its surroundings and why she has been convicted at the time. He hopes that her fate can be relieved. She has indicated that she would like to be employed as lady's-maid.

[UBL BPL 2922]

**886. C.G.C. Reinwardt (Leyden) to the Minister of the Interior (The Hague); 26 September 1837**

Reinwardt thanks the Minister of the Interior for his letter dated 25 August 1837 (n° 128, 5e Afdeling), in which he has asked his opinion with respect to a text, written by W.H. de Vriese, professor in Amsterdam and offered to H.M. the King. It is a translated abstract of a beautiful and precious work written by the French scientist Bonafous, in which an important agricultural subject is discussed, the culture of maize and its household use, to be exactly. Maize is an Indian corn, originally from South-America. It can only be grown in the warmer regions of the earth. There are only a few landowners, especially in the South of France, who are growing these plants and only for the purpose of feeding larger house birds, like turkeys. In Reinwardt's view De Vriese should have paid more attention to the question if this plant can be grown in the Netherlands and if so, under which circumstances. Nevertheless his treatise deserves royal consent, because it is about a useful plant. After De Vriese has completed his answer, a decision has to be made about the question if this culture has to be recommended yes or no. This plant should be compared with other plants, which are grown for the same purpose.

[UBL BPL 2922; BOT, AGR]

**887. Minister of the Interior (The Hague) to C.G.C. Reinwardt (Leyden); 16 October 1837**

Reinwardt, appointed first member of the 'Natuurkundige Commissie', established in Batavia, many years ago, has to advise the Minister of the Interior about all aspects of the work of that commission. Now he has been asked to inform him about the possible aptitude of A.E. Forsten for the membership of this commission.

[NA 3-12.17.7; BOT, PHY, ZOC, MED, GEO, MIN]

**888. C.G.C. Reinwardt (Leyden) to H.W. Tydeman (Leyden); 17 October 1837**

Reinwardt has just found Tydeman's note. If possible he would lend him Buckland's treatise, but somebody else has borrowed it already. Van Breda has it in his possession too. Tydeman will find the best treatise on the digesting infusorians in Poggendorff's *Annalen der Physik*, 1836, Bd. 9, Heft 1 (which also contains a plate). This book is present in the library. If he has left town, he will not be able to attend the meeting of the 'Maandelijksch Gezelschap'.

[UBL LTK 998; ZOC, PHY]

**889. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 17 October 1837**

Today Reinwardt has received the translation written by Dr. Egeling. He promises to check and to correct it as soon as possible, although he is extremely occupied. He adds his greetings to his friend and to Mrs. Woestenbergh.

[NA-RANH HMW 444-115]

**890. C.G.C. Reinwardt (Leyden) to M. van Marum (Haarlem); 1 November 1837**

Reinwardt returns the translation of Gaertner's treatise, together with the original document. Now it can be sent on to the printer. He has meticulously checked the translation. Doing this has been very difficult, because of the small and dense handwriting. He observes that Van Marum will have learned from Gaertner's letter that he has asked for 25 extra copies of the printed version of his treatise, at his own expense. Gaertner is one of the most outstanding and honourable botanists now, who has given a sequel to the

immortal masterpiece of his father, entitled *De Fructis et Seminis ... etc.*, by far 'the most famous botanical work of all times'. If Gaertner junior would not have harmed his eyes too much by his many microscopic observations, he would have gone on in that field of study. Now he has focused his attention on another domain of plant physiology – the study of hybrid fertilization. Reinwardt adds his kindest regards.

[NA-RANH HMW 444-115; BOT]

**891. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden). J. Kops (Utrecht) and J.G.S. van Breda (Leyden); 17 December 1837**

In order to fulfil his duty, according to the Laws of the 'Eerste Klasse' – to deliver a lecture – Van Hall has entered two treatises entitled 'Eenige waarnemingen omtrent de ontwikkeling der zaden van *Amaryllis*, ... etc.' and 'Beschrijving en afbeelding eener nieuwe soort van *Rhododendron*'. Vrolik asks the jury to enter its judgement within the next two months.

[NA-RANH KNI 175-37.310; BOT]

**892. C.G.C. Reinwardt (Leyden) to A. de Vries (Haarlem), P. van Lee (Haarlem) and A. van der Willigen (Haarlem); 28 December 1837**

Reinwardt is very sad about the news of the sudden death of his old friend Van Marum. The last time he has seen him – only a couple of days ago – his friend still demonstrated his interest and his clear-headedness, when they were discussing all kinds of subjects. His death is a painful and irreparable loss. Their friendship has lasted for many years. Reinwardt has always regarded Van Marum as his leader and master. He has always enjoyed his affection and intimacy. He will regret Van Marum's death until he dies. He offers his services and expresses his feelings of sincere esteem and signs as their obedient servant.

[UBL LTK 1868]

**893. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden); 24 January 1838**

Vrolik reminds Reinwardt that, on behalf of the committee, he has sent him and Van Breda two cases of soil samples from the drilling of the artesian well on the 'Nieuwmarkt' (Amsterdam). He had already informed them before

that the 'Eerste Klasse' wanted to receive the geological and mineralogical report as soon as possible.

[NA-RANH KNI 175-37.321; GEO, MIN]

**894. Secretary General of the Interior (The Hague) to C.G.C. Reinwardt (Leyden); 6 February 1838**

Reinwardt advises the Minister of the Interior with regard to the question if Korthals, member of the 'Natuurkundige Commissie', who recently has returned from the Dutch East Indies, is allowed to keep Reinwardt's herbarium, in order to examine and to describe the plants. Temminck and Blume have also been consulted. The government has decided to formulate new strict rules for the naturalists, returning from the East Indies, because the collecting activities have been paid by the government. In the Minister's view every collected object belongs to the Kingdom of the Netherlands. It has to be incorporated into the Dutch collections. However the honour of the discovery itself has to be given to the man, who has discovered these objects. Mulder, another naturalist and member of the commission, has also returned recently. He has to report to Temminck, while Korthals has to report to the director of the 'Rijksherbarium' (Leyden). Finally several data are given as well as several details of regulations.

[NA 3-12.17.7; ZOC, GEO, MIN, BOT]

**895. F.G. Burthin (Göttingen) to C.G.C. Reinwardt (Leyden); 9 February 1838**

Referring to the list of plants drawn by Reinwardt, Burthin takes the liberty to send him the seeds he wanted to receive. He supposes that Reinwardt did receive the catalogue of the botanical garden of Göttingen. He hopes that it will offer him several interesting species. He is eagerly awaiting Reinwardt's new list and expresses his feelings of esteem. [The original letter is written in German]

[UBL BPL 2922; BOT]

**896. C.G.C. Reinwardt (Leyden) to the Minister of the Interior (The Hague); 12 February 1838**

Reinwardt informs the Minister of the Interior about the results of the examination of two rock samples, covered by a letter from His Majesty the King. They are both samples of a metal ore from a gang. They are mainly composed of quartz or flint in which a metal ore has been dissolved. It is mainly about pyrite and copper pyrites. Reinwardt decides that mining it is only worth the effort if it is found in large quantities. If so it can be used for the production of vitriol and alum. Because the samples only contain very small amounts of copper ore, no profit can be expected.

[UBL BPL 2922; MIN, GEO, MIN, CHE, PHY]

**897. C.G.C. Reinwardt (Leyden) to an unknown person (??); 17 February 1838**

In this account of a meeting of the 'Natuurkundige Commissie', during which the activities of Mulder and Korthals have to be settled in detail, several questions are discussed. The assemble has decided that the ministerial decree (dated 6 February 1838, n° 97) has to meet the expectations and claims of the two naturalists. It turns out that the 'Natuurkundige Commissie' has not been informed yet about the possible appointment of E.A. Forsten.

[UBL BPL 609-2; ZOC, MIN, GEO, BOT]

**898. Ministry of the Interior (The Hague) to C.G.C. Reinwardt (Leyden), C.J. Temminck (Leyden) ad C.L. Blume (Leyden); 22 February 1838**

Reinwardt and his colleagues are informed about the appointment of E.A. Forsten as a member of the 'Natuurkundige Commissie'.

[NA 3-12.17.7]

**899. J.G.S. van Breda (Leyden) to C.G.C. Reinwardt (Leyden) and N.C. de Fremery (Utrecht); 1 March 1838**

Very attentively Van Breda has read the reports written by Reinwardt as first member of the geological commission, which has been appointed to study the soil samples collected at the occasion of the drilling of a well at the 'Nieuwmarkt' (Amsterdam). Reinwardt has done an excellent job. Perhaps he should have studied the infusoria and other fossil tiny animals

under the microscope. Nevertheless Van Breda only has a few objections to make. Although Reinwardt has had every opportunity to determine the collected shells correctly, since he has made use of the large collections of the 'Rijksmuseum' and although he did ask De Haan and Forsten, some of his determinations are incorrect. Van Breda gives several examples and explains why Reinwardt is wrong. Furthermore he does not agree with Reinwardt's conclusion on the geological nature of the soil under the 'Nieuwmarkt'. Too easily Reinwardt has drawn the conclusion that the presence of shells of *Corbula* proves that the soil, in which these shells have been deposited, must be a 'Zuyderzee' deposit, while – in his view – it is a type of clay. If Reinwardt is right, the bottom of the 'Zuyderzee' must have been more than 100 feet deeper than it is today. The small pieces of lead described by Reinwardt are only the rests of solder, which has been used to connect the tubes with which the well has been drilled. Van Breda adds several other remarks. He is looking forward to receiving the comments given by Reinwardt and De Fremery and to their ideas about how to arrange their second collective report.

[UBL BPL 609-2; ZOC, GEO, MIN]

**900. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden); 8 March 1838**

Vrolik wants to be informed as soon as possible about the results of the investigations, which have been carried out by Reinwardt, Van Breda and De Fremery, with respect to the utility of the solution invented by J. Howard Kyan for the preservation of ship's hulls. Vrolik reminds that his first demand dates from 28 January 1836 and that he still has to advise the Minister of the Interior and the Director-General of the Navy.

[NA-RANH KNI 175-37.334; CHE, BOT, PHY]

**901. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden); 8 March 1838**

Once again Vrolik reminds Reinwardt that he still has to report on the results of his investigations with respect to the invention of J. Howard Kyan, dealing with the preservation of ship's hulls. Reinwardt has to consult his fellow members Van Breda and De Fremery and to report as soon as possible.

Vrolik wants to know why he has not received this report until now. The Ministry of the Interior and the Department of the Navy want to receive it as soon as possible.

[UBL BPL 609-2; CHE, PHY, BOT]

**902. E.L. van Heeckeren (Paramaribo) to C.G.C. Reinwardt (Leyden); 16 March 1838**

Van Heeckeren, Governor-General of the West Indies, informs Reinwardt that on 19 November 1837 he did receive his letter dated 16 September 1837 through Mr. Splitgerber. He thanks Reinwardt for having introduced him to this important scientist. Because of that he learned about the results of his scientific journeys through Surinam. He assumes that Splitgerber has already informed Reinwardt about the results of his efforts. In his view these journeys will yield a rich harvest, because this man is working hard with unflagging energy. Besides the plantation owners are giving him every support they can. Van Heeckeren will also help him as much as he can. Until now he has not had the opportunity to do so. Because Splitgerber knows his willingness, he is looking forward to receiving his requests. Van Heeckeren feels very honoured by the fact that finally scientists are focussing on Surinam. The kingdom of the Netherlands has never shown any interest in this country. Even worse, it has always had an undisguised contempt for this country, or at best it showed its compassion. In his view this indifference is completely matching with the way in which the Netherlands have been diddled out of the possession of Brazil. Meanwhile he has served the colony for 17 years, six of which he has been in office as Governor-General. Now His Majesty has authorized him to go on leave to the Netherlands and to stay there for a year. He will leave in a couple of months and see Reinwardt. [UBL BPL 2922; BOT, ZOC, COB]

**903. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Leyden); 19 March 1838**

Reinwardt sends his report on a geological treatise to Van Breda. He has added the signed receipt of another treatise (on the growth of wood), which is still in his possession. He did not receive the first proof of Gaertner's treatise until yesterday. He had to edit it himself, after which he has returned the document to the printer. Today he has received another sheet of the

proof. He expresses his feelings of esteem and obedience.  
[NA-RANH HMW 444-116; GEO, BOT]

**904. Minister of the Interior (The Hague) to C.G.C. Reinwardt (Leyden);  
27 April 1838**

The Minister of the Interior discusses the possible publication of a comprehensive work on the natural history of Java. Its publication would help to make the activities of the 'Natuurkundige Commissie' more widely known. The Minister wants to be advised, not only by Reinwardt, but also by Temminck and Blume. Besides he wants to inspect certain documents, which have previously been sent to Reinwardt.  
[NA 3-12.17.7; ZOC]

**905. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Haarlem); Spring  
of 1838**

Reading this rather extensive treatise on plant anatomy has been very exhausting. However the author has proved not to be an expert in his field at all. The structure of the treatise is defective. The author has not even understood the question asked by the 'Maatschappij'. He has spent too much of his energy on proving that the ideas of Du Petit Thouars with respect to the various types of wood tissues are wrong. In order to correct these concepts the author wants to introduce new terms – 'normal wood tissue', 'adventive wood tissue' (of which the vascular bundles are growing from the leaves into the branches) and 'normal adventive wood tissue' (of which the vascular bundles are a combination of those of the leaves and those of the branches). In the author's view the vasculare bundles of the third category are responsible for the development of the annual rings. The author has developed several other new ideas, among others with respect to the arrangement of the vascular bundles in the stem. These are always growing in from the leaf stalks. The author has also tried to distinguish sharply between shrubs and trees, with respect to wood anatomy. In his view only 'normal wood tissue' is present in shrubs. From his incomprehensible remarks about the anatomy of *Caltha palustris* it is obvious that the author does not have the faintest idea of how to handle a microscope. In Reinwardt's view he has lost face and even more than that. As a matter of fact the author has made use of the ideas of several renowned botanists. He has tried to develop his own

defective theory, without having carried out any experiments. Reinwardt is disgusted about the fact that he had to analyse this treatise.

[NA-RANH HMW 444-435.391(2) R; BOT]

**906. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Haarlem); Spring of 1838**

The author has written the most comprehensive and extensive treatise, which the 'Maatschappij' has received since its foundation in 1752, a treatise of 670 pages 4°. The author has expected his readers to be completely ignorant about this subject. He has tried to answer the question if it is possible to find traces of a gradual development of fossils (from simple life forms to more complicated structures), which are known to us. Erroneously he has spent the first part of his treatise on describing the anatomy of the living plants and animals. Although Reinwardt agrees that this is a correct starting point, the author has spent far too much paper on this part of his treatise.

In the second, less extensive part of his treatise he has proved to be an expert in stratigraphy. He has demonstrated that it is possible to determine the relative age of all kinds of fossils from different layers. He has made the right and most fruitful comparisons. This part of the treatise is really excellent. He has also proved in a very convincing way that life, since it has begun, has developed from the most simple to the most complicated and highest life forms.

Because the author has tried to develop one chain of beings, he has walked into a trap, which is a regrettable failure. In spite of his previous statements he has also given series of transitional life forms, which are contradictory to his theory. The author did not realize that large parts of the surface of the earth are still unknown. He has not taken into account the consequences of the climatic changes in historical and prehistorical times, nor did he use the fact that there are similarities between different regions of the earth with respect to their climates. He did not realize that certain fossils are disappearing much faster than others (because of their different chemical composition). The author has wrongly put that the 'voortbrengend vermogen' ('productive power') of nature has been much weaker in prehistorical times than it is now. All in all, the author has drawn the wrong conclusions. He did not answer the question correctly. So awarding him is out of the question.

[NA-RANH HMW 444-436.404(1) R; GEO, MIIN, PHY, CHE]

**907. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Haarlem); 13 May 1838**

Reinwardt reports on a treatise on the atmosphere ('dampkringslucht'). He adds the original manuscript of Gaertner's treatise, which has been awarded last year as well as a printed copy of the treatise written by C.H. Schultz (Berlin). In his covering letter he proposes to appoint Gaertner and Schultz foreign members of the 'Maatschappij'. Meanwhile they have both become well-known scientists. He expresses his feelings of esteem.

[NA-RANH HMW 444-116; BOT, PHY]

**908. Minister of the Interior (The Hague) to C.G.C. Reinwardt (Leyden), C.J. Temmink (Leyden) and C.L. Blume (Leyden); 15 June 1838**

The Minister of the Interior informs Reinwardt and his colleagues that Horner's monthly salary has been raised from 400 to 500 guilders, while Van Gelder's salary as a prosecutor has been raised from 200 to 300 guilders per month. [Ludwig Horner is a draughtsman, assigned to the 'Natuurkundige Commissie'].

[NA 3-12.17.7, ZOC]

**909. C.G.C. Reinwardt (Leyden), N.C. de Fremery (Utrecht) and J.G.S. van Breda (Haarlem) to G. Vrolik (Amsterdam); 21 June 1838**

Reinwardt gives the final and very detailed account of the results of the meticulous analysis of the soil samples, which have been brought to the surface at the occasion of the drilling of a well at the Amsterdam 'Nieuwmarkt', by using a clack bit ('klepboor'), until a depth of 246 feet ('Rhijnlandsche voeten') below the surface. Reinwardt has occupied himself with the collection and description of geological and mineralogical data, together with Van Breda and De Fremery. In the inventory all details have been given. Unfortunately it has turned out to be impossible to determine the geological age of the various layers. Furthermore the commission has concluded that at least once a gigantic flood has swept over this region, at least if the thick layers of clay and sand have been deposited in a short lapse of time. It is still not clear if these deep layers have been deposited during the alluvium, yes or no, although the commission does not think so. Anyhow in those prehistoric times the high-tide level was different from nowadays. Finally the commission has compared the results of this drilling with those

collected during a previous drilling of a well in Amsterdam (in 1605). Finally Reinwardt points at Lyell's contribution to geology, which has been published in the *Philosophical Transactions of the Royal Society* (London, 1835, Tab. 2, fig. 5, p. 31), in order to illustrate a couple of mollusc, which have been found in the soil of the 'Nieuwmarkt'.

[NA-RANH KNI 175-64(139).9 R; GEO, MIN, ZOC]

**910. Minister of the Interior (The Hague) to C.G.C. Reinwardt (Leyden), C.J. Temminck (Leyden) and C.L. Blume (Leyden); 3 July 1838**

The Minister of the Interior informs the addressees that their plan to write a comprehensive work on the natural history of Java is far too expensive. In the view of Reinwardt and his colleagues 12.000 guilders have to be invested in that project. The Minister is willing to give green light to it, but only if it will be made less expensive. He also wonders if it would be wise to add a French text. He wants to receive the advice as soon as possible.

[NA 3-12.17.7; ZOC, BOT, GEO, MIN]

**911. H. Baron Collot d'Escury van Heinenoord (The Hague) to C.G.C. Reinwardt (Leyden); 23 July 1838**

D'Escury, one of the governors of the university, acknowledges the receipt of Reinwardt's letter, which is meant for recommending young Mr. Wittewael for promotion. D'Escury is willing to cooperate, although an opportunity will probably not present itself. This is due to the fact that most probably the hortus will be given another use. He stipulates that according to Reinwardt it is not possible yet to comment on it, because the economical garden will be transformed into a pure botanical garden. So, it makes sense to continue the position of a worker, especially if Reinwardt's budget will not be charged with his salary. D'Escury wants to know how Reinwardt and his wife are doing. He gives his kindest regards, also on behalf of his wife, and expresses his feelings of esteem.

[UBL BPL 2922; BOT, AGR]

**912. Minister of the Interior (The Hague) to C.G.C. Reinwardt (Leyden), C.J. Temminck (Leyden) and C.L. Blume (Leyden); 25 July 1838**

The Minister of the Interior reminds the addressees of his previous letter on the natural history of Java. In his view it will not be possible to raise enough money to finance this undertaking. He wants to know if it would be wise to publish this work in a fixed number of issues, which can be bought apart from each other. He asks for an advice.

[NA 3-12.17.7; ZOC, BOT, GEO, MIN]

**913. Th. Horsfield (London) to C.G.C. Reinwardt (Leyden); 3 August 1838**

Horsfield thanks his colleague for having sent him this honourable letter (dated 27 July 1838), which he has received already on 30 July. From it he has learned that the copies of his work sent to Leyden did not arrive until now. He has sent it to Holland through the Firm Black & Armstrong ('Wellington House', London). Horsfield regrets this delay and he begs his colleague to convey his compliments to Mr. Luchtman, together with his apologies for this affair. He also begs him to distribute the contents of this writing among the colleagues, with whom he is corresponding. He is willing to send Reinwardt as many copies as he will be needing. He expresses his feelings of sincere gratitude for the friendship Reinwardt has given to him as well as for everything he has done in his behalf. He adds his kindest regards for Reinwardt's beloved wife and calls himself his most grateful and most devoted friend.

[UBL BPL 2922; BOT]

**914. C.G.C. Reinwardt (Leyden), J. Kops (Utrecht) and J.G.S. van Breda (Haarlem) to G. Vrolik (Amsterdam); late Summer of 1838**

On behalf of his fellow members of the jury, Reinwardt reports on Van Hall's treatise on the tuberiform seeds of certain *Amaryllis* species, such as *Amaryllis longifolia* from the Cape Province, a plant which is rather common in our gardens. The ovary of this species swells and keeps its seeds hidden in the fleshy and succulent mass. In Reinwardt's view these masses have to be considered – at least at first – as the result of a proliferation and not as seeds in the strict sense. This species is quite different from other

bulbous plants and even from other *Amaryllis* species. A more detailed examination has proved that these tuberous proliferations of the ovary are indeed seeds, each containing one embryo. Reinwardt has analysed its development. Finally he has decided that this phenomenon is not unique for *Amaryllis longifolius*, but that it is also occurring in other bulbous plants, like several other *Amaryllis* species and *Crinum*. He points at Linnaeus's conclusion, who in the past century has regarded these structures as bulbs. Rumphius has been more accurate. He has compared these structures with the seeds of the Chestnut and Horse Chestnut, and also with the seeds of mallow plants. Furthermore Reinwardt points at the discoveries made by Burmannus. W. Herbert, the English botanist, has given detailed descriptions of the various groups of bulbous plants (see: *Botanical Magazine* and *Botanical Register*). Later on he has published an *Appendix* on this subject (1821) and finally an extensive *Monograph* (1837, London). Herbert has given the clear differences between *Amaryllis* and *Crinum*. As it turns out Van Hall and Herbert are holding different views. Van Hall's *Amaryllis longifolius* has to be renamed and called 'Crinum capense', the name which Herbert has given it already in 1821. This name is also used in the last edition of the Linnaean *Systema Vegetabilis* (Schultes). Finally the jury gives a detailed account of the particular development of the seeds in the fruit of *Crinum capense*, shortly after flowering. The jury has succeeded in explaining the strange development, proving that the seeds are already germinating, while they are still contained in the fruit. The various *Crinum* species prefer moist or wet grounds and they produce their seeds in the same way as other plants do, which are living on the shores and beaches in a vaporous and warm atmosphere. The jury decides that this treatise cannot be published and that its author has to be informed that he is allowed to do with his treatise whatever he wants to.

[NA-RANH KNI 175-64(139).17 R; BOT]

**915. J. Teissèdre l'Ange (Amsterdam) to C.G.C. Reinwardt (Leyden); 1 October 1838**

Teissèdre l'Ange sends Reinwardt a letter, received from their mutual friend Van den Ende. Van den Ende mentions the decision, made by the directors of the 'Hollandsche Maatschappij der Wetenschappen'. He makes clear that only out of necessity he will put up with this and that he will submit

his resignation. If Reinwardt should decide to send this letter on to Johan Enschedé, he should first of all inform Van den Ende about his plan. He asks Reinwardt to convey his greetings to Mrs. Reinwardt and to pass this message on to Professor Siegenbeek and to Miss Truitje. Finally he observes that he is suffering from rheumatism in the left foot.

[UBL BPL 2922]

**916. N.C. de Fremery (Utrecht) to C.G.C. Reinwardt (Leyden); 4 October 1838**

On behalf of the 'Utrechtsch Genootschap van Kunsten en Wetenschappen' De Fremery asks Reinwardt to deliver a lecture for its members. He hopes that Reinwardt will agree. The society would be greatly indebted to him. He wants to know on which of the Friday nights to come Reinwardt will have the opportunity to come to Utrecht. He would be very pleased if Reinwardt and his wife would be so kind to see him before he will read his paper. With pleasure he recalls Reinwardt's stay in Utrecht for a couple of days, last summer and expresses his feelings of esteem and friendship.

[UBL BPL 2922]

**917. C.L. Blume (Leyden) to C.G.C. Reinwardt (Leyden); 7 October 1838**

Blume, professor of botany and director of the 'Rijksherbarium'(Leyden), informs Reinwardt that according to the royal decree, made on 5 September 1838 (n° 99), His Majesty has ordered him through his letter, dated 21 September 1838, to send Reinwardt a copy of *Rumphia*, issues 1-18, to which he did subscribe in the past. He promises to send the forthcoming issues. He asks his colleague to return the signed receipt.

[UBL BPL 2922; BOT]

**918. Minister of the Interior (The Hague) to C.G.C. Reinwardt (Leyden), C.J. Temmick (Leyden) and C.L. Blume (Leyden); 20 October 1838**

The Minister of the Interior answers the representatives of the 'Natuurkundige Commissie' and promises that he will try to find the money needed for the publication of a work on the natural history of the colonies in the Dutch East Indies. Making use of the lithographer Erxleben, who has also worked for Von Siebold, will cost 1.500 guilders per year and that is too expensive.

The commission should prefer to invite a Dutch artist. It will not be difficult to find a lithographer in Leyden, who is willing to accept the job for less. He asks the addressees to find that man. / [NA 3-12.17.7; BOT, ZOC, GEO, MIN, ART]

**919. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden); 29 October 1838**

Vrolik sends Reinwardt, first member of the commission which has been installed in 1836 in order to advise with respect to J. Howard Kyan's patent for the preservation of ship's hulls, a letter received from the Minister of the Interior and dated 18 October 1838 (n° 138). It covers several documents, in which the results of various experiments have been described. As soon as possible Vrolik wants to receive the final report as well as the concept answer to the Minister, by barge or by coach.

[UBL BPL 609-2; CHE, PHY, BOT, TEC]

**920. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden), J.G.S. van Breda (Haarlem) and N.C. de Fremery (Utrecht); 31 October 1838**

Meanwhile Vrolik has received the final report with respect to the patent held by J. Howard Kyan for the protection of ship's hulls. This report will be evaluated and the final report will be stipulated.

[NA-RANH KNI 175-37.389; CHE, PHY, BOT, TEC]

**921. W.S. Swart (Amsterdam) to C.G.C. Reinwardt (Leyden); 3 November 1838**

Soon Swart, president of the 'Eerste Klasse', has to send the annual report to His Majesty the King. His Majesty wants to be informed in detail. Therefore, Swart invites Reinwardt to accompany him, because Alewijn and Vrolik will probably be absent in the audience. Reinwardt is the expert in the industrial applications of science. Most probably one of the items will be J. Howard Kyan's patent for the protection of ship's hulls, wood, canvas and other materials from rot. Employees of the Ministry of Public Works have also carried out experiments. Swart hopes that Reinwardt will be able to send him another letter on this subject before the audience will take place. He apologizes for being so frankly. He has pressing reasons. He expresses his feelings of friendship and high esteem. Again a printed brochure has been

added to this letter. It has been published by the 'Anti-Dry rot Company', which is holding Kyan's patent (41 p., 8°).

[UBL BPL 609-2; BOT, CHE, PHY]

**922. Minister of the Interior (The Hague) to C.G.C. Reinwardt (Leyden), C.J. Temminck (Leyden) and C.L. Blume (Leyden); 20 November 1838**

C. Vollenhoven – sending this letter on behalf of the Minister of the Interior – is pleased to announce that it will probably be possible to raise the funds, which are needed for the publication of a 'Natuurlijke Historie der Nederlandsch Oost-Indische Bezittingen'. He wants the commission to continue its activities and is looking forward to receiving an answer.

[NA 3-12.17.7; ZOC, BOT, GEO, MIN]

**923. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden), J. Kops (Utrecht) and J.G.S. van Breda (Haarlem); 12 December 1838**

Vrolik informs Reinwardt and his colleagues that Van Hall has taken to heart the advice given by the jury and that he has improved his treatise on *Amaryllis longifolia* and *Crinum capense*. The 'Eerste Klasse' wants to receive the jury's report within the next two months.

[NA-RANH KNI 175-37.404; BOT]

**924. C.J. Glavimans (Rotterdam) to C.G.C. Reinwardt (Leyden); 24 December 1838**

The experiments with the solution invented by J. Howard Kyan have been completed by Reinwardt, Van Breda and De Fremery. Glavimans, member of the commission which has to decide with respect to the text of the report, underlines its importance. Although he is not able to send Reinwardt one more sample of the solution, his colleague can order it at the wharf, where Glavimans junior is carrying out his large-scale experiments. The right concentration is one pound of bichloride of mercury, added to eight gallons of fresh water. Another important question to be answered is if it is recommendable to treat the wood with lye, before it will be used for shipbuilding, yes or no. All in all, chemistry plays an important role. Experience has taught Glavimans that a solution of bichloride of mercury does not penetrate deeply enough into the wood. He expresses his feelings

of high esteem and calls himself Reinwardt's obedient servant.  
[UBL BPL 609-2; BOT, CHE, PHY]

**925. Minister of the Interior (The Hague): Royal Decree; 10 February 1839**

Today – on 10 February 1839 – His Majesty the King has decided that the *Verhandelingen der Nederlandsche natuurkundigen betreffende de voortbrengselen der Nederlandsche overzeesche bezittingen* will be published according to the propositions made by Reinwardt, Temminck and Blume. The various articles of the royal decree explain the sources to be consulted, the procedures to be followed, the expenses with regard to the illustrations, the size of the book (3 volumes) and its language ('nederduits'). The costs may not exceed the sum of 36.000 guilders. This money will be provided by the Department of the Colonies. This sum will be spread over the years 1837 until 1841. The Minister expects that the money needed, will be at the expense of the annual budgets of the 'Natuurkundige Commissie'. Temminck will have to report annually to the Minister of the Interior about the proceedings and to the Department of the Navy and the Colonies about the expenses. The proceeds of the sale of this book will accrue to the Ministry of the Interior.  
[NA 3-12.17.7; ZOC, BOT, GEO, MIN]

**926. C.G.C. Reinwardt (Leyden) to J. Decaisne (Paris); 12 March 1839**

Reinwardt, who is still remembering Decaisne's goodness, thanks him for sending the brochure on sugar roots. He is pleased by the fact that he is allowed to send a list of rare plants, wanted by him to professor Mirbel, next spring. He hopes that the regular exchanges between Paris and Leyden will restart again. He expresses his strong feelings of friendship and high esteem towards Decaisne. [The original letter is written in French]  
[IDF Ms 2457; BOT]

**927. C.G.C. Reinwardt (Leyden) to J.T. Bodel Nijenhuis (Leyden); 30 March 1839**

Just before he left, Erxleben has drawn Reinwardt's portrait in a hurry. Reinwardt wants to keep this fact quiet for the time being. He also wants to postpone its printing. Even his next of kin are still ignorant of this fact. He offers to send a few copies to Bodel Nijenhuis and to Van der Willigen, as

soon as he will be starting the distribution of these portraits. He underlines his feelings of high esteem.

[UBL BPL 1886; ART]

**928. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden); 3 April 1839**

Once more Vrolik reminds Reinwardt of his promise to submit the final results of the experiments with respect to the patent of J. Howard Kyan as soon as possible, It cannot be postponed any longer. Meanwhile this request has been repeated more than once.

[NA-RANH KNI 175-37.436; CHE, PHY, BOT, TEC]

**929. Ch.Fr. Brisseau De Mirbel (Paris) to C.G.C. Reinwardt (Leyden); 7 April 1839**

De Mirbel thanks Reinwardt for sending him a collection of seeds. He has added a catalogue of plants which are available. He hopes that Reinwardt will find several interesting species. He is ready for restarting the exchange programme. He has charged a friend and colleague from Heidelberg to send him a copy of a treatise, written by Mr. Sporch and him on the development of plant embryos. Because he is not sure if this friend will have the opportunity to hand this document over to Reinwardt, he has decided to ask one of Reinwardt's countrymen to deliver it at Reinwardt's. A second copy has to be given to Mr. Blume. The main object of this treatise has been to fight the ideas of Mr. Schleiden (Berlin), who has dared to put that plants are asexual. He does not understand why such a keen scientist can make such a most strange proposition. In his view this idea has to be rejected. Anyhow, even such a point of view may give rise to new observations and discoveries. He expresses his feelings of esteem and devotion. [The original letter is written in French]

[UBL BPL 2922; BOT]

**930. G. Vrolik (Amsterdam) to J.G.S. van Breda (Haarlem), C.G.C. Reinwardt (Leyden) and C.J. Temminck (Leyden); 13 April 1839**

In order to fulfil his duty with respect to the obligation of delivering a lecture in the meeting of the 'Eerste Klasse', De Fremery has entered a treatise entitled 'Bijdrage tot de kennis der fossiele Zoogdieren in Noord-Nederland' ('Contribution to the knowledge of the fossil mammalia of the

Northern Netherlands'). The 'Eerste Klasse' wants to receive the report within two months.

[NA-RANH KNI 175-37.442; GEO, ZOC]

**931. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Haarlem); April 1839**

The author of the treatise on the artificial sugar entered under the motto 'Der edle Mensch sei hülfreich ... (Goethe)' has not given any new facts and views. Furthermore he has not understood the question, because the 'Maatschappij' wanted to be informed about new sources for the production of sugar. In other words the author had to suggest new plant species, the constituents of which can be transformed into sugar, of course under the condition of a detailed description of the chemical procedures, which have to be carried out.

[NA-RANH HMW 444-436.403 R; BOT, AGR, TEC, CHE, PHY]

**932. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Haarlem); April 1839**

The author has demonstrated his skills in microscopic anatomy. Reinwardt knows how difficult and exhausting these observations are and he knows that many observations have to be repeated in order to prevent optical illusions. The treatise entered under the motto 'Mit lauter Stimme spricht der Natur', is really excellent and the drawings are true-to-nature and absolutely perfect. Reinwardt praises the sequence of subjects discussed by the author. He has described their living conditions, development, etc. The author distinctly believes in the theory of the 'generatio aequivoca' and obviously Reinwardt agrees. The individuals of *Protococcus* and of other microscopic plants are produced through a 'spontaneous generation', there is no doubt about that! These life forms are intermediate forms between the non-organized ('onbewerktuigde') and the organized life forms ('bewartuigde'). The globular plants can develop into other life forms by fusion and they are able to change into more complex forms like 'Flap' (?), Algae, Fungi and Mosses. In Reinwardt's view the author has solved several problems and he has found the answer to various uncertainties. The only problem is that he did introduce several new terms, relative to the organisms, which he did observe and describe. Reinwardt wants to use the qualification

‘narrow-mindedness’. In order to prove that he is right with respect to his descriptions and conclusions, the author has enclosed a collection of microscopic preparations. He deserves to be awarded the gold medal and the bonus as well.

[NA-RANH HMW 444-436.408 R; BOT]

**933. C.G.C. Reinwardt (Leyden), J. Kops (Utrecht) and J.G.S. van Breda (Haarlem) to G. Vrolik (Amsterdam); June 1839**

First of all Reinwardt observes that he and his colleagues had already reported on Van Hall's treatise on the production, germination and development of the seeds of *Amaryllis longifolia* (or *Crinum capense*). Although the author did not change his opinion, he has adapted the historical part of his treatise. He has discussed the discoveries made in the past by several botanists. Meanwhile he has also decided to use the name ‘*Crinum capense*’. However Reinwardt is not willing to withdraw his objections and more in general he observes that this treatise has to be regarded as a general discussion of the process of germination within the ‘*Plantae monocotyledonae*’. Perhaps it will be preferable to advise the author to take care of its publication himself. Another option is that the ‘Eerste Klasse’ organizes its publication separated from the *Verhandelingen*, after which it can offer this treatise at a reasonable price. Kops and Van Breda fully agree with this proposal. A treatise should not act like a textbook for beginners in the field of the botanical sciences. Van Breda himself distinctly prefers the first of the possible solutions.

[NA-RANH KNI 175-64(139).34 R; BOT]

**934. G.Vrolik (Amsterdam) to W.Vrolik (Amsterdam), C.G.C. Reinwardt (Leyden) and W.H. de Vriese (Amsterdam); 4 July 1839**

At the occasion of the last meeting of the ‘Eerste Klasse’ a letter from the Minister of the Interior has been received, covering three other documents – a letter from the governors of ‘*Natura Artis Magistra*’, a letter from the municipality of Amsterdam and an inventory of the animals living in the menagerie of Mr. Martin (Amsterdam). Gerardus Vrolik asks his son Willem Vrolik – being first member of the jury – to enter the report. The ‘Eerste Klasse’ has to advise the Minister of the Interior, so it wants to receive the answer within a month.

[NA-RANH KNI 175.37.467; ZOC; see also the following document]

**935. W. Vrolik (Amsterdam), C.G.C. Reinwardt (Leyden) and W.H. de Vriese (Amsterdam) to G. Vrolik (Amsterdam); July 1839**

Willem Vrolik enters the advice, relative to the request, which has been sent to the 'Eerste Klasse' by the governors of the Zoological Society under the maxim 'Natura Artis Magistra'. It is all about the question if the government should give financial support to institutions like the 'Artis', in order to encourage these foundations, yes or no. The commission has decided that the only possible answer is 'yes', because these institutions are indispensable for the advancement of scientific knowledge. The commission wants to point at the important function of the famous 'Jardin Royal des Plantes' (Paris) and at the influence great scientists, like Buffon and Cuvier, have had. The same goes for the 'Zoological Gardens' of London, where men like Owen, Morgan, Barnett and Ogilby have been doing their research. So 'Natura Artis Magistra' should be supported financially. This institution is really trying to carry out scientific research. It is more than simply a garden offering entertainment to the public. In the future this garden and its society could develop into an important institution. If needed, Willem Vrolik is willing to give more details. It will even be possible to invite famous scientists, qualified for the teaching of zoology, to hold zoological lectures. The zoological garden is willing to put the deceased animals at the disposal of the professors of human anatomy and physiology of the 'Athenaeum Illustre'. Finally the skeletons can be given to the 'Artis' museum. Of course the zoological garden should be enabled to keep several rare and interesting larger animals, which can be studied before and after their death. By doing so possible 'fairground' attractions can be prevented.

First of all the petitioners are hoping that it will please His Majesty the King to accept the patronage of this institution. Secondly they hope that His Majesty is willing to provide the necessary money to acquire Mr. Martin's menagerie. Perhaps His Majesty could give an annual support like he is doing with respect to many other useful institutions. This would enable the zoological garden to buy a specimen of an important animal species. The 'Eerste Klasse' submits this advice to the judgement of the Minister of the Interior [signed by Willem Vrolik and co-signed by Reinwardt and De Vriese].

[NA-RANH KNI 175-64(139).38 R; ZOC]

**936. Th. Horsfield (London) to C.G.C. Reinwardt (Leyden); 3 August 1839**

First of all Horsfield wants to thank his colleague for the fact that he has done him the pleasure of making Erxleben's acquaintance. He also asks him to convey his gratitude to Mr. Luchtmans for sending him the bill and the receipt relative to the copies of the first volume of a work on the vegetable kingdom, which has been sold. He ends his letter by expressing his feelings of friendship and affection. [The original letter is written in English].

[UBL BPL 2922; BOT]

**937. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden), C.J. Temminck (Leyden) and J.G.S. van Breda (Haarlem); 13 September 1839**

In the last meeting of the 'Eerste Klasse' a letter (dated 4 September 1839, n° 186) has been read, which has been received from the Minister of the Interior. It covers the copy of another letter, received from a certain Mr. Taitbout de Marigny. This man has expressed his wish to make a sea voyage. Vrolik asks the addressees to send their advice within a month (anyhow, before mid-October).

[NA-RANH KNI 175-37.492; ZOC, BOT]

**938. C.J. Glavimans (Rotterdam) to C.G.C. Reinwardt (Leyden); 13 September 1839**

Glavimans reminds Reinwardt of a previous agreement with respect to the preservation of wood through the application of the solution invented by J. Howard Kyan ( $\text{HgCl}_2$ -water). He has added three bottles of Kyan's solution and several samples of oak – treated and not treated. One of these pieces of wood has been submerged in Kyan's solution from 7 August 1838 until 7 September 1839. The solution contained in one of the three bottles had already been used for treating wood. Glavimans asks Reinwardt to analyse the contents of that bottle as well as the residue in the three bottles. If Reinwardt asks him to, he is willing to be of his service.

[UBL BPL 609-2; BOT, CHE, PHY, TEC]

**939. J.G.S. van Breda (Haarlem), C.G.C. Reinwardt (Leyden) and C.J. Temminck (Leyden) to G.Vrolik (Amsterdam); about 30 September 1839**

On behalf of his colleagues Van Breda discusses a treatise, which has been written by N.C. de Fremery. It is entitled 'Bijdrage tot de kennis der fossiele zoogdieren in Noord-Nederland gevonden.' First of all he observes that the bones of many thousands of larger and smaller specimens of extinct mammals are deposited at the bottom of the North Sea and at the older diluvial sediments of the kingdom of the Netherlands and Belgium. Of course the largest bones have been preserved the best, such as the remains of elephants and especially the molars of these animals. Large numbers of these fossils have been found already. Describing these fossils is very important, because our knowledge of the extinct animals is still very defective. Only a few years ago it has been discovered that the fossil remains of the elephants are belonging to various species. Therefore the commission takes the view that it would be most useful to produce exact descriptions of these fossil remains. Enlarging our knowledge will also help to get a better knowledge of the nature of these deposits and of the fossils, which have been found in them. Van Breda foresees that soon the Diluvium will be divided into subdivisions ('onder-formatiën'), which have been formed in different periods and under various circumstances. De Fremery has indeed established that there are such diluvial subdivisions. He has also discovered that the fossil bones are especially abundant at the diluvial bottom of the North Sea. Because this bottom is rich of rocks and boulders, the distribution of these fossil bones has probably been preceded by the scattering of these boulders. De Fremery's treatise is a most important contribution to zoology and geology. Most regrettably the author has not been more precise with respect to the sites where these bones have been found. Although the bones are too incomplete to determine the species, De Fremery has been so wise to describe each fossil meticulously and he has decided to add true-to-nature illustrations. Because the *Verhandelingen* of the 'Eerste Klasse' are the right place for the preservation of such important discoveries, this treatise must be published in its works. Two of the bones are belonging to species, which are still unknown in the Netherlands. One of these bones belongs to *Bos priscus* (described by Bojanus) and the other bone belongs to *Cervus tarandus* Linnaei, the reindeer, which has been described by Linnaeus. If the

'Eerste Klasse' should decide to publish De Fremery's treatise, the commission would like to stress that it wonders if the two bones, belonging to the genus *Elephas*, are really the remains of *Elephas primigenius*. As a matter of fact it is not so strange that in these sediments the bones of more than one Elephant species are found (see: 'Magazine of Natural History', July 1839). Cuvier (Paris) and Mareska (Ghent) have also found interesting remains. Anyhow, in geological times more different Elephant species were existing than there are living nowadays. The author should rethink his decision to classify the peat moors, in which the remains of *Bos primigenius* have been found, under the diluvium.

[NA-RANH KNI 175-64(139).39 R; ZOC, GEO]

**940. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden); 11 October 1839**

Vrolik wants to be advised about the letter (dated 13 September 1839), sent to the Minister of the Interior by Mr. Taitbout de Marigny. Vrolik asks Reinwardt to give his advice also on behalf of Temminck and Van Breda. The 'Derde Klasse' and 'Vierde Klasse' have been invited to give their advice too.

[NA-RANH KNI 175-37.510; ZOC, BOT]

**941. C.G.C. Reinwardt (Leyden), J.G.S. van Breda (Haarlem) and C.J. Temminck (Leyden) to G. Vrolik (Amsterdam); about 24 October 1839**

On behalf of the commission Reinwardt reports on the request, made by Taitbout de Marigny in his letter sent to the Minister of the Interior on 4 September 1839. The commission has already been informed that His Majesty has agreed. Taitbout de Marigny has offered to make a journey over sea, during which he will have the opportunity to collect objects of natural history and to carry out many observations. In the view of the commission Taitbout de Marigny has well-founded plans and his travel scheme is very promising. The commission recalls the journey made by Pallas more than 50 years ago. They hope that Taitbout de Marigny will discover many interesting objects and phenomena in the Crim and in the 'Black Sea' region, in the 'Azov' region and in many other unknown regions. The 'Eerste Klasse' hopes to receive many interesting specimens (fossils and so on) and of course

a number of objects, which have already been collected on the Eastern isthmus of the 'Tauric' peninsula. Besides they hope to receive many rare plants and animals, which will enable the 'Eerste Klasse' to get familiar with the effects of the physical factors, like climate, soil and atmosphere on the vegetation and on animal life.

In Temminck's view Taitbout de Marigny has still to be instructed about how to collect the objects. Therefore he has added three copies of the printed instructions to this report. The commission has high hopes of the efforts put in by Taitbout de Marigny.

[NA-RANH KNI 175-74(139).42 R; ZOC, GEO, BOT, MIN]

**942. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden), N.C. de Fremery (Utrecht) and J.G.S. van Breda (Haarlem); 26 November 1839**

In the last meeting of the 'Eerste Klasse' the geological commission has communicated the provisional results of the analysis of the last collection of soil samples from the 'Nieuwmarkt' (Amsterdam), which have been sent to Reinwardt. As soon as the examination will be completed the commission will have to inform the 'Eerste Klasse'.

[NA-RANH KNI 175-37.521; GEO, MIN]

**943. G.Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden); 26 November 1839**

Again a collection of soil samples is offered to Reinwardt, De Fremery and Van Breda. They are asked to inform the 'Eerste Klasse' as soon as they have finished their analyses. They have to present their results through an annotated report.

[UBL BPL 609-2; GEO, MIN]

**944. C.G.C. Reinwardt (Leyden) to H. Schlegel (Leyden); 14 January 1840**

A long time ago Reinwardt has taken a cockatoo ('cacaou') from Ceram to Holland in order to give it to a lady friend as a present. Now he sends its body to Schlegel. He asks him to have it stuffed by Vermeer, because he wants to give it to another friend.

[UBL BPL 2742; ZOC]

**945. J.Fr. Blumenbach (Göttingen) to C.G.C. Reinwardt (Leyden); 28 January 1840**

Blumenbach thanks his colleague for his kind letter. He also thanks him for the honourable present. He still remembers the pleasant and interesting exchanges of ideas with their mutual friends. He asks Reinwardt to convey his greetings to Van der Capellen and to help him sending a parcel to Van der Vinne in Batavia. He signs his letter as Reinwardt's most devoted friend and colleague. [The original letter is written in German]

KB 121 D 6]

**946. Commission for Drilling wells on the 'Nieuwmarkt' (Amsterdam) to G.Vrolik (Amsterdam); provisionally 28 February 1840**

On behalf of the commission, Reinwardt, being the author of the report on the results of the analysis of the first collection of soil samples of the 'Nieuwmarkt' (Amsterdam), discusses the results of the analyses of another 83 soil samples, referring to his first report.

[UBL BPL 609-2; GEO, MIN]

**947. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Haarlem); 4 March 1840**

Reinwardt returns the first version of the extensive French treatise on the fossils and adds a copy of his report. Soon he will return the second version of the treatise, together with a new report. He has decided to stick to his judgement, because the author has only skipped the part of the treatise, in which a useless description of natural history has been given.

In order to be able to judge the new version of the treatise on wood, he needs a copy of his first report. So he asks Van Breda to return it to him. He promises to enter his report in time, if possible. He adds his compliments for Mrs. Van Breda.

[NA-RANH HMW 444-118; GEO, MIN, BOT]

**948. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Haarlem); 12 March 1840**

Reinwardt has judged two treatises on the gradation of fossils. The first one is a revision of the treatise, which has been entered in 1838. The other one is new. First of all, he discusses the French treatise, the most extensive

one. Reinwardt decides that it must have been written by Marcel de Serres (Montpellier), because he is familiar with the handwriting. This time the author has omitted the former first part of his treatise, an extensive comparative anatomical description of the animals and plants. The second part offers a brief recapitulation of the first part. Besides the author has added new discoveries. The part of the treatise, in which the fossil remains of the various formations have been discussed, is really excellent now, although it has to be considered an introduction to the proper answer to the question. In it, the author had to discuss the pros and cons of the assumption of a 'gradation'. In the first round (1838), this part of the answer has been rejected by the jury. In its view, the author had concluded too easily that from the beginning of 'Creation' until now, a gradation from the most primitive to the most complicated life forms had indeed taken place. The author should have realized that his style of argumentation was contradictory to the art of argumentation and to the general laws of nature. The fossil remains, which have been described by him, are not convincing enough. Furthermore the author has wrongly applied the conclusions, drawn by him with respect to local circumstances, to the whole surface of the earth. He did not realize that some of his conclusions are very premature, nor did he understand the importance of the fact that various parts of a body are susceptible to different decaying processes: some parts remain, while other parts are disappearing. Besides, maybe certain species did not leave any traces. Already in 1838, the Jury had observed that the author had not taken into account sufficiently the general laws of nature. If he would have realized the consequences of his discoveries, he would not have pleaded a linear gradation of living beings, but a 'reticular, more or less coherent system'. The author has allowed himself to be seduced to contrary, hazardous and unscientific hypotheses and absurdities. This time the author has stressed that the linear gradation is a too simple representation of a possible historical development. He has solved his theoretical problems by stating that the deviant life forms, which do not fit in his theory, must be a consequence of a contravention to the rule. In several cases the author has embraced assumptions made by other authors as being facts, for example that in the beginning the atmosphere largely consisted of carbon dioxide and he does not mind that animals never could have lived in that atmosphere. Because most of the objections have not been

dispelled until now, the treatise cannot be awarded, in spite of its many new discoveries and valuable descriptions.

The second entry is a concise German treatise. It is far less valuable. It only discusses the coal deposits. Furthermore the author has answered a simple 'yes' to the question if there has been a gradation of natural beings, yes or no. In the author's view everything, which has been created in the past, is still existing and has not changed from the moment of its creation until now. The author has not carried out any investigations himself, nor did he make any observations and he has not come out with any proofs. This entry does not deserve any further attention.

[NA-RANH KNI HMW 444-436.404(2) R; ZOC, GEO, MIN]

**949. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Haarlem); probably about 28 April 1840**

The author of a treatise on wood has not sufficiently improved his first entry. To Reinwardt, reading this document has again been an awful and not interesting occupation of his spare time. He does not at all understand why his colleagues are willing to give their approval to this entry. It should be rejected. Of course the outcome has to be a different one, if the author – Dr. Dassen – has already been promised the premium of 150 guilders. Just now he cannot think up other prize contests, because he simply has not got the time to do so. Van Breda knows well that he prefers devising interesting and daring contests to saddening advisory work.

His wife is recovering again, although she is still weak. Her recovery will take long. If he will be able to attend the meeting of 'Teylers Tweede Genootschap' next Friday he will see Van Breda. He still has to be informed about the time. He asks to convey his compliments to Mrs. Van Breda.

[NA-RANH HMW 444-118; BOT]

**950. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Haarlem); probably about 28 April 1840**

After having read the supplements to Dassen's treatise on the sap streams in plants, Reinwardt decides that this document has to be published in the *Verhandelingen* of the 'Maatschappij'.

[NA-RANH HMW 444-433.375 R; BOT]

**951. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Haarlem); end of April 1840**

Reinwardt has really been impressed by this excellent treatise, which has been entered under the maxim 'Mit lauter Stimme spricht der Natur'. The author is very experienced in microscopic investigations, which must have been very tiring. Reinwardt is very satisfied with the choice, made by the author with respect to the sequence of the natural beings. Furthermore he has proved to be familiar with the discoveries made by other authors, like Priestley. The author strongly believes in the theory of the 'generatio aequivoca' and Reinwardt does not object. In the author's view, organisms like *Protococcus* are representing the transition between the 'onbewerktuigde' (unorganized) beings and the organized beings. He also describes the development of the *Protococcus* globules into other ('higher') organisms, the development of mosses [a statement, which refers already to the modern concept of the metamorphosis of mosses]. In Reinwardt's view mosses can only develop in two ways: from seeds and through the process of the 'generatio aequivoca' (starting from globules like *Protococcus*). The author is convinced that the spontaneous generation is applicable to the majority of the gymnosperms. After all Reinwardt decides that this document is a well written treatise, which has been embellished by beautiful illustrations. However he dislikes the fact that the author has introduced various affected terms and that he has displayed a certain pedantry and narrow-mindedness. Nevertheless, he wants to praise this treatise, simply because the author has given the results of important and new observations. He has carried out meticulous and reliable research. Besides, he has added a collection of preparations. Therefore the author deserves to be awarded the gold medal.

[NA-RANH HMW 444-436.408 R; BOT]

**952. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Haarlem); Spring of 1840**

The author of the treatise entered under the maxim 'Magna res est veritas et praevalit', which has been rejected five years ago, has again made an attempt. So Reinwardt had to examine if the author has succeeded in being victorious this time. The author did not change his ideas and starting points. However he is using the terms 'primary wood' and 'secondary wood', in stead of the terms 'normal wood' and 'adventive wood'. On the other hand he did not

change his idea that the tracheas of the wood are beginning in the leaf and that they are ending in the stem. Furthermore he states that the secondary wood is only consisting of coherent fibres. In the view of the author this concept has to be the base of the line of reasoning through which the secret of the formation of wood can be unveiled. Reinwardt, who does not accept this assumption, wants to put that the formation of wood as a tissue has to be explained in a complete different way. This problem is related to the essential fact that there are various sap streams in the stem and in the branches of the tree. He wonders why the author did change the contents of the term 'wood'. Furthermore he did not explain the microscopic structure and function of the elements of the 'primary wood' ('tracheas') and of the 'secondary wood' ('fibres'). Many other authors have already given more details and better explanations of the anatomy and physiology of plants than the author of this treatise has done now. He has proved to be hardly familiar with using the microscope, which in this case is an indispensable instrument! In that respect the author is absolutely inexperienced. Why did he not refer to the drawings made by other authors? Why did he almost not refer to the observations, experiments and analyses made by other botanists? The author only pointed at the ideas of Du Petit Thouars. Not any reference to the historical literature has been given! He has carried out a few observations, in which he has confined himself to the growing sunflower. He has found out that the 'primary wood' is growing from the leaves into the stem and that later on the secondary wood is developing without any relation with the leaves. The author's statements are contradictory and very confusing. Reinwardt rejects the author's explanation of the structure and growth of the roots, in which he assumes a transformation of pith into secondary wood. Reinwardt does not believe that the author has really observed this phenomenon. Reinwardt knows better! The treatise is still defective, not only in its structure, but also with respect to the development of ideas, which are based on observations.

[NA-RANH HMW 444-435.391(3) R; BOT]

**953. G.A.G.Ph. Baron Van der Capellen van Berkenwoude (Vollenhove) to C.G.C. Reinwardt (Leyden); 9 May 1840**

First of all Van der Capellen, who has just returned from Paris to The Hague, wants to acknowledge the receipt of Reinwardt's letter. He informs

him about Mrs. Van der Capellen's health since they had an accident in Heidelberg. She has completely recovered. Fortunately they could see the capable professor Chelius there. Later on, when they were spending the winter in Paris, they had to see a dentist. His wife is most susceptible to Reinwardt's compassion. She has asked her husband to let him know that she has the most wonderful and pleasant recollection of their time spent in Java, especially of the time spent together in Buitenzorg. They are very sad about the disease Mrs. Reinwardt has been suffering of. They sincerely hope that she has recovered meanwhile. He has taken notice of the letter of recommendation with respect to Dr. Loncq, which Reinwardt has sent him. It is not the first one about this excellent scientist, that he received. He assures Reinwardt that the recommendation given by him will carry much weight in Loncq's favour. He wants to emphasize that the influence of a chairman of the curators is slightly different from the position of a Governor-General with respect to the members of the Council of the East Indies. He expresses his feelings of highest esteem, friendship and devotion. [UBL BPL 2922]

**954. G. Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden); 13 June 1840**

Vrolik informs Reinwardt that the Minister of the Interior and the Director-General of the Navy want to receive the final report regarding the experiments carried out with J. Howard Kyan's solution for the prevention of ship's hulls, canvas and ropes from dry-rot. He reminds his colleague that the first demand already dates from 1836.

[NA-RANH KNI 175-37.595; CHE, PHY, BOT]

**955. C.G.C. Reinwardt (Leyden) to F.A.W. Miquel (Rotterdam); 5 September 1840**

A couple of days ago, Reinwardt has been pleasantly surprised by the reception of Miquel's treatise on *Melocactus*. He appreciates this gesture as a new sign of affection and he expresses his sincere gratitude for this beautiful present. He has already found out that this work is an excellent aid to those who want to determine the species of this difficult genus. He expresses his feelings of admiration. The botanists owe him their gratitude. Naturally Miquel will add his new discoveries to this reference book from

time to time. The book written by Du Petit Thouars on the same subject is definitely of a lesser importance.

[UBU Hs 1873; BOT]

**956. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Leyden); 26 January 1841**

Through the *Haarlemsche Courant*, Reinwardt has been informed about the uncomplicated delivery of Mrs. Van Breda. He wishes his colleague and secretary of the 'Hollandsche Maatschappij' good luck. He hopes that the new mother will have recovered soon, that the new-born baby will grow up in prosperity and that it will enhance the happiness of its parents. Reinwardt has received the enclosed document through professor Von Martius (Munich). It is meant for the 'Maatschappij'. It gives ideas about the fertilization of plants. Reinwardt fully agrees with the author: 'This contribution deserves the attention of the 'Maatschappij'. It might be added to the treatise on the same subject, which still has to be published. He begs Van Breda not to send him any treatises for evaluation this year. In a postscript he observes that he has paid two guilders and 33 cents for postage in behalf of the 'Maatschappij'.

[NA-RANH HMW 444-119; BOT]

**957. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Haarlem); 23 February 1841**

Reinwardt is happy that Van Breda has the opportunity to devote himself to science again. Perhaps this will be the best way to surmount his terrible loss. Fortunately Van Breda's oldest child is almost out of danger now. A couple of days ago Reinwardt has sent a letter to professor Von Martius, in which he has asked him to authorize the 'Maatschappij' to publish his contribution. If his letter remains unanswered he will decide in favour of publication, because as a matter of fact Von Martius has already dropped a hint that he is willing to agree.

[NA-RANH HMW 444-119; BOT]

**958. J.H.J. Van Lansbergen (Caracas) to C.G.C. Reinwardt (Leyden); 1 March 1841**

Many times Van Lansbergen has experienced Reinwardt's benevolence

during his stay in Leyden. He arrived in Caracas a couple of months ago. Therefore he feels it as his duty to inform him briefly about his ups and downs in this part of the world. His gratitude makes him dare to write these few lines. He hopes to send a considerable collection of parasitic plants, which is in the possession of an Englishman. Because of the dry season this collection cannot be sent to Holland yet. Furthermore he will study entomology. White ants are eating his house. It would be better if these animals would have taken possession of the house of his neighbour. It would be much better if an earthquake would demolish the house and the ants. Unfortunately heavier earthquakes are occurring only once every 30 years. On the other hand the last one, which destroyed Caracas, occurred about 29 years ago, so there is still hope. And the marks of that event are still visible. The numerous ruins are still present. Life is very uncomfortable here, because everything is stolen. After all life in Bogota is much better than it is in Caracas. Life on the plane of Bogota is much healthier. He dreams about practising botany in a beautiful garden, in a pleasant company, while someone is waiting for you to have a cup of tea or coffee and where you can find shelter from the rain. He expresses his feelings of sincere esteem.

[UBL BPL 2922; BOT]

**959. C.G.C. Reinwardt (Leyden) to P. Harting (Utrecht); 30 September 1841**

Reinwardt apologizes for returning the treatises, which have been sent to him so late. He has kept behind what Harting has offered him and thanks him for sending these documents. Reinwardt is rather familiar with the subject of Harting's investigations. Through Harting's work the gap between the inorganic world and the organic world will gradually disappear.

[UBL BPL 1938]

**960. G. Vrolik (Amsterdam) to H.C. van Hall (Groningen), C.G.C. Reinwardt (Leyden), W.H. de Vriese (Amsterdam) and J.G.S. van Breda (Haarlem); 8 October 1841**

Dassen has sent a letter covering a treatise, which he wants to be published in the *Verhandelingen* of the 'Eerste Klasse'. Vrolik asks the commission to enter its report within four months.

[NA-RANH KNI 175-37.718; BOT]

**961. A. Valenciennes (Paris) to C.G.C. Reinwardt (Leyden); 14 October 1841**

Valenciennes wants to introduce Mr. Zollinger to Reinwardt. Zollinger is going to leave for Java, in order to visit the possessions, owned by Mr. Meyer, who is perhaps known to Reinwardt. Zollinger wants to explore the island, which Reinwardt knows so well and he refers to the fact that so many have already had the pleasure to attend Reinwardt's lectures and listen to his beautiful and most interesting accounts of his journeys through this island. He begs Reinwardt to provide Zollinger with every useful information, in order to make his success complete.

Since Reinwardt has left Paris, there has not been any important news. Of course Reinwardt still knows how long their friendship has lasted already. He is still editing Volume XVI of his work on the fishes. He hopes that Reinwardt will receive it this year. He hopes that for the sake of their friendship Reinwardt will be so kind to provide him with a specimen of *Nautilus pompilius* through Mr. De Haan. At the occasion of a meeting of the 'Académie des Sciences' Valenciennes has read a treatise on that peculiar animal. He begs him not to dissect that animal before sending it without delay to Paris by coach, because he wants to examine it himself. He promises to return it as soon as possible. He asks Reinwardt to give his kindest regards to Mrs. Reinwardt, to Reinwardt's niece and to his daughter-in-law. [The original letter is written in French]

[UBL BPL 2922; ZOC]

**962. J.G.S. van Breda (Haarlem) to C.G.C. Reinwardt (Leyden); 12 November 1841**

To Van Breda's regret several members of the 'Eerste Klasse' have asked him why the report on the experiments with the solution, invented by J. Howard Kyan has not been entered until now. He has been urged to finish this affair. So he has promised to ask Reinwardt to communicate the results of his analyses and to finish the report. He wants to be informed by return.

[UBL BPL 609-2; BOT, CHE, PHY, TEC]

**963. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Haarlem); 27 November 1841**

Reinwardt informs his colleague that on Friday 10 December 1841, at 10 a.m., he will be able to receive him and N.C. De Fremery in Leyden, in order to discuss the report on Kyan's patent. He adds his kind regards.

[BTS 2285; CHE, PHY, BOT, TEC]

**964. C.G.C. Reinwardt (Leyden), N.C. de Fremery (Utrecht) and J.G.S. van Breda (Haarlem) to G. Vrolik (Amsterdam); December 1841**

Reinwardt has completed the final version of the second report on the analysis of the soil samples collected at the occasion of the well drilling project at the Amsterdam 'Nieuwmarkt'. He has analyzed 83 soil samples. He gives an inventory of his findings. The maximum depth, which has been attained, is 104,5 meters.

[NA-RANH KNI 175-65(140).16 R; GEO, MIN, CHE]

**965. C.G.C. Reinwardt (Leyden), N.C. de Fremery (Utrecht) and J.G.S. van Breda (Haarlem) to G. Vrolik (Amsterdam); December 1841**

Inventory of the analysis of the soil samples, which have been collected at the 'Nieuwmarkt' (Amsterdam) up to a depth of 104,5 meters.

[NA-RANH KNI 175-65(140).16\* R; GEO, MIN, CHE]

**966. C.G.C. Reinwardt (Leyden), N.C. de Fremery (Utrecht) and J.G.S. van Breda (Haarlem); 31 December 1841**

Finally the commission has succeeded in stipulating the final text of the second report on Kyan's fluid for the protection of wood, ship's hulls, etc., against dry rot. Reinwardt wants to observe that the 'Eerste Klasse' has to decide about the final advice to the Minister of the Interior and the Director-General of the Navy.

[NA-RANH KNI 175-65(140). 15 R; BOT, CHE, PHY, TEC]

**967. C.G.C. Reinwardt (Leyden) to P. Harting (Utrecht); 8 February 1842**

Reinwardt thanks his colleague for sending him a list of available seeds and returns his own list, from which Harting can make his choice. He

congratulates him with his new appointment. It will not be easy for Harting to spend enough time on his various activities, without failing in one of his duties, especially in the beginning of his job as a professor. He expresses his feelings of friendship and affection towards him, assures him of his esteem and calls himself his servant.

[UBL BPL 1948; BOT]

**968. C.G.C. Reinwardt (Leyden) to J. Decaisne (Paris); 9 April 1842**

Reinwardt informs his colleague about the genus *Drimyspermum*. He has added a flower. Furthermore he discusses other specimens and samples of this genus and also specimens, which have been collected on Celebes, many years ago. He also adds a Latin description and a list of synonyms. Perhaps specimens belonging to this genus are bearing other names at the moment. He announces the publication of an article on this subject. [The original letter is written in French]

[IDF Ms 2457; BOT]

**969. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Haarlem); Spring of 1842**

Reinwardt discusses a French treatise. Its author has understood the question very well. He has proved to be familiar with the subject and he is an experienced scientist. Besides he has entered a rich collection of observations, which have been well explained. In the author's view the described fossils must be regarded as chronological and characteristic data of the various formations. He explains why fossils have been jumbled up sometimes. He has also tried to explain the other three possible causes of mixing. Reinwardt does not agree with the details of these explanations, especially of the one in which the author puts that the formation is so soft ('pulpy') that the fossils have gone under in it. In Reinwardt's view the major cause of this mixing must have been the disturbing effects of upheavals of formations, followed by numerous caving-ins, shifts and remodelling. After all most of the fossils will appear to have remained in their original formation. Reinwardt has understood that the author is especially interested in the tertiary formations of the South of France. He agrees with him that it is often difficult to determine the relative age of formations and fossils. Of course the correlation between the disturbed formations and the undisturbed ones by means of the

analysis of their fossil content is important. Reinwardt agrees that the fact that the analyses are complicated because of the fact that certain formations have been influenced by the alternation of fresh water and seawater, while others were not. Unfortunately the author has only examined a rather small region. He should at least have tried to investigate other regions, in which tertiary formations are prevailing and in which often a mixture of fossils of various ages and from various origins is present. Once more the treatise is defective and incomplete in a certain way, so awarding it is impossible. However because the rest of the treatise is of a good quality the author should be promised the award and the premium, if he is willing to complete and to improve his treatise according to the demands of the 'Maatschappij'. [NA-RANH HMW 444-437.431(2) R; GEO, MIN, PHY, CHE]

**970. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Haarlem); 11 May 1842**

Reinwardt enters a couple of drafts of contests. He hopes that they will arrive in time. He promises to attend the preparatory meeting of 'Teylers Tweede Genootschap', next Friday at 11.30 a.m.

[NA-RANH HMW 444-120]

**971. A. von Zandt (Munich) to C.G.C. Reinwardt (Leyden); 28 June 1842**

Pointing at herself Antoinette von Zandt hopes that Reinwardt will not be frightened by the reappearance of a phantom of the past, or in other words an old friend from the time he was still living in Amsterdam. She hopes that Heaven is still blessing him because he is entitled to be blessed! She herself has also been blessed. After many years of illness she has good health now. This health even makes her daring to enjoy life. She is not as old as Methuselah yet. She still had the illusion of being able to visit Holland once again. If doing so she emphasizes that the best of it would be visiting her old friend Reinwardt and presenting him to the family of her late uncle à Roy, although they have treated her badly with respect to the inheritance which had been promised to her. She begs her friend to hand the enclosed letter to her first cousin, who is still grateful towards Reinwardt for the protection he has granted to her brother. Only through Reinwardt this letter will reach her. She asks him to give her kindest regards to his wife and adds the best

wishes from her, her husband and children, assuring him of her feelings of affection and true friendship. [The original letter is written in German]  
[UBL BPL 2922]

- 972. G. Vrolik (Amsterdam) to N.C. de Fremery (Utrecht), G.J. Mulder (Rotterdam/Utrecht?), H.C. van Hall (Groningen), C.G.C. Reinwardt (Leyden); G. Sandifort (Leyden), J.Ch.B. Bernard (Leyden), W.Vrolik (Amsterdam) and C.G. Ontijd (The Hague); 5 July 1842**

The members of the 'Eerste Klasse', having a medical background, are urgently invited to enter their remarks with respect to the 'Geneeskundige Wetten en Voorzieningen'. Their comments will be discussed during the meeting of 11 August 1842.

[NA-RANH KNI 175-37.763; MED]

- 973. A.Valenciennes (Paris) to C.G.C.Reinwardt (Leyden); 22 September 1842**

Valenciennes wants to show his gratitude for the pleasure Reinwardt has made them (the directors of the 'Muséum National d'Histoire Naturelle') at the occasion of his stay in Paris, without forgetting what Reinwardt did for him during his various visits paid to Leyden. Therefore he begs his friend to accept his treatise on the anatomy of the Nautilus. He has seized the opportunity to send him and Diard a copy of this work as well as a copy of the results of his anatomical research on *Silurus electricus*. He would be very pleased if these two modest works will have Reinwardt's learned approval and if at the same time he and Miss Valenciennes will have the pleasure of being informed about the well-being of Reinwardt, his wife and his niece and to convey to them the assurance of his best wishes and sweet memories. He expresses his feelings of high esteem. [The original letter is written in French]

[UBL BPL 2922; ZOC]

- 974. C.G.C. Reinwardt (Leyden) to J. Decaisne (Paris); 9 October 1842**

Reinwardt has tried to answer Decaisne's letter (received today) as soon as possible. It pleases him that he is able to send his colleague a flower of his '*Drimyspermum*'. Until now he did not succeed in finding the fruits of this

plant. Therefore he can only describe what he has observed in a wood, near a river in the island of Celebes. He adds a Latin description of this tree. He admits that he has been wrong with respect to the anatomy of its seeds. He has kept the two fused cotyledons for a perispermium, because they are rather swollen. He points at the important publications of the botanists Endlicher, Hooker and Blume. He describes several species of the genus *Dais*. He also points at the description of several species of *Drimyspermum* and of several other genera, which he has given in his *Siloge plantarum novarum et minus cognitatum* (Tome 2, p. 2-15, Ratisb., 1838), which has been published by the 'Botanical Society of Rothenburg o/d Tauber' (Germany). This society has taken over the publication of *Flora*. Reinwardt deeply regrets the errors made in this premature publication.

Because of his many occupations he has not been able yet to resume his work on *Ficus*. Therefore he had to postpone the sending of the wood samples to Brongniart, which he had promised to send him. He asks Decaisne to convey his apologies to Brongniart and to add his greetings, also to De Jussieu and to Gaudichard. [The original letter is written in French]  
[IDF Ms 2457; BOT]

**975. C.G.C. Reinwardt (Leyden) to G.Vrolik (Amsterdam); late October 1842**

In order to explain his decision regarding the treatise, entered by Dassen, Reinwardt wants to sketch the history of this treatise. Between 1838 and 1840 the author has already made two attempts to have his treatise on wood anatomy accepted by the 'Hollandsche Maatschappij'. Both times it was rejected. Meanwhile the author has considerably improved his entry. He has carried out many experiments in order to enlarge the knowledge of plant anatomy. He has accomplished a lot. In spite of these favourable words it is still possible to criticize his entry. The author still has to eliminate several contrarities. Unfortunately he has remained faithful to his ideas. He has demonstrated a unique view on the anatomy of the stem and he even dares to stress that most authors have a defective knowledge in this field, because they are neglecting the difference between 'primary wood' and 'secondary wood'. Reinwardt does not agree with this conclusion and he points at the discoveries, which have been made in the last few years. He does not understand why the author has chosen his point of view already in the

introduction of his treatise and why he wants to stick to it, despite the many facts, which prove that his ideas are indefensible. The author has changed his point of view regarding the anatomy of palm trees. At the moment he is convinced that the stem of these trees is containing secondary wood, surrounded by the cambium (like it is the case in the Dicotyledones), in order to explain why the lower part of the stem is wider than the rest. He gives interesting details of the structure and function of the cambium. In Reinwardt's view this statement is a typical example of prejudice. The author would not have made these statements if he would have been acquainted with the writings of Mohl, Meyer and Schleiden. Many errors have been caused by the defective description of the various tissues. Again the author did not exploit the possibilities of a good microscope. It will take too much time to indicate all the errors. All in all, the treatise cannot be awarded. The author should be advised not to publish his treatise in personal capacity, because it is far too defective.

[NA-RANH KNI 175-65(140). 19 R; BOT]

**976. J.G.S. van Breda (Leyden), C.G.C. Reinwardt (Leyden) and N.C. de Fremery (Utrecht) to G.Vrolik (Amsterdam); 27 October 1842**

The Minister of the Interior has asked the 'Eerste Klasse' to advise about the request made by Dr. Cohen (Groningen). Cohen has asked His Excellency to subsidize his research in the field of geology. Van Breda, Reinwardt and De Fremery have decided to advise negatively, which means that they advised against the positive advice, which has already been given by the Governor of Groningen. In the treatise pleading his request, Cohen did not demonstrate an all-round and thorough knowledge of the geology of the Netherlands. He did not give any original ideas with respect to daring new investigations. He has expressed the wildest ideas about the 'fossil' concept. In his view everything found in the soil – like the remains of buildings, weapons and fragments of dinnerware, etc. – are fossils. Many of his hypotheses are really absurd. Finally the Latin used by him is incomprehensible and his style of writing is bombastic. All in all, the author is not capable of carrying out any valuable geological investigations.

[NA-RANH KNI 175-65(140).31 R; GEO, MIN]

**977. ?? Van der Jagt (Surabaya) to C.G.C. Reinwardt (Leyden); 1 December 1842**

Meanwhile it has been almost four years ago that he has left the Netherlands, after having stayed in Leyden for three years. In spite of his promise made to his friend and his wife, he did not give a sign of life since then. In their eyes he must have been most ungrateful. Reinwardt, who has spent so many years in the Dutch East Indies, will surely understand that this fascinating country can make an 'orang barae' forget his fatherland. Not until a couple of months later he will remember in a state of pleasant sadness what he has left behind. And that is what also happened to him! Meanwhile he has seen many new friends and talked about their mutual friend Reinwardt. He hopes that Reinwardt and his wife will forgive his negligence. Two months after his arrival in Batavia he was appointed at the Council of Justice of Surabaya. Mr. S. van der Tuuk, its president, has been so kind to offer him his friendship and a room in his house as well. Van der Tuuk and his family are really most kind to him. They have even promised her daughter to him! After having stayed there for one and a half year he was promoted magistrate and public prosecutor at the Council of Justice of Makassar, as a matter of fact through the intercession of Mr. Van der Tuuk. Recently he has been given a leave in order to go to Surabaya and to get married on 12 September. During his stay in Surabaya he has met Mr. Merkus, who is still acting Governor-General of that region. Merkus has promised him a new promotion, as soon as a suitable position will be vacant. His happiness would be complete if he could at least once again see his fatherland and the Reinwardt family. It would be most appropriate if Mr. Merkus would finally be appointed Governor of these districts. He prays that God will be with Reinwardt and his family. He would be most pleased if Reinwardt, when it suits him, would take the opportunity to answer his letter and to inform him about the state of health of Mrs. and Miss Reinwardt. He gives his kindest regards. Probably a letter will be added from Radin Tommongang Tjondro Koesoemoe, who has asked him to express his sincerest esteem to Reinwardt.

[UBL BPL 2922]

**978. J.Th. Bik (Tjibodas) to C.G.C. Reinwardt (Leyden); 20 January 1843**

Bik enjoyed having received a letter from Reinwardt again, telling him good news from Europe. He remembers well how he and the other members of

the expedition had to leave Reinwardt, when they were in Anjar. Nobody could have foreseen that they would still be sending each other letters about 20 years later. Therefore he still hopes to see Reinwardt again some day. He does not want to say goodbye forever, although the plans to return to Europe have not been made yet. The fact that they will both have to leave a large family behind is hampering their freedom of choice. Reinwardt knows how close he and his brother are and how much they are attached to their families. Life is so short and they prefer a good and pleasant family life to life in Europe. Besides two years ago they have tried to help their brother Bram (Benno) to start an indigo trade in the principalities ('Vorstenlanden'). Meanwhile they have invested a considerable sum of money. Much will depend on the way in which this enterprise will be directed. The region of Solo is especially suited for this culture. The town of Bandung has been improved and embellished and several new large brick houses have been built, for example for the resident. Mr. Vogel, a wealthy man, has almost changed his house into a museum of natural history. Bik underlines that it is very difficult to get employed by the government. Therefore he praises the artists Radijs and Muller, who succeed in supporting themselves. In his view their works are beautiful and especially Muller's landscapes are received well. Yesterday they have been informed that Mr. Merkus has been appointed Governor-General of Surabaya, which fact pleases them very much. He hopes that Reinwardt will receive this letter in good health and that he will be able to answer it. He gives his kind regards, of course also to Mrs. Reinwardt and he adds the best wishes from his family.  
[UBL BPL 2922; ART, ZOC]

**979. A. de Jussieu (Paris) to C.G.C. Reinwardt (Leyden); 16 March 1843**

De Jussieu has the honour to send Reinwardt the first part of a monograph on the Malpighiaceae and informs him that the second part will soon follow. He begs him to hand this copy over to Mr. Blume. He seizes the opportunity to make his wish known to receive a copy of a treatise awarded by the 'Teylers Tweede Genootschap', which Reinwardt has sent to his colleague Decaisne. It is entitled 'Ueber die neuesten Fortschritte der Anatomie und Physiologie der Gewächse'. It is really important to have it in his library, because he has to consult it frequently. He would really be most obliged if Reinwardt would be so kind to send him a complete list of the works which

have meanwhile been awarded by 'Teyler's Tweede Genootschap'. Until now the most important work in this field which is in his possession is the book written by Kieser. He gives his kind regards and emphasizes his feelings of devotion and esteem. [The original letter is written in French]

[UBL BPL 2922; BOT]

**980. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Haarlem); Spring of 1843**

Reinwardt discusses a treatise, dealing with the features of microscopic salt water animals, which are only known as fossils. In his very defective elaboration of the subject the author has made as much use as possible of the ideas of Ehrenberg. However the author did misinterpret the concepts of this scientist, among others with respect to the definitions of geological terms. The author has largely simplified Ehrenberg's ideas with respect to the very varied mineralogical and chemical composition of the various Cretaceous deposits. The same goes for the presence of micro-fossils – microscopic infusoria – belonging to the Crustaceans. Their skeletons are consisting of chalk (Polythalmia, or 'Animalcula bryoidea corallina'), or of silicon ('Infusoria diatomeae'). The author has only discussed the silicon fossils.

Although Reinwardt realizes that the distinction between animals and plants is still obscure and difficult, the author should also have described the fossils with chalky skeletons. Reinwardt does not understand why he continues to regard the Diatomeae as fossil plants. Furthermore the author does not agree with Ehrenberg, who has put that most of the Cretaceous infusoria are still living in our time. Finally he has never examined the micro-fossils of the Cretaceous formations himself. On the other hand he has put himself out in the detailed description and beautiful depiction of 61 species of Infusoria diatomeae (belonging to six different genera). Reinwardt has decided to reject this treatise. It should not be published.

[NA-RANH HMW 444-438.472 R; ZOC, GEO, MIN, CHE]

**981. C.G.C. Reinwardt (Leyden) to J. Decaisne (Paris); 20 June 1843**

Reinwardt, reminding Decaisne that he has once been welcomed most heartily in Paris, informs him that this letter will be delivered by Mr. De Winter, a promising student of the natural sciences at Leyden University,

who wants to study in Paris. He is eager to study Decaisne's rich collections. Reinwardt asks him to help De Winter and if he may wish so, to introduce him to his colleagues. Reinwardt would be very much obliged. [The original letter is written in French]

[IDF Ms 2457; BOT]

**982. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Haarlem); 25 June 1843**

Reinwardt judges Michelotti's treatise on a paleontological subject. The author has described the fossils of the Lower Apennines (Piemonte, Turin region). These fossils have been found in fossil-rich mid-Tertiary formations. The author has written a valuable treatise, which is also important to geology in general. Because of the rich fossil deposits and because of the presence of certain species of fossils, it is possible to determine the relative age of the various layers of the formation. All these fossils – several hundreds – have been given in a list and new species have been meticulously described. The author has proved to be well acquainted with the writings of the most renowned authors. He is really a very zealous scientist. So All in all, Michelotti's treatise has to be published by the 'Maatschappij', especially if it will be enriched with the illustrations of the species discovered by him. Everybody will embrace this publication as a most important contribution to the science of geology. If the Directors would decide to publish this treatise, the French text has to be corrected. The numerous grammatical errors are detracting the importance of this document.

[NA-RANH HMW 444-121; GEO, MIN, PHY]

**983. C.J. Temminck (Leyden), G. Sandifort (Leyden) and C.G.C. Reinwardt (Leyden) to G.Vrolik (Amsterdam); June 1843**

The jury reports on Willem Vrolik's treatise on the anatomy of Stenops. Fortunately Vrolik has had the opportunity to dissect several fresh specimens, so he could even examine the most vulnerable tissues. His findings have forced him to correct the opinion of a couple of other scientists, among others the one supported by Schroeder van der Kolk. Reinwardt gives a survey of these corrections, especially those regarding the anatomy of the brain. He also mentions several discoveries made by himself, among others regarding the anatomy of the external ear, of the tongue, the larynx, lungs,

vascular system and digestive tract.

The jury wonders why the author did not discuss further details of the internal structure of the intestine, which have already been discussed by other scientists. The meticulous description of the skeleton and the muscular system prove that these animals are having a certain anatomical resemblance with the quadrupeds and also with the insectivorous animals. The drawings are most illustrative. All in all, it is a very beautiful treatise, which deserves to be published in the works of the 'Eerste Klasse', but not until after a grammatical correction has been carried out.

[NA-RANH KNI 175-65(140).33 R; ZOC]

**984. J.G. Zuccarini (Munich) to C.G.C. Reinwardt (Leyden); 2 July 1843**

Zuccarini assumes that Reinwardt will think that Zuccarini did not receive nor appreciate the rare species of his garden. The chief gardener has filed away Reinwardt's list of desiderata so well, that he could not find it again. Therefore Zuccarini has added a catalogue of the species from which Reinwardt can make his choice. He also sends him a selection of seeds, put together by himself. He also takes the liberty to inform him that he wants to avoid unnecessary costs of transportation. Therefore he also adds two treatises, written by him, one of which is about Japanese plants. Furthermore he informs Reinwardt that he has received various notes from Von Siebold, who has asked him to complete them.

He informs him about the condition of the Dutch plants, which are growing in the garden of Munich, as well as on the situation of Mr. Ledebour, Council of State, who has lived in Heidelberg the last few years. He also spends a few words on plant geography and palaeontology. Finally he observes that the costs of living have risen considerably meanwhile. He expresses his warm feelings towards Reinwardt, Mrs. Reinwardt and the rest of his family. [The original letter is written in German]

[UBL BPL 2922; BOT, GEO]

**985. Ch.Fr. Brisseau De Mirbel (Paris) to C.G.C. Reinwardt (Leyden); 19 December 1843**

De Mirbel asks Reinwardt if he still remembers that he (Reinwardt) has sent him a flattering letter last year. He would be pleased if everybody would

receive his contributions to science so well. However he expects that his work will evoke many negative reactions from the other side of the river Rhine. If it turns out that his adversaries are right, he will submit his ideas to their judgement, because it simply is not right to keep one's ground when you are wrong. At the time Reinwardt has asked him a question relative to this subject. Strangely enough professor Savi from Pisa has asked him the same question at the same time, that is to say if he simply had made a mistake, or did he simply not develop his idea to the end? As a matter of fact he only blames himself for having forgotten something. It is about the leafless stem of a date palm and about its internal physical processes, which are still going on, such as capillary ascent, endosmosis, transpiration and the suction by its roots. That is why the tree lives on. Reinwardt knows, as he does too, that in dicotyledon trees most of the sap is flowing upward through the oldest vessels, which are located in the heart of the stem and that this even goes for trees, which are no longer in the possession of any vital force. In De Mirbel's view this is the answer to the question asked by Reinwardt and Savi. He gives his regards to his most judicious friend. Once again he thanks Reinwardt for having sent his letter. If this answer should not be satisfactory, he should write him once more. He promises to rethink the problem. He gives his kindest regards to his dear colleague and most judicious friend and expresses his feelings of devotion. If Reinwardt might happen to see Baron De Cazes he should inform him on his behalf that his son has passed his baccalarareate examination. [The original letter is written in French]

[UBL BPL 2922; BOT, PHY]

**986. C.G.C. Reinwardt (Leyden) to the 'Société Royale des Antiquités du Nord' (Copenhagen); 20 December 1843**

Reinwardt acknowledges the receipt of the letter sent to him on 13 November 1843, covering the activities and the statutes of the 'Société'. Although he feels very flattered for having been elected member, he is advanced in years and he has arrived at the end of his career. He has no longer the courage to make new plans for the future, nor does he dare to enter into new obligations, which he cannot satisfy, especially into those who are not allied to his former and actual occupations. As a consequence,

he can only extend his gratitude to the 'Society' for the honouring offer it has made. He assures the 'Society' that he will remain most interested in its activities. [The original letter is written in French]

[UBL BPL 2922; ART, ETN]

**987. G.A.G.Ph. Baron Van der Capellen van Berkenwoude (Paris) to C.G.C. Reinwardt (Leyden); 18 February 1844**

Recently Van der Capellen received a letter from W.H. de Vriese (Amsterdam), only known to him through his uncle Schneither. De Vriese has begged him to introduce and to recommend him to Reinwardt. He wants to fulfil the vacancy occurring as a result of Reinwardt's retirement. Although in Van der Capellen's view this request is completely unnecessary, because Reinwardt knows the applicant already and is of course aware of his merits, he has decided not to refuse this request, all the more because he does not want to disappoint Schneither. They are all convinced of the effect of the recommendation given by Reinwardt. Finally De Vriese has been one of Reinwardt's promising students. Van der Capellen would be pleased if De Vriese would be appointed Reinwardt's successor. Van der Capellen and his wife both enjoy good health and he thanks God for that blessing. They have decided to stay in The Hague until early April, after which they will move to their beloved Vollenhove. If he can be of any help to Reinwardt, he will be prepared to do so. Although his memory is beginning to fail, he still remembers well the years he spent in the island of Java. How many of their travel companions have died already? Perhaps it will soon be their turn. The death of general Elout has been a great shock to him, because after his return to Europe, he has not had the opportunity to see Elout again. In his view Van der Vinne must be pleased with his present post. After having given his regards to Mrs. Reinwardt he ends his letter and calls himself Reinwardt's obedient servant.

[UBL BPL 2922; BOT]

**988. Ch.Fr.A. Morren (Liège) to C.G.C. Reinwardt (Leyden); 20 February 1844**

Morren thanks his most respected colleague for having sent him the catalogue of seeds. He adds his list of desiderata, as well as a catalogue of the botanical garden of Liège. Reinwardt will also have noticed that next to the garden

there is a school of agriculture. This fact has made him ask his colleague if it is true that it is possible to obtain a couple of roots (tubercules) of *Lathyrus tuberosus* ('aard-muysen') in Holland. He asks him to send him a basket of these tubercules with the diligence. Of course he will reimburse him. Morren's wife, who still remembers Reinwardt, his wife and his daughter, has just given birth to a daughter herself. They are both in good health. Their house is situated opposite to the garden. Because his house is rather spacious, it is possible to lodge a young man of good birth and to educate him. If Reinwardt should wish to introduce a young man to his colleague, in order to study in Liège, he should let him know. Morren hopes that Reinwardt will come to Liège and see him one of these days. The railroad has been completed until Bonn. He has received a letter from the Prince Charles Bonaparte (Paris), who has asked to inform him in detail about a work on reptiles, written in French by Schlegel. He asks Reinwardt to give him the exact title. He gives his kindest regards and adds the best wishes from his wife. [The original letter is written in French]  
[UBL BPL 2922; BOT, ZOC, AGR]

**989. C.G.C. Reinwardt (Leyden) to F.A.W. Miquel (Rotterdam); 10 March 1844**

Reinwardt has sent Miquel's circular on to the friends of professor Chr.G.D. Nees von Esenbeck (Bonn), president of the 'Koninklijk Keizerlijke Akademie Leopoldino Carolina', whom he highly respects. He thanks Miquel before hand for sending him the list of seeds. He mentions the terrible accidents, which are still having their effects on the botanical institute of Hamburg. He is pleased by the news that professor Schwann is still rather well, although the 'fatum senile' is already showing itself from time to time. He expresses his sincere feelings of esteem and signs as Miquel's obedient servant.  
[UBU Hs 1873; BOT]

**990. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Haarlem); Spring of 1844**

In response to the first part of the prize contest the French chemical treatise has given a survey of the known natural chlorides. However the author did not offer any new facts. As a matter of fact he has borrowed most of his 'knowledge' from Beudant's *Traité de la Minéralogie*, even without

quoting his sources. And it is even worse! He has succeeded in distorting and mutilating Beudant's words in the most miserable way. Reinwardt supports his judgement by comparing a number of statements, made by the author with the original texts from Beudant's work. The author has very well succeeded in proving that he is an absolute 'nothing' in the field of chemistry. His chemical formulas are indecipherable 'barbaric hieroglyphs'. Finally the author presents the most terrible unscientific ideas with respect to the extraterrestrial origin of the chlorine in the rock salt – 'through the impact of aeroliths' ('luchtsteen'). All in all, the author has turned out to be an ignorant and untalented plagiarist, who does not at all deserve to be awarded.

[NA-RANH HMW 444-439.491 R; CHE, MIN]

**991. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Haarlem); 7 May 1844**

First of all Reinwardt adds a covering letter to the report on the coal beds. He also adds a few remarks on another treatise (about the origin of silicon in the Cretaceous period).

[NA-RANH HMW 444-439.525 R; GEO, MIN, PHY, CHE]

**992. F.A.W. Miquel (Rotterdam) to C.G.C. Reinwardt (Leyden); 20 October 1844**

Miquel informs Reinwardt that he has received a letter from Chr.G.D. Nees von Esenbeck, through which he has asked him to thank the members of the 'Leopoldina', who have contributed to the costs, incurred because of the manufacturing of a commemoration cup. This cup which has been engraved properly and decorated with a representation of *Neesia placarpoides* Knuth., has been offered to the president of the 'Leopoldina' during a festive dinner at the occasion of his jubilee as a president. Thereupon Nees von Esenbeck has accepted this giving, emphasizing that it has to be regarded as a dedication to the academy. During the ceremony the names of those members who have contributed to this present, have been mentioned. Among these were many of his personal friends. He was very much pleased by seeing them at that occasion. Miquel hopes that the trip to Germany has done him good. During this trip the weather has been rather good.

Because he is still collecting specimens of the Piperaceae and Reinwardt had

already offered his help, he now wants him to recommend himself to him. In exchange he would be able to offer Reinwardt specimens of plants from Surinam and Australia, as well as a couple of mosses from Java, which have been collected by Montagne. If all goes well he will soon be able to offer him a printed copy of his work on *Cycas*. He gives his compliments to Mrs. Reinwardt and to Miss Reinwardt.

[UBL BPL 2922; BOT]

**993. G.A.G.Ph. Baron Van der Capellen van Berkenwoude (Vollenhove) to C.G.C. Reinwardt (Leyden); 31 October 1844**

Although he still regrets to have missed Reinwardt in Leyden yesterday, he has been pleased by the contents of his letter which he received that same day. He thanks him, also on behalf of his wife. They cherish the many memories of the wonderful years they have had in Buitenzorg in Java. Although they are getting older and older these memories will be retained. The day before yesterday it has been exactly 29 years since they set sail for the Dutch East Indies. His stay in Java has surpassed his dreams. They must consider themselves lucky for having the opportunity to find each other in good health after so many years and after having been exposed to so many dangers.

[UBL BPL 2922]

**994. P.J.I. de Fremery (Utrecht) to C.G.C. Reinwardt (Leyden); 10 November 1844**

De Fremery informs Reinwardt about the death of his beloved father, Nicolaas Cornelis de Fremery, retired professor of Utrecht University, member of the 'Koninklijk Nederlandsch Instituut van Wetenschappen, Letterkunde en Schoone Kunsten' and of many other scientific societies in the Netherlands and abroad and president of the 'Provinciaal Utrechtsch Genootschap van Kunsten en Wetenschappen', who died on 9 November 1844.

[UBL BPL 2922]

**995. K.Fr.Ph. von Martius (Munich) to C.G.C. Reinwardt (Leyden); 25 November 1844**

Von Martius observes that it has been a long time since he has received news from Reinwardt and his family. Therefore he feels the need to send him a letter, because those who are near to each other should be informed regularly about their ups and downs. Besides there is another reason for writing this letter to his friend and colleague. As a secretary of the 'Akademie Leopodina' and simply as Von Martius himself he has to write these lines. But before doing so he has to state that he has a good health. Today he has made a pleasant trip in the company of their mutual friend Robert Brown. Furthermore he is pleased to inform his friend that his eldest daughter has married Erdl, professor of physiology and comparative anatomy at the University of Munich. Erdl has accompanied Schubert during his journey through the Middle East. Martius confesses that he has mainly occupied himself with the study of the palms. In six to eight months he hopes to have written his book and to have it published. He will send Reinwardt a copy and ask him to judge it. Besides he wants to become a member of the 'Bataviaasch Genootschap van Kunsten en Wetenschappen'. Since 1842 he is a member of the 'Hollandsche Maatschappij der Wetenschappen' (Haarlem). Furthermore he informs his colleague that the Royal library has moved into a new building. Unfortunately the copies of the works of the 'Maatschappij' which he has received, have been added to the collection of the new library. So he asks Reinwardt to send him another copy. Because he is still studying the palm trees he asks his friend to send him information about the anatomy and physiology of these trees. This request has also been sent to the other major botanical gardens of Europe. Furthermore he wants to be informed about the production of amyllum in the sago palms during the various seasons. He refers to previous announcements made by Rumphius. He has addressed his letter to him and not to Blume, because of his unpleasant experiences with that gentleman. Under no circumstances he wants to see him again. In his view this man is unreliable. And what is more, the redundant communications of this man do not give any interesting new facts with respect to the subject, which he is studying. Finally he asks Reinwardt to inform him if possible about the *Dendrita calapparia* (?) He eagerly looks forward to receiving this information. With respect to the question asked by Reinwardt about the progress of his work on the 'Herbarium Florae'

he observes that he has discovered a new family in Brazil. If Reinwardt should have other questions to ask he should not hesitate to do so, in order to settle his debt to him. He asks him to give Von Siebold his kind regards. He emphasizes his feelings of deep respect, devotion and friendship. [The original letter is written in German]  
[UBL BPL 2922; BOT, ZOC, ANA]

**996. J. Moleschott (Heidelberg) to C.G.C. Reinwardt (Leyden); 10 December 1844**

Moleschott thanks Reinwardt for the kind way in which he has been received by him at the occasion of his visit to Leyden last September. He was pleased by the fact that his treatise on Liebig has been received so well by 'Teyler's Tweede Genootschap'. This fact has also been the occasion for a renewed acquaintance with Reinwardt. He thinks that Reinwardt must have been surprised when he found out that he (Moleschott) appeared to be the author of the treatise, after he had given such a positive judgement of it when Moleschott was seeing him for the first time. It has made him very happy. He asks Reinwardt's permission to have his treatise published at his own expense and to give his support to this request to be made to the Directors of 'Teylers Foundation'. Moleschott has to use this means in order to add to his scientific reputation. After all he wants to continue his anatomical and physiological studies in order to make himself more useful. Being convinced that Reinwardt will be willing to come to his aid if possible, he hopes that he will not blame him for asking him this favour and for having added a letter addressed to the Directors of 'Teylers'. He gives Reinwardt and his wife his kindest regards and hopes to see Reinwardt again in perfect health next spring.  
[UBL BPL 2922; BOT, CHE, PHY]

**997. C.G.C. Reinwardt (Leyden) to F.A.W. Miquel (Rotterdam); 30 December 1844**

Reinwardt apologizes for having postponed his answer to Miquel's letter. He had already sent him specimens of the Piperaceae, which are in his possession. He did not like the idea to turn his herbarium upside down. His many occupations have kept him from carrying out his plan. Now he sends his colleague what he had in mind to send him. He fears that these

species are already known to him. In return he asks Miquel to determine the still unidentified species for him. The same goes for the species, which are growing in the Hortus of Leyden. Many species, which have arrived in Leyden, proved to be bearing the wrong names. Reinwardt thanks him for sending the three notes on the Cycadeae as well as the plants from Surinam. Dr. Landré and Dr. Horstman have sent him dried plants from Surinam. None of these plants have been identified until now. Many are in a bad condition. These facts have hampered him in the continuation of his activities. He is pleased to accept a small collection of Javanese mosses, which have been identified by Mr. Montaigne. He advises his colleague to visit him and to admire his collection of Surinam mosses. A couple of days ago Mr. Preiss has sent him a collection of more than 1.000 species from the Austral-asiatic region. He asks Miquel to identify at least a part of this beautiful collection. He reminds the pleasant journey on the river Rhine and spends a few words on common experiences. He would love to receive Miquel, when he is travelling through Leyden. He underlines his feelings of esteem and calls himself Miquel's obedient servant.

[UBU Hs 1873; BOT]

**998. Robley Dunglison (Philadelphia) to C.G.C. Reinwardt (Leyden); 3 January 1845**

Reinwardt is informed that the 'American Philosophical Society' thanks him for having sent the *Verhandelingen over de natuurlijke geschiedenis der Nederlandsche overzeesche Bezittingen*, written by the members of the 'Natuurkundige Commissie voor Nederlandsch Indië'. [The original letter is written in English]

[UBL BPL 2922]

**999. F.A.W. Miquel (Rotterdam) to C.G.C. Reinwardt (Leyden); 15 January 1845**

Miquel returns the collection of Piperaceae which Reinwardt has been so kind to send him. These specimens were essential for his research with respect to this family. Especially the species from the East Indies have been most interesting. He has even discovered a new species. He became more familiar with the characteristics of several species, for example of *Ch. celebica* (Piper ellipticum or Blume's Piper celebicum). This species has

been collected by Reinwardt in the island of Celebes. He hopes to publish the results of his investigations in a supplement to the 'Syst. Pip.'. As far as possible he has determined the various species of Piper, which are growing in the Hortus of Leyden. This has not always been possible, because several specimens appeared to be sterile. He has given several details in an additional note. He has arranged the various specimens of the Piperaceae according to his own system. Besides he has added a couple of specimens from his own collection. Furthermore he has added a small case, containing a series of Javanese cryptogams. The new species of cryprogams have been described in Hooker's *Journal of Botany* by Montagne. Miquel hopes to be able in the near future to send a larger collection.

Recently Montagne has asked him if Dozy and Molkenboer would be prepared to give specimens of the moss species, recently described by them, in exchange for specimens of other moss species, which are only in his possession. As he does not correspond with Montagne, he wants to ask Reinwardt to convey this request to the two gentlemen. Miquel would be very pleased if he would be informed about the decision taken with respect to this request, because Montagne has asked him to answer him. He assumes that Reinwardt, director of the Herbarium, will decide that it will be advantageous to complete his collection by the acquisition of the rare species offered by Montagne, by sending species in exchange. Anyhow Dozy and Molkenboer will be the right persons to decide.

He gives his kindest regards to Reinwardt and his family, expresses his feelings of esteem and obedience and asks him to convey his greetings to Mrs. Geel.

[UBU Hs 1873; BOT]

**1000. C.G.C. Reinwardt (Leyden) and W.H. de Vriese (Amsterdam) to W.H. de Vriese (Amsterdam); 22 January 1845**

On behalf of De Vriese, Reinwardt discusses G.Vrolik's treatise, entitled 'De Cycas-stam vergeleken met bollen'. Vrolik had decided to write this treatise after having received a beautiful specimen of *Cycas revoluta* as a present. After having lost all its leaves as a consequence of the journey to Holland this tree has started to grow again in the Amsterdam Hortus.

Vrolik has given a brief description, to which a fine drawing has been added, which has been made at the occasion of the arrival of this tree in

Amsterdam. He has added some remarks about the relationship with several species of bulbous plants and he points at various similarities. Thereupon he analyses these similarities and decides about the implications of a possible relationship. He rightfully refers to the works, which have been published by Du Petit Thouars, Richard, Miquel and De Vriese. Vrolik has been more and more convinced of the fundamental differences between the Cycadeae and the bulbous plants. However it has been possible to demonstrate a superficial analogy between the Cycadeae and other divisions of the vegetable kingdom, or – in Reinwardt's words – a partial affinity between the Cycadeae and the bulbous plants. In many respects there is a world of difference between these plants. Of course the 'Eerste Klasse' should publish Vrolik's treatise, together with the beautiful illustration.

[NA-RANH KNI 175-66(141).12 R; BOT]

**1001. C.G.C. Reinwardt (Leyden) to F.A.W. Miquel (Rotterdam); 24 January 1845**

Shortly after the reception of Miquel's letter, Reinwardt has presented Montagne's proposition to Molkenboer and Dozy. He did not receive the answer until yesterday. The two botanists have agreed to send their answer directly to Montagne. So Reinwardt has added a message. He has understood that his present (a modest collection of Piperaceae) has pleased Miquel. Contributing to the completion of this difficult scientific work is of course very pleasing to him. Regrettably he cannot offer more. Meanwhile many specimens of this family, as well as other plants, which have been collected in the Dutch East Indies, have been lost. He is happy that Miquel has returned these plants to him. Fortunately his colleague has succeeded in identifying at least a number of species, which are growing in the Hortus. He also thanks Miquel for having enriched his Cryptogams collection. Soon the first fascicle of Dozy's and Molkenboer's illustrated description of the Dutch East Indian mosses will be published. He adds his compliments to Mrs. Miquel and expresses his feelings of esteem.

[UBU Hs 1873; BOT]

**1002. A. Brongniart (Paris) to C.G.C. Reinwardt (Leyden); 2 February 1845**

Brongniart asks permission for recommending Dr. Guettet to Reinwardt, a young physician and one of his friends, who is visiting the Netherlands. He wants to see the beautiful scientific collections, especially those which are dealing with anatomy. Dr. Guettet is the associate of Dr. Thibert in a project which is very important to the anatomical sciences and which is fostered by the 'Académie des Sciences'. It is about anatomical representations in relief, which are extremely accurate. These new representations will be most important for the science of pathological anatomy. Of course Reinwardt will give his support to Dr. Guettet. Brongniart would be pleased if Reinwardt would be so kind to inform him through Guettet about his well-being. Reinwardt's friends and colleagues in Paris are really interested in everything that concerns him. He expresses his feelings of esteem. [The original letter is written in French]

[UBL BPL 2922; ANA, MED]

**1003. J. Decaisne (Paris) to C.G.C. Reinwardt (Leyden); February 1845**

Decaisne is very grateful because his friend has been so kind to receive several scientists from Paris. Again he proposes a visitor to Reinwardt – Dr. Hooker, the son of William Hooker – whom Reinwardt knows well. Hooker junior has accompanied Sir James Ross as a botanist, during the English expedition to the South Pole. It would be fine if Dr. Hooker will be offered the opportunity to make the acquaintance of Reinwardt's old bryological assistants Dozy and Molkenboer. Decaisne himself wants to be informed about the recent botanical publications of the 'Hollandsche Maatschappij der Wetenschappen'. He asks him to convey his greetings to Mrs. Reinwardt, to Reinwardt's daughter and to his niece. He assures him of his feelings of high esteem. [The original letter is written in French]

[UBL BPL 2922; BOT]

**1004. Th. Schwann (Hamburg) to C.G.C. Reinwardt (Leyden); 12 March 1845**

Schwann thanks Reinwardt for his kind letter, dated 22 February 1845, to which a copy of Reinwardt's list of seeds had been added. Now he adds his list of seeds, which are available in the Hortus of Hamburg.

Within shortly Reinwardt will be informed about the postage, to be paid by him. Furthermore he has been informed by Professor De Vriese, that Mr. Splitgerber, whom he has met at Reinwardt's, is in such a distress, that he has become a complete loss to science. He spends a few words on the headway with respect to his *Enumerat. Plant.* He expresses his sincere feelings of esteem and devotion. [The original letter is written in German]  
[UBL BPL 2922; BOT]

**1005. Minister of the Interior (The Hague) to C.G.C. Reinwardt (Leyden);  
16 April 1845**

In reply to Reinwardt's letter, dated 27 January 1845, the Minister of the Interior informs him that in accordance with his proposal a copy of the catalogue of the Hortus of Buitenzorg has been sent to the botanical gardens of the kingdom, to their directors, to several professors and to others persons who are qualified for that. Furthermore a copy of Reinwardt's letter has also been sent to the Minister of the Colonies, especially because of what has been said in it about Hasskarl, the hortulanus. Thereupon the Minister of the Colonies has informed him that Hasskarl's wish to be promoted and to have his salary increased, has to be decided by the East Indian government.  
[UBL BPL 2922; BOT, PHY]

**1006. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Haarlem); Spring  
of 1845**

Much has been published about the origin and development of ore banks in the Netherlands, as the author of this French treatise, entered under the maxim 'Nec species sua quique manet rerumque novatrix ... etc.', has stated. Less is known about their origin. The author is really an expert in the field of mineralogy and geology. He has proved to be able to write a concise and important treatise. He has carried out his investigations in the North-Eastern parts of France (Vosges and Saarland). A couple of rivers, rising from sandstone formations, which are iron ore rich and hematite rich, are transporting large quantities of soil. Thereupon, iron oxide is deposited on places where the water has lost its speed and becomes stagnant. The water plants die and rot. In the author's view dissociation, dissolution, fermentation and rot cause the development of carbon dioxide and phosphoric acid. These substances cause a partial dissolution of the iron oxide deposits. This solution

is again carried downstream, after which it is deposited at new locations. These events cause the formation of iron ore and sand ore, moor ore and so on. Reinwardt does not agree – at least not with respect to the iron ore formations in the Netherlands. The water of the Rhine and Maas is almost free of iron oxide. In Reinwardt's opinion the iron ore banks and grounds are still growing, although they develop slowly. The alluvial and diluvial soils are rather iron oxide rich. The same goes for the various types of rocks and pebbles, the pure quartzes excluded. Reinwardt acknowledges the positive influence of decaying plants on wet soils.

In order to explain this process completely, the author should also have carried out chemical research, like the 'Maatschappij' had asked. Now he has only given the results of the investigations of other scientists. Neither did he mention the presence of various iron salts in the soil, like the iron salt of humic acid. Reinwardt refers to Berzelius. The author has proved to be ignorant of the works of Sprengel and G.J. Mulder. He has not examined any of the soils, mentioned in the contest. Therefore his treatise cannot be awarded, which is a pity for this experienced writer.

[NA-RRANH HMW 444-438.469 R; CHE, PHY, GEO, MIN]

**1007. W. Vrolik (Amsterdam) to G. Vrolik (Amsterdam) and C.G.C. Reinwardt (Leyden); 19 May 1845**

Vrolik senior and Reinwardt are informed that they have to deliver a lecture during the meeting of the 'Eerste Klasse' of 14 June 1845.

[NA-RANH KNI 175-37.1015]

**1008. J.J. Splitgerber (Amsterdam) to C.G.C. Reinwardt (Leyden); 24 May 1845**

Splitgerber has to bring sad news to Reinwardt. His dear brother has died yesterday. Undoubtedly Reinwardt will be shocked by this news and so is Splitgerber's family. Of course Reinwardt has got familiar with Splitgerber's merits, because of their relationship of many years. Reinwardt has always had a lively interest in his friend. It is sad to know that since several years Splitgerber has been deprived of his mental capacities, without hope of recovering.

[UBL BPL 2922]

**1009. C.G.C. Reinwardt (Leyden) to J.H. Leveillé (Paris); 28 may 1845**

Reinwardt – still remembering Leveillé's friendship – announces the near arrival of Dr. Verkouteren, a young Dutch scientist, in Paris. He asks his colleague to help him and to procure him with the needed information. He expresses his feelings of gratitude and reminds Leveillé's warm reception in Leyden. He informs him that their mutual friend Splitgerber has suddenly died in the prime of life ('as a consequence of a cerebral inflammation, caused by a hemiplegia'). He has died as a victim of his beloved science.

[The original letter is written in French]

[MNHN Ms 2311; BOT]

**1010. W. Vrolik (Amsterdam) to C.G.C. Reinwardt (Leyden); 2 June 1845**

Vrolik junior sends Reinwardt a copy of a letter from G. Hattopp (Lüttgenrode) with two samples of minerals. He asks him to examine these and to report during the next meeting of the 'Eerste Klasse'.

[NA-RANH KNI 175-37.1020; MIN]

**1011. H.W. Zuber (Amsterdam) to C.G.C. Reinwardt (Leyden); 4 June 1845**

Zuber recalls the fact that almost 40 years have gone since he attended the lectures of chemistry given by his instructor. In spite of those many years he has never forgotten these experiences. He wants to let Reinwardt know his feelings because nowadays many are complaining about the defectiveness of higher education. He cherishes these recollections especially because one of his sons is on the verge of being examined by Reinwardt on the same subjects. So he has felt the need to send Reinwardt this letter before his son leaves for Leyden. He still remembers Reinwardt's benevolence shown to him. Finally he praises his son's character and gives his kindest regards.

[UBL BPL 2922; CHE]

**1012. J.J. Brakx Ekenholm (The Hague) to C.G.C. Reinwardt (Leyden); 13 June 1845**

Brakx Ekenholm brings to mind the ties of friendship which have existed for many years between his father Jean Ekenholm, his mother Mrs. Adrienne-Marie Ekenholm and Reinwardt, since they were living in Batavia. Because of the competence or incompetence of his wife, relative to the settlement

of possessions, he has to be informed by Reinwardt about the civil laws in force in 1836. Undoubtedly one of the professors of law in the University of Leyden is an expert in these matters. He asks Reinwardt to give him the titles of a couple of books written on this subject. He apologizes for having asked Reinwardt's attention. Awaiting his answer he expresses his feelings of esteem. [The original letter is written in French]  
[UBL BPL 2922]

**1013. C.G.C. Reinwardt (Leyden) to W.Vrolik (Amsterdam); 14 June 1845**

Reinwardt reports on the mineral samples, which have been sent to the 'Eerste Klasse' by Hattopp (Lüttgenrode), These fragments of green glass are only the remains of an ordinary bottle and Reinwardt explains why. He gives the results of a couple of physical and chemical analyses. If the sender would like to receive an answer, the 'Eerste Klasse' should inform him that his high hopes have been in vain and that the fragments have no value at all.  
[NA-RANH KNI 175.66(141).4 R; MIN, PHY, CHE]

**1014. L. Elie de Beaumont (Paris) to C.G.C. Reinwardt (Leyden); 16 June 1845**

Reinwardt is informed about the fact that in its last meeting the 'Société de Géologique de France' has decided to hold its extraordinary annual meeting on Sunday 14 September in the town of Avallon. De Beaumont describes the interesting geological and mineralogical features of its surroundings. He hopes that Reinwardt will come to Avallon in order to meet his colleagues. He expresses his feelings of esteem and devotion. [The original letter is written in French]  
[UBL BPL 2922; GEO, MIN]

**1015. J.J. Brakx Ekenholm (Herstal) to C.G.C. Reinwardt (Leyden); 21 June 1845**

Brakx Ekenholm reminds Reinwardt of his letter sent from The Hague on 13 May 1845, in which he has asked to be informed in behalf of his wife, Mrs. Engel, the daughter of Jean Ekenholm of Batavia, about the civil laws which were in force in 1836 in Batavia. He asks Reinwardt again to inform him through one of the professors of the Faculty of Law in Leyden.  
[UBL BPL 2922]

**1016. K.Fr.Ph. von Martius (Munich) to C.G.C. Reinwardt (Leyden); 1 July 1845**

Von Martius confesses that most regrettably he has not received a sign of life from his friend for a considerable time. He is really devoted to him and he would like to be informed about his well-being. He begs him to answer his letter and he thanks God that his own health has considerably improved since he takes medicines. Now he is full of energy and occupies himself again with the edition of his work on palms. Deo volente Reinwardt will receive this year a publication written by him. He wants to know how Blume's *Rumphia* is doing. Furthermore he invites Reinwardt to attend the meeting which will be held in Nuremberg in September. He would be pleased to see Reinwardt again. He asks him to give his regards to Mrs. Reinwardt. He adds a couple of short writings and gives his kind regards. [The original letter is written in German]

[UBL BPL 2922; BOT]

**1017. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Haarlem); 7 May 1846**

Reinwardt enters his report on the coal beds. He reminds his colleague of another treatise, dealing with the origin of silex in Cretaceous formations, in which the origin of silica has been discussed. In the respective report he has stated that the silica has penetrated very slowly into the finest microscopic structures of shells, polyparia, and so on, which – at the time – is the only possible explanation.

[NA-RANH HMW 444-439.525 R; GEO, MIN, CHE, PHY]

**1018. J. Geel (Leyden) to C.G.C. Reinwardt (Leyden); 4 October 1846**

Geel sends his colleague a copy of his recently published book. He hopes that it will be received well. He also hopes that his friend is willing to throw a glance at its contents. He points at two notes in particular. He stresses his feelings of friendship towards Reinwardt and calls himself his true friend.

[UBL BPL 885]

**1019. C.G.C. Reinwardt (Leyden) to J. Decaisne (Paris); 6 October 1846**

Reinwardt really gains benefit from Korthals's stay in Paris. At Reinwardt's request Korthals has conveyed his greetings to Decaisne and has reminded

him of his excellent treatise on the potato disease, which Reinwardt has received last year. Reinwardt – already having been occupied with the study of this plant disease – has corresponded on this subject with Von Martius, Bergsma and several others. He agrees with Decaisne about its cause and he asks his colleague to allow him to make use of his experience in the field of phycology, because at the moment he is studying the algae, from which plants the Japanese are producing a vegetable jelly, mostly from *Fucus tenax*. He sends Decaisne a sample of another species, which is still unknown to him, although it has been presented to him as a specimen of *Fucus sphaerovesicus*. Even consulting the works of Turner and Woodward did not help and neither did Greville's book (*Allgem. Bot.*, Tom. XIV).

He will also add a fragment of *Fucus tenax*, showing a couple of peculiarities, which have not been mentioned by Lindley, Nees von Esenbeck and Agardt (Agardh?), until now. Anyhow there are enough points to be explained, a fact that justifies a meticulous analysis. He knows that Decaisne has the possibility to help him. He apologizes in advance and asks him to convey his greetings to the other friends of the Paris 'Muséum'. [The original letter is written in French]

[IDF Ms 2457; BOT, AGR]

**1020. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Haarlem); 20 February 1847**

Reinwardt returns a treatise on the iron ore beds judged by him, together with his report. He agrees with Van Breda about the possible identity of its author and regrets the fact that this entry has to be rejected.

[NA-RANH HMW 444-439.546 R; CHE, PHY, GEO, MIN]

**1021. C.G.C. Reinwardt (Leyden), W.H. de Vriese (Amsterdam) and G. Vrolik (Amsterdam) to W. Vrolik (Amsterdam); 28 March 1847**

On behalf of his fellow members of the jury, Reinwardt reports on Miquel's treatise on one of the most peculiar plants, this has been entered under the maxim 'Revisio critica casuarinarum'. He opens his report by giving a description of *Casuarina* trees and shrubs (a family, comprising only one genus). These plants are living in the Southern hemisphere, especially in New-Holland and on the islands of the South Pacific. Miquel – knowing the general determination problems caused by this genus and having consulted

Sieber, Preiss, Drummond, Dalton, Hooker and others – has acquired much material from the plants collected in the past by other botanists. Systematic problems – such as the fact that several species have not been determined until then, the problem of synonymy of different species, etc. – have made it difficult for Miquel to proceed. However meanwhile he has determined and distinguished 30 different species. He gives details of the physical, chemical, climatological and geological nature of the places, where these plants are growing.

Reinwardt underlines the importance of the illustrations of 27 species drawn by Verhuell, which are indispensable for those who want to identify the various Casuarina species. Although this treatise does not pretend to be a complete monograph, Miquel has tried to give as much information as possible. Of course he has not been able to remove every uncertainty. Nevertheless this work is a most important contribution to botany and an excellent starting point for further investigations. Therefore Reinwardt suggests to publish this treatise, together with its drawings in the *Verhandelingen* of the 'Eerste Klasse'. De Vriese fully agrees and so does Vrolik senior, although he wants to make a few minor objections, with regard to the terminology used by the author and by the first member of the jury. First of all he wants to point at the distinction between 'scales' ('schubben') and 'leaflets' ('blaadjes'). The rest of the report shows that the three members of the jury have not come to a complete agreement with respect to certain anatomical details, for example with respect to the flowers. Because the author (Miquel) has expressed himself very carefully, he has not been able to remove every uncertainty. In Vrolik's opinion this aspect needs a thorough investigation and he has wondered why his two colleagues did not try to solve these problems. The report is accompanied by a covering letter to Willem Vrolik. Vrolik senior, who initially wanted to read his contribution to the report himself in the meeting of the 'Eerste Klasse', has finally decided to send his comments to Reinwardt, president of the jury.

[NA-RANH KNI 175-67(142).2 R; BOT, GEO, PHY, CHE]

**1022. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Haarlem); Spring of 1848**

The author of the Dutch treatise under the maxim 'Er zijn nog duizend dingen, niet enkele, onaangeroerd ... etc.' has corrected his entry (1846)

in the right way. Now his contribution discusses the distribution of the knowledge of the natural history of our country. Nevertheless his treatise does not meet the intentions of the 'Maatschappij'. The author did not understand the quintessence of the question and Reinwardt sketches the aspects of his failure. His treatise is defective, very incomplete and superficial. He lacks every scientific background.

[NA-RANH HMW 444-440.554(2) R; ZOC]

**1023. C.G.C. Reinwardt (Leyden) and H.C. van Hall (Groningen) to W. Vrolik (Amsterdam); January 1849**

In his treatise on the African Fig trees Miquel has pointed at an important taxonomic problem. He can be very proud of his first report on this intriguing plants, entitled 'Prodromus Monographiae Ficarum', which – most regrettably – has already been published in a foreign journal (W.J. Hooker's *London Journal of Botany*, 1847, 1848). Most of his Dutch colleagues will still be unaware of this interesting publication.

Reinwardt discusses Miquel's systematic approach and points at the previous efforts of Gasparini and Zuccarini. This treatise is in fact a part of the *Prodromus*, which has already been published. In it the author discusses the African species of the Fig tree. He has proved that in Africa at least 64 species are growing. So the author has contributed considerably to the knowledge of the geographical distribution of *Ficus*. However Reinwardt has several questions to ask, such as: Why did the author decide to publish a part of the *Prodromus* for a second time? The partial publication does not inform its readers very well about the whole plant family. Furthermore the 'Laws' of the 'Eerste Klasse' do not allow to publish a treatise, which has already been published elsewhere. So finally the author himself should decide about what to do. Naturally the 'Eerste Klasse' will thank him for his accomplishment. The drawings are most exquisite and Van Hall fully agrees with that.

[NA-RANH KNI 175.67(142).32 R; BOT]

**1024. C.G.C. Reinwardt (Leyden) to W. Vrolik (Amsterdam); 2 February 1849**

From Vrolik's letter Reinwardt has learned that Miquel has objected against the judgement of his treatise on the African Fig trees. Reinwardt has considered Miquel's arguments, but he has decided not to reconsider his

judgement. So the jury's advice will not be changed. He returns the dossier to Vrolik.

[NA-RANH KNI 175-67(142).32\* R; BOT]

**1025. H.C. van Hall (Groningen) and C.G.C. Reinwardt (Leyden) to the members of the 'Eerste Klasse' of the KNI (Amsterdam); 3 March 1849**

Once again Reinwardt and Van Hall react to the 'Toelichting van den Heer Miquel op het rapport betreffende zijne verhandeling over de Afrikaansche Vijgebomen' [*Verhandelingen*, d.d. 14 October 1848, 'Notulenboek' VII, p. 376].

[NA-RANH KNI 175-31.71; BOT]

**1026. C.G.C. Reinwardt (Leyden) to W. Vrolik (Amsterdam); Spring of 1849**

Reinwardt reports on Cornelis Swaving's 'Geneeskundige Plaatsbeschrijving van Buitenzorg'. He explains the structure of this work and decides that the author has produced a defective treatise, among others because his knowledge of the natural sciences has proved to be very incomplete. Furthermore his language is careless, his style of writing is uncivilized and his presentation is chaotic. The author has not carried out any observations and he has showed his lack of education in physics, chemistry and natural history. He has also demonstrated his prejudice with respect to the native populations. His ideas about how to improve their living conditions are immature. This treatise does not at all deserve to be published in the works of the 'Eerste Klasse'

[NA-RANH KNI 175.67(142).33 R; MED, PHY, BOT, ZOC, AGR, GEO, MIN]

**1027. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Haarlem); 5 May 1849**

Fortunately Reinwardt has completed the report on the very extensive treatise on the Coniferae. He adds a couple of drafts of prize contests. Unfortunately he will not be able to attend the coming meeting of the 'Maatschappij'. The swelling on his knee is worsening. He has to be supported every time he wants to go from one room into another. Climbing the stairs is almost

impossible. He expresses his feelings of friendship.  
[NA-RANH HMW 444-127; BOT]

**1028. C.G.C. Reinwardt (Leyden) and J.H.Molkenboer (Leyden) to J.G.S. van Breda (Haarlem); 17 September 1849**

Reinwardt, president of the 'Koninklijke Nederlandsche Maatschappij tot Aanmoediging van den Tuinbouw', and Molkenboer, its secretary, informs the secretary of the 'Hollandsche Maatschappij der Wetenschappen' that they have planned to organize an exposition in Haarlem. They recommend this project to the attention of the 'Maatschappij' and add a copy of the provisional programme.

[NA-RANH HMW 444-127; BOT, AGR]

**1029. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Haarlem); 12 February 1850**

Reinwardt returns Gaertner's treatise, together with his report. Undoubtedly Van Breda will agree with his judgement. The assessment of the French treatise on mineral water sources is more problematic. It will not be possible for him to return these entries within the term, determined by Van Breda.

[NA-RANH HMW 444-128; BOT, CHE, PHY, GEO, MIN]

**1030. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Haarlem); end of March 1850**

Reinwardt's report of 20 pages, on a treatise of 43 pages on the 'Eaux thermales', does not give a discerning judgement of the author's statements. It remains obscure which ideas have originated from the author's mind and which have been expressed by Reinwardt himself. Reinwardt did not approve, nor reject this treatise. He only concluded – agreeing with the author – that the phenomenon of the hot springs is in fact still a scientific riddle.

[NA-RANH HMW 444-441.585(1) R; PHY, CHE, GEO, MIN; see also: UBL BPL 609-1]

**1031. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Leyden); 28 April 1850**

The German geologist – and Reinwardt is well aware of the fact that it is Bronn – has excellently completed his treatise on palaeontology. He has been assisted by the renowned palaeontologists H.R. Goepfert and H. von Meyer. In fact this treatise has already been published in three volumes. This fact means a violation of an important rule of the ‘Maatschappij’. These three volumes give the descriptions of 27.000 fossils. The entry is extremely well structured. The author has discussed all major issues: the structural changes of organisms in the course of the ages, the relation between the fossils and the living organisms, the gradation of beings and the geographical distribution of the fossils, with respect to the composition of the soil. Bronn’s contribution is really a must for every scientist. He has done more than simply answering the question. He has fully met the demands of the ‘Maatschappij’, taking into account the actual state of the art. It is most regrettable that in the covering letter Bronn has revealed his name. This had to be kept secret. Reinwardt wonders how rigorously the ‘Maatschappij’ has to keep to its rules. In his final conclusion he stresses that in this special case this excellent achievement, which will not be surpassed easily by other scientists, deserves to be awarded the gold medal and the premium as well, although the rules have been broken. Reinwardt expects the Directors of the ‘Maatschappij’ to accept his arguments. As a matter of fact it is quite favourable that Bronn’s treatise has already been published, a really money saving fact.

[NA-RANH HMW 444-441.584 R; GEO, ZOC]

**1032. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Leyden); 29 April 1850**

In this covering letter Reinwardt informs his colleague that he has read the work of professor Bronn and he warmly recommends it to the Directors of the ‘Maatschappij’.

[NA-RANH HMW 444-441.584\* R; GEO]

**1033. W. Vrolik (Amsterdam) and C.G.C. Reinwardt (Leyden) to the members of the 'Eerste Klasse' of the KNI (Amsterdam); 8 June 1850**

On behalf of his colleague Reinwardt Willem Vrolik reports on the lecture delivered by Van der Hoeven on the Perodicticus Potto. They have both judged positively. The author has given detailed information about this extraordinary being. He has also presented a couple of drawings. He has proved to be familiar with the writings of other authors, which have previously been published on this subject. In the view of the jury, this treatise has to be published, although the drawing of the skeleton has to be corrected and annotated.

[NA-RANH KNI 175-67(142).65 R; ZOC]

**1034. W. Vrolik (Amsterdam) and C.G.C. Reinwardt (Leyden) to the members of the 'Eerste Klasse' of the KNI (Amsterdam); 8 June 1850**

On behalf of the jury, appointed on 11 April 1850, Willem Vrolik reports on the treatise entered by Jan van der Hoeven, entitled 'Bijdrage to de kennis van den Potto van Bosman'.

[NA-RANH KNI 175-31.71; ZOC]

**1035. C.G.C. Reinwardt (Leyden) to G. Vrolik (Amsterdam); 8 June 1850**

Reinwardt presents a treatise on the auriferous and volcanic soils of Northeast Celebes, in which he has described a number of observations, carried out by him a long time ago. His treatise has been read on 25 November 1849 and on 8 June 1850. In his thoughts he has returned to the Moluccas and Celebes, where he has visited the sites. He observes that the map, which has meanwhile been published by Mr. Melville van Carnabé in the *Moniteur des Indes*, Vol. III, is quite correct. He gives geographical and geological details, among others about the Gorontalo Bay and the Menado region. He has also added ethnographical, agricultural, meteorological and climatological information and also facts about the native administration, about botany (among others with respect to *Rhizophora*) and zoology (among others regarding the wild fowls). He discusses the way in which the gold is collected. The treatise has been embellished with sketches of marvellous views. A calculation of the proceeds of this industry has also been added. Furthermore Reinwardt has

compared the gold, produced on Celebes, with the gold from Borneo and Sumatra. In his view, the gold production can be increased by employing more workers and by improving the technical facilities. He points at the *Tijdschrift voor Nederlandsch Indië* (1850, p. 265) for more information about the period 1846-1850. Finally he spends a few words on volcanism and other geological phenomena of the Menado region.

[UBL BPL 609-1; MIN, GEO, CHE, PHY, BOT, AGR, ZOC, ETN]

**1036. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Haarlem); June 1850**

After having judged Gaertner's treatise, Reinwardt returns it, together with his report. He has been embarrassed by the reception of another treatise, a French one. He will not be able to judge it within the term, indicated by Van Breda, He would have told him so, if he would have seen him last week. He can only work a few hours each day and in a slow tempo. He has already too much work to do.

[NA-RANH HMW 444-128; BOT]

**1037. C.G.C. Reinwardt (Paris) to J. Decaisne (Paris); 5 August 1850**

Reinwardt – meanwhile arrived in Paris – cannot hide his feelings, nor his desire to see his friend Decaisne. However, because of his ailments of old age he is not able to come to him through the long footpaths and archways of the 'Jardin des Plantes', where carriages are not allowed. As a matter of fact it has been foolish to undertake this long and tiring voyage and to fulfil the wish uttered by his wife and little children, who have accompanied him. He asks his friend to inform him about his address and to tell him the day and the hour on which he may visit him. Decaisne will oblige him forever. He assures him of his feelings of high esteem and devotion. [The original letter is written in French]

[IDF Ms 2457; BOT]

**1038. C.G.C. Reinwardt (Leyden) and H.C. van Hall (Groningen) to the members of the 'First Class' of the KNI (Amsterdam); 1 February 1851**

On behalf of the jury, appointed on 4 January 1851, Reinwardt reports on Miquel's treatise, entitled 'Over eenige nieuwe levende soorten van

Cycadeeën' ('On several new living species of Cycadaceae').  
[NA-RANH KNI 175-31.71; BOT]

**1039. C.J. Temminck (Leyden), C.G.C. Reinwardt (Leyden) and J. van der Hoeven (Leyden) to J.G.S. van Breda (Haarlem); 31 March 1851**

The jury reports on the letter, dated July and on the explanatory note, dated November 1850 on the Dodo, which have been addressed by Sloet tot Olthuis to the Directors of the 'Hollandsche Maatschappij der Wetenschappen'. Both documents have not given any new facts, although the 'Maatschappij' only wanted to receive notes and illustrations regarding this animal, which have not already been made public by Strickland, Melville and Hamel. Maybe parts of the skeleton of this animal have been preserved in an old collection of natural history. Sloet tot Olthuis has only repeated what Strickland has already published.

[NA-RANH HMW 444-441.617 R; ZOC]

**1040. C.G.C. Reinwardt (Leyden), A.H. van der Boon Mesch (Leyden) and J. van der Hoeven (Leyden) to J.G.S. van Breda (Haarlem); 13 May 1851**

Van der Boon Mesch, Reinwardt and Van der Hoeven want to make remarks with respect to the plan, proposed by the directors of the 'Maatschappij' at the occasion of its first centennial, to put up a considerable premium for the most outstanding scientific work, which will be published or submitted to the judgement of the 'Maatschappij' from the date of its centennial (21 May 1852), during the next four years. Scientists, who are working in the various fields of science, should be allowed to compete. The most excelling publication should be awarded 2.000 guilders, while the next best should be awarded the sum of 1.000 guilders.

[NA-RANH HMW 444-129]

**1041. C.G.C. Reinwardt (Leyden) to W.H. de Vriese (Leyden); 6 June 1851**

In his provisional answer to De Vriese's letter, sent to him today, Reinwardt underlines that he has been very moved by its content. He feels very grateful and he does not understand why De Vriese is always working so hard and so continuously in his behalf. De Vriese has already showed him his esteem and love more than enough. Knowing that his friends are still showing him their

affection and interest, keeps him alive and so does science itself. He hopes that he will remain able for some time to demonstrate his gratitude. He signs as De Vriese's grateful friend.

[UBL BPL 1886]

**1042. C.G.C. Reinwardt (Leyden) to Ch.L. Bonaparte (Paris); Summer of 1851**

Reinwardt sends Charles Lucien Bonaparte, nephew of the emperor Napoleon Bonaparte, ornithologist, his well meant greetings. He has arranged that Korthals, who will leave for Paris, will deliver this letter at Bonaparte's. Although Reinwardt has become immobile (because of his age), he is still enjoying life, amidst his family and friends. He has said good bye to his regular duties at the university. His scientific activities are decreasing now. He knows – and is satisfied about it – that he can go on doing so as long as his head and his heart will keep on serving him. He remembers that Bonaparte has attended the festivities at the occasion of the fiftieth anniversary of his professorate. His true-to-life portrait has been received very well and he thanks his friend for that. He will always remember Bonaparte's visit to Leyden and the agreeable hours they have spent together. He hopes that the occasion to see him once more, will present itself and he adds the greetings of his wife and children. [The original letter is written in French]

[MNHN Ms 2610; ART]

**1043. C.G.C. Reinwardt (Leyden) to A.C. Kruseman (Haarlem); 29 November 1851**

Reinwardt thanks Kruseman, book publisher, for having sent him the prospectus of the *Album der Natuur*, covered by a circular, dated 20 November 1851, through which Kruseman has informed him that he has been invited to become a member of the editorial board. Although he feels very honoured by this flattering invitation, he feels too old to assume new duties. Because of his growing weakness and his continuing illness he is hardly capable of carrying out scientific activities. Therefore he asks Kruseman to spare him. However he feels the need to assure him of his vivid interest in this useful undertaking. He promises to contribute to its success as much as possible. He assures him of his esteem and calls himself his obedient servant.

[UBL ACN 607-158; ZOC, BOT, GEO, MIN]

**1044. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Haarlem); March 1852**

Probably this French treatise is the result of the effort made by the same author, who's entry, submitted in 1850, has been rejected last year. This persevering man has not been put off and he has really learned from the remarks, made by the jury. This time he has succeeded in meeting the demands of the 'Maatschappij'. He has removed every redundancy. Nevertheless the author did not present any experimental results. He has not even succeeded in using the results of other authors, in order to explain the phenomena of the hot springs. He has only consulted a number of French publications, while on the other hand most interesting and impressing works have been published recently in Germany. The most serious problem is that he is inexperienced in chemistry, which fact has kept him from drawing several important conclusions. Reinwardt continues by giving a few examples of the conclusions, drawn by the author. The author has put that the hot water is already present in the deepest rocks and formations and he has stressed the importance of upheavals, shifts and compressions for the formation of canals, through which the hot water can function as a hot spring. Unfortunately he did not realize that rainwater can flow downwards as well. Reinwardt wants to point at the enormous heat inside the earth and at the inconceivable forces, which are working in the deep. In the author's view the salinity of the seawater is due to the fact that the thermal waters are finally flowing to the sea. The treatise cannot be accepted.

[NA-RANH HMW 444-441.585(2) R; GEO, CHE, PHY]

**1045. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Haarlem); 11 April 1852**

The main part of this treatise is a geognostical description of the landscape north of Dresden in Saxony, northeast of the 'Ertzgebergte', where the river Elbe is flowing. The treatise has been enriched with parts of the large general geognostical map of Saxony. This document especially discusses the right bank of the river, which is enclosed by granite and syenite mountains. The author explains the presence of a sandy plane, by assuming the former existence of a diluvial sea, which has meanwhile disappeared. Because the

author's argumentations are so ill-founded and the treatise only seems to give his personal ideas, it cannot be awarded.

[NA-RANH HMW 444-442.624 R; GEO, PHY]

**1046. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Haarlem); Spring of 1853**

Reinwardt has judged three treatises entered in response to a contest, held in 1851 and 1852. These entries are bearing the following maxims: 'Schon im dunklen Chaos häufte sich die Materie ... etc.' (Alexander von Humboldt), 'Parvis compositur orbis' and 'Le champ de la Nature ne peut s'épuiser ... etc.' (Chateaubriand).

It is still impossible to explain the phenomenon of the origin of enclosures in rocks, although mineralogy has made a tremendous progress and although the author is convinced that these enclosures have not been present from the beginning of Creation. Because these enclosed minerals are very rare, they are often sold at very high prices. The development of chemistry has made it possible to analyse these minerals. So mineralogy owes a lot to chemistry. For example it has been discovered that the number of different minerals largely exceeds the number of known chemical elements. Most minerals are compound. The first treatise does not explain how the 326 different minerals have developed. The other two treatises do. All three have spent most words on the description of the various minerals. This is also the best part of each of these entries. The second part – discussing the genesis of minerals – is disappointing, superficial and completely borrowed from other authors, especially from Gustav Bisschoff. None of the authors is a chemist. The author of the second treatise is still adhering to the plutonic theory. Reinwardt wants to praise Bisschoff, the man, who – during a lifetime – has made himself deserving in this field of study. He has dared to restrict himself to explanations, which are solely based on facts, observations, results of experiments and experiences (see his excellent and extremely instructive *Lehrbuch der chemischen und physikalischen Geologie*, which has dealt 'plutonism' a heavy stroke).

If the 'Maatschappij' should decide to publish one of these treatises, Reinwardt would prefer the third one, under the maxim 'Le Champ de la Nature ... etc.'.

[NA-RANH HMW 444-442.648 R; GEO, MIN, CHE, PHY]

**1047. C.G.C. Reinwardt (Leyden) to J.G.S. van Breda (Haarlem); 28 June 1853**

Reinwardt is pleased to mention the name of a most experienced corrector for the proofs of the three German treatises. It is a most renowned German writer, Dr. C.A. Sicherer (Leyden), who is willing to accept this task at a reasonable salary. If Van Breda wants to make use of this man, he should contact him himself.

Reinwardt has accepted the fact that the drafts of the prize contests, which were proposed by him, have been rejected. However, he does not understand why, because a treatise on one of these subjects has been awarded already. He also discusses the three mineralogical treatises, which have been rejected, because its authors were not experienced chemists. He thanks Van Breda for the two silver medals, awarded for the two treatises, devised by him, which have been awarded in 1852 and 1853. He returns the signed receipt. Unfortunately he is still too weak to make a summer trip. His immobility is getting worse and he is fading by the day. He wishes Van Breda good-luck with his geological strolls and of course he wishes him to collect many interesting objects. He ends his letter by adding his most amiable greetings. [BTS 2285; GEO, MIN, CHE]