



# Collecting Colonial Nature

## European Naturalists and the Netherlands Indies in the Early Nineteenth Century

ANDREAS WEBER

The sheer variety and size of Dutch scientific collections of Indonesia's flora and fauna are unique in the world. Gathered over the last two hundred years, they represent a shared European legacy of natural historical research and its colonial context. To understand how the entanglement of transnational and trans-imperial networks and actors within the field of natural history shaped the study of nature, this essay focuses on the history of the *Natuurkundige Commissie voor Nederlandsch-Indië* (Committee for Natural History of the Netherlands Indies), one of the main state-funded collecting enterprises in the early nineteenth century world. Similar to other colonial powers, the Dutch made extensive use of local informants and naturalists from other European countries. By studying the Committee's fieldwork, this essay contributes to an entangled history of natural history and collecting in the emergent Dutch empire.

De enorme verscheidenheid en omvang van Nederlandse wetenschappelijke collecties op het gebied van flora en fauna in Indonesië zijn wereldwijd ongeëvenaard. Deze collecties, die in de afgelopen tweehonderd jaar werden samengesteld, belichamen een gemeenschappelijk Europees erfgoed op het gebied van natuurhistorisch onderzoek en de koloniale context waarin dit ontstond. Om een goed begrip te krijgen van de wijze waarop de verstrengeling van transnationale en transimperiale netwerken en actoren op het gebied van de natuurhistorie het natuurwetenschappelijk onderzoek bepaalde, richt dit artikel zich op de geschiedenis van de *Natuurkundige Commissie voor Nederlandsch-Indië*, een van de belangrijkste door de staat gefinancierde, negentiende-eeuwse instellingen die zich op collectievorming richtten. Net als andere koloniale machten maakten ook

de Nederlanders op grote schaal gebruik van de kennis van natuuronderzoekers uit andere Europese landen en van lokale informanten in de kolonie. Met deze analyse van het veldonderzoek van de Commissie toont dit artikel aan hoezeer de geschiedenis van de natuurgeschiedenis en van collectievorming vervlochten is met de geschiedenis van het Nederlandse kolonialisme.

## Introduction<sup>1</sup>

In the first half of the nineteenth century, various attempts were made to survey and study natural resources in the emerging Dutch empire in the Indonesian archipelago. Like the British in South Asia, the Dutch made extensive use of local Indonesian informants and naturalists from other European countries. To understand how the entanglement of transnational and trans-imperial networks and actors within the field of natural history shaped the study of nature in the early nineteenth century, this essay focuses on the field practices of the *Natuurkundige Commissie voor Nederlandsch-Indië* (Committee for Natural History of the Netherlands Indies, hereafter ‘the Committee’).

Established in 1820 by King William I of the United Kingdom of the Netherlands, the Committee was a costly, large-scale surveying and collecting endeavour, offering naturalists, draftsmen, and preparators<sup>2</sup>, who came from German-speaking countries, France, and the Netherlands, a unique opportunity to pursue a career in the field of natural history as travellers and colonial civil servants. Until the Committee was dissolved in 1850, its seventeen members visited large parts of the far-flung Indonesian archipelago, sending a wealth of information, such as field notes and drawings, and specimens documenting the area’s rich biodiversity and natural resources to Europe.<sup>3</sup> Collecting flora and fauna in the Indonesian archipelago and

1 For valuable feedback on the research that led to this essay, the author thanks Bernhard Schär (ETH Zürich), Christof Dejung (University of Bern), Eulàlia Gassó Miracle (Naturalis Biodiversity Center, Leiden) and the participants of the workshop ‘An Empire of Demands and Opportunities: Relocating the Netherlands Indies in European History, c. 1800-1900’, held at the ETH Zürich on 27-28 August 2018. This essay has been written as part of the NWO/Brill Creative Industries Project ‘Making Sense of Illustrated Handwritten archives’ (grant number 652.001.001). I am also indebted to the late Chris Smeenk, former curator of mammals at Naturalis Biodiversity Center Leiden, with whom

I taught two research seminars on the history of the *Natuurkundige Commissie* in 2010/2011 and 2011/2012 at Leiden University.

2 In the field of natural history preparators are those responsible for preparing plants and dead animals so that they could be used for research. Those preparing only animals are also known as taxidermists.

3 For especially useful older histories of the Committee, see Marius J. Sirks, *Indisch natuuronderzoek. Een beknopte geschiedenis van de beoefening der natuurwetenschappen in de Nederlandsche koloniën* (Amsterdam 1915); Agatha Gijzen, ‘*s Rijks Museum van Natuurlijke Historie, 1820-1915* (Rotterdam 1938) 86-194.

establishing their stature in Europe, however, presented various challenges that will be discussed in more detail below. Overall, in this essay I argue that the Committee's history is best studied by bringing local colonial and European trajectories of natural historical inquiry under one analytical umbrella. An entangled perspective allows me to attend to actors, networks, and modalities of intercultural exchange that have traditionally been ignored.<sup>4</sup>

By using this approach, this essay engages with recent scholarship dealing with the role of natural historical and other forms of knowledge production in the context of the early nineteenth-century Dutch empire in insular Southeast Asia. Other studies have argued that natural historical inquiries in the Indonesian archipelago lacked scientific rigour, assuming that scientific knowledge was exclusively produced in the West.<sup>5</sup> In contrast to this latter body of work, historians have started to generate more entangled narratives, analytically weaving together historical dynamics in Europe with those in colonial Southeast Asia.<sup>6</sup> Fenneke Sysling and Robert-Jan Wille, for example, have shown that advances in anthropology and biology in the late nineteenth and early twentieth centuries are impossible to explain without considering input from learned travellers and institutions in the Netherlands Indies.<sup>7</sup> Bernhard Schär has mentioned that two Swiss collectors working on ethnography and natural history in colonial Celebes formed a community of German-speaking museum directors and Southeast Asia scholars in Europe.<sup>8</sup> Moritz von Brescius has noted the scale of intellectual engagement among German-speaking and other European naturalists, emphasising that by the mid-nineteenth century such connections had become inter-imperial.<sup>9</sup>

4 On the historiographical potential of entangled histories, see Ralph Bauer and Marcy Norton, 'Introduction: Entangled Trajectories: Indigenous and European Histories', *Colonial Latin American Review* 26:1 (2017) 1-17 <https://doi.org/10.1080/10609164.2017.1287321>.

5 Andrew Goss, *The Floracrats. State-sponsored Science and the Failure of Enlightenment in Indonesia* (Madison 2011); Peter Boomgaard (ed.), *Empire and Science in the Making: Dutch Colonial Scholarship in Comparative Global Perspective* (New York 2013) 1-38 <https://doi.org/10.1057/9781137334022>.

6 A foundational work addressing the Dutch context is: Susan Legêne, *De bagage van Blomhoff en Van Breugel. Japan, Java, Tripoli en Suriname in de negentiende-eeuwse Nederlandse cultuur van het imperialisme* (Amsterdam 1998).

7 Fenneke Sysling, *Racial Science and Human Diversity in Colonial Indonesia* (Singapore 2016) <https://doi.org/10.2307/j.ctv9hj794>; Robert-Jan Wille, *Mannen van de microscoop. De laboratoriumbiologie op veldtocht in Nederland en Indië, 1840-1910* (Nijmegen 2018).

8 Bernhard Schär, *Tropenliebe. Schweizer Naturforscher und niederländischer Imperialismus in Südostasien um 1900* (Frankfurt am Main 2016).

9 Moritz von Brescius, *German Science in the Age of Empire* (Cambridge 2019) 1-28 <https://doi.org/10.1017/9781108579568>. See also Arthur MacGregor, 'European Enlightenment in India: An Episode of Anglo-German Collaboration in the Natural Sciences on the Coromandel Coast, Late 1700s-Early 1800s', in: Arthur MacGregor (ed.), *Naturalists in the Field: Collecting, Recording and Preserving the Natural World from the Fifteenth*

By focusing on the history of the Committee, this essay aims to enrich this discussion, which bases analyses of colonial natural history and collecting on the entangled past of empires and nation states.

My argument in this essay is elaborated in three sections. The first section briefly details the biographies of the Committee members, demonstrating the truly pan-European nature of its collecting endeavours. As in previous centuries, the vast colonies of the Netherlands in Southeast Asia offered an opportunity to participate in its networks of global knowledge exchange, attracting German-speaking naturalists in particular.<sup>10</sup> Following the members of the Committee to the Indonesian archipelago, the second section underlines how natural history knowledge in the early nineteenth century is best analysed as a contingent product of local encounters, in which exchanges between European and non-European experts in natural inquiry were pivotal.<sup>11</sup> Encounters outside the Committee's headquarters in the botanical garden in Buitenzorg (now Bogor) in Java are of particular interest to my argument in this essay. Focusing on the publication challenges the Committee faced, once the manuscripts and specimens had been sent to Europe, the third section shows how linguistic nationalism impeded disseminating knowledge about nature and natural resources of the Netherlands Indies in the early nineteenth century. Overall, this essay provides an entangled narrative, in which stages in natural history knowledge production are intertwined with developments in Europe and elsewhere.

### The Committee: A European project<sup>12</sup>

The history of the Committee begins in the early years of the reign of King William I (1815-1840) of the United Kingdom of the Netherlands. After the French Empire's collapse in 1815, William I and his advisors initiated

to the Twenty-First Century (Leiden 2018) 365-392  
[https://doi.org/10.1163/9789004323841\\_014](https://doi.org/10.1163/9789004323841_014).

- 10 Klaas van Berkel, *Universiteit van het Noorden. Vier eeuwen academisch leven in Groningen*, volume 1, *De oude universiteit 1614-1876* (Hilversum 2014) 443; Leonard Blussé and Ilonka Ooms (eds.), *Kennis en compagnie. De Verenigde Oost-Indische Compagnie en de moderne wetenschap* (Amsterdam 2002).
- 11 The historiography on this theme is vast. For good starting points, see Lissa Roberts, 'Situating Science in Global History: Local Exchanges and Networks of Circulation', *Itinerario* 33:1 (2009) 9-30 <https://doi.org/10.1017/S0165115300002680>;

Simon Schaffer e.a., *The Brokered World: Go-Betweens and Global Intelligence, 1770-1820* (Sagamore Beach 2009); and Anna Winterbottom, *Hybrid Knowledge in the Early East India Company World* (London 2016) <https://doi.org/10.1057/9781137380203>.

- 12 The first three paragraphs of this section draw on the introduction and the sixth chapter of my PhD dissertation, which has been published as Andreas Weber, *Hybrid Ambitions: Science, Governance, and Empire in the Career of Caspar Georg Carl Reinwardt (1773-1854)* (Leiden 2012).

numerous projects aimed at transforming the Northern and Southern Netherlands into a powerful and influential nation with economically profitable colonies in the Netherlands Indies. The economic prospects seemed promising. While the Southern Netherlands (currently Belgium) had a thriving textile industry and abounded with natural resources such as pit coal, the commerce-oriented Northern provinces (currently the Netherlands) shipped textiles and industrial products to Batavia.<sup>13</sup> Ships returning to the Netherlands brought colonial products such as cloves, nutmeg, tea, and coffee. Newly established financial and commercial agencies seeking to strengthen the national economy included the Fonds ter aanmoediging der Nationale Nijverheid (Fund to Encourage National Industry, established in 1821), the Algemene Nederlandsche Maatschappij ter begunstiging van de volksvlijt (General Dutch Society to Promote Diligence, established in 1822), and, most importantly, the Nederlandsche Handel-Maatschappij (Dutch Trading Company, established in 1824/1825).

These economic projects coincided with cultural and scientific reforms. To promote the prestige of his kingdom in Europe, King William I strengthened and enlarged cultural institutions established in the aftermath of the Batavian Revolution, such as the Nationale Bibliotheek (National Library, 1798) in The Hague and the Nationale Konst-Gallerij (National Art Gallery) in Amsterdam.<sup>14</sup> To showcase the Asian colony in this narrative, William I also founded two national museums and repositories for the rapidly expanding ethnography and natural history collections: the Koninklijk Kabinet van Zeldzaamheden (Royal Cabinet of Rarities, 1816) in The Hague and the Rijksmuseum van Natuurlijke Historie (National Museum of Natural History, 1820) in Leiden. In 1829, William I established a Rijksherbarium (National Herbarium) in Brussels. The violent secession of Belgium the following year, however, led this herbarium to be transferred to Leiden.<sup>15</sup> William I and his advisors hoped that these institutions would afford cultural credence to the Dutch aggressive agricultural and economic policy in Europe and the colonies.

The establishment of the Rijksmuseum van Natuurlijke Historie and the Rijksherbarium had a tremendous impact on the intellectual and cultural landscape of the Kingdom of the Netherlands. Both institutions soon developed into European hubs of natural history research. By the

13 Jan Roegiers and Niek C.F. van Sas, 'Revolutie in Noord en Zuid', in: Hans Blom and Emiel Lamberts (eds.), *Geschiedenis van de Nederlanden* (Baarn 2006) 222-256; Frank Santegoets, 'Het Verenigd Koninkrijk 1815-1830', in: Wantje Fritschy and Joop Toebes, *Het ontstaan van het moderne Nederland. Staats- en natievorming tussen 1780 en 1830* (Nijmegen 1996) 215-242.

14 On the museum and cultural policy of William I, see Rudolf Effert, *Royal Cabinets and Auxiliary Branches. Origins of the National Museum of Ethnology, 1816-1883* (Leiden 2008) 17-26 and Legêne, *De bagage van Blomhoff*, 327-397.

15 Agatha Gijzen, 's *Rijks Museum*; Lipke Holthuis, 1820-1958. *Rijksmuseum van Natuurlijke Historie* (Leiden 1995); Pieter Smit, 'The Rijksherbarium

mid-nineteenth century, their collections equalled those in Paris.<sup>16</sup> Their swift ascent was thanks to two key factors. On the one hand, both museums could build on existing collections gathered by individuals, such as the cabinet of Dutch Stadtholder William v or institutions, such as the learned societies in Haarlem, Amsterdam, or Middelburg.<sup>17</sup> On the other hand, William I enabled the directors of the Rijksmuseum van Natuurlijke Historie to form the Committee and other groups dedicated to collecting.<sup>18</sup> By exploring the biodiverse islands of the Indonesian archipelago, the collections gathered by the Committee enriched the national repositories of historical specimens in Leiden and Brussels.

Like the staff of the Dutch trading companies in the seventeenth and eighteenth centuries, the Dutch universities, the Dutch colonial armed forces, and the seasonal workers in the long nineteenth century, a significant share of the Committee members were recruited not from the Netherlands but from German-speaking parts of Central Europe.<sup>19</sup> Due to a lack of clearly defined career paths, German members, like many other young naturalists in Europe, considered a position in the Netherlands or the Netherlands East Indies ideal for securing an income, an audience, and a reputation.<sup>20</sup> Moreover, it allowed them to escape a politically divided Central Europe, where upward

and the Scientific and Social Conditions which Influenced its Foundation', *Blumea* 25:1 (1979) 5-11.

- 16 On the museum's early years, see Eulàlia Gassó Miracle, *Temminck's order. Debates on zoological classification, 1800-1850* (PhD dissertation, Leiden University 2019), chapter II.
- 17 Bert Sliggers and Marijke Besselink (eds.), *Het verdwenen museum. Natuurhistorische verzamelingen, 1750-1850* (Blaricum 2002).
- 18 For an overview of these networks, see Maria J. van Steenis-Kruseman and Cornelis van Steenis (eds.), *Cyclopaedia of Malesian Collectors*, <http://www.nationaalherbarium.nl/fmcollectors/Home.htm> (accessed 30 September 2018) and Charles Franssen, Lipke Holthuis, and Hans Adema, 'Type-catalogue of the Decapod Crustacea in the Collections of the Nationaal Natuurhistorisch Museum, with Appendices of pre-1900 Collectors and Material', *Zoologische Verhandelingen* 311:1 (1997) 270-275.
- 19 The Dutch trading companies were named the *Vereenigde Oostindische Compagnie* (Dutch East Indian Trading Company, VOC) and *Geotroyeerde*

*Westindische Compagnie* (Dutch West Indian Trading Company, WIC). See Roelof van Gelder, *Het Oost-Indisch avontuur. Duitsers in dienst van de VOC* (Nijmegen 1997); Andreas Zangger, *Koloniale Schweiz. Ein Stück Kolonialgeschichte zwischen Europa und Südostasien* (Bielefeld 2011); and Jan Lucassen and Leo Lucassen, 'The Netherlands', in: Klaus Bade et al. (eds.), *The Encyclopedia of Migration and Minorities in Europe. From the 17<sup>th</sup> Century to the Present* (Cambridge 2011) 34-43 <https://doi.org/10.1017/cbo9780511781841.008>. As regards the international composition of the Dutch colonial armed forces, see also Philipp Krauer's essay in this issue.

- 20 Susannah Gibson, 'The Careering Naturalists: Creating Career Paths in Natural History, 1790-1830', *Archives of Natural History* 44:2 (2017) 195-214 <https://doi.org/10.3366/anh.2017.0444>; Peter Boomgaard, 'The Making and Unmaking of Tropical Science: Dutch Research on Indonesia, 1600-2000', *Bijdragen tot de Taal-, Land- en Volkenkunde* (BK) 162:2/3 (2006) 191-217 <https://doi.org/10.1163/22134379-90003666>.

mobility depended on family ties, private capital, and class.<sup>21</sup> Especially in German-speaking areas, only naturalists with socio-economic standing and family connections with the government of one of the German territories such as Prussia could pursue a career in the field.<sup>22</sup> Some German-speaking naturalists used their medical training to further their interest in natural research either in the Netherlands or in the Netherlands East Indies.<sup>23</sup> While career prospects were poor in German-speaking areas, the demand at the Dutch universities and the newly established natural history institutions and the need to acquire new specimens and publish about new insights in the field offered well-trained experts of nature with lower socio-economic standing sufficient social and professional flexibility.

In the context of the Committee, Salomon Müller (1804-1864), who was born in Heidelberg, exemplified this course. The son of a saddler, Müller never pursued an academic degree. He specialised in preparing specimens for preservation and presentation in natural history museums, securing a position as the Committee's preparator of animals and plants in 1825.<sup>24</sup> Other members from German-speaking areas hailed from higher socio-economic classes. The parents of Carl Ludwig Schwaner (1817-1851) owned an apothecary in Mannheim, while Heinrich Kuhl (1797-1821), Heinrich Boie (1794-1827), and Heinrich Macklot (1799-1832) had each been affiliated with universities in Southern Germany.<sup>25</sup> Franz Wilhelm Junghuhn (1809-1864), born in Mansfeld, Saxony-Anhalt, was trained as a surgeon, and Ludwig Horner's father was a member of the Zurich city council. In the late 1820s the

21 Van Berkel, *Universiteit van het Noorden*, 443; Denise Phillips, *Acolytes of Nature: Defining Natural Science in Germany, 1770-1850* (Chicago 2012). For a detailed discussion on restricting social dynamics in other parts of Europe, see Sarah Easterby-Smith, *Cultivating Commerce: Cultures of Botany in Britain and France, 1760-1815* (Cambridge 2018). On Germans working as naturalists in the British Empire, see Brescius, *German Science*.

22 The best example was the German traveller Alexander von Humboldt (1769-1859). For a good overview of his career and scholarship on him, see: Ottmar Ette (ed.), *Alexander von Humboldt Handbuch: Leben – Werk – Wirkung* (Stuttgart 2018).

23 Philipp Teichfischer, 'Transnational entanglements in colonial medicine. German medical practitioners as members of the health service

in the Netherlands East Indies (1816-1884)', *Histoire, médecine et santé. Revue d'histoire sociale et culturelle de la médecine, de la santé et du corps* 10 (2016) 63-78 <https://doi.org/10.4000/hms.1035>.

24 For more detail on these individuals and their fieldwork in the region, see Klaver, *Inseparable Friends*; Thomas Hildenhagen, 'Das kurze Leben des Dr. h.c. Heinrich Kuhl (1797-1821) und seine herpetologischen Beiträge', *Sekretär* 10:2 (2010) 40-59; Ruth Barnes, 'Recording cultures. Collecting in eastern Indonesia', in: Pieter ter Keurs (ed.), *Colonial Collections Revisited* (Leiden 2007) 203-219; and Fransen, Holthuis, and Adema, 'Type-catalogue', 270-275.

25 For biographical information on Schwaner, see also <http://www.weltgefluester.de/index.php/2009/10/01/der-naturforscher-dr-schwaner-1817-1851/> accessed 19 February 2019.

Committee also employed a Frenchman named Pierre-Médard Diard (1794-1863), who was born near Tours. Given the French strategic interests in Asia, however, Diard raised the suspicion of the Dutch colonial authorities and his fellow naturalists on the Committee.

Financed by the Dutch crown, the Committee was officially established in 1820. Although the name suggests a cohesive organisation throughout the period the Committee existed, the reality was more complex. In the beginning, the Dutch crown and the Museum of Natural History in Leiden trained naturalists, with the intention of attracting naturalists from German-speaking areas. Before leaving for Java in the early 1820s, Heinrich Kuhl was allowed to visit numerous private and public collections in France, England, and Prussia.<sup>26</sup> To curtail costs, later generations of naturalists received no specialised training. The Committee's fieldwork depended on the goodwill of the Governor General in Batavia. Especially in the years prior to the Java War (1825-1830), the Committee's travels to survey natural resources was paid by the colonial government. In addition to facilitating travel over land and by sea, the colonial government's primary obligation to the Committee was to ensure that all observations and specimens collected were shipped to the Museum of Natural History in Leiden. When naturalists deviated from this rule, the colonial government intervened.<sup>27</sup>

Each Committee member had specific expertise. When Kuhl, at the age of twenty-one, left for Java in 1820, he was hailed as one of the most talented young naturalists in Europe.<sup>28</sup> The publication of two monographs on mammals, and in particular on bats, had brought him acclaim in German-speaking areas and beyond.<sup>29</sup> Heinrich Boie, who had been curator of the zoological collections at Heidelberg University, was professionally renowned as well. Before leaving for Java, he had worked on a major monograph on Java's amphibians (*Erpétologie de Java*).<sup>30</sup> Before Diard joined the Committee, he had worked under the French naturalist Alfred Duvaucel in British and French India. Later, Diard continued collecting in Singapore.<sup>31</sup> Although they were officially employed by the Dutch state, all Committee

26 For a complete list of the collections they viewed, see Theodorus van Swinderen, *Vita Heinrichi Kuhlii. Academiae C.L.C. Naturae Curiosorum dum vivebat, socii* (1822).

27 For a fascinating view on illicit specimen trade from the Dutch colonies to Germany, see Philip Teichfischer, "Bin ich aber nur einmal auf Java!" – Johann Lukas Schönleins ostindische Schatztruhe. Grenzüberschreitender Naturalienhandel im 19. Jahrhundert', Florian Steger (ed.), *Medizin- und Wissenschaftsgeschichte in Mitteledeutschland* (Leipzig 2016) 121-131.

28 Klaver, *Inseparable friends*.

29 Heinrich Kuhl and Johan Conrad van Hasselt, *Beiträge zur Zoologie und vergleichenden Anatomie* (Frankfurt 1820) <https://doi.org/10.5962/bhl.title.48998>; Heinrich Kuhl, *Conspectus psittacorum* (Bonn 1820).

30 Marinus Hoogmoed, 'Nomenclatural Problems Relating to *Atractus Trilineatus* Wagler, 1828', *Zoologische Mededelingen* 56:10 (1982) 131-138.

31 Henry Noltie, *Raffles' Ark Redrawn: Natural History Drawings from the Collection of Sir Thomas Stamford Raffles* (London 2009).



members hoped their sojourn in the Dutch empire would establish their reputation as authorities on nature in the colonies. The large new botanical garden in Buitenzorg was especially attractive, offering them both an excellent infrastructure for their fieldwork and links to networks of trade, bureaucracy, and printing.<sup>32</sup>

While most notebooks, specimens, and drawings of the Committee returned to Europe, many naturalists died in the colonies from diseases such as malaria and syphilis.<sup>33</sup> Many of the documents and specimens are now scattered throughout European museums and archives. Specimens collected by Diard and other members were sent to the Royal Society in London and the Muséum national d'Histoire naturelle (Museum of Natural History) in Paris. In the 1830s, when most of the Committee's specimens arrived in Europe, the Leiden Museum of Natural History regularly exchanged items from Asia with natural history museums in Berlin, Vienna, Frankfurt, Munich, and Copenhagen.<sup>34</sup> Compiling a complete list of the European trajectories of items related to the Committee would be challenging, as many natural history museums in Europe have yet to digitise their collections and inventories.<sup>35</sup> A minority of the items stayed in Indonesia. Most of the notes documenting Carl Schwaner's investigations in Borneo in the 1840s, for example, are still at the National Archive of Indonesia (ANRI) in Jakarta.<sup>36</sup>

This brief historical overview of the Committee offers a glimpse of the rich material, visual, and textual outcomes of its members' collecting endeavours. Neither the careers of Committee members nor their collections can be fully understood from a solely European perspective. Only if European and colonial trajectories are considered together, may analysis of the Committee provide an account of natural history and empire in the early nineteenth century. The preference of the Dutch for naturalists from

32 Andreas Weber, 'Bitter Fruits of Accumulation: The Case of Caspar Georg Carl Reinwardt (1773-1854)', *History of Science* 52:3 (2014) 297-318 <https://doi.org/10.1177/0073275314546970>.

33 Naturalis Biodiversity Center, Leiden, Natuurkundige Commissie archive, diary of Pieter van Oort, entry 8 October 1831.

34 Marinus Hoogmoed, 'An Annotated Review of the Salamander Types Described in the Fauna Japonica', *Zoologische Mededeelingen* 53:9 (1978) 91-105. I thank Marinus Hoogmoed for this reference. For an informative overview of the museum's exchange networks in the first half of the nineteenth century, see Gassó Miracle, 'Temminck's order', chapter 2.

35 A group of historians, biologists, and computer scientists are currently making the manuscripts and drawings of the Natuurkundige Commissie stored at Naturalis Biodiversity Center in Leiden searchable. On this, see Andreas Weber, et al., 'Towards a Digital Infrastructure for Illustrated Handwritten Archives', in: Marinos Ioannides (ed.), *Digital Cultural Heritage* (Cham 2018) 155-166. For a large-scale international attempt to make European specimen collections searchable, see the project Distributed System of Scientific Collections: <http://dissco.eu/> (accessed 1 October 2018).

36 ANRI Jakarta, K 35 'Borneo Zuid en Oostkust', inventory number: 113-124.

German-speaking areas is remarkable. As German states had no territorial claims in Asia, the Dutch regarded German scientists as loyal civil servants and collectors.<sup>37</sup>

### Collecting nature in the Netherlands Indies

After its establishment in 1820, Committee members visited large parts of the Netherlands Indies. Kuhl, Boie, Macklot, and Diard explored the environs of Batavia, Buitenzorg, and the western part of Java in the 1820s. Macklot, Müller, the Dutch draftsman Pieter van Oort (1804-1834) and the Dutch preparator Gerrit van Raalten (1797-1829) set out on the Triton for a long sea expedition encompassing New Guinea, Timor, Celebes, and Amboina in 1827.<sup>38</sup> Later expeditions also covered Sumatra and Borneo. The purpose of these travels was twofold. First, the Committee's research had to serve the colonial state in managing its overseas possessions. They were regularly instructed to help colonial authorities find feasible solutions to pressing issues, from cultivating cash crops to appraising soil.<sup>39</sup> Some naturalists were asked to map peripheral regions which were unprospected so far and gather information about natural resources. In the 1840s, Schwaner was instructed to investigate pit coal resources in South Borneo, useful for steamships and industry.<sup>40</sup> Müller provided a detailed map of this region. Second, Committee members were expected to act as collectors of the Museum of Natural History and the National Herbarium in Leiden.

Upon arriving in Batavia, most naturalists immediately went to the botanical garden in Buitenzorg. Here, the colonial government had reserved a house and store rooms for Dutchmen and foreigners.<sup>41</sup> The garden was next to the residence of the Governor General and the building of the Algemene Secretarie (General Secretariat), the Dutch colonial administrative centre in Java. Until the Committee was disbanded in 1850, the garden and its surrounding infrastructure served as its operational centre, both in the Buitenzorg district and in more remote regions in Java and other islands. The garden also provided

37 On this point, see also Brescius, *German Science*, 9.

38 Mörzer Bruyns, *Met de Triton*.

39 Maarten Manse, 'Kennis is macht. De veelzijdige expedities van Pieter William Korthals (1807-1892)', *Studium. Tijdschrift voor Wetenschaps- en Universiteitsgeschiedenis* 6:1 (2013) 42-50 <https://doi.org/10.18352/studium.8837>.

40 Naturalis Biodiversity Center, Leiden, Natuurkundige Commissie archive, 'Instructie voor het Lid der Natuurkundige Commissie',

Dr. Carl Schwaner, Buitenzorg, May 30, 1843, scan: NNM001001273\_003.

41 Carla S. Oldenburger-Ebbers, 'Buitenzorg bij Batavia en omliggende tuinen', *Cascade. Bulletin voor tuinhistorie* 8:1 (1999) 6-19. On the early years of the garden, see also: Andreas Weber, 'A Garden as Niche: Botany and Imperial Politics in the Early Nineteenth Century Dutch Empire', *Studium. Tijdschrift voor Wetenschaps- en Universiteitsgeschiedenis* 11:3 (2019) 178-190 <http://doi.org/10.18352/studium.10177>.



GURIA INDIAE NEERLANDICAE BOGORIAE,  
EX  
HORTO BOTANICO VISA, TERRAE MOTU NUPER DIRUTA.



The storerooms, laboratory and offices in the botanical garden in Buitenzorg formed an important infrastructure for early nineteenth-century naturalists in Java. This illustration of the garden appeared in Carl Blume, *Rumphia, sive commentationes botanicae, imprimis de plantis Indiae Orientalis* (Amsterdam 1834-1849).

the naturalists with a secure place to dissect collected animals, write and copy their notes, compare their findings with observations by others, prepare drawings, and arrange for items to be shipped to Europe.<sup>42</sup> The handwritten field notes of Kuhl and Conrad van Hasselt, for example, show that in February 1821 the garden's anatomy facilities were used to dissect and describe the anatomy of a female elephant (*Elephas indicus*).<sup>43</sup> Managing the dissection of an animal weighing two to five tons required a well-organised anatomy site with lifting facilities, dissection instruments, and enough helpers to remove the animals' intestines.<sup>44</sup>

Dissecting and collecting natural history items was a collaborative endeavour involving large numbers of European and non-European helpers. All Committee members could rely on the colonial infrastructure. By the time their drawings, manuscripts, and specimens reached museums in Europe, they had passed through numerous hands. The field diary of Van Oort, one of the group's most productive collectors and draftsmen, reveals the daily routine of the Committee. Van Oort was born in Utrecht and arrived in Java in 1826.<sup>45</sup> He died in 1834, aged only 29. In his diary, which comprises over one thousand handwritten pages, Van Oort vividly describes collaboration and tensions alike with local helpers and German- and French-speaking naturalists. When Committee members left Buitenzorg in 1831, they often had an entourage of over 150 persons.<sup>46</sup> In addition to soldiers and porters, the caravan included eight Bugi hunters, several cooks, guides, and two Javanese (one was named Asied) and one Chinese draftsman who helped Van Oort organise his drawings.<sup>47</sup> To ensure the safety of the group *en route*, the authorities informed district heads of their upcoming travels. Van Oort and his colleagues were allowed to stay in protected residences for travelling colonial civil servants (known as *pasanggrahan*), when they followed the postal road connecting Batavia's harbour with Buitenzorg's botanical garden and other important sites in Java.<sup>48</sup> In addition to their base in Buitenzorg, these *pasanggrahan* provided naturalists with a temporary base, where they could

42 Andreas Weber, *Hybrid Ambitions*, 115-144.

43 For the dissection report, see Naturalis Biodiversity Center, Leiden, Natuurkundige Commissie archive, field books of Heinrich Kuhl and Johan Conrad van Hasselt, Buitenzorg 16 February 1821, scans: NNM001001033\_116-130.

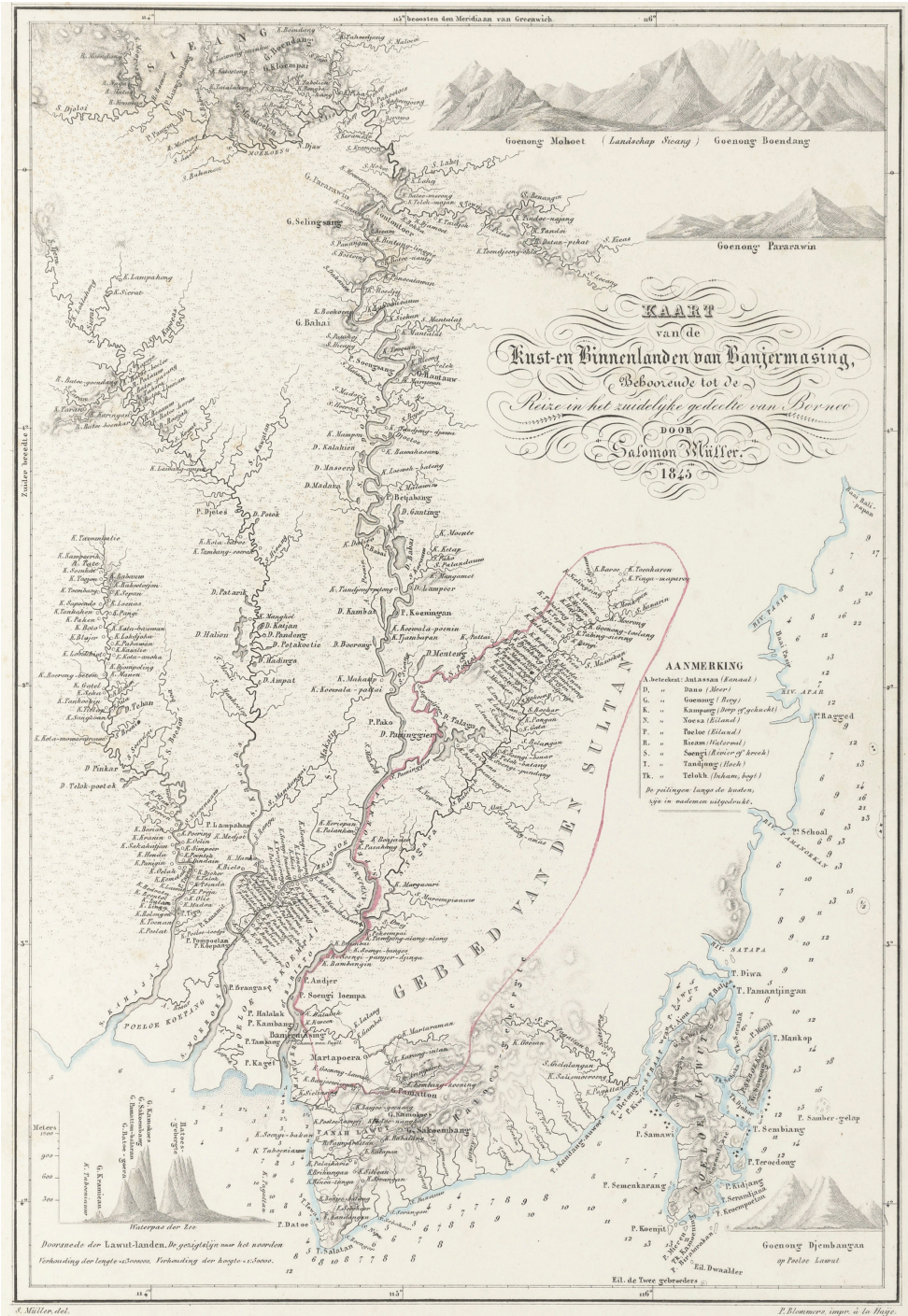
44 The report mentions around 50 drawings produced during the dissection.

45 For the best and only biographical account of Pieter van Oort, see Kim Nieuwendijk, 'Met Van Oort naar verre oorden', MA dissertation, Leiden University (Leiden 2011).

46 Naturalis Biodiversity Center, Leiden, Natuurkundige Commissie archive, diary of Pieter van Oort, entry 14 May 1831.

47 *Ibid.*, entries 18 May 1831 and 21 July 1831.

48 Peter Nas and Pratiwo, 'Java and the Grote Postweg, La Grande Route, the Great Mail Road, Jalan Raya Pos', *Bijdragen tot de Taal- Land- en Volkenkunde* 158:4 (2002) 707-725; For a more general historiographical overview of the laboratories and botanical garden in Buitenzorg see: Andreas Weber and Robert-Jan Wille, 'Laborious Transformations: Plants and Politics at



▲ Map of the hinterland of Banjarmasin (now Banjarmasin) in South Borneo designed by Samuel Müller. The map is based on geographic information Müller compiled during his visit in 1836. Müller marked the area controlled by the local sultan in red. Naturalis BC, NNM001000871\_090. Public Domain Mark 1.0.

rest and prepare their field notes, and specimen collections to be transported back to Buitenzorg.

Once Van Oort and his fellow travellers arrived in a village or city, the local meetings followed the same procedure. First, the naturalists were welcomed either by a Dutch and/or by a local district head, who usually invited them for a meal and tea. During these meetings, which were often translated by interpreters, Van Oort and his colleagues received information on the economic and natural resources of that particular district. The diary of Van Oort is filled with long lists of Sundanese, Malay, and Javanese names of plants and animals.<sup>49</sup> Armed with experience-based expertise on flora and fauna, Javanese women were often crucial mediators between the Committee's interests and the interests of local rulers.<sup>50</sup> We know Van Oort, whose diary abounds with sexual innuendos, had several affairs with Javanese women.<sup>51</sup> Although the socio-economic background of these women are impossible to reconstruct, these diaries reflect the women's importance as sources for the Committee's research on Javanese flora and fauna. The diaries mention that a Javanese woman called Siepiet, with whom Van Oort had a longstanding affair, was born on a large private country estate (Pondok Gedeh) in the hinterlands of Batavia in 1813 or 1814.<sup>52</sup> However, in the later published accounts of the Committee's fieldwork aimed at an audience of European readers, Chinese draftsmen and meetings with Javanese informants are far less prominent and are rarely mentioned.

During the Committee's years in Indonesia, only part of Java was under Dutch control. In more remote areas the Committee relied on the infrastructure provided by private landowners and plantation administrators, many of them were British. In May 1832, for example, the Committee visited a large country estate in West Java. The estate manager John Pitcairn was also involved in sugar production.<sup>53</sup> Many of these estates were dependent on the Dutch colonial government authorising them to produce sugar using cheap

the Bogor Botanical Gardens', *Studium: Tijdschrift voor Wetenschaps- en Universiteitsgeschiedenis* 11:3 (2018) 169-177, <http://doi.org/10.18352/studium.10176>.

- 49 Naturalis Biodiversity Center, Leiden, Natuurkundige Commissie archive, diary of Pieter van Oort, entry 6 July 1831.
- 50 Liesbeth Hesselink, *Healers on the Colonial Market. Native Doctors and Midwives in the Netherlands East Indies* (Leiden 2011) [https://doi.org/10.26530/oopen\\_400271](https://doi.org/10.26530/oopen_400271); Hans Pols, 'European Physicians and Botanists, Indigenous Herbal Medicine in the Netherlands East Indies, and Colonial Networks of Mediation', *East Asia Science, Technology, and Society: An International Journal* 3:2/3 (2009) 173-208 <https://doi.org/10.1215/s12280-009-9085-6>.
- 51 Naturalis Biodiversity Center, Leiden, Natuurkundige Commissie archive, diary of Pieter van Oort, entries 15 August, 3 September 1831 and 20 May 1832.
- 52 *Ibid.*, entry 25 May 1832.
- 53 Naturalis Biodiversity Center, Leiden, Natuurkundige Commissie archive, diary of Pieter van Oort, entry 24 May and 29 February 1832. On Pitcairn, see for example Roger Knight, *Sugar, Steam and Steel*, 67.



*Der asiatische weibliche Elephant. Elephantus indicus fem. Elephant d'Asie femelle.*



Illustration of a female *Elephas indicus*. Special Collection of the University of Amsterdam, *Iconographia Zoologica*, box 99: 220.02.01.033. Public domain. <https://tinyurl.com/y3dkmvam>.

local labour. Private estate managers supported the Committee members with additional guides, porters, hunters, and interpreters. They also made their local servants prepare temporary footpaths and lodgings.

Despite extensive collaboration, tensions arose, both between the Dutch and the foreign Committee members and between the Committee and the locals. The safety of the members could not always be guaranteed during and after the Java War (1825–1830), which had claimed the lives of over 200,000 civilians as well as Javanese and European soldiers.<sup>54</sup> Macklot was killed in an uprising of Chinese workers in Purwakarta shortly after the war.<sup>55</sup> During the attack on Macklot's house, the Committee also lost many manuscripts, specimens, books, and other scientific equipment.<sup>56</sup> Tensions between Dutch and other European naturalists also compromised the Committee's productivity. When the Frenchman Diard took over the Committee's financial administration, for example, Van Oort questioned whether he was trustworthy. Given the French interests in Asia, Van Oort and other Committee members suspected Diard of sending specimens and observations to Paris rather than to the Netherlands.<sup>57</sup>

Unlike Diard, the German-speaking members were usually praised for their productivity and loyalty. After the untimely deaths of Kuhl and Conrad van Hasselt in the mid-1820s, for example, a specially designed tomb and burial monument in Batavia sponsored by the Governor General paid tribute to their fieldwork. In his diaries, Van Oort also described Boie, who died in 1827, as a naturalist with outstanding expertise.<sup>58</sup> The Dutch trust in German-speaking naturalists was reflected in their generous salaries. While Van Oort received a monthly salary of 200 colonial guilders, Macklot and Boie were each paid 500 colonial guilders.<sup>59</sup> This trust, however, was not unconditional. In the 1820s, the Governor General asked the Dutch preparator Van Raalten to copy the field notes of their deceased German colleagues.<sup>60</sup> King William I explicitly forbade naturalists to send manuscripts, specimens, or drawings to German or other European museums. The case of Junghuhn, a German-speaking member of the Committee in

54 Peter Carey, *The Power of Prophecy: Prince Dipanagara and the End of an Old Order in Java* (Leiden 2007) 653.

55 Koos Kuiper, *The Early Dutch Sinologists (1854–1900): Training in Holland and China, Functions in the Netherlands Indies* (Leiden 2017) 12 <https://doi.org/10.1163/9789004339637>. Van Oort also regularly reported unrest in the Javanese villages; see Naturalis Biodiversity Center, Leiden, Natuurkundige Commissie archive, diary of Pieter van Oort, entries 2 January 1828, 17 August, and 19 September 1831.

56 Naturalis Biodiversity Center, Leiden, Natuurkundige Commissie archive, diary of Pieter van Oort, entry 25 June 1832. Thanks are due to Sylvia van Zaanen, with whom I am currently editing Van Oort's travel diary, for this reference.

57 Naturalis Biodiversity Center, Leiden, Natuurkundige Commissie archive, diary of Pieter van Oort, entry 6 September 1827.

58 *Ibid.*

59 *Ibid.*, entry 8 March 1827.

60 Gassó Miracle, 'Temminck's order', chapter 3.





Van Oort and one of the hunters are offered a snake in Timor, around 1828/1829. In the background is a soldier. Especially in the years before and after the Java War, substantial numbers of armed soldiers accompanied the naturalists when they left the botanical garden. Coenraad Temminck e.a. (ed.). *Verhandelingen over de Natuurlijke Geschiedenis der Nederlandsche Overzeesche Bezittingen*, vol. 3 (Leiden 1839-1844) plate 29. Naturalis BC, NNM001000871\_029. Public Domain Mark 1.0.

the 1830s, shows that this fear was justified. Upon discovering Junghuhn's correspondence with German publishers and learned institutions, the colonial government terminated his affiliation with the Committee.<sup>61</sup> Ultimately, only a few members of the Committee returned to Europe. In the next section I follow the return of the surviving naturalists to Europe, examining the difficulties they faced in turning the Committee's notes and specimens into scientific publications.

### Circulation of fieldwork in Europe

The German naturalist Müller returned to Leiden in 1837. In the years prior to his return, the repositories and archives of the Museum of Natural History and the National Herbarium were rapidly filled. According to a report by Wilhelm de Haan (1801-1855), curator of the invertebrates collection at the museum in Leiden from 1825, the number of insects rose from 249 in the 1820s to 18,410 in 1834.<sup>62</sup> Although exact figures are unavailable, handwritten manuscripts in the museum archive also appear to have increased substantially during these years. Müller and the botanist Pieter William Korthals filled thousands of pages in field books with meticulous descriptions of the flora and fauna in the colonies.<sup>63</sup> Despite this influx of material in Europe, natural history knowledge was slow to materialise in scientific publications. Focusing on some of the tensions that arose during the creation of the *Verhandelingen*, the main dissemination project of the Committee, in the third section of this essay I explore the challenges faced by the Committee members when they tried to publish an overview of the natural resources aimed at the European readership. Transforming field notes, specimens, and drawings into scientific publications was far from simple. These tensions offer a fresh view on European natural history and empire formation in the early nineteenth century.

A first tension arose in the mid-1830s. Until then, only a few articles and excerpts from letters had been published in German, Dutch and French periodicals.<sup>64</sup> In this context, the interim Governor General of the Netherlands Indies Jean Chrétien Baud had sent William I a long letter deploring the inefficient dissemination strategy of the Committee.<sup>65</sup> Hardly any of the travellers had managed to inform European readers about the

61 Renate Sternagel, *Der Humboldt von Java. Leben und Werk des Naturforschers Franz Wilhelm Junghuhn, 1809-1864* (Halle 2011) 130-140.

62 Gijzen, 's Rijks Museum van Natuurlijke Historie, 44.

63 Manse, 'Kennnis is macht'; Klaver, *Inseparable Friends*.

64 The library of Naturalis Biodiversity Center in Leiden holds two volumes comprising most of

the Committee's early publications (mainly letters printed in German, Flemish and French learned periodicals). They reflect the codes: 2.4.5.2 Kuhl and 2.4.5.2.2 Kuhl.

65 This and the following three paragraphs draw on text from chapter 6 of my PhD dissertation, Weber, *Hybrid Ambitions*.



The tomb and the monument constructed after the death of Heinrich Kuhl and Johan Conrad van Hasselt in Batavia in the early 1820s. Collection Tropenmuseum Amsterdam, inventory number TM-0-461.

natural wealth of the colonies. Findings of the Committee members on fishes in the Indonesian archipelago had already been published by French naturalists.<sup>66</sup> To reduce the Committee's annual costs of 40.000 guilders a year in total, Baud proposed the king to restrict the number of naturalists in the colony, and he urged that they should be sent back to the Netherlands as quickly as possible to publish their findings.<sup>67</sup>

Baud's reservations did not fall on deaf ears. As William I and his ministers were uncertain how to respond, they forwarded the letter to Caspar Georg Carl Reinwardt, director of the botanical garden at Leiden University from 1822, and Coenraad Jacob Temminck, director of the Museum of Natural History in Leiden from 1820, requesting them advice in this matter.<sup>68</sup> In his reply, Temminck deplored the lack of financial support that William I allocated the Committee and regretted the failure of his collectors to publish appropriate reports on their fieldwork. Reinwardt added another argument and complained that William I regarded this fieldwork exclusively as a national endeavour which had then to be published in Dutch.<sup>69</sup> In Reinwardt's view, all observations made and specimens gathered in the Netherlands Indies belonged to a shared pool of knowledge, and had to be made accessible to naturalists all over Europe.<sup>70</sup> Inspired by the German naturalist Alexander von Humboldt (1769-1859), Reinwardt also recommended the king to sponsor a 'physical description' of the colonies, in which the interplay between various forces of nature (such as wind, rain, volcanic activity, and erosion) would reveal and explain the wealth of natural resources in the colonies.<sup>71</sup>

Reinwardt's suggestions were ignored. Finally, in February 1839, William I agreed to sponsor a multi-volume monograph series on the findings of the Committee. The first volume would address zoology, the second botany, and the third ethnography. Each volume had to include many lithographs. The purpose was to communicate the findings of the Committee to a larger readership. All contributions had to be in Dutch or Latin. To ensure that the monographs remained a 'national exercise', the use of French, the main

66 George Cuvier and Achilles Valenciennes, *Histoire naturelle des poissons* (Paris 1828-1849); Tyson Roberts, 'The Freshwater Fishes of Java, as Observed by Kuhl and Van Hasselt in 1820-23', *Zoologische Verhandlungen* 285 (1993) 1-94.

67 National Archive, The Hague, Binnenlandse Zaken, Archief van het Ministerie van Binnenlandse Zaken, inventory number 4652, report 5 September 1837: 'Extract uit het register der resolutien van den Gouverneur Generaal ad-interim van Nederlandsch Indië in rade.' Buitenzorg, 27 February 1836.

68 Eulàlia Gassó Miracle, 'The Significance of Temminck's Work on Biogeography', *Journal of the History of Biology* 41:4 (2008) 677-716 <https://doi.org/10.1007/s10739-008-9158-8>.

69 Royal decision, 29 April 1820, reprinted in: Huibert Veth, *Overzicht van hetgeen, in het bijzonder door Nederland, gedaan is voor de kennis der fauna van Nederlandsch-Indië* (Leiden 1879) 22.

70 Veth, *Overzicht van hetgeen*, 84-87.

71 University Library Leiden, Special collections, BPL 2425, 20; Caspar Georg Carl Reinwardt, *Über den Charakter der Vegetationen auf den Inseln*

language of natural history publications at the time, was ruled out.<sup>72</sup> The refusal of William I to honour requests from readers in the Netherlands and other parts of Europe to publish the Committee's findings in French needs to be understood within a broader official policy to strengthen the Dutch nation.<sup>73</sup> The administrators of the Batavian Republic, which preceded the reign of William I, had already taken various measures such as the creation of an official spelling and several educational reforms to ensure that administrative and learned exchanges within the Republic were established in Dutch.<sup>74</sup>

As a result of William I's decision, the success of the *Verhandelingen* was limited. Rather than enabling the Committee's knowledge on natural history to circulate throughout Europe, only 250 copies were published. The Dutch government ordered that a substantial share should be distributed among ministries, learned societies, and museums in the Netherlands and abroad. While learned readers in Europe devoted time and money to the latest instalment of the 'physical description' of South America, written in French by Alexander von Humboldt, many copies of the *Verhandelingen* were presented as diplomatic gifts, and disappeared unread in the libraries of Europe, the United States, and other parts of the world.<sup>75</sup>

While the European circulation of natural history publications based on the Committee findings in the Netherlands Indies remained modest in the first half of the nineteenth century, the Committee's specimen collections and handwritten documentation had a major impact on natural history research in Europe in the long term. To this day, this rich source serves biologists and biodiversity researchers as reference material in taxonomic inquiries and publication projects. The large number of type specimens that the Committee brought together are a valuable asset in naming unknown specimens<sup>76</sup>, conducive to understanding long-term environmental change not only in

*des Indischen Archipels. Vortrag, gehalten in der  
Versammlung deutscher Naturforscher und Ärzte in  
Berlin am 20. Sept. 1828* (Berlin 1828).

72 National Archive, The Hague, Algemene  
Staatssecretarie en Kabinet des Konings,  
inventory number 4450, royal decision 10  
February 1839, number 101.

73 Gijsbert Rutten, *Language Planning as Nation  
Building. Ideology, Policy and Implementation in  
the Netherlands, 1750-1850* (Amsterdam 2019) 1-3  
<https://doi.org/10.1075/ahs.9>.

74 Even in the eighteenth century, the number  
of learned journals and books published in  
Dutch soared. See Gijsbert Rutten and Ton van  
Kalmthout, 'Introduction: Cultural Nationalism  
and the Rise of Dutch Studies', in: Rick Honings et

al. (eds.), *Language, Literature and the Construction  
of Dutch National Identity (1780-1830)* (Amsterdam  
2018) 15-16 <https://doi.org/10.1515/9789048526758-002>.

75 Von Humboldt's travel narrative appeared from  
1807 to 1835 in multiple volumes as *Le voyage aux  
régions équinoxiales du Nouveau Continent, fait en  
1799-1804, par Alexandre de Humboldt et Aimé  
Bonpland*. For the complex publication history  
see for example Ulrike Leitner, 'Ausgaben und  
Übersetzungen', in: Ottmar Ette (ed.), *Alexander  
von Humboldt Handbuch: Leben – Werk – Wirkung*  
(Stuttgart 2018) 252-259.

76 A type specimen is the name-bearing specimen  
that taxonomists use to define the characteristics  
of a species.

insular Southeast Asia but in other parts of the world as well.<sup>77</sup> Many of the species such as the Silvery Javan Gibbon, Javan Rhinoceros, Common Spotted Cuscus, and Javan tiger are now either extinct or critically endangered.<sup>78</sup> This archive of the Committee, still largely unexplored, offers historians of science a fascinating insight into the daily lives of European naturalists of diverse backgrounds and interests in the Netherlands Indies. Moreover, it deepens our understanding of the cross-imperial natural history in the nineteenth century.

## Conclusion

In this essay, I have shown how the history of the Committee for Natural History of the Netherlands Indies is best approached from a transnational and cross-imperial perspective. Recently, historians have focused on the role of overseas imperialism in facilitating natural history and other forms of learned inquiry. The history of the Committee also shows that the Dutch empire exuded a broad appeal to young people within Europe, in particular from German-speaking lands. Many hoped that participating in a state-sponsored collecting endeavour would give them the opportunity to consolidate their careers and establish their stature as naturalists.

The decision to publish the Committee's main publication in Dutch left many of the expectations of these naturalists unfulfilled. Aside from the difficulties the Committee experienced circulating its fieldwork results within Europe, the Committee and its material remnants both shaped and were shaped by non-Dutch nationals, mostly naturalists from Central Europe. The enormous influx of specimens that the Committee collected in the Netherlands Indies has had a lasting impact on European institutions and the scientific study of nature in the colonies. The close relationships of the Leiden Museum of Natural history with other institutions in Europe, including museums in Paris, London, and Munich, has endured.

77 See for example Eulàlia Gassó Miracle, Lars van den Hoek Ostende, and Jan Willem Arntzen, 'Type specimens of amphibians in the National Museum of Natural History, Leiden, The Netherlands', *Zootaxa* 1482:1 (2007) 25-68 <https://doi.org/10.11646/zootaxa.1482.1.2>. Plant type specimens collected by the Committee can be best accessed through the website: [www.bioportal.nl](http://www.bioportal.nl).

78 Since large parts of the handwritten notes have never been published, extracting and linking historical names of species with their

contemporary ones present serious challenges. On this, see Lise Stork, Andreas Weber, Eulàlia Gassó Miracle, et al., 'Semantic Annotation of Natural Historical Collections', *Journal of Web Semantics* (2018), in press; Lise Stork et al., 'Automated Semantic Annotation of Species Names in Handwritten Texts', in: Leif Azzopardi et al. (eds.), 'Advances in Information Retrieval. ECIR 2019'. Lecture Notes in Computer Science, vol. 11437 (Cham 2019) 667-680 [https://doi.org/10.1007/978-3-030-15712-8\\_43](https://doi.org/10.1007/978-3-030-15712-8_43).



Field notes by Pieter William Korthals, photograph taken in the archives of the former National Herbarium of the Netherlands (now Naturalis Biodiversity Center) by Andreas Weber, 2010.

In the Indonesian archipelago, the Committee was important as a surveyor of the emergence of the colonial state and its aggressive agricultural exploitation. The Committee, however, was more than a tool of the empire. While travelling in the remote areas and islands of Java, the Committee encountered a world in which a colonial government barely existed. Collecting natural history specimens under these circumstances required striking a careful balance among divergent local interests. Against the backdrop of a colonial policy that forced local peasants to produce cash crops for the world market, the local Indonesian assistants of the Committee must have met odd reactions to their collection activities from family, friends and neighbours. Regardless of whether these Indonesian assistants were forced to participate in the Committee's activities, or whether they were attracted by financial incentives, or just curious about the work undertaken, they assisted in creating a shared cultural and natural heritage.

Studying this heritage will teach us *more than* the biodiversity and the long-term changes in flora and fauna in one of the most biodiverse regions in this world.<sup>79</sup> As historians, we can *also* read these archives as the products of a moment in which European natural history, local Indonesian expertise of natural resources, and colonialism were closely entangled.

**Andreas Weber** is an assistant professor of long term development of science and technology in society and digital heritage at the University of Twente in the Netherlands. Most of his research examines the daily life, collections, and material practice of naturalists and chemists in the context of the former Dutch empire in insular Southeast Asia. He also helps increasing the access to valuable digitised natural historical collections with computational technology. Andreas Weber holds an MA degree in History (2005) and a PhD from Leiden University (2012). In 2015-2016, he was a John C. Haas fellow of the Science History Institute in Philadelphia. E-mail: a.weber@utwente.nl.

79 For a recent plea to diversify research agendas, especially in the context of the rapid digitisation of natural history collections, see: Joshua A. Drew, Corrie S. Moreau and Melanie L.J. Stiassny,

'Digitization of Museum Collections', *Nature Ecology & Evolution* 1 (2017) 1789-1790 <https://doi.org/10.1038/s41559-017-0401-6>.