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Hybrid ambitions : science, governance, and empire in the career of Caspar G.C. Reinwardt (1773-1854)

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PART II

Malay Archipelago

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A Hybrid Traveller in the Malay Archipelago

Well equipped schools were missing, even in densely populated cities, and the few existing [schools] here and there were run by teachers who, without having passed any exam, have chosen their profession arbitrarily and, given the lack of any supervision, guidance, reprimand or necessary tools, didn't even possess basic skills such as the Dutch language.

Reinwardt in an account on the school system on Java drafted in late 1819.¹

In October 1815, Reinwardt boarded the warship *Admiraal Evertsen* in the roadstead of Texel.² The fleet of seven ships bound for the Indies carried high civil servants and approximately 3000 soldiers and other personnel who had been selected to constitute a new colonial administration of Java and the neighbouring islands.³ Head of the new colonial government was Godert Alexander Gerard Philip, baron van der Capellen (1778-1848) who, like

¹ De Vriese, *Reinwardt's reis*, 249: “[Z]elfs de meest volkrijke steden misten wel ingerigte scholen, en de weinige hier en daar nog bestaande scholen werden door onderwijzers gehouden, die, zonder afgelegd examen, willekeurig dien stand gekozen hadden en bij het gemis van opzigt, leiding, teregtwijzing en noodige hulpmiddelen, tevens veelal de meest noodzakelijke kundigheden, zelfs die der Nederduitsche taal, niet bezaten.”

² UB Leiden, BPL 2425, V, travel diary Reinwardt, entry 16 October 1815.

³ P.H. van der Kemp, *De teruggave der Oost-Indische koloniën. 1814-1816* ('s-Gravenhage: Martinus Nijhoff, 1910), 123-244 and 322-26.

Reinwardt, had pursued a steep career in the aftermath of the Batavian Revolution. After study in Utrecht and Göttingen, Van der Capellen first served as a civil servant in Utrecht and Eastern Friesland. During the reign of Louis Napoleon, he was appointed minister for the interior. Willem I, in turn, appointed Van der Capellen minister for trade and colonies and sent him on a diplomatic mission to Brussels and Vienna where he was involved in the complex post-Napoleonic negotiations between Britain, Russia, Austria and Prussia.⁴



Figure 23: Portrait of the new Governor General G.A.G.P. Van der Capellen, by Cornelis Kruseman (1797-1857).

One of the central issues in these negotiations was the future of Belgium. British Foreign secretary Robert Stewart Castlereagh (1769-1822) was especially insistent that Belgium merge with the Netherlands to protect the North Sea Coast from French influence. In order to advance this

⁴ On Van der Capellen's education and early career, see Stevens, *Van der Capellen's koloniale ambitie*, 8-29.

proposition, Castlereagh offered Willem I and his advisors to return some of the former Dutch possessions in Southeast Asia which the British had conquered in the aftermath of the Batavian Revolution in 1795 and during the Napoleonic wars; Java did not fall into British hands until 1811.⁵ After a period of tenacious negotiations, the parties reached an agreement, and in August 1814 emissaries of both countries signed the Treaty of London (*Tractaat van Londen*) according to which the Dutch regained Suriname, Java, Sumatra, and the Moluccas from the British; the former Dutch settlements in the Caribbean, the Cape, India and Ceylon remained in British hands. In order to compensate the Dutch for this territorial loss, British diplomats also offered to return the island of Bangka, with its invaluable tin resources. Moreover, both parties agreed that merchants from both nations should be allowed to trade in each other's colonial territories.⁶

The actual transfer of the possessions in the Malay Archipelago was to be carried out by a General Committee (*Commissie generaal*) which Willem I established in late 1814. Despite the doubts of one his most important advisors, Gijsbert Karel van Hogendorp (1762-1834), the king appointed Van der Capellen—who had no expertise in colonial affairs—as head of the new committee. The advice of Anton Reinhard Falck, the king's secretary, apparently tipped the scale here. Other members of the general committee were Cornelis Theodorus Elout (1767-1841) and the former commander of the Dutch fleet in Asia, Arnold Adriaan Buyskes (1771-1838). The General Committee should remain active until all possessions had been transferred from the British to the Dutch. After the dissolution of the committee, Van der Capellen was designated to stay in Java as Governor General.⁷

The instructions and regulations for the General Committee were prepared in the autumn of 1814. Although Willem I was sovereign in colonial affairs, it took several months to develop the documents which provided the committee with concrete guidelines for their work in the

⁵ J. van Goor, *De Nederlandse koloniën. Geschiedenis van de Nederlandse expansie, 1600-1975* (Den Haag: SDU Uitgeverij, 1994), 171-92.

⁶ N.C.F. van Sas, *Onze natuurlijkste bondgenoot. Nederland, Engeland en Europa, 1813-1831* (Groningen: Wolters Noordhoff-Bouma's Boekhuis, 1985), 79-95.

⁷ On the appointment of the General Committee, see Stevens, *Van der Capellen's koloniale ambitie*, 62-67. On Buyskes' years as surveyor and naval officer see K. Zandvliet, "Daendels en de nieuwe kaart van Java," in *Herman Willem Daendels, 1762-1818*, ed. F. van Anrooij, et al. (Utrecht: Matrijs, 1991), 79.

colonies.⁸ In the end, the regulations were drafted by the members of the Council of State (Raad van State) and the Council of Trade and Colonies (Raad van Koophandel en Koloniën), established in April 1814. Head of the latter institution was the former Minister for the National Oeconomy Johannes Goldberg, whom the king esteemed for his economic expertise. Goldberg was one of the few patriots who belonged to the king's inner circle of advisors.⁹

In October 1814, Goldberg presented to the king a conceptual version of the regulations and a longer report on how trade and the administration of the Netherlands Indies should be organized. Similar to other colonial thinkers such as Dirk van Hogendorp (1761-1822) and his more moderate brother Gijsbert, Goldberg considered Java and the neighbouring islands an essential and, potentially, economically valuable part of the Dutch nation.¹⁰ In order to guarantee its profitability, Goldberg and Van Hogendorp advocated a gradual liberalization of the Dutch trading system in the Malay Archipelago. Instead of shipping all colonial products to Amsterdam, as the merchants of the East India Company had done in the two centuries before, Goldberg advised the king to slowly liberalize the market in Batavia for the fast-growing number of American and British traders in the region.¹¹ Only clove, nutmeg, mace, opium and tea were to be exclusively sold in Amsterdam.¹²

After some deliberations in the Council of State, the king followed Goldberg's suggestion and decreed the new regulations in early January

⁸ P.J. Platteel, *De grondslagen der constitutie van Nederlandsch-Indië. De wording van het regeerings reglement van 1815* (Utrecht: N.V. A. Oosthoek's Uitgevers-Maatschappij, 1936), 70; and Van der Kemp, *De teruggave der Oost-Indische koloniën*, 163-244. For a more recent account on the genesis of the regulations, see N.S. Efthymiou, "De organisatie van regelgeving voor Nederlands Oost-Indië: stelsels en opvattingen (1602-1942)" (PhD thesis, University of Amsterdam, 2005), 158-72.

⁹ Zappey, *De economische en politieke werkzaamheid*, 93.

¹⁰ For detailed survey of patriot visions on the colonies, see G.J. Schutte, *De Nederlandse patriotten en de koloniën. Een onderzoek naar hun denkbeelden en optreden, 1770-1800* (Groningen: H.D. Tjeenk Willink, 1974); and Efthymiou, *De organisatie van regelgeving*, chapter 2.

¹¹ On the growing importance of American merchants in the region, see J.R. Fichter, *So great a proffit. How the East Indies trade transformed Anglo-American capitalism* (Cambridge: Harvard University Press, 2010), chapters 3-6; and L. Blussé, *Visible cities. Canton, Nagasaki, and Batavia and the coming of the Americans* (Cambridge: Harvard University Press, 2008), 60-64.

¹² Zappey, *De economische en politieke werkzaamheid*, 118-21.

1815.¹³ Since detailed information about the exact economic and political state of Java and the neighbouring islands was lacking, the promulgated regulations offered only a vague framework for how the colonies should be administered. It is therefore not surprising that Goldberg, Elout and Buyskes suggested that the king appoint the expert for agriculture and processing industries, Reinwardt, as general advisor to the General Committee. Willem I followed the recommendation and attached Reinwardt to the committee in the same month.¹⁴

This chapter aims to provide a reconstruction of the early phase of the General Committee's fieldwork in and around Batavia. In particular the reforms of the former Governor General Herman Willem Daendels (1762-1818) and his British successor Sir Thomas Stamford Raffles had transformed the city and its suburb Buitenzorg into a nodal point for colonial governance and science. As the former administrative heart of the Dutch East India Company's trading empire, the city also functioned as trading hub in the far-flung Malay Archipelago.¹⁵ Despite its unhealthy environment, European and indigenous merchants regularly called at Batavia's harbor to load and unload cargo not only from Sumatra, Borneo, Celebes, the Moluccas, and the Lower Sunda Islands, but also from India, Malaysia, China, Brazil, America, the Philippines and Japan. Batavia and its suburbs thus constituted important sites where trade and politics-related information from all over the Malay Archipelago and even beyond was exchanged.¹⁶

Owing to his position as general advisor to the General Committee, Reinwardt could thus rely on a large network of informants who provided him with statistical and other data about the islands' administration, nature and economy. Reinwardt used this information to get a general overview of

¹³ The full title of the regulations is: *Reglement op het beleid van de regeering, het justitiwezen, de cultuur en den handel in 's lands Aziatische bezittingen.*

¹⁴ UB Leiden, BPL 2425, 3, Royal decision 11 January 1815.

¹⁵ For a concise overview of the administrative infrastructure in Java in 1814, see H.W. van den Doel, *De stille macht. Het Europees binnenlands bestuur op Java en Madoera, 1808-1942* (Amsterdam: Uitgeverij Bert Bakker, 1994), 27-46; and Stevens, *Van der Capellen's koloniale ambitie*, 43-55.

¹⁶ On the unfavorable environmental conditions of the city, see P.H. van der Brug, *Malaria en malaise: De VOC in Batavia in de achttiende eeuw* (Amsterdam: De Bataafsche Leeuw, 1994). For an overview of the trading networks in the region, see H. Dick, "State, nation-state and national economy," in *The emergence of a national economy. An economic history of Indonesia, 1800-2000*, ed. Howard Dick, et al., 15-19 (Leiden: KITLV Press, 2002).

the colony's current status. The bulk of the collected data was meant to serve as the basis for a detailed statistical report and a travel narrative to be compiled after his return to the Netherlands. Moreover, it provided him a platform to initiate reforms of Java's public health and educational system. Like his Batavian predecessors in the Netherlands, Reinwardt installed civil servants tasked with surveying and advancing the daily practice of teachers, physicians, surgeons and apothecaries in the various districts of the colony. The inspectors had to regularly dispatch reports to Batavia. In order to improve the colony's agriculture, Reinwardt also established a botanical garden in Buitenzorg. Owing to vital colonial networks, the garden quickly developed into an important platform for the acclimatization of rare and economically rewarding plants, trees, and herbs. Van der Capellen even dreamt of transferring the entire production of spices from the Moluccas to Java, in order cut costs for the administration of the remote islands.¹⁷ Although many of these initiatives remained in a fledgling state, they formed an important incentive for the rise of a 'modern' colonial bureaucracy in Java in the course of the nineteenth century.

A Hybrid Traveller

In the months before Reinwardt's departure it was in particular Goldberg who further defined his tasks.¹⁸ During a meeting in the offices of the Council of Trade and Colonies at the 'Fluwelenburgwal' in The Hague in February 1815, Goldberg asked Reinwardt whether he would be willing to gather statistical data during his stay in Java and the neighbouring islands. Goldberg and the king expected Reinwardt to summarize his findings in the form of a detailed report after his return.¹⁹ In order to structure Reinwardt's survey, Goldberg offered Reinwardt a long list of questions which he considered crucial for his journey through the Malay Archipelago. Similar to Goldberg's earlier surveys which he had carried out as Agent van de Nationale Oeconomie (1799-1801), the questionnaire for Reinwardt touched upon a variety of topics. The 120 questions were grouped under

¹⁷ H.T. Colenbrander, ed., *Gedenkschriften van Anton Reinhard Falck* ('s-Gravenhage: Martinus Nijhoff, 1913), 468: Letter Van der Capellen to Falck, Sourabaya, 8 July 1817.

¹⁸ Zappey, *De economische en politieke werkzaamheid*, 95-104.

¹⁹ NA The Hague, collectie Reinwardt, inv. 1: Letter Goldberg to Commissarissen generaal, 25 March 1815.

geography, population, (export) products, processing of raw material, trade and, eventually, arts and sciences. Among the questions were:

[What is the] size of the cultivated land? Size of the forests and uncultivated areas? Natural characteristics, size and further curiosities or a general description of the mountains? Size of inland waters and their status in particular regarding shipping? . . . What is the current state of the salt production? Is there any production of saltpetre, and is it of any importance? Are there stone, coal or iron mines on Java (or on the neighbouring islands) as some writers suggest? What is the status of the forests and is the wood appropriate for the construction of ships? Are there other sorts of wood available that are important for commerce such as dyewood, fine lumber, sandalwood from Timor, sappanwood from Bima or 'calliatour' wood, etc.? . . . How much coffee is produced each year, is the quality even or does it vary, which quantity is consumed within the colony? . . . How many arrack distilleries are there? How much arrack is produced annually? . . . Has the export [of arrack] to the British possessions declined or not, and if it has, what are the reasons for the decrease? . . . What is the current state of trade with Europe and the United States? . . . What is the present state of child-rearing and the educational system?²⁰

²⁰ De Vriese, *Reinwardt's reis*, 37-48: "Uitgestrektheid van het gecultiveerde land? Uitgestrektheid der bosschen en woeste landstreken? Natuurlijke gesteldheid, uitgestrektheid en verdere merkwaardigheden of eene algemeene beschrijving der gebergten? Oppervlakte der binnenlandsche wateren, derzelve staat, vooral in de betrekking tot de scheepsvaart? . . . Hoedanig is de staat der planten, en is het hout geschikt voor den scheepsbouw? Zijn er ook andere soorten van hout, welke voor den koophandel belangrijk zijn, b.v. verwhout, fijn werkhout, sandelhout op Timor, sappanhout van Bima, calliatour-hout en andere. . . . Hoeveel koffij wordt er 's jaarlijks wel ingeogst, en is dezelve van gelijke of verschillende qualiteiten, hoeveel wordt daarvan binnen 's lands verteerd? . . . Hoeveel arak-stookerijen zijn er? Hoe groot is de jaarlijks gewonnen quantiteit arak?. . . Is de uitvoer naar de Engelsche bezittingen in Oost-Indië verminderd of niet, en zoo ja, welke zijn de oorzaken dezer vermindering?. . . In welke staat bevindt zich de Koophandel op Europa en Noord-Amerika?. . . Welke is de toestand van de opvoeding en het schoolwezen?" The individual numbers of the quoted questions have been removed.

Apart from his function as surveyor and advisor to the General Committee, the king obliged Reinwardt to use his field trips to collect rare natural historical specimens for the State Cabinet of Natural History ('s Lands Kabinet van Natuurlijke Historie), which was stored in the building of the Royal Academy of Sciences at the Kloveniersburgwal in the centre of Amsterdam and of which Reinwardt was director from its establishment in 1810.²¹

In order to fulfil his wide-ranging tasks, Reinwardt was awarded the title Director of Agriculture, Arts and Sciences of Java and the neighbouring islands (Directeur tot de zaken van landbouw, kunsten en wetenschappen op Java en de naburige eilanden).²² Moreover, he received a generous annual salary of 24.000 guilders, which far exceeded his salary as professor at the Athenaeum Illustre in Amsterdam. Even Goldberg's salary of 10.000 guilders per annum was much lower.²³ Reinwardt was also endowed with an extra sum of 1.500 guilders in order to buy scientific equipment for his journey to the Dutch colony.²⁴ Additionally, the king allowed Reinwardt to appoint two qualified assistants to help him on his investigations in the field.²⁵ And eventually, Willem I promised Reinwardt to keep his professorship at the Athenaeum Illustre and his directorate of the State Cabinet vacant until his return from the Netherlands Indies.²⁶

This brief discussion of Reinwardt's instructions has shed light on the hybridity of his identity as traveller. First, he was supposed to survey the colony's economy and agriculture by using Goldberg's questionnaire. Second, he was tasked with improving the education of European civil servants and the medical care in hospitals and apothecaries. And third, Reinwardt was ordered to collect plants, animals and minerals in order to develop the State Cabinet in Amsterdam into a prestigious and diverse natural historical collection.

²¹ L.B. Holthuis, *1820-1958: Rijksmuseum van Natuurlijke Historie* (Leiden: Nationaal Natuurhistorisch Museum, 1995), 14-15.

²² UB Leiden, BPL 2425, 3, Royal decision 11 January 1815. Article 1.

²³ Zappey, *De economische en politieke werkzaamheid*, 101.

²⁴ UB Leiden, BPL 2425, 3, Royal decision 11 January 1815. Article 9 and 11.

²⁵ *Ibidem*, article 12.

²⁶ *Ibidem*, article 7 and 8.

Sailing to the East

Reinwardt's journey to Batavia took nine months. On board the *Admiraal Evertsen*, Reinwardt carried a small library and a large amount of chemical and physical instruments such as various-sized bulbs, barometers, thermometers, eudiometers (for measuring changes in the volume of gas), an air pump, a metal detector, a clock, drawing paper, and a bathometer made by his colleague Abraham van Stipriaan Luiscius.²⁷ Like other travelling naturalists, he kept a travel diary in which he recorded weather observations, the ship's position, his daily activities and copies of letters to his friends and colleagues back in the Netherlands. Reinwardt regularly corresponded with his family in Lüttringhausen and with his friends and colleagues in Amsterdam, Utrecht and Haarlem, such as Anthoni d'Ailly and his son Anthony Johannes d'Ailly (1793-1851), Jeronimo de Vries, David Jacob van Lennep, Cornelis van Vollenhoven, Johan Melchior Kemper, Nicolaas Cornelis de Frémery, and of course Martinus van Marum.²⁸ Reinwardt often enclosed small presents such as plant seeds, small landscape sketches, candles, baskets, and boxes with ginger roots and fruits. Sometimes he asked his friends to forward the presents to his family in Lüttringhausen.²⁹ His friends, in turn, sent him copies of recently published books, newspaper articles, recent issues of scientific journals or special paper for mounting his collection of dried plants.³⁰

Reinwardt knew the above-mentioned persons from his years as chemist-apothecary, gardener and professor in Amsterdam, Harderwijk and Haarlem. Anthoni and Anthony Johannes d'Ailly ran a pharmacy and chemical workshop in Amsterdam. Reinwardt had become acquainted with De Vries, Van Lennep, Van Vollenhoven and Kemper during his years as a student at the Athenaeum Illustre in the late 1790s. All of them belonged to a group of friends who regularly came together to discuss politics and literature in one of Amsterdam's literary societies. With Van Marum, Reinwardt shared a deep passion for the cultivation of exotic plants, plant

²⁷ De Vriese, *Reinwardt's reis*, 50.

²⁸ UB Leiden, BPL 2425, inv. 5. For detailed excerpts of many of Reinwardt's letters, see Van Heiningen, *The Correspondence of Caspar Georg Carl Reinwardt*.

²⁹ See, for instance, NHA Haarlem, 529: Archive Martinus van Marum, letter Reinwardt to Van Marum, Batavia, 15 December 1816; and Batavia, 9 April 1817 or KB The Hague, 121 B 8, letter Reinwardt to De Vries, Batavia, 15 June 1817.

³⁰ See, for instance, NHA Haarlem, 529: Archive Martinus van Marum, letter Reinwardt to Van Marum, Buitenzorg, 6 February 1818; and KB The Hague, 121 B 8, letter Reinwardt to De Vries, Batavia 20 May 1818.

physiology and experimental chemistry, the last of which was likely the link between Reinwardt and Frémery, since 1795 professor for medicine, chemistry, pharmaceuticals and natural history at Utrecht University. Like Reinwardt, Frémery promoted the application of the 'new' chemistry in an industrial and medical context. In 1808, Frémery finished a Dutch translation of Jean Antoine Chaptal's (1756-1832) book *La Chimie appliquée aux arts* which Reinwardt had begun but never managed to finish owing to his various administrative and academic duties in Harderwijk.³¹

Before the General Committee reached Java by the end of April 1816, the convoy made two long stops, one on the Cape Verde islands and the other at Cape of Good Hope. During both layovers, Reinwardt studied the local climate and geography as well as the political and economic situation at the two places. The manifold observations and measurements recorded in his travel diary comprised detailed information on the fertility of the soil, the number of cattle, descriptions of unknown plants, and the quality of local agricultural products such as cheese, chickens, and oranges. Reinwardt summarized his observations in a letter to his friend Van Marum in Haarlem as follows: "The vegetation is entirely unknown to me, so you easily understand that I was stunned by that when I set foot ashore."³² Besides his own observations, he frequently contacted and exchanged information with local gardeners, plantation owners, apothecaries, missionaries, farmers, and civil servants.³³ These local contacts also allowed him to carry out a longer tour of the hinterland of Cape Town.³⁴

Reinwardt's draftsmen Adrianus Johannes Bik (1790-1872) and his brother Jannes Theodorus Bik (1796-1875) used such short trips to document the landscape and vegetation in the form of watercolour sketches. Reinwardt's notes also included a detailed description of how the Cape's economy could be further improved. Since the region did not possess enough fossil fuels, it would hardly be possible to establish a processing industry there, so Reinwardt advised local administrators to build new roads and bridges to stimulate the cultivation and trade of cash crops, fodder plants and

³¹ MM The Hague, letter Reinwardt to Meerman, 25 Augustus 1807.

³² NHA Haarlem, 529: Archive Martinus van Marum, letter Reinwardt to Van Marum, Port Praya, 25 November 1815: "De vegetatie is geheel vreemd, en gij begrijpt ligt hoezeer mij dat trof toen ik voet aan waal zette."

³³ See for instance, UB Leiden, BPL 2425, inv. 5, entry 9 January 1816.

³⁴ Ibidem, entries 16 and 17 January 1816 and KB The Hague, 121, B 8, letter Reinwardt to De Vries, Kaapstadt, 10 January 1816.

wood.³⁵ This brief analysis of Reinwardt's early entries in his travel diary allows a first glance on his work in the field. In order to fulfil his instructions, Reinwardt and his helpers heavily depended on the knowledge and skills of a large number of people with local knowledge.

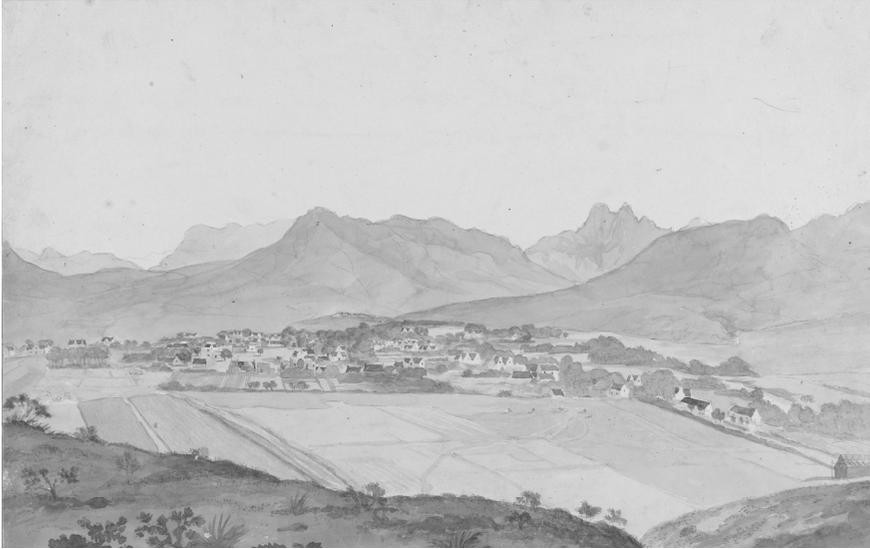


Figure 24: Watercolour sketch of the hinterland of the Cape by Reinwardt's draughtsman Adrianus Johannes Bik (1790-1872).

Approaching the Social Worlds of Batavia

Reinwardt and the other members of the General Committee arrived in Batavia at the end of April 1816. Since the transfer of the colonies from the British to the Dutch colonial administrators took longer than expected, Reinwardt had no official duties for several months.³⁶ He therefore used his time to engage with Batavia's administrative elite. Many of them fostered the hope that the new colonial government would appoint them to high administrative positions. For Reinwardt, contact with many of these persons was thus an ambiguous endeavour. He depended on their administrative

³⁵ UB Leiden, BPL 2425, inv. 5, entry 3-9 February 1816.

³⁶ For a detailed overview of the complex negotiations between British and Dutch administrators *in situ*, see N. Tarling, *Anglo-Dutch rivalry in the Malay world 1780-1824* (London: Cambridge University Press, 1962); and P.H. van der Kemp, *Oost-Indië's herstel in 1816* ('s-Gravenhage: Martinus Nijhoff, 1911), 63-114; and Van der Kemp, *De teruggave der Oost-Indische koloniën*, 334-401.

experience and social networks, but at the same time he had to maintain a critical distance, because many of them saw any change in the colony's administration as a threat to their economic interests and political influence. It is therefore not surprising that his letters to the Netherlands sometimes contained critical comments about the lifestyle of Batavia's wealthy elite. In a letter to De Vries, Reinwardt in particular complained about the daily life of women who were always surrounded by a large number of servants and slaves.³⁷

Reinwardt was first lodged in the spacious house of the IJsseldijk family at Rijswijk, ten kilometres south of the old town of Batavia. The IJsseldijks belonged to a clique of conservative families who had played an important role in the colonial bureaucracy in Java since the end of the eighteenth century. Wouter Hendrik van IJsseldijk (1755-1817) had served as district officer (*resident*) in Yogyakarta in central Java and later as extraordinary member of the Council of the Indies (Raad van Indië). Almost all these families possessed large private estates in the hinterland of Batavia. As a so-called 'oudgast'³⁸ IJsseldijk was rather critical about all changes in the colonial administration. He instead adhered to the ideals and administrative practices of the former Dutch East India Company.³⁹

Nonetheless, together with the IJsseldijks and other colonial administrators Reinwardt carried out short field trips in the vicinity of Batavia to such places as the Kampung Molucca, Cilodong, Kramat, Grogol and Tangerang. In Kramat, Reinwardt visited a coffee plantation belonging to one of IJsseldijk's friends.⁴⁰ In Grogol and Tangerang, he inspected an oil and sugar mill and an indigo factory.⁴¹ The sugar mills were often rented and run by Chinese.⁴² Until the introduction of the cultivation system (*cultuurstelsel*)

³⁷ See, for instance, KB The Hague, 121 B 8, letter Reinwardt to De Vries, Tjilodong, 25 May 1816.

³⁸ The Dutch term 'oudgast' refers to a clique of high-ranked and privileged East India Company officials who had established powerful family networks in Java. Even after the fall of the East India Company many of them stayed on the island and tried to secure their privileges.

³⁹ Stevens, *Van der Capellen's koloniale ambitie*, 78-83; and, more generally, J.G. Taylor, *The social world of Batavia. Europeans and Eurasians in colonial Indonesia* (Madison: University of Wisconsin Press, 2009), 71-75, 119-23.

⁴⁰ UB Leiden, BPL 2425, inv. 5, entry 30 April and 1 May 1816 and entries 6-9 May 1816.

⁴¹ *Ibidem*, entry 12 July 1816 and 17 and 18 July 1816.

⁴² G.R. Knight, "Estates and plantations in Java 1812-1834" (PhD thesis, University of London, 1968), 55-56.

in 1830, these wealthy private landowners and entrepreneurs formed an important group in Java. Various influential liberal thinkers and administrators in the Netherlands and in Batavia—Van der Capellen and Elout were two of them—had long believed that such private agricultural enterprises would be essential to Java's development as a financially rewarding enterprise. In the course of their stay on Java, however, the General Commissioners gradually changed their mind, especially after they heard reports about inhumane work conditions that sometimes sparked local uprisings. In 1819, they decided to forward this issue to Willem I in the Netherlands, but he was reluctant to make a decision with the result that later Elout and Van der Capellen were heavily criticized for their laxness in stimulating private agricultural and other entrepreneurial activities in Java.⁴³

In this early stage, Reinwardt also met another influential official in the social world of Batavia, Nicolaus Engelhard (1761-1831), the former governor of Java's Northeast Coast and the owner of large estates in Buitenzorg and the Preanger region.⁴⁴ Engelhard had amassed a large amount of natural historical items, books, drawings, antiquities and manuscripts which he stored in his spacious house at Rijswijk.⁴⁵ From Engelhard, Reinwardt eventually received the botanical and zoological notes of the French naturalist Jean Baptiste Leschenault de la Tour (1773-1826), who had stayed at Engelhard's house in Semarang between 1803 and 1806.⁴⁶

Reinwardt also became acquainted with the president of the Batavian Society of Arts and Sciences (Bataviaasch Genootschap van Kunsten en Wetenschappen), the military commander Balthazar Frederik Wilhelm, baron von Lutzow (†1822). Since its foundation in 1778, the society had offered Batavia's small merchant elite an important platform to come together and converse about various topics.⁴⁷ Like its counterparts in the Netherlands, the Batavian Society occasionally launched essay competitions

⁴³ Knight, "Estates and plantations," 18; Stevens, *Van der Capellen's koloniale ambitie*, 113-62; and B. de Prins, *Voor Keizer en Koning. Leonard du Bus de Gisignies. 1780-1849. Commissaris-generaal van Nederlands-Indië* (Amsterdam: Uitgeverij Balans, 2002), 104-10.

⁴⁴ Knight, "Estates and plantations," 137.

⁴⁵ F. de Haan, *Priangan. De Preanger-Regentschappen onder het Nederlandsch Bestuur tot 1811*, vol. I (Batavia: Bataviaasch Genootschap van Kunsten en Wetenschappen, 1910), 85.

⁴⁶ UB Leiden, BPL 2425, inv. 5, entry 13-17 May 1816; and J. Bastin, *The natural history researches of Dr Thomas Horsfield (1773-1859). First American naturalist of Indonesia* (Singapore: Oxford University Press, 1990), 20-22.

⁴⁷ Taylor, *The social world of Batavia*, 85-87; and H. Groot, *Van Batavia naar Weltevreden. Het Bataviaasch Genootschap van Kunsten en Wetenschappen, 1778-1867* (Leiden: KITLV Uitgeverij, 2009), 63-155.

Reinwardt noted in his diary that the two of them had already added 130 new plant specimens to his private herbarium.⁵⁰ Reinwardt also carried out barometric measurements to calculate the height of nearby mountains. These measurements were necessary to calibrate other instruments in the new environment. In order to be able to compare the results with later measurements, Reinwardt noted the results in his travel journal.⁵¹

During the first months of his stay in Java, the General Committee and Reinwardt were confronted with a dilemma. On the one hand, they depended heavily on the expertise and influence of individuals and families who before the reforms of Daendels had played an influential role in the colony's administration. On the other hand, the General Committee and Reinwardt had to distance themselves from these so-called 'oudgasten' who feared that changes in the colony's administration would further erode their family's wealth, status and privileges. Many of them had made fortunes by leasing large parcels of land in the hinterland of Batavia where they forced Javanese peasants to cultivate crops such as coffee and rice.

Organizing Batavia and the Surrounding Areas

In August 1816, British Lieutenant-Governor John Fendall (1762-1825), handed Java over to the Dutch.⁵² One day after the change of regime, Reinwardt left the house of the IJsseldijk family and moved to a place close to the houses of Elout and Van der Capellen in Rijswijk. In the months to come, Reinwardt was a frequent guest in the houses of high-ranking officials.⁵³ In October 1816, the General Committee informed the subordinate district officers in a printed circular letter about Reinwardt's appointment as Director of Agriculture, Industry and Arts. From now on, the provincial administrators were obliged to supply Reinwardt and his helpers with accurate statistical and other information.⁵⁴

583-84; and M.-O. Scalliet, "Beelden van Oost-Indië: de collectie Bik in het Rijksprentenkabinet," *Bulletin van het Rijksmuseum* (2001): 345-8.

⁵⁰ UB Leiden, BPL 2425, inv. 5, entry 29 June 1816.

⁵¹ *Ibidem*, entry 2 July 1816.

⁵² *Ibidem*, entry 19 August 1816.

⁵³ KB The Hague, 121 B 8, letter Reinwardt to De Vries, Rijswijk, 14 September 1816.

⁵⁴ NA The Hague, Ministerie van Koloniën, 1814-1849, inv. 2435, decision 23 October 1816.

In the months after his appointment as Director of Agriculture, Industry and Arts, Reinwardt hardly found time to continue his investigations of Java's nature and geography. While Elout and Van der Capellen tried to get an overview of the political and economic situation in the various districts of Java,⁵⁵ Reinwardt started reorganizing the school and public health systems in Batavia and the surrounding areas. In the optic of Reinwardt, who had been socialized in a culture where improvement, standardization and measurement formed the core tools to improve society and economy, the situation on Java seemed more than chaotic.⁵⁶ In order to improve the situation, Reinwardt obliged district officers in the different provinces to look for and propose qualified candidates who could be employed as teachers in government schools. Moreover, he installed several school inspectors (*schoolorpzieners*) who were asked to survey schools in their respective district. The General Commissioners also followed Reinwardt's advice to establish a primary school in Weltevreden, ten kilometres south of the old centre of Batavia. According to Reinwardt's plans, four permanently employed teachers were needed to teach around 160 European pupils. Indigenous pupils were not allowed to enter the school. Since the school building had to be entirely renovated, the school was not opened before 1817.⁵⁷ Later the General Commissioners also agreed to establish similar elementary schools in Gresik, Surabaya, Semarang and in downtown Batavia.⁵⁸

Reinwardt also initiated the reopening of the military school in Semarang. The central aim of the school, which had been founded by VOC merchants in 1782, was to prepare young candidates for service in the colonial army and navy. The school had also played a crucial role in the mapping of Java after the Fourth Anglo-Dutch war. Students and teachers at the school had prepared a large number of detailed hydrographical and topographical maps of Java's coastal areas.⁵⁹ Like its counterparts in the

⁵⁵ R. van Niel, *Java's Northeast Coast, 1740-1840. A Study in colonial encroachment and dominance* (Leiden: CNWS Publications, 2005), 293.

⁵⁶ De Vriese, *Reinwardt's reis*, 249.

⁵⁷ J. van Lennep, ed., *Het leven van Mr. Cornelis van Lennep en Mr. David Jacob van Lennep*, vol. 4, *Het Leven van D.J. van Lennep* (Amsterdam: Frederik Muller, 1862), 133, letter Elout to David J. van Lennep, 4 July 1817.

⁵⁸ NA The Hague, Ministerie van Koloniën, 1814-1849, inv. 2371, decision commissarissen generaal, 16 January 1818, no. 29.

⁵⁹ G. Knaap, et al., *Grote Atlas van de Verenigde Oost-Indische Compagnie, 2: Java en Madoera* (Voorburg: Asia Maior/Atlas Maior, 2007), 34.

Netherlands, the school's curriculum covered a broad array of subjects.⁶⁰ Apart from more practical courses, its lecturers also offered courses in cartography, hydrography and physics, European and indigenous languages, and history.⁶¹ After the school opened its doors in 1818, Reinwardt remained affiliated with the institute as a member of the board until his departure five years later.⁶²

In order to improve the health care system in Java, Reinwardt established a municipal committee for civilian health care in Batavia. The new institution was supposed to work alongside the already existent military medical service which had been established at the end of the eighteenth century.⁶³ The Batavian committee was ordered to develop rules for day-to-day medical practice in Batavia and the surrounding areas, a function similar to that of medical committees in the Netherlands. Moreover, its members were asked to examine apothecaries, surgeons and medical doctors and to survey their work in colonial hospitals.⁶⁴ Reinwardt hoped that his efforts would help to change the deplorable situation he found. As he described it:

Neither laws, nor one single authorized committee helped them to choose truly qualified medical doctors; prejudices, the coincidentally successful result of an empirical treatment, or other groundless reasons often determined their choice; unbridled quackery was unimpededly allowed to control the life of many inhabitants and more than one example of this detrimental development has not remained unknown to the [colonial] administration.⁶⁵

⁶⁰ For more information on the military school established in Delft in 1814, see G.P.J. Verbong, "Gescheiden paden 1813-1842," in *Geschiedenis van de Techniek in Nederland. De wording van een moderne samenleving, 1800-1890*, vol. 5, *Techniek beroep en praktijk* ed. H.W. Lintsen, et al., 53-56 (Zutphen: Walburg Pers, 1994).

⁶¹ For the exact curriculum, see De Vriese, *Reinwardt's reis*, 262-71.

⁶² De Vriese, *Reinwardt's reis*, 250-1 and UB Leiden, BPL 2425, inv. 5, entry August 1818.

⁶³ A.H.M. Kerkhoff, "The organization of the military and civil medical service in the nineteenth century," in *Dutch Medicine in the Malay Archipelago 1816-1942*, ed. G.M. van Heteren, et al. (Amsterdam: Radopi, 1989), 9-12.

⁶⁴ De Vriese, *Reinwardt's reis*, 251-2.

⁶⁵ *Ibidem*, 251: "Wetten, nog eenige daartoe bevoegd collegie was hun behulpzaam in het kiezen van waarlijk bekwame geneeskundigen; vooroordeelen, de toevallig gelukkige uitkomst eener empirische handeling, of andere even zoo ongegronde redenen, bepaalden veelal deze keuze; eene onbeteugelde kwakzalverij mogt onverhinderd over het leven van

This brief analysis of Reinwardt's involvement in the reorganization of the public health and educational system in Java has shown that the naturalist played a leading role within the Dutch new colonial administration. Following the practice of administrators in the Netherlands, Reinwardt placed all schools and medical practices in Java under central governmental control, and to ensure the quality of the services delivered he appointed special inspectors to examine and survey the daily practice of teachers and physicians throughout the entire island. The following section will show how Reinwardt's influential position facilitated another project that was meant to improve the colony's agriculture and economy.⁶⁶

Establishing a Botanical Garden in Buitenzorg

In early 1817, Reinwardt suggested that the General Commissioners establish a botanical garden next to the palace of the Governor General in Buitenzorg. According to Reinwardt, a favourable climate and volcanic soil made Buitenzorg an ideal environment for the cultivation of economic, medicinal and exotic plants from all over the Archipelago. These could then be shipped to similar gardens in Europe and other colonies. Moreover, the nearby Ciliwung River would supply the garden with sufficient water.⁶⁷ In January 1817, Reinwardt wrote to Van Marum:

Owing to more rain and a better climate here in Buitenzorg, the cultivation of plants works out much better than in Batavia; I have already made plans with a gardener to sow and cultivate uncommon plants in wooden boxes which can

vele ingezetenen beschikken, en meer dan een droevig voorbeeld dezer schadelijke uitwerking is zelfs aan het Bestuur niet onbekend gebleven."

⁶⁶ For a detailed discussion of the reforms in the Netherlands, see J. Kloek and W. Mijnhardt, "The well-being of society: education," in *Dutch culture in a European perspective*, vol. 2, *1800: Blueprints for a national community*, ed. J. Kloek, et al., 243-64 (Assen: Royal van Gorcum, 2004); and J. Kloek and W. Mijnhardt, "The well-being of society: poor relief and health care," in *Dutch culture in a European perspective*, vol. 2, *1800: Blueprints for a national community*, ed. J. Kloek, et al., 265-84 (Assen: Royal van Gorcum, 2004).

⁶⁷ The request by Reinwardt and the subsequent decision taken by the General Commissioners are reprinted in M. Treub, *Geschiedenis van 's Lands Plantentuin te Buitenzorg. Eerste gedeelte* (Batavia: Landsdrukkerij, 1889), 2-4.

be dispatched to Europe if a suitable person happens to be available to look after the plants during the journey.⁶⁸

Three months later the colonial government offered Reinwardt a suitable piece of land and authorized him to hire James Hooper as gardener. He received a monthly salary of 150 guilders.⁶⁹ Since Hooper had been trained at Kew gardens—one of the centres for botanical research in early nineteenth-century Europe—Reinwardt was more than pleased when Hooper accepted the position. Hooper remained affiliated with the garden in Buitenzorg until 1830.⁷⁰

Beside Hooper, Reinwardt could draw upon another plant expert: the German physician Carl Ludwig Blume, who had studied medicine in Leiden under Sebald Justinus Brugmans and who arrived in Java in late 1818.⁷¹ Impressed by Blume's floral expertise, Reinwardt quickly affiliated him with the botanical garden and his Department for Agriculture, Arts and Sciences,⁷² and even invited him to live in his house in Buitenzorg.⁷³ Blume's subsequent appointment as inspector for the smallpox vaccination allowed Blume to travel around and to investigate the floral world in the hinterland of Batavia.⁷⁴ During these journeys, Blume collected a large number of living and dried plants and seeds which eventually formed the basis for a series of

⁶⁸ NHA Haarlem, 529: Archive Martinus van Marum, letter Reinwardt to Van Marum, Buitenzorg, 1 January 1817: "Hier op Buitenzorg, alwaar wegens de meerdere regen en het beter klimaat het kweken veel beter gaat dan te Batavia, heb ik reeds met de tuinman een plan gemaakt, om eenige merkwaardige gewassen in houten kasten te saaijen en te planten, en deze alzo, wanneer daartoe eene geschikte gelegenheid en een persoon is, die gedurende de reis deze verzorgen kan, naar Europa over te zenden."

⁶⁹ NA The Hague, Ministerie van Koloniën, 1814-1849, inv. 2367. Decision General Commissioners 15 April 1817, no. 36.

⁷⁰ Th. F. Rijnberg, 's *Land Plantentuin, Buitenzorg 1817-1992. Kebun Raya Indonesia Bogor* (Enschede: Johanna Oskamp, 1992), 23.

⁷¹ NHA Haarlem, 529: Archive Martinus van Marum, letter Reinwardt to Van Marum, Batavia 12 December 1818. For a concise biography of Blume see A. den Ouden, "C.L.Blume, periode 1826-1832" (master's thesis, Leiden University, 1979), 7-8.

⁷² J. MacLean, "Carl Ludwig Blume and the Netherlands Indies," *Janus. Revue Internationale de l'Hisotire des Sciences, de la Médecine, de la pharmacie et de la technique* 66 (1979): 16-17.

⁷³ NA The Hague, Ministerie van Koloniën, 1814-1849, inv. 2445. Decision of the Governor-General, 1 February 1819, no. 18.

⁷⁴ For the exact collection localities of Blume, see M.J. van Steenis-Kruseman, *Malaysian plant collectors and collections being a cyclopedia of botanical exploration in Malaysia* (Jakarta: Noordhoff-Kolff N.V., 1950), 64-66.

botanical studies such as the *Tabellen en platen voor de Javaansche orchideeën* (Tables and plates of Javanese orchids, 1825), the *Bijdragen tot de Flora van Nederlandsch Indië* (Contributions to the flora of the Netherlands Indies, 1825-27), and the *Enumeratio plantarum Javae* (1827-28). These publications, which were published in Batavia and Leiden, comprised botanical descriptions of various plant families in the form of long lists and a few illustrations. They were partly written in Latin and partly in Dutch.⁷⁵

The actual construction of the garden started in May 1817. According to an early schematic map, the garden area was divided into different sections. In addition to beds and fields for local and European (cash) crops, herbals, flowers and trees, the garden possessed storage rooms for harvested crops, agricultural tools and accommodations for the indigenous workers. According to the annual budget of the garden made by Reinwardt in 1822, the garden employed around sixty-five local helpers who received three guilders a month. In order to facilitate the reworking of the soil, buffalos and cows were held in stables close to the garden area. Apparently, the garden was joined to the Governor-General's small private zoo where pigs, an elephant, a rhino, and horses were held.⁷⁶ The administration of both institutions was separated in 1822.⁷⁷

According to a catalogue compiled by Blume in 1823—one year after Reinwardt had returned to the Netherlands—the garden comprised more than nine hundred plant species. While the majority of the plants came from the mountainous hinterland of Batavia and the Moluccas, the garden also exchanged plants with gardens in China, Japan, Brazil, Bengal, and France. In his introduction to the catalogue, Blume noted that almost all attempts to grow foreign seeds turned out to be a success.⁷⁸ As Reinwardt had written to Van Marum in February 1818:

We are progressing nicely with the garden. I am sure that it will have a beautiful layout, such as only a few have in Europe. From *China* I have received many nice plants.

⁷⁵ For more information on the history of these publications, see C.G.G.J. van Steenis, "Dedications," in *Flora Malesiana*, vol. 10, ed. C.G.G.J. van Steenis, et al., 9-12, 23-5 (Batavia: Nordhoff-Kolff, 1989); and Den Ouden, *C.L. Blume*, 33-62.

⁷⁶ Rijnberg, 's *Land Plantentuin*, 136-9.

⁷⁷ M. Treub, "Korte geschiedenis van 's Lands Plantentuin," in 's *Lands Plantentuin te Buitenzorg, 18 Mei 1817-18 Mei 1892* (Batavia: Landsdrukkerij, 1892), 6-7.

⁷⁸ C.L. Blume, *Catalogus van eenige der merkwaardigste zoo in- als uit-heemsche gewassen te vinden in 's Lands Plantentuin te Buitenzorg* (Batavia: Landsdrukkerij, 1823), 4.

From *Japan* I was sent some, but they have suffered so much during the journey that only a few will remain alive.⁷⁹

The various links between the different colonial botanical gardens in Asia was also mirrored in the assigned plant names. Reinwardt named, for instance, one of the new plant families—the *Wallichia*—after the superintendent of the botanical garden in Calcutta, Nathaniel Wallich (1786-1854).⁸⁰

The garden also included plants from the Netherlands. In early July 1817, for instance, Reinwardt requested that Van Marum send him seeds of flowers, trees, herbals and ‘oecconomic’ plants. Reinwardt explicitly asked for, among others, tulip bulbs, buckwheat, flax, birches and fruit trees.⁸¹ Reinwardt in turn regularly sent Van Marum bundles of plant sketches, plant seeds and small boxes with living plants for his own garden, Plantlust, as well as for gardens in Amsterdam, Gent, Groningen, Utrecht and Leiden.⁸²

This overview of Reinwardt’s garden project sheds light on the garden’s hybrid function. Buitenzorg served as a place where Reinwardt and his assistants could cultivate and acclimatize the economically rewarding crops and plants they received from various parts of the far-flung Malay Archipelago and sister institutions in the Netherlands, France, China, Japan, Brazil and India. Of particular importance were the economic gardens in the British Empire, the number of which had increased tremendously as the empire expanded in the second half of the eighteenth century. Triggered by the growing need for timber and other natural resources after the Seven

⁷⁹ NHA Haarlem, 529: Archive Martinus van Marum, letter Reinwardt to Van Marum, Buitenzorg, 6 February 1818: “Met den hortus hier vorderen wij al sterk. Dit zal er zeker een zo schone aanleg worden, als er zelfs in Europa weinigen bestaan. Van *China* heb ik verscheiden fraaie planten ontvangen. Van *Japan* waren mij ook eenigen toegezonden doch deze hebben op reis zo veel geleden dat er slechts weinig van zal in het leven blijven.”

⁸⁰ C.L. Blume, *Catalogus van eenige der merkwaardigste zoo in- als uit-beemsche gewassen te vinden in 's Landsplantentuin te Buitenzorg* (Batavia: Landsdrukkerij, 1823), 11. For a recent analysis of Wallich’s hybrid career, see D. Arnold, “Plant capitalism and Company science: The Indian career of Nathaniel Wallich,” *Modern Asian Studies* 42:5 (2008): 899-928.

⁸¹ NHA Haarlem, 529: Archive Martinus van Marum, letter Reinwardt to Van Marum, Batavia 1 July 1817.

⁸² See, for instance, NHA Haarlem, 529: Archive Martinus van Marum, letter Reinwardt to Van Marum, Buitenzorg, 9 April 1817; *ibidem*, Batavia 1 July 1817; *ibidem*, Buitenzorg, 10 December 1817; *ibidem*, Bandung, 16 August 1819; *ibidem*, Batavia 25 February 1821.

Years' War, British administrators had set up gardens in Calcutta, Madras, Samulcottah, and Bombay in India; in Colombo, Sri Lanka; at the Cape of Good Hope; and on the Atlantic island of St. Helena, and St. Vincent in the West Indies.⁸³ Under the aegis of Joseph Banks, the British garden network developed into a highway for the exchange and acclimatization of economically rewarding and exotic plants.⁸⁴ By joining these growing networks, the garden in Buitenzorg gradually emerged as a new nodal point for botanical investigations in Southeast Asia.⁸⁵

Yet, beside the acclimatization of plants, the garden in Buitenzorg also formed an important site for Reinwardt and his helpers to discuss, order and describe the plants which they had collected during their field trips in Java. Blume even started to compile his own collection of dried plants. When Reinwardt discovered this effort to establish a private herbarium, he stepped in and impounded the collection on behalf of the colonial government. But in the end, Reinwardt's attempts to maintain a monopoly on the interpretation of Java's vegetation failed. While Reinwardt spent most of his time on 'improving' the emerging colonial state, Blume continued enriching his herbarium and even started to prepare publications on Java's flora, which led to increased tension between Reinwardt and Blume. When in 1820 Reinwardt discovered that Blume wanted to dispatch plants to the Netherlands under his own name, Reinwardt sought the assistance of the colonial government. The governor general confirmed Reinwardt's claims and confiscated Blume's herbarium and placed it under Reinwardt's

⁸³ For a history of the emergence and function of the British colonial botanical gardens, see R.H. Grove, *Green imperialism. Colonial expansion, tropical island Edens and the origins of environmentalism* (Cambridge: Cambridge University Press, 1995), 309-48; and Drayton, *Nature's government*, 106-24. For an intriguing analysis of the Ceylonese case, see S. Sivasundaram, "Islanded: Natural history in the British colonization of Ceylon," in *Geographies of nineteenth century science*, ed. D.N. Livingstone and Charles W.J. Withers, 123-48 (Chicago: University of Chicago Press, 2011).

⁸⁴ Fa-ti Fan reminds us that botanical gardens were not the only places where plant specimens were gathered and exchanged in the decades around 1800. In his analysis of the port city of Canton, he stresses the importance of markets and the gardens of local merchants as essential collecting points; see Fan, *British naturalists in Qing China*, 11-39. For an overview of Banks' collectors network, see D. Mackay, "Agents of empire: the Banksian collectors and evaluation of new lands," in *Visions of empire. Voyages, botany, and representations of nature*, ed. D.P. Miller, et al., 38-57 (Cambridge: Cambridge University Press, 1996).

⁸⁵ Goss, *The Floracrats*, 27-31.

supervision.⁸⁶ This policy was later codified in a set of instructions for Blume, who stayed on in Java as director of the botanical garden until 1827.⁸⁷

Collecting as Collaborative Enterprise

Owing to his many administrative obligations, Reinwardt hardly found time to collect natural historical items himself. As the following analysis will show, collecting and preparing specimens was a collaborative endeavour that spanned the entire Malay Archipelago. Beside his own collectors who accompanied him on his travels, he could count on various individuals who sent specimens for free or offered specimens for purchase. In December 1816, Reinwardt for instance received a cage which contained a rare bird, which local people called *boerung rankong*. The sender—a colonial civil servant—explained in the attached letter that a local hunter in the mountainous hinterland of Batavia had given him the bird as a present. He further expressed his hopes that the bird would enrich Reinwardt's collection.⁸⁸ One year later, Reinwardt agreed to buy a collection of shells and horns from a European collector in Semarang for more than 3000 Indies guilders.⁸⁹ And one of the highlights of Reinwardt's first shipment to the Netherlands in September 1817 was the skeleton of a crocodile which locals had caught for him in the harbour of Batavia.⁹⁰

Reinwardt's most important external collectors, however, were Jacob d'Arnoud van Boeckholtz and the pensioned German military August Franz Treffz (1770-1819). Boeckholtz was a special emissary whom the General Commissioners had sent to Borneo in order to secure the Dutch influence there. Since Governor-General Daendels had abandoned the Dutch post in Banjarmasin a couple of years before, the British now considered the settlement part of their empire and declined to return it to the Dutch.

⁸⁶ NHA Haarlem, 529: Archive Martinus van Marum, letter Reinwardt to Van Marum, Buitenzorg, 16 April 1820.

⁸⁷ NA The Hague, collectie Reinwardt, inv. 3. Extract uit het Register der Handelingen en Resolutien van den Gouverneur Generaal in Rade, Batavia, 11 June 1822.

⁸⁸ NA The Hague, collectie Reinwardt, inv. 4, letter Doorninck to Reinwardt, Buitenzorg, 3 December 1816.

⁸⁹ Ibidem, letter Blok to Reinwardt, Semarang, 16 December 1817.

⁹⁰ Bataviasche Courant, 5 September 1818, no. 36. The article is reprinted in De Vriese, *Reinwardt's reis*, 223-24.

Tenacious negotiations and violent skirmishes that also involved local rulers were the consequence.⁹¹

Besides his diplomatic duties, Boeckholtz collected various natural historical items for Reinwardt. An inventory for a shipment in September 1817 lists two young living orang-utans, two prepared bear skins, six monkeys, a box with various rock, clay and coal samples, and a large number of clothes, weapons and other ethnographical items. Boeckholtz's brief catalogue includes additional information such as the provenance of each item. Regarding the orang-utans, he noted, for instance:

[F]rom the Daijak and there called *ka-hi-oh*. They are still very young but are from the largest sort. They have been caught together with their mothers, but since they could not be overmastered and always bit through the ropes they have been bound with, one was obliged to kill them [the mothers] and be satisfied with the young ones.⁹²

In an accompanying letter, Boeckholtz described the difficulties he faced in the field. His lack of expertise as a naturalist was compounded by the scarcity of reliable and experienced local helpers for tours to the mountainous hinterland of Borneo. Boeckholtz often either received the wrong type of animals or the birds, snakes, cats, and monkeys collected died before they arrived in Banjarmasin.⁹³

Reinwardt's other collector, Treffz, was a former member of the so-called Kapregiment, a group of around 3200 soldiers which the duke of Wuerttemberg had leased to the VOC in 1786 in order to secure its outposts in Ceylon, the Coromandel Coast, Java, Celebes and at the Cape. Treffz reached the Netherlands Indies in 1791 and, after the Kapregiment was

⁹¹ Tarling, *Anglo-Dutch rivalry in the Malay world*, 86-87; and G. Irwin, *Nineteenth-Century Borneo. A Study in diplomatic rivalry* ('s Gravenhage: Martinus Nijhoff, 1955), 35-51.

⁹² NA The Hague, collectie Reinwardt, inv. 4, Lijst van zoodanige artikelen des door den onder-geteekenden voor den Heere C.G.C. Reinwardt te Banjermassing zijn verzamelden ter gedeeltelijke voldoening aan zijn Hoog Geleerden deswegens gedane aanvragen, benevens eenige korte aantekeningen. Sourabaija, 4 September 1817: "[U]it de Daijak en aldaar ka-hi-oh genoemd. Zijnde nog zeer jong doch van de grootste soort. Zij zijn samen met hunne moeders gevangen, doch daar deze niet te bedwingen waren en telkens weer de touwen waarmede zij gebonden waren in stukken beten, is men verpligt geweest dezelve te doden en zich eenlijk met de jongen te vergenoegen."

⁹³ Ibidem, letter Boeckholtz to Reinwardt, Sourabaija, 4 September 1817.

dissolved, held various positions within the Dutch colonial army. Upon the death of his wife in 1818, Treffz intended to return to Württemberg before deciding to stay in Java and work as a collector for Reinwardt on the island of Celebes.⁹⁴



Figure 26: Field sketch of a Flying lizard, probably drawn by Gerrit L. Keultjes (1786-1821).

⁹⁴ J. Prinz, *Das württembergische Kapregiment 1786-1808. Die Tragödie einer Söldnerschar* (Stuttgart: Von Strecker und Schröder, 1932), 4-78.

In the summer of 1819, Reinwardt received five boxes with natural historical items. The boxes contained seven living monkeys (*pararang*), three snakes, one gecko, a chicken, a dried fish, two agamid lizards, and one bottle with several prepared flying lizards.⁹⁵ In the letter that accompanied the shipment, Treffz provided Reinwardt with more information about his collecting practices and the natural habits of the collected animals.⁹⁶ In September 1819, Treffz informed Reinwardt that a collection of skulls of four rebellious local chieftains, various weapons and clothes were awaiting shipment in Makassar.⁹⁷

This brief sketch of Reinwardt's collector network reveals the complexity of collecting natural historical items in the field. By the time these items reached the cabinets in the Netherlands, they had passed through the hands of almost countless local hunters, colonial civil servants, sailors and harbour workers. Vital information on the natural habitat of living animals was often provided by local people. Even 'collectors' such as Boeckholtz were thus highly dependent on indigenous collectors and their expertise.

Shipping Specimens to the Netherlands

According to his instructions, Reinwardt regularly forwarded items to the State Cabinet at the Trippenhuys in Amsterdam. The first boxes left Batavia in September 1817 in the warship *Amsterdam*. According to an article published in the *Bataviasche Courant*, the boxes were filled with prepared animal skins, insects, birds, skeletons, and other anatomical items which had been preserved in bottles filled with alcohol. The boxes also comprised a large collection of minerals, shells and corals from the Moluccas. Some items even originated from China, Bengal and elsewhere.⁹⁸

The specimens that Reinwardt had received from Boeckholtz formed an essential part of Reinwardt's second shipment to the Netherlands. The boxes of the second shipment were spread over two ships which left Batavia in late 1818 and in early 1819. According to an article in the *Bataviasche Courant*, the skeleton of a large tiger, a kangaroo from Australia, and samples of around 140 bird species were part of a shipment of plant seeds and around

⁹⁵ NA The Hague, collectie Reinwardt, inv. 4: Lijst der goederen bestaande in natuurlijke voorwerpen verzonden van Macasser naar Sourabija, 23 July 1819.

⁹⁶ Ibidem, letter Treffz to Reinwardt, Makassar, 23 July 1819.

⁹⁷ Ibidem, letter Treffz to Reinwardt, Makassar, 4 September 1819.

⁹⁸ *Bataviasche Courant*, 5 September 1818 reprinted in *De Vriese*, 223-4.

80 living plants which had been specially cultivated for the medical gardens of the Universities of Leiden, Utrecht and Amsterdam. Other boxes contained sketches of Javanese plants by Adrianus Johannes Bik, a large landscape painting, and ethnographical items such as weapons and clothes.⁹⁹

In the end, none of these items reached the Netherlands. All three ships on which the material had been loaded between late 1817 and early 1819 went down close to the Cape. When Reinwardt first heard rumours about the loss of the *Amsterdam* shipment he wrote to Van Marum:

This loss is irretrievable for the Cabinet; I say irretrievable, not because the same specimens could not be collected again, but because there is so much other work to be done which needs joy, time, and workforce, and because of the surprisingly great difficulties which the collection of the dispatched items have caused.¹⁰⁰

The loss of a second shipment one year later was mentioned in an article in the *Bataviasche Courant*. The anonymous author of the brief article expressed his hope that the loss of the second shipment would not weaken the colonial government's support of Reinwardt's collecting activities.¹⁰¹

In contradiction to his instructions, and despite his actions towards Blume, Reinwardt did not exclusively ship natural historical items to the cabinet in Amsterdam. In June 1819, he offered (via Van Marum) bird skins and mammals to the Dutch Society of Sciences (Hollandsche Maatschappij van Wetenschappen) and geological specimens to Teyler's Museum in Haarlem.¹⁰² He also received requests from other learned societies such as the *Zeeuwsch Genootschap van Wetenschappen* (Zeeland Society of Sciences) in

⁹⁹ Ibidem, 30 January 1819 reprinted in De Vriese, 225-7.

¹⁰⁰ NHA Haarlem, 529: Archive Martinus van Marum, letter Reinwardt to Van Marum, Batavia, 20 May 1818: "Dit verlies is voor het Kabinet onherstelbaar; ik zeg onherstelbaar, niet om dat dezelfde voorwerpen niet nog wederom zouden kunnen verkregen worden, maar omdat nog zoo veel ander werk te doen is, waartoe lust, tijd en arbeid vereischt wordt, en om de verbazende moeite die de inzameling van het gezondene veroorzaakt heeft."

¹⁰¹ *Bataviasche Courant*, 17 April 1819, no. 16.

¹⁰² NHA Haarlem, 529: Archive Martinus van Marum, letter Reinwardt to Van Marum, Banjaran, 18 June 1819.

Middelburg.¹⁰³ In a letter to Van Marum, Reinwardt was rather astonished by this request:

The Zeeland Society has made me correspondent and asks me to dispatch items for its cabinets. It will be difficult to meet this and many other requests, which don't stop burdening me. I did not even know that this society has a collection of natural historical items. Do you know it, and does it mean anything?¹⁰⁴

Although Reinwardt initially declined to dispatch specimens to other cabinets, he later asked Van Marum to forward boxes with birds and insects to the learned society in Middelburg as well as to individual collectors such as the Russian consul-general Georg Heinrich von Langsdorff (1774-1852) in Rio de Janeiro and the wealthy private insect collector Bernt Wilhelm Westermann (1781-1868) in Kopenhagen.¹⁰⁵

The desperate requests for specimens from individuals and learned societies such as the one in Middelburg shows the growing public interest in natural historical and ethnographical specimens from Java. Publication of Raffles' *History of Java* in 1817 had sparked considerable interest in the Dutch colony and by July of that year, shortly after its publication in London, booksellers in The Hague offered the city's mayor a copy of the illustrated monograph to help expedite its translation into Dutch.¹⁰⁶ As in France and Britain, natural historical and ethnographical collections and lavishly illustrated publications on animals, plants, societies and minerals in

¹⁰³ For a brief history the cabinet of the Zeeuwsch Genootschap, see H.J. Zuidervaart, "Het kabinet der natuurlijke zeldzaamheden van het Zeeuwsch Genootschap der Wetenschappen, 1771-1869," in *Het verdwenen museum. Natuurhistorische verzamelingen, 1750-1850*, ed. B.C. Slingers, 155-74 (Blaricum: V+K Publishing, 2002).

¹⁰⁴ Ibidem, letter Reinwardt to Van Marum, Buitenzorg, 10 October 1818: "Het Zeeuws Genootschap heeft mij tot correspondent gekozen, en verlangt van mij voorwerpen voor zijne kabinetten. Het zal moeilijk zijn om aan deze en zo vele andere aanvragen te voldoen, waarmede men niet ophoudt mij te belasten. Ik wist niet dat dat genootschap ook al eene verzameling van Natuurhist.[orische] voorwerpen had. Is U die bekend, en betekent die wat?"

¹⁰⁵ Ibidem, letter Reinwardt to Van Marum, Batavia, 3 June 1820 and Buitenzorg, 8 September 1820.

¹⁰⁶ Advertentie, 's *Gravenhaagsche courant*, 16 July 1817.

colonial areas gradually developed into material signifiers of colonialism at home.¹⁰⁷

Conclusion

This chapter has shown that Batavia and Buitenzorg offered the General Committee and Reinwardt a crucial, if unstable, platform from which to launch various initiatives to survey and improve the island's administration and economy. Reinwardt specifically focused on the improvement of public health and the educational system, while Elout and Van der Capellen aimed at getting a general overview of the colony's current state. In order to gather the necessary information, they all tried to strengthen extant administrative and commercial networks through the appointment of new civil servants who had to report intermittently about their observations in the different administrative districts.

The growing administrative and commercial networks fed another project: the establishment and enlargement of a botanical garden in Buitenzorg. Under Reinwardt's direction, the garden quickly developed into a nodal point for the collection and acclimatization of useful and exotic plants from Europe, various parts of the Malay Archipelago, China, Japan, India, and even Brazil. Gathering these plants was a collaborative endeavour. The discussion of Reinwardt's networks of collectors in Borneo and Celebes has shown how heavily they depended on local skills and expertise. Without the practical experience of numerous indigenous helpers, none of these items would have reached the botanical garden in Buitenzorg, much less the Netherlands.

Many of the collected plants, animals and minerals were eventually forwarded to the State Cabinet in Amsterdam. In particular the king hoped that newly collected items would help to transform the small cabinet into a new national natural historical institution with the potential to illustrate the kingdom's grandeur and 'scientific' prestige. However, since Reinwardt's first shipments did not reach the Netherlands, the king and his advisors gradually

¹⁰⁷ For two of the very rare attempts to analyze the material and visual culture of Dutch expansionism in the early nineteenth century, see S. Legêne, *De bagage van Blomhoff en Van Breugel: Japan, Java, Tripoli en Suriname in de negentiende-eeuwse Nederlandse cultuur van het imperialisme* (Amsterdam: Koninklijk Instituut voor de Tropen, 1998); and S. Protschky, *Images of the tropics. Environment and visual culture in colonial Indonesia* (Leiden: KITLV Press, 2011).

doubted Reinwardt's authority as collector and 'scientific' traveller. His reputation also suffered by comparison with his younger assistant Carl Ludwig Blume. While Reinwardt spent most of his time on administrative issues, Blume was able to focus his attention on Java's flora. Beside collecting plants for the botanical garden and his private herbarium, Blume started to prepare the publication of specialized articles and monographs on Java's flora with the aim of demonstrating his status as an 'expert' on Java's nature. Owing to the rising doubts about Reinwardt's abilities, it is therefore not surprising that Reinwardt's friends in the Netherlands urged him to shift his focus from his administrative duties in Batavia towards the collection of natural historical specimens in less investigated parts of the island such as the Preanger in the hinterland of Batavia.

The following chapter will show that Reinwardt was not the only one who became aware of the importance of observations in the field. Within a few months of their arrival in Java, Van der Capellen and Elout had realized that gaining reliable information of the economic and political situation of more remote provinces in Java was a difficult endeavour. Although many administrators in remote provinces had fulfilled the General Committee's request to hand in reports about their districts, the assembled information remained too fragmentary to develop a more general vision on the basis of which the colony's administration could be improved. Even the recommendations of Batavia's administrative elite had to be treated with caution. Many of them seemed to promote their own agendas with the broader aim of securing their social status and their financial well-being. Advisors such as Herman Warner Muntinghe (1773-1827) and Nicolaus Engelhard (1761-1831) were not only experienced administrators, but owners of large plantations where coffee and other cash crops were cultivated. The official documents in the archives at Batavia offered no solution.¹⁰⁸ Since the British administrators had left the records in a chaotic state, the General Committee had to apply another proven and tested administrative tool to gather reliable data about the island's administration and economy: travelling!

¹⁰⁸ This point is further explored by Jeurgens, "Op zoek naar betrouwbare informatie," 271-75.