

SENCKENBERG MONOGRAPHS

1 · 2024

Katharina Schmidt-Loske, Georg F. Tschan & Willi E. R. Xylander

**Space, time, plants and paper: Botanical exploration from colonial
origins to global heritage**

Sample pages

Senckenberg Gesellschaft für Naturforschung
Senckenberg Museum für Naturkunde Görlitz

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Preface – launch of Senckenberg Monographs

Dear readers,

For many years, institutes of Senckenberg, the Leibniz Institution for Biodiversity and Earth Systems Research, have maintained independent and partly different series of publications: The Senckenberg Research Institute and Natural History Museum in Frankfurt published monographs in particular, amongst others, as *Abhandlungen der Senckenberg Gesellschaft für Naturforschung* with a focus on palaeontology. Müncheberg issued the *Nova Supplementa Entomologica* with a focus on taxonomy and systematics of various insect groups, while in Görlitz the *Peckiana* series also published monographs, monothematic contributions as well as conference proceedings.

Each of these series successfully reached its specific target group, and a wide range of specialists found contributions of relevance to their particular fields of interest. Moreover, these series were and are important for the exchange of publications of the three editing institutes. This ensures that libraries and thus researchers of Senckenberg and their wide networks of partners stay in close contact and constantly receive the latest literature as reference for their scientific work.

However, none of the series could guarantee for publication at regular intervals, thus limiting its visibility and value for the scientific community. The Senckenberg Board of Directors and the editors of the three series therefore decided to establish a new format under the title ‘Senckenberg Monographs’, in which the three formerly independent series would merge so that regular publication is ensured.

Senior scientists from the three Senckenberg institutes at Frankfurt, Görlitz and Müncheberg will share editor responsibilities for the respective volumes in the future. Authors who are specialists in their field and selected peer reviewers will continue to guarantee the high standard of contents.

Now you are holding the first volume of this new series in your hands. We hope that you will remain loyal to us – whether as a reader, author, reviewer or person responsible for a scientific library – and that the tradition to which ‘Senckenberg Monographs’ is committed as a publication organ with a ‘long half-life’ will carry on.

Frankfurt, Müncheberg, Görlitz, October 2024

Dr Ulrich Jansen

(Editor-in-Chief of *Abhandlungen der Senckenberg Gesellschaft für Naturforschung*)

Professor Dr Thomas Schmitt

(Editor-in-Chief of *Nova Supplementa Entomologica*)

Professor Dr Karsten Wesche

(Editor-in-Chief of *Peckiana*)

Dr Peter Königshof and

Professor Dr Willi Xylander

(former Editors-in-Chief)

Plants on paper – an introduction

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1 A variety of sources

The title of this introduction is intentionally ambiguous. Most botanists familiar with research collections would agree that herbarium sheets – plant specimens pressed, dried and mounted on a stiff white paper (cf. Davies et al. 2024) – are what is meant with ‘plants on paper’. Yet there is another source from which information on plants and the people who worked with them can be drawn: letters and postcards. Such handwritten documents have long been overlooked or neglected by scientists, in spite of the extensive records available for study, for example in academic estates.

Botanists often use the labels affixed to or information directly written onto herbarium sheets¹, which provides important information about the who, where and when something was collected, but the labels also shed some light on the individuals who subsequently worked with the material. However, the space on a herbarium sheet is limited, whereas letters do not have this restriction. If there is more to say, another sheet of paper may be added. If the message is brief, a postcard is more appropriate. Researchers have to start realising that for many items in their collections, there may be a letter or postcard with information that is highly relevant for the item itself. And as the word implies, *context* is only given with all associated texts – which not so long ago was provided by the exchange of letters.

In fact, the total number of surviving letters from past eras is remarkably high. This is due to improved recording techniques and archiving practices since the 19th century. On the other hand, the audience at that time was very interested in private matters of more or

less known collecting naturalists and explorers, and a tendency towards a ‘voyeuristic’ perspective can even be assumed. Many letters have also been preserved that were expressly not intended for this purpose (Baasner 1999). Nevertheless, researchers across the disciplines now have this rich material at their disposal.

Unfortunately, herbarium specimens and the associated information from letters and postcards are rarely stored together. Sometimes, the corresponding collections are well-sorted and physically close², but this is rather the exception. It is even rarer to find clear cross-references between letters and herbarium sheets, not to mention common inventory numbers. Mostly, interested scholars need to have some criminalistic qualities to find and put the various pieces of the puzzle together. Inevitably, they have to familiarise themselves with archival science and learn to decipher and transcribe old manuscripts and handwritten documents. However, this detective work is rewarding (and can be quite enjoyable), especially as there is good introductory literature on working with archival sources nowadays (for example Beck & Henning 2012).

Simply digitising objects, as it was done at the beginning of the digitisation phase at different European research museums and archives, is increasingly being questioned. A new approach that is recently emerging, is to present collecting practices, attempts in mapping networks of relationships and to add multi-layered descriptions, also in relation to the debate about the Anthropocene (see for example Trischler & Will 2019, Sturm et al. 2022).

Nevertheless, before we can offer new findings, which is desired, we often have to bring together

Auf der Suche nach den ‚Getreidestammformen‘ – Brief- und Pflanzenwechsel zwischen Bonn und Weimar

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Abstract

This article focuses on the correspondence between Friedrich August Körnicke (1828–1908), Heinrich Carl Haussknecht (1838–1903) and Joseph Friedrich Nicolaus Bornmüller (1862–1948). Haussknecht and Körnicke had been in contact by letter since 1872 and exchanged plant material as well as news. Their interests were similar and revolved around hybridization in individual plant genera as well as the question of the origins and areas of origin of cereals and other crop plants. Both published their respective findings on this subject, and in some cases held opposing views. Through Haussknecht, Körnicke approached Bornmüller in 1892, who was on a botanical journey to the Orient at that time. Körnicke asked him to collect and send him seeds of various plants for his cultivation experiments in Bonn-Poppelsdorf, which would help to clarify the question of descent. All three scientists were involved in a network with different botanical research areas and followed the European ideas of the 19th century.

Keywords:

Herbarium, correspondences, Haussknecht, Körnicke, Bornmüller

Zusammenfassung

Im Fokus des Beitrages steht der Briefwechsel zwischen Friedrich August Körnicke (1828–1908), Heinrich Carl Haussknecht (1838–1903) und Joseph Friedrich Nicolaus Bornmüller (1862–1948). Haussknecht und Körnicke pflegten seit 1872 briefliche Kontakte und tauschten seither neben Mitteilungen auch Pflanzenmaterial aus. Ihre Interessen ähnelten sich und drehten sich sowohl um Hybridisierungen in einzelnen Pflanzengattungen als auch um die Frage nach der Abstammung und der Ursprungsgebiete der Getreidearten und anderer Nutzpflanzen. Beide publizierten hierzu ihre jeweiligen Erkenntnisse, zum Teil vertraten sie gegensätzliche Auffassungen. Auf Vermittlung von Haussknecht wandte sich Körnicke 1892 an Bornmüller, der sich seinerzeit auf einer botanischen Sammelreise im Orient befand. Körnicke bat um Sammlung und Zusendung von Saatgut diverser Pflanzen für seine Kulturversuche in Bonn-Poppelsdorf, die zur Klärung der Abstammungsfrage beitragen sollten. Alle drei Wissenschaftler waren in ein Netzwerk unterschiedlicher botanischer Forschungsrichtungen eingebunden und folgten den europäischen Ideen des 19. Jahrhunderts.

Schlüssel-/Stichwörter:

Herbarium, Korrespondenzen, Haussknecht, Körnicke, Bornmüller

Letters, plants and travel in the context of 19th century long-distance communication: Georg Schweinfurth's correspondence with Friedrich August Körnicke

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Abstract

The Biohistoricum at LIB Museum Koenig holds 80 postal items that Georg Schweinfurth sent to Friedrich August Körnicke between 1886 and 1907. Körnicke, who is mainly known as an agricultural botanist interested in cereals, received not only letters, but also many seeds of plants from Schweinfurth's African expeditions for his experimental garden. Their exchange of letters suggests that their personal relationship changed over the course of the decades. However, the letters have to be evaluated within their historical context, and also the conventions of letter writing in the 19th century. Correspondence by letter was an important element in the development of the educated bourgeoisie (*Bildungsbürgertum*) and the emergence of scientific scholarship. A reliable and efficient postal network was the prerequisite for this, which in turn depended on the improvement of the transport infrastructure, especially the railways. Mail delivery was fast and only took a few days in the latter half of the 19th century, even internationally. This is reflected in the enormous increase in mail volumes at that time. The telegraph and the emergence of the telephone played only a subordinate role for the majority of the population. In contrast, the expansion of communication possibilities by mail promoted the cosmopolitan exchange that made the lively correspondence between Schweinfurth and Körnicke possible in the first place.

Keywords

Letters, postcards, infrastructure, conventions, communication

1 Introduction

On 17 March 1899, Georg Schweinfurth wrote to Friedrich August Körnicke the following lines¹ (Figure 1).

“Honourable Privy Councillor, | You have again delighted me with | one of Your interesting and content-rich letters and I hasten | to express to you my best | thanks for it. Everything I learned

through | You about emmer, I did | not hesitate to share in letters to | Solms Laubach (now in Biskra), to | Loret and to de Morgan in South | Persia. [...]”

These few lines capture some of the most important elements of epistolary communication between scientists in the late 19th century generally, and between these two correspondents in particular. Schweinfurth, the letter's author, starts by addressing the recipient, Körnicke, formally with his honorific title, ‘Privy

(In-)Visible: The herbarium Carl Ludwig Blume from Indonesia and personal correspondence of Blume with his foster parents

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Abstract

Historical collections derived from former colonial regions reflect the biases of the Western scientific system. Large quantities of herbaria with such backgrounds are found and investigated in institutions and by scientists of the global North. One example is the Blume herbarium from Indonesia and Japan, which was deposited in the LMO in 1853. So far, neither quality nor quantity of this collection was known, and thus, the latter was invisible to scientist in both the global North and South. Providing access to this well preserved plant material (physical and/or digitised) as well as to contemporary inventories or correspondence will increase the perspectives we have on Blume and his work. To overcome the barrier of “deciphering” old German handwriting (Suetterlin, Kurrent), a project with students was initiated to transliterate letters from Blume to his foster parents. Subsequently, it is planned to translate these letters into English and provide them as a basis for studies on this colonial collection and its collector. So far, the self-testimony provides interesting information beyond the work of a German botanist working for the Dutch India Company in Indonesia. We learned more about the authors health conditions, his worries, doubts and fears, the work as physician, and Blumes affection for this foster family. As to the letters to be still transliterated, we hope for more information about Blumes attitude and behaviour towards the local population.

Keywords

Botany, colonial collection, digitalization, museum, provenance

On the principle of serendipity and how to involve students in projects dealing with historical botanical objects

Collections, especially herbaria, hold a broad range of information to be discovered. Starting with the distribution of taxa in time and space, their

morphology, former and current taxonomic concepts, nomenclatural changes, and finally DNA as a valuable source for molecular genetic investigations, much more information is permanently stored in the form of dried, and carefully mounted herbarium sheets. Indeed, beyond their value for plant systematists, botanical collections are also references to (re-)discover the history of the institutions, i. e., herbaria of universities, schools, museums, as well as private collections.

Eduard Rüppell (1794–1884) – his botanical legacy

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Abstract

Eduard Rüppell (1794–1884) was a prominent figure in the Senckenberg Nature Research society's early history. He undertook four self-funded expeditions to northeast Africa and Arabia, and the success of the second and the third journey set the cornerstone of the Senckenberg Museum in Frankfurt. When Rüppell left the Senckenberg after a conflict in 1858, every second biological object was either collected or organized by him. Although he was better known for his zoological studies, the botanical legacy forms an important, yet neglected aspect in the life of the city of Frankfurt's most important explorer of the 19th century. Today, Rüppell's herbarium represents a valuable part of the Herbarium Senckenbergianum (FR), e. g. due to very early records especially from the Ethiopian highlands.

Keywords

Senckenberg history, botanical research and collections, Herbarium Senckenbergianum, Eduard Rüppell

1 Introduction

Wilhelm Peter Simon Eduard Rüppell (1794–1884; Figures 1–2) was the son of a wealthy banker and merchant, and he is – presumably – the greatest of all those explorers of the 19th century who were born and raised in Frankfurt (Berger 2012). In Egypt, Sudan, Ethiopia and along the Red Sea Coast, Rüppell studied the culture, archaeology, fauna, geology, meteorology and topography in the course of his self-financed expeditions. He was one of the early visitors from Europe in this part of the world and this is especially true for the alpine highlands of Ethiopia and Kordofan, both regions where Rüppell came first to fill the blanks that were left in the atlases of the day. Subsequently, he brought back rich natural history collections to

Frankfurt. The success of Rüppell's expeditions pushed the Senckenberg Museum into European limelight (Mertens 1949, Klausewitz 1984, Sakurai 2013).

2 Eduard Rüppell the Collector

The Senckenberg Museum was built in 1820/21 and initiated by the “Senckenbergische Naturforschende Gesellschaft” (Senckenberg Natural History Society), founded in November 1817. Rüppell joined the Senckenberg Society in 1818. As early as 1835, the British parliamentary commission, organized to discuss the reform of the British Museum, was

Die Selbstverständlichkeit globalen Denkens und ihre Widerspiegelung in der Flechten- und Moossammlung des SMNG

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Abstract

This is a brief contribution about botanists and non-botanists of the 18th and early 19th centuries who focussed on studying the biodiversity of lichens and bryophytes worldwide. Intensive travelling and networking led to the creation of important collections in Europe and gave naturalists an idea of the distribution of species. Collecting lichens and bryophytes, including those of the Moravian Brethren (Herrnhuter Brüdergemeine) in South Africa, played an important role in the transfer of knowledge, then as now. The many herbarium specimens in the Görlitz Natural History Museum can be used to analyse biodiversity change in the country of origin due to their good state of preservation and documentation, their status as type material and as ecological indicators.

Keywords

Moravian Brethren, liverworts, type material, exsiccata, ecological indicators

Zusammenfassung

Der Kurzbeitrag handelt von Botanikern und Nichtbotanikern des 18. und des frühen 19. Jahrhunderts, die das Studium der Artenvielfalt an Flechten und Moosen weltweit im Blick hatten. Intensive Reisetätigkeit und Vernetzung untereinander führte bei den Personen auf dem Tauschweg zur Entstehung bedeutender Sammlungen in Europa und gab den Naturforschern eine Vorstellung von der Verbreitung von Arten. Die Aufsammlungen von Flechten und Moosen, worunter nicht zuletzt solche der Herrnhuter Brüdergemeine in Südafrika zu nennen sind, hatten damals wie heute eine herausgehobene Bedeutung im Wissenstransfer. Die vielfältigen Herbarbelege im Görlitzer Naturkundemuseum können aufgrund guten Erhaltungs- und Erfassungszustands, ihrer Stellung als Typusmaterial und als ökologische Indikatoren zur Untersuchung von Biodiversitätswandel im Herkunftsland genutzt werden.

Keywords

Herrnhuter, Lebermoose, Typusmaterial, Exsiccatenwerke, ökologische Indikatoren

Three examples of cereal collecting in Northeast Namibia

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Abstract

This essay discusses three instances of organized and documented cereal collections in and beyond the Zambezi Region, Northeast Namibia. Looking at the gathering of small grain varieties for an imperial seed transfer in 1913/14, an extensive cereal collection in 1991/92 and the establishment of regional seed banks in 2023, the contextuality of the respective collecting practices is reflected upon. Guiding questions are: Who collects cereal seeds in each example? What exactly is collected and for what purpose? Who benefits from the collection?

Keywords

(agro)botany, botany, ethnography, collections

1 Introduction

The Zambezi Region in Northeast Namibia is characterized by small-scale subsistence farming, with the main cereals grown being maize, sorghum, and pearl millet (SPC, APF & SAIEA 2015: 77). Up to this day, colonial legacies can be felt in the agricultural system and high inequalities in the country in general and in the relatively remote Northern regions in particular.¹ Cereals and seed collecting practices are intertwined in this (colonial) history.

Taking my small ethnographic research on cereal seeds in the Zambezi Region as a point of departure, this essay discusses three instances of organized and documented cereal collections in and beyond the area. It looks at practices of collecting cereals which

are influenced by Western notions of documenting, appropriating, exchanging, and conserving them. To illustrate the contextuality and non-innocence of such collecting practices, the three examples are reflected upon with the following questions: Who collects cereal seeds in each example? What exactly is collected and for what purpose? Who benefits from the collection?

During my research I encountered three documented cereal collections from 1913 to 2023 in archival documents, literature and through my interlocutors in Namibia. In this essay, firstly, a cereal collection under German colonial rule in Northeast Namibia in 1913/14 is discussed. Secondly, an extensive cereal collection in Northern Namibia in 1991/92 is elaborated. Thirdly, the present gathering of seeds for regional seed banks is touched upon. The essay ends with a concluding reflection.

Making Connections. Open Data for Transdisciplinary Provenance Research on Collections from Colonial Contexts

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Abstract

The aims of this article are twofold: Firstly, it raises awareness about acquisition contexts of museum collections that were shaped by asymmetrical power relations, injustice and violence and explains the terminology and concept of “colonial contexts”. It then discusses colonial collecting practices with a focus on colonial infrastructures and legal frameworks that defined the appropriation of collections in the German colonies. Furthermore, it draws attention to transdisciplinary collecting practices that can be observed in colonial contexts. Secondly, and strongly related to the aforementioned aspects, it introduces a project currently developed at the Museum für Naturkunde Berlin (MfN, Natural History Museum Berlin). By using an open participatory approach, this project links data on people for provenance research across institutions and disciplines. With the proposed methods, data on people can be connected to collections, archival material and literature, but also to specific acquisition contexts e. g. expeditions or military conflicts. Linking archival material – that is often spread across various museums and collections – with objects is not only relevant for provenance research but also for biodiversity studies. Documents from the colonial era are important accounts containing biodiversity knowledge about the colonised regions. Diaries, field notes, official reports and correspondence often also include Indigenous knowledge. By using a Linked Open Data approach, this information is made available worldwide. Thereby, new ways emerge to transparently provide information on colonial collections for joint discussions and projects with actors from the countries of origin and other implicated communities. Furthermore, the archival material from the colonial era with rich information on flora and fauna of formerly colonised territories can become an important basis for collaborative studies on biodiversity loss and climate change that can lead to enriching information in museum databases and online portals. Sharing information on the colonial entanglements of museum collections and biodiversity knowledge on a global scale by using participatory, open and accessible methods are a basic prerequisite for such knowledge contextualisation and transfer.

Keywords

Collection agent, collector, colonialism, Linked Open Data (LOD), Wikidata

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