

The Reuss herbarium

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De herbario berolinensi notulae No. 56

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Abstract: The Reuss herbarium is a collection of c. 60000 vascular plants of mainly European origin brought together in the mid-nineteenth century and kept in the Botanical Museum Berlin. This herbarium consists of specimens gathered by August Emanuel Reuss and his two sons August Leopold and Wilhelm Joseph and includes ample material purchased from different sources, notably the exchange club "Botanischer Tauschverein" in Vienna, and various exsiccata series. The collection also contains the voucher material referring to August Leopold Reuss's publications on the flora of what is now the north of the Czech Republic, the eastern fringe of Austria, the most western part of Croatia and the surroundings of Trieste in Italy. A considerable proportion of the Reuss herbarium originates from gardens, both botanic and private, in Prague, Vienna and elsewhere, and documents in certain cases their long-lost inventories. The complex background of the Reuss herbarium and its acquisition are elucidated, brief biographies of the key figures of the Reuss family with emphasis on their botanical activities are provided, and the names of the main collectors represented in the herbarium are listed.

Key words: August Emanuel Reuss, August Leopold Reuss, Austria, Berlin, Czech Republic, Europe, herbarium, vascular plants

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1. Introduction

During the night of 1–2 March 1943, the herbarium wing of the Botanical Museum Berlin-Dahlem was hit by bombs, among them phosphorus canisters, setting its contents on fire and reducing them to ash (Pilger 1953). Today this catastrophe is regarded as the largest loss to plant taxonomy that ever occurred. Fortunately, some materials that were kept in other parts of the Botanical Museum or had already been evacuated for safe storage survived the fire. Nevertheless, the gaps in the collections were immense.

News about the disaster in Dahlem spread quickly and occasioned a letter of condolences from Fritz Knoll (1883–1981), professor ordinary for botany and rector, i.e. vice-chancellor, of Vienna University, directed to Ludwig Diels (1874–1945), director general of the Botanic Garden and Botanical Museum Berlin-Dahlem. In this document dated 11 March 1943 Knoll promised assistance for the "Wiederaufbau ihres wissenschaftlichen Betriebs" [reconstruction of your scientific institution] (Unpublished sources 1). News about the Dahlem catastrophe may have spread from Knoll or another source to the Naturhistorisches Museum in Vienna where Karl

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Heinz Rechinger (1906–1998), then the acting head of the Department of Botany (Lack 2000), sent a letter dated 10 May 1944 to an unknown recipient in Berlin (Unpublished sources 2). In this document he announced the sending of fourteen boxes of herbarium material to the Kali mine in Bleicherode in Thuringia, Germany, then one of the evacuation sites of the Botanical Museum Berlin-Dahlem. These boxes, labelled BM 102-116, contained a miscellany of herbaria intended as gifts to help rebuild the collections (Unpublished sources 2) and they survived through to the end of the Second World War in safe storage. These were subsequently transferred, with the permission of the Soviet authorities, first to Erfurt, then later to the Soviet sector of Berlin and finally handed over to the Botanical Museum Berlin-Dahlem, which was based in the American sector of this city.

The boxes BM 102-110 and part of box 111 contained the Reuss herbarium; only a tiny fraction, about a dozen fascicles, had suffered from damp during the transfer and was discarded. In the late 1960s, this collection, comprising some 60000 specimens, was arranged according to families. In this way the Reuss herbarium was available for consultation, but because of other priorities it was only gradually mounted and integrated into the general herbarium. This process is now approaching its end and it seems useful to give an account as to how this herbarium was initially assembled by members of the Reuss family and to offer an overview of its contents.

This paper continues earlier contributions on the herbaria sent from the Naturhistorisches Museum in Vienna to the Botanical Museum Berlin-Dahlem in 1944 (Lack 1980; Lack & Wagner 1985).

2. The Reuss family from Bohemia

The medical profession sometimes runs in families, and the Reuss family is a good example of this trend having produced physicians in four succeeding generations (Krutský 2001a; Vávra 2009). Two members qualified additionally in the sciences, and both were considered important enough to have commemorative papers published on the occasion of their anniversaries (Pemsel 1930; Bartenstein 1961). Their lives and achievements were also the subject of a conference held in 2001 in their native Bilin [now Bílina, Czech Republic], a tiny town in northern Bohemia. Furthermore the esteem for their medical activities and for their promoting the acidulous mineral water of Bilin resulted in a pompous, eight-metre high monument in marble (Krutský 2001b). Erected in 1898 and recently restored, it still stands, albeit with the original inscription in German now substituted by an amended Czech translation. The scientific publications of these two "scientific" members of the Reuss family led to the inclusion of their names in several Czech encyclopaedias (e.g. Anon 1904a, 1904b; Bulisová 2003).

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also collected plants during a period of their lives. Two of them published a small number of botanical papers. Since neither botany nor collecting plants was the focus of activity of these three physicians and since a considerable number of biographical notes already exists, it seems appropriate to give only a brief overview of their lives. References to the bibliographies listing their numerous publications and to their handwritings are added. The little we know about their plant collecting and their creating a private herbarium is dealt with in more detail.

Note: The House of Reuß, a princely family in the Holy Roman Empire, is not known to be related to the Reuss family from Bohemia. The best-known members of the former family were the heads of two tiny sovereign states belonging to the former Deutsches Reich, i.e. the Principality of the Reuss Elder Line and the Principality of the Reuss Junior Line.

2.1. Franz Ambros[ius] Reuss (1761–1830)

Born in Kleinseite [Malá Strana, now part of Prague], Franz Ambros was promoted doctor of medicine and doctor of philosophy at Prague University in 1783. After studying mineralogy and geology with Abraham Gottlieb Werner (1749–1817) in Freiberg (Electorate of Saxony) he was appointed "Stadt-und Herrschaftsarzt" [physician for the town, i.e. Bilin, and the estates, i.e. the Lobkowicz estates] by Franz Joseph Maximilian 7th Prince Lobkowicz (1772-1816), later the first Duke of Roudnice. In a sense this changed the course of the family history since his children and grandchildren were also born in this little town. Franz Ambros published numerous papers on mineralogy, geology, palaeontology and balneology, among them a textbook for mineralogy in eight volumes. Subsequently he was appointed director of the industrial office and mining authority for the huge Lobkowicz estates where he contributed to the extensive mineralogical, geological and palaeontological collections of Prince Lobkowicz deposited in Bilin Castle. At an early moment in his life Franz Ambros was elected corresponding member of the Königliche Gesellschaft der Wissenschaften [Royal Society for Sciences] in Göttingen (Electorate of Brunswick-Lüneburg) (Krahnke 2001) and the Königliche Böhmische Gesellschaft der Wissenschaften [Royal Bohemian Society of Sciences] in Prague. Apparently supported by Archduke Johann of Austria (Anon. 1979: 417), Franz Ambros was given the title of "kaiserlicher Bergrath" [imperial mining council]; he died in Bilin aged sixty. He had been in correspondence, in 1813, with Goethe who had previously visited the nearby town of Teplitz [today Teplice, Czech Republic] and in May of that year came to Bilin in order to see with Franz Ambros the stock of cut and uncut garnet stones in the princely chancellery (Flügel 2013); and, in 1828, with Friedrich Wilhelm III, King of Prussia (Anon. 1979: 416), and Alexander Freiherr von Humboldt (1769-1859), who with Franz Ambros in 1791

had climbed the Borschen [today Bořeň, a mountain near Bilin] (Smetana 1979), with a subsequent correspondence (e.g. Anon. 1979: 419). Franz Ambros was an early balneologist in Bohemia (Procházka 2001) and made the mineral water of Bilin popular. He was also the first in the family to assemble substantial scientific collections, among them possibly also herbarium specimens.

Biography: Wurzbach (1868b), Anon. (1904a, 2001), Krutský (2001b, 2001c), Herm (2003b). Lists of publications: Krutský (2001d).

2.2. August Emanuel Reuss (1811–1873), since 1871 Ritter von Reuss – Fig. 1.

Born in Bilin as Ambros's fifth son, Franz August Emanuel studied philosophy and was promoted doctor of medicine at Prague University in 1833. Two years later, Ferdinand Joseph 8th Prince Lobkowicz (1797–1868), the second Duke of Roudnice, appointed him "Stadt-, Herrschafts-und Brunnenarzt" [physician for the town, i.e. of Bilin, the [Lobkowicz] estates and spa physician]. August Emanuel continued very much along his father's lines publishing widely on a broad spectrum of topics, mainly in mineralogy, geology and, in particular, palaeontology. He joined the Königliche Böhmische Gesellschaft der Wissenschaften and was in contact with among others František Palacký (Anon. 1979: 422-423), for good reason called "otec národa" [father of the people], a key figure for Czech identity, in Bohemian politics and historiography. In the second round of appointments to the newly founded Kaiserliche Akademie der Wissenschaften [Imperial Academy of Sciences] in Vienna, August Emanuel was nominated as an ordinary member in February 1848 together with such luminaries as Christian Doppler (Anon. 1851) and in the following year appointed first professor ordinary for mineralogy at Prague University. While in the capital of Bohemia, August Emanuel was an active member of Lotos (Anon. 1874c), a society for promoting the study of natural history in its broad sense (Startenstein 1920) and acted as its president from 1855-1862 (Zepharovich 1874). Together with his colleague at Prague University, Jan Evangelista Purkyně (1787-1869), famous for having discovered the Purkyne fibres in the human heart, he was also a member of the Gesellschaft des vaterländischen Museums in Böhmen [Society for the Patriotic Museum in Bohemia] (Houfek & Okurka 2014). After serving for one year as rector, i.e. vice president, of Prague University, August Emanuel moved to Vienna in 1863 where he was given the chair for mineralogy and geology at Vienna University. Awarded with the Order of the Iron Crown 3rd class he was ennobled "Ritter von Reuss" in 1871 (patent of nobility reproduced in Anon. 1979: 44-45); two years later August Emanuel died in Vienna. August Emanuel's work on fossil foraminifera



Fig. 1. August Emanuel Reuss (1811–1873), portrait. – Vienna, Österreichische Nationalbibliothek, Bildarchiv.

made him one of the fathers of micropalaeontology (e.g. Hradecká & Čtyroká 2001). His contributions to mineralogy and geology have also been appreciated by the scientific community (e.g. Fejfar 2001; Kouřímský 2001).

Collecting vascular plants seems to have been a major topic for August Emanuel. An anonymous note refers to his "Thätigkeit als Botaniker, die sich hauptsächlich in den letzten Jahren zu einer solchen Leidenschaft steigerte, daß er im Verein mit seinen beiden Söhnen ein Herbarium der europäischen Flora zusammenbrachte" [his activity as botanist, which rose over the last years to such a passion that he brought together with his two sons a herbarium of the European flora] (Anon. 1874a). This statement is corroborated by label information and an obituary (Geinitz 1874). Here we read that August Emanuel had started collecting and identifying plants in his early years and that he contributed to the herbarium of his elder son August Leopold, which "zu einem der grössten Privatherbare Oesterreichs erhoben worden ist" [has been raised to one of the largest private herbaria in Austria] (Geinitz 1874). The oldest specimens in the Reuss herbarium collected by August Emanuel date from 1829–1834 and originate from Bohemia. The accessibility of this collection, then deposited in Prague, is mentioned in passing in a chronicle of botany in Bohemia (Maiwald 1904). Collecting in an appreciable extent seems to have been resumed by August Emanuel only in 1856, first in Bohemia, and from 1863 onwards in Lower Austria; it continued until his

Collecter astoresiens Co Vitta angusti folie v. Jumpolits Kin than Jum 16 big for to hanfo Frand Sept Jufel bar Podol 363 Acheato В A Villa angus ti Joha Noth Vicia lathyroides L Invikan figel vlanfale sen Rellel. schwik noift sen flindenniffa bi Prag. 1820/561 Ale. L. you Thin Atenado in Donnhach 20 mar 1867 Prof Prent D С Flora Austriae inf. Vicia sepium L. Galega officinatio Z: for sen Otrians in his Thirles quifines Juringendorf is hadoly bis has afath. Rofranininfor bai Marine aldrey mill Maria . 1. Juni 1865 A. REUSS. While 1871. Dr. A v. Reuss. A. NEUSS. Ε F 24 Artemisia pontica X. Artimisia protien L builder frink no forme Surge Winn, on Dan Ange , niffen dan Vaflan a und dury Morbangen 14. Trytan bas 1566 -Horenford & Reuff G Н

Fig. 2. Handwriting of August Emanuel Reuss (A–C), August Leopold Reuss (D–F) and Wilhelm Reuss (G, H). – Berlin, Botanisches Museum Berlin, Generalherbar.

final year. However, August Emanuel is known to have published only a single botanical paper, a checklist of the vascular flora of Teplitz and its surroundings (see Appendix 1), and seems to have regarded plant collecting primarily as a recreation (Geinitz 1874).

Biography: Wurzbach (1868a), Schrötter (1874), Geinitz (1874), Laube (1874), Anon. (1874a, 1874b, 1904b), Bartenstein (1961), Zapfe (1985), Anon. (2001), Krutský (2001b, 2001c), Vávra (2000, 2001, 2006, 2009), Herm (2003a).

List of publications: Krutský (2001e). - Handwriting: Krutský (2001b: 47–48); Fig. 2A–C.

2.3. August Leopold Reuss (1841–1924), since 1871 Ritter von Reuss – Fig. 3.

Born in Bilin as the eldest son of August Emanuel, he studied medicine at Prague University where he joined a botanical exchange club informally named "Die Trilobiten" (Maiwald 1904). Later he moved with his father to Vienna University and was promoted doctor of medicine and doctor of surgery in 1865 and 1867, respectively. Specializing in ophthalmology he received his venia legendi in 1870 and became a founding member of the Wiener Allgemeine Poliklinik, a humanitarian institution intended to offer free medical treatment to the poor. In 1884 he was appointed head of the department of ophthalmology at this clinic, a position he held until his retirement. From 1909 until 1918 he headed this clinic, immortalized in Arthur Schnitzler's play "Professor Bernhardi", as its director. In addition, August Leopold had an extensive private ophthalmological practice and published a considerable number of papers in his field, in particular on myopia, astigmatism and achromatopsia. He died in Vienna aged eighty-three, an obituary explicitly mentioning his "Liebe zu Blumen und zu Augen" [love for flowers and eyes] (Mannaberg 1924).

Before his appointment to the Wiener Allgemeine Poliklinik, August Leopold collected vascular plants in the Austro-Hungarian monarchy, mainly in Bohemia and Lower Austria, starting at some time in the late 1850s. Findings of rare plants in Bohemia by him and/or his father were the subject of August Leopold's first botanical publications (see Appendix 1, Reuss 1859). His most substantial paper deals with the vascular flora in the region of Kom[m]otau [Chomotov], Saaz [Žatec], Raudnitz [Roudnice] and Tetschen [Děčín], all towns situated in northern Bohemia (see Appendix 1, Reuss 1867). Together with his father he undertook several botanical excursions across the Austro-Hungarian monarchy, among them to the Banat and to Trieste, Istria and the island of Lošinj. The findings of the latter tour were published by August Leopold (see Appendix 1, Reuss 1868).

After the death of his father, August Leopold discontinued collecting plants. This fact is confirmed in an unpublished letter of 3 July 1884 "Seit mehr als 10 Jahren

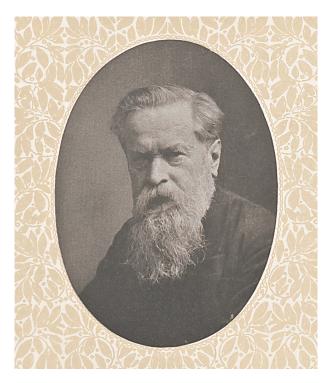


Fig. 3. August Leopold Reuss (1841–1924), portrait. Hirsch, L. (ed.), Der kaiserlich österreichische Franz Joseph Orden und seine Mitglieder, Wien: Biographischer Verlag, 1912, p. 127. – Berlin, Staatsbibliothek Preußischer Kulturbesitz.

beschäftige ich mich nicht mehr mit Botanik; mein Herbar steht in Kisten verpackt auf dem Boden und harrt der Zeit, wo mir die Berufsgeschäfte gestatten werden mich meiner alten Lieblingswissenschaft zuzuwenden" [For more than 10 years I have no longer been engaged in botany; my herbarium, packed up in boxes, is deposited in the attic and waits for the moment when my professional duties will enable me to turn back to my old favourite science] (Unpublished sources 3). Only in 1894 did August Leopold resume collecting plants. His son August Adolf (1879–1954), ordinary professor of paediatrics at Graz University and director of the paediatric clinic in Wien-Glanzing (Vávra 2009), did not continue this family tradition.

Biography: Wurzbach (1868b), Pagel (1901), Mannaberg (1924), Fischer (1962), Lauber (1985), Vávra (2009). List of medical publications (independent works only): Reuss & Woinow (1869), Reuss (1902). List of botanical publications: Appendix 1. – Handwrit-

ing: Fig. 2D–F.

2.4. Wilhelm Joseph Reuss (1849–1927), since 1871 Ritter von Reuss (rytar z Reussů)

Born in Bilin as the third son of August Emanuel, he studied medicine, probably at Vienna University, and continued the family tradition in becoming spa physician in his native town. Like his grandfather, Franz Ambros, he also published on the waters of the Bilin spring. He died in Prague in 1927. Judging from herbarium labels, he collected plants during the 1860s in Vienna and its surroundings, though the labels were often written by his father.

Biography: Vávra (2009).

Publication: Reuss & Laube (1891). – Handwriting: Fig. 2G, H.

3. The Reuss herbarium

All we know about the transfer of the Reuss herbarium to Vienna University is the anonymous and laconic note "Professor Dr. August [Leopold] R.[itter] v. Reuß hat das Herbarium seines Vaters der Universität Wien geschenkt" [Professor Dr. August [Leopold] R.[itter] v. Reuß has donated his father's herbarium to Vienna University] (Anon. 1910). This report seems to imply that August Leopold regarded this herbarium as his father's, i.e. August Emanuel's collection. However, it seems more appropriate to regard it as August Leopold's herbarium and consequently the abbreviation "Herb. A. L. v. Reuss" is used on labels in B. More important is another aspect: we do not know exactly how well informed the author of the brief anonymous note really was (see below).

In 1910, Richard Wettstein Ritter von Westerheim (1863-1931) was professor ordinary of botany at Vienna University and director of its botanical garden (Janchen 1933), and he may have had a special interest in acquiring the Reuss herbarium. Prior to his appointment at Vienna University he had been professor ordinary of botany at Prague University, a vice-president of "Lotos" and could well have desired to have the herbarium, rich in material from Bohemia and from the botanical garden of his former university, under his care. In any case several specimens with the annotation "HB Prag" were provided with an additional printed label "Botanisches Institut der k. k. Universität Wien" and the stamp "cult. Hort. bot. Prag.". For reasons presented below this fact is somewhat difficult to understand. However, it should be taken into account that printed labels were often used in an informal way (E. Vitek, pers. comm., 11 Feb 2019) and not as proof of ownership.

However, an alternative interpretation for "donated to Vienna University" is tentatively presented here. The Reuss herbarium could have been donated by August Leopold not to Vienna University but to the K. K. Zoologisch-Botanische Gesellschaft [Imperial Royal Zoological-Botanical Society] in Vienna. This association had its collections deposited since 1908, i.e. prior to the anonymous note, in the east wing of the so-called old Botanical Museum, in Mechelgasse 2 in the third district of Vienna (Janchen 1933), which was university property. Formerly, this building on the grounds of the Botanical Garden of Vienna University had been the seat of the Botanical Institute, which by 1908 had moved to the nearby premises at Rennweg 14. In short, one could easily be misled into thinking that the Reuss herbarium was donated to "Vienna University".

The further fate of the Reuss herbarium remains largely unknown. In any case the collection was neither amalgamated with the pre-existing herbarium of the society nor with the herbarium of the Botanical Institute. Instead it must have been kept separate as an unmounted collection. From 1922 at the latest, the herbarium of the society was dissolved (Lack 1980), with parts sold and other parts donated to the Natural History Museum (W). No less than 12674 specimens from the "Zoolog.- Bot. Gesellschaftsherbar (Wien)" are given in the index of collectors kept at W, albeit without a date (Lack 1980), but these appear not to have included the Reuss herbarium. However, the same index also contains an entry referring to Reuss material from Bohemia and the Banat with the note "ex Herb. Zoolog.-bot. Ges." added (E. Vitek, pers. comm., 12 Feb 2019); neither a date nor the number of specimens involved in this transfer are given. This seems to indicate that some specimens collected by members of the Reuss family in Bohemia and the Banat were extracted from the Reuss herbarium and integrated into W, while the rest of the Reuss herbarium remained untouched.

In a historical account on the herbarium of Vienna University (Schönbeck-Temesý 1992) the Reuss herbarium is surprisingly reported to have been offered for sale to Notre Dame University in Monroe, Louisiana, in 1934 with the note added that this purchase did not materialize (Schönbeck-Temesý 1992). Considering the realities of Austrian administration, it is highly implausible that such an offer could have been made had the Reuss herbarium been university (i.e. state) property, but quite possible had it been private property (evident from an unpublished letter by Erwin Janchen to Theodor Karl Just cited in Schönbeck-Temesý 1992). After all, E. Janchen (1882–1970) was deputy director of the botanical garden of Vienna University when writing this letter (Wendelberger 1972) and must have been well informed. Nothing is known for certain where the Reuss herbarium was actually kept after 1922 until it was sent by Rechinger in 1944 to Bleicherode (see Introduction). The Naturhistorisches Museum is a possible depository since not only specimens from Bohemia and the Banat (see above), but also 26 sheets of Berberidaceae, were accessioned by W, astonishingly as late as 1944 according to the index of collectors (E. Vitek, pers. comm., 31 Jan 2019).

The Reuss herbarium in Berlin consists of (1) specimens collected by members of the Reuss family and (2) materials gathered by others, with the latter group far more extensive than the first. Basically it is a European herbarium with only a tiny fraction of specimens originating in other continents, notably North America, Africa and Central Asia.

For various reasons, the attribution of labels to individual members of the Reuss family is not easy – firstly because August Emanuel and his son August Leopold often abbreviated their Christian names to "A."; secondly because, judging from the handwriting, labels were not written by the collector but by a relative or an amanuensis, at least in certain cases; and thirdly because labels with a printed indication of the collector's name were sometimes corrected by hand. Furthermore, the name of the collector is sometimes omitted, although judging from the handwriting the respective label had been written by a member of the family. August Emanuel is known to have repeatedly used "Prof Dr Reuß" on the labels and also annotated the collections of his younger son Wilhelm Joseph.

August Emanuel, August Leopold and Wilhelm Joseph Reuss are not known to have travelled abroad, i.e. outside the Austro-Hungarian monarchy, and all their collections come from this region, comprising in current political terminology Austria, Croatia, the Czech Republic, Hungary, Slovakia and Slovenia, plus parts of Italy, Montenegro, Poland, Romania, Serbia and Ukraine. This part of the Reuss herbarium comprises the bulk of the specimens collected by August Leopold in what is now Austria, Croatia, the Czech Republic and Italy and published in his botanical papers (see Appendix 1). The material gathered by August Leopold's father originates mainly from the three focal points of his life, i.e. Bilin, Prague and Vienna, including their surroundings, while his younger son Wilhelm Joseph collected mainly in Vienna and its surroundings.

A surprisingly large number of specimens originated in gardens. Many come from the Botanical Garden of Prague University, the Botanical Garden of Vienna University and the Botanical Garden of the Theresianische Akademie, the latter a private botanical garden attached to a famous boarding school in Vienna, founded by Maria Theresia, Queen of Bohemia and Hungary, in 1746. Situated on the corner of what is now Favoritenstraße and Theresianumgasse in the fourth district of Vienna, this scarcely known garden was used in the late eighteenth century primarily as an economic garden (Klemun 2002), while its inventory in the mid nineteenth century is now revealed for the first time due to the specimens in the Reuss herbarium.

Smaller numbers of specimens come from the botanical gardens in Karlsruhe (Grand Duchy of Baden), from other private gardens, e.g. those in Bilin, Prague and Tetschen, and nurseries, e.g. those of the Poscharsky family in Dresden (Kingdom of Saxony). Due to their privileged position in society, the members of the Reuss family had access to the gardens and conservatories belonging to the upper echelons of Bohemian aristocracy, e.g. to those at Sichrov Castle [today Zámek Sychrow, Czech Republic], then owned by Camil Joseph I. Prince Rohan (1800–1892). Other gardens mentioned on the labels include "Eisenberg" standing for Eisenberg Castle [today Zámek Jezeří, Czech Republic], then owned by Ferdinand Joseph 7th Prince Lobkowicz, and "Rothenhaus" standing for Rothenhaus Castle [Zámek Červený Hrádek], since 1866 belonging to Gottfried Karl Joseph Prince Hohenlohe-Langenburg (1860–1933). A collection of orchids and heathers originates from the long-lost conservatory in the Kinsky garden [Zahrada Kinských] (Anon. 1999) on Laurenziberg [Petřín] in Prague; this summer residence belonged to Ferdinand Bonaventura 7th Prince Kinský of Wchinitz and Tettau (1834–1904) when these plants were gathered there. The exact localities of other gardens, like a "Baumgarten" in Prague and a "Vereinsgarten", are less clear. The former seems to refer to a public park in Bubeneč, now called Královska oboda or Stromovka and situated in the ninth district of Prague (Anon. 1999), while "Vereinsgarten" possibly stands for the garden of the k. k. Gartenbau-Gesellschaft [Imperial Royal Horticultural Society] in Vienna. In c. 1860 this association had rented from Johann II, 12th Reigning Prince of Liechtenstein (1840-1929), facilities, mainly conservatories, at his summer residence in the ninth district of Vienna (Anon. 1860a), where passion flowers, orchids and many plants from Australia were cultivated. Unfortunately a number of specimens cultivated in gardens are often annotated in a most fragmentary way, e.g. "HB" [Hortus Botanicus] without giving a locality, although the date of collection is almost always given. It seems plausible to assume that the bulk of the post-1863 specimens annotated "HB" may originate from the Botanical Garden of Vienna University.

Herbarium material collected by others (see Appendix 2) was acquired by exchange or purchase. Many labels carry the stamp "Botanischer Tauschverein in Wien" which indicates that they passed through the hands of Alexander Skofitz (1822-1892), the founder of this institution and of the journal "Osterreichisches Botanisches Wochenblatt", later "Österreichische Botanische Zeitschrift" (Anon. 1875). Clearly plants were not only exchanged but also sold through this Tauschverein (Skofitz 1865), and numerous notes in the standing section "Botanischer Tauschverein" published in the two journals cited above testify how heavily members of the Reuss family were involved in the activities of this association. These notes cover the years 1860 (Anon. 1860b) to 1874 (Anon. 1874b) but are only rarely sufficiently detailed to understand which member of the Reuss family was involved in the transactions.

In addition, the Reuss herbarium contains several widespread exsiccata series, like those distributed by Theodor von Heldreich (1822–1902), i.e. his "Flora graeca exsiccata", "Herbarium graecum normale" and "Plantae exsiccatae ex Attica", by Rudolf Friedrich Hohenacker (1798–1874) and others (see Appendix 2). The number of type specimens forming part of the Reuss herbarium is very small: among them we find, e.g., a Kotschy collection from modern Turkey that is the basis of the name *Aethionema rubescens* Boiss.

Specimens collected by members of the Reuss family and kept in GJO and W are currently available in the JACQ database (https://herbarium.univie.ac.at/database/ accessed 5 Feb 2019), and more are to follow in the future.

4. Other Reuss collections

According to Index Herbariorum (Vegter 1983) and the JACQ database further botanical collections by members the Reuss family have been deposited in BRNU, DAO, FI, GB, GOET, GZU, H, IBF, MANCH, MW, P, W and WU. Judging from the numbers given (Vegter 1983), the Reuss herbarium in Berlin is ten times as large as the second largest collection of Reuss specimens, i.e. that conserved in WU. How and when the latter collection was integrated into the herbarium of Vienna University remains unknown (W. Till, pers. comm., 31 Jan 2019)

After the death of Ferdinand Joseph 7th Prince of Lobkowicz the mineralogical, geological and palaeontological collections to which Franz Ambros and August Emanuel Reuss had very substantially contributed and which had been deposited in Bilin Castle passed to his elder daughter Leopoldine Countess Bossi Fedrigotti von Ochsenfeld, née Princess Lobkowicz (1835-1892) (Papp & Vincze-Szeberényi 1991). For 30000 guilders she sold this material to the Magyar Nemzeti Múzeum in Budapest, where 41 217 specimens with a total weight of about 80 tons were accessioned (Papp & Vincze-Szeberényi 1991). Today this collection is kept in the Magyar Természettumányi Múzeum in Budapest, but it suffered considerable losses during the Hungarian Revolution of 1956 (Papp & Vincze-Szeberényi 1991). According to a database at the latter institution, at least one herbarium specimen collected by a member of the Reuss family ended up in BP (Z. Barina, pers. comm., 16 Jan 2019), but it is doubtful if this had previously formed part of the Lobkowicz collection.

No attempt is made here to deal with the collections of fossil plants and non-botanical materials brought together by members of the Reuss family that exist in Prague, Vienna and elsewhere.

5. Botanical eponymy and homonymous botanists

The name "Reuss" is immortalized in a few generic names, but only the fossil genus Reussia C. Presl (1838) commemorates a member of the Reuss family from Bohemia, i.e. Franz Ambros Reuss. However, this name is nomenclaturally illegitimate as a later homonym of Reussia Dennst. (1818), for a genus of Rubiaceae dedicated to Christian Friedrich Reuss (1745-1813), a Copenhagen-born physician and botanist active in Tübingen, as well as of Reussia Endl. (1836), for a genus of Pontederiaceae, conserved against its earlier homonym and of unclear dedication (Burkhardt 2018). The specific epithet of the fossil Pinus reussii Corda (1846) refers to August Emanuel Reuss. By contrast Rubus reussii Holuby (1875), Rosa reussii H. Braun (1885) and Gentiana reussii Tocl (1901), all names for non-fossil plants, were dedicated to Gustav Reuss (1818-1861), a botanist and physician based in what is now Slovakia. Leopold Reuss

(1775–1850), cathedral vicar (Domvikar) at Passau and author of two local Floras (Reuss 1819, 1831), is also not related to the Reuss family from Bohemia.

6. Epilogue

The Reuss herbarium is relevant for different fields of research: floristics, in particular the change in the composition of the flora since the 1850s as exemplified in regions particularly well collected like northwestern Bohemia, northern Burgenland and coastal Istria; urban ecology, in particular the documentation of plant life in urban agglomerations like Prague, Vienna and their surroundings, valuable because of the precisely dated specimens; and garden conservation, offering insight into the inventory of botanical as well as private gardens (including the respective conservatories) in the mid-nineteenth century, mainly in Bohemia and Austria.

Acknowledgements

Thanks are due to G. Neumann for volunteering to enter label data of the Reuss herbarium into the herbarium database at B. Thanks are also due to Z. Barina (Budapest), W. Till and E. Vitek (both Vienna) for information on the herbarium material collected by members of the Reuss family and now conserved in BP, W and WU. J. Compton (Tilsbury), P. Hein, E. Lack (both Berlin) and E. Vitek have kindly read a preliminary version of this text, and E. Vitek and R. Vogt (Berlin) are thanked for their reviews of the submitted manuscript.

Unpublished sources

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- Letter by K. H. Rechinger to unknown recipient, dated 10 May 1944. – Berlin, Botanischer Garten und Botanisches Museum Berlin, Archiv, Auslagerungsakten.
- 3: Letter by August Leopold Reuss to J. B. Keller, dated 3 July 1884. – Vienna, Antiquariat Inlibris, Gilhofer Nfg.

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Appendix 1

Botanical publications by August [Emanuel] Reuss and August [Leopold] Reuss

- Reuss A. [E.] 1841: Flora von Teplitz und seinen Umgebungen. – Pp. 130–141 in: Schmelkes, G., Teplitz und seine Mineral-Quellen mit besonderer Rücksicht auf ihren Werth als Heilmittel. – Dresden: Arnold.
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- Reuss A. [L.] 1861: Beiträge zur Flora Böhmens. Lotos 11: 223–228.
- Reuss A. [L.] 1862: Beiträge zur Flora Böhmens. Lotos **12:** 235–238.
- Reuss A. [L.] 1863: Die Flora der Salzstellen, insbesondere Böhmens. – Lotos **13:** 11–14, 26–28.
- Reuss A. [L.] 1867: Botanische Skizze der Gegend zwischen Kommotau, Saaz, Raudnitz und Tetschen. – Pp. 129–232 in: Löschner, J. W. v. (ed.), Teplitz und die benachbarten Curorte vom naturhistorischen, medizinisch-geschichtlichen und therapeutischen Standpunkte. – Prag: H. Dominicus [= Löschner, J. W. v. (ed.), Beiträge zur Balneologie. Aus den Curorten Böhmens 2].

- Reuss A. [L.] 1868: Bericht über eine botanische Reise nach Istrien und den Quarnero im Mai 1867. – Verh.
 K. K. Zool.-Bot. Ges. Wien 18: 125–146.
- Reuss A. [L.] 1873: Beiträge zur Flora von Nieder-Österreich. Verh. K. K. Zool.-Bot. Ges. Wien 23: 41–48.

Appendix 2

Main collectors represented in the Reuss herbarium and provenance of their collections

Provenances are given in current political terminology; the historical terminology (in quotation marks) is used, however, where historical territories cannot clearly be assigned to current territories unless the specific location is considered.

Collector names follow the "standard label name" of Harvard's Botanists database (http://kiki.huh.harvard .edu/databases/botanist_index.html) but first name initials have been added always if known.

Exsiccata series edited by others than the collectors are cited separate at the end.

Ahrenberger J.	Austria, S Germany
Alschlinger A.	"Dalmatia"
Andorfer J.	Austria
Ascherson P.	Germany: Brandenburg, Italy: Sardinia
Baenitz C. G.	Poland, "Bohemia"
Bagge A.	Germany: Hesse
Bailey C.	United Kingdom, Ireland
Balansa B.	Turkey
Barth J.	Romania: Transylvania
Bayer J. N.	Austria
Becker A.	Russia: Lower Volga ["Sarepta"]
Berggren S.	Norway
Besser W.	Ukraine: Crimea
Bilimek D.	Austria, Czech Republic, Hungary
Blanche C. I.	Lebanon, Syria
Bochkoltz W. C.	Germany
Boissier É.	Greece, Spain
Bordère H.	France
Bourgeau E. Spain	n: mainland & Canary Islands, Switzerland
Bradley France:	Corsica, Italy: mainland & Sardinia, Spain
Braig E.	"Istria"
Brandmayer E.	Austria
Braun A.	Germany
Braunstingel J.	Upper Austria
Breidler J.	Austria
Breutel J. C.	South Africa
Brotherus V. H. & A	. H. Finland: Lapland
Burchardt W.	Germany: "Neuvorpommern und Rügen"
Cawlowski A.	Austria
Cesati V.	Italy
Chaubard L. A.	France, Greece, Italy
Claudi	Austria, Bohemia
Clemenson	Germany: Hesse
Costa y Cuxart A. C	Spain: Catalonia
Csató J. von	Romania: "Transylvania"
Debeaux J. O.	France: Corsica, Spain
Ducommun JC.	S France, Switzerland

Eisenstein Austria Engler A. "Silesia" Erdmann T. O. Canada: Newfoundland/Labrador Fábry J. Hungary, Slovakia Norway, Romania: "Transylvania" Falck A. Germany: Thuringia, "Carpathians" Fritze R. Frivaldszky von Frivald I. (E.) "Macedonia", "Rumelia", "Thracia", Greece: Crete Funk Spain Fürstenwärther J. B. von Austria Gaillardot C. Lebanon, Syria Graf F. Austria, Slovenia Guicciardi J. Greece Gussone G. Italy: Sicilia Hans W. (from Herrnhut) Germany Hartman C. Norway Hausmann F. Italy: S Tirol Haussknecht C. Germany, N Italy, Switzerland Romania: Transylvania Haynald L. Hazslinszky F. Czech Republic, Hungary, Slovakia Hedenberg Greece: Rhodes Hegelmaier C. F. Germany: "Württemberg" Heidenreich F. A. Poland Heldreich T. H. H. Greece Heller A. A. Mexico Hepperger C. von Austria, N Italy Heuffel J. "Banat["] N Germany, Poland Hinks A. Hofmann [E.?] "Bohemia" Hohenacker R. F. "Caucasus" Czech Republic, Hungary, Slovakia Holuby J. Huet du Pavillon A. Switzerland Huguenin A. France Hülsen R. "Posen" Austria, "Dalmatia", France, Hungary, Italy Huter R. Jabornegg M. Austria, "Dalmatia", Italy, Switzerland Janka V. von Bulgaria, Hungary, Romania, Turkey Josch E. Austria Juratzka J. Austria Czech Republic Kablikóva J. Kalmus F. Austria Karl W. "Bohemia" Karo F. K. Poland Keck K. Austria Kegelmaier Switzerland Kerner A. Austria, Germany: Allgäu, Hungary, N Italy Kiener C. Switzerland Kokeil F. Austria Kotschy C. G. T. Bulgaria, "Nubia", Turkey Austria, Hungary Kovátz J. Kralik J. L. France, Tunisia Kristof L. Austria, N Italy Kržišch J. F. Austria, Hungary, Slovakia Kugel F. "Pyrenees" Kumlien T. L. T. U.S.A.: Wisconsin Kuntze A. Italv Kuntze O. Germany Switzerland Lagger F. J. "Altai", Ukraine: Crimea Ledebour C. F. Leffler J. A. Sweden Switzerland Lerch J. F. Leresche L. France, Switzerland Letourneux A.-H. France Lindeberg C. J. Norway, Sweden Dominican Republic, Loser A. France: Martinique & Mauritius, Italy, Istrien Mathonnet R. France Matz M. Lower Austria

Mayer A. C. Czech Republic, Slovakia Menzel G. Greenland, North America Moen Guyana Monheim V. Germany: North Rhine-Westphalia Moritz J. W. K. Venezuela Moser C. J. U.S.A.: Pennsylvania Nietner J. Sri Lanka Noë F. W. Balkans Nordstedt C. F. O. Scandinavia Oberleitner F. Austria Oenicke K. Germany: Brandenburg Oertel A. Austria, Germany: Hesse & Thuringia, Switzerland Opiz P. M. Austria, Czech Republic, Germany Pantocsek J. Balkans, Hungary Pávai A. von Romania: Transvlvania Perraudière H. R. L. T. de la France, Spain: Canary Islands "Dalmatia" Petter E Pichler K. [C.] von Austria, N Italy Balkans, N Italy Pichler T. Turkey Pinard C. Polathy K. "Bohemia" Porta P. Italy Portenschlag F. von "Dalmatia" Ralintz C. Poland Rastern N. Austria, Balkans, Switzerland Rauscher R. Austria Rehmann A. "Galicia" Reichardt H. W. Austria Reverchon E. France: "Hautes-Alpes" Richter L. Romania Romain C. Algeria Schäde J. Germany: Brandenburg Schimper W. "Abyssinia" Schlosser J. C. Croatia

Exsiccata series

Heldreich T. von [de] (ed.)

- * Flora Graeca exsiccata
- * Herbarium Graecum normale
- * Samaritani delectus plantarum Aegypti inferioris curante Th. de Heldreich
- * Plantae exsiccatae ex Attica

Schmidt C. Schneller W. A. Schreiber H. Schrenk A. G. von Schröter Schultz A. Schwarzel B. Schwarzel F. Schweinfurth G. Sieber F. W. Siegmund W. Simony O. Skofitz A. Sonklar C. A. Spreitzenhofer G. C. Spruner W. Strobl G. Szovits [Szoviz] A. J. Tappeiner F. Tauscher J. [G.] Thévenau A. V. Todaro A. Tommasini M. G. S. de Turczaninow N. S. Uechtritz R. F. C. Urgel T. Vágner L. Veselsky B. Vsetecka F. Wolfner W. Wolle J. Willkomm M. Winkler M. Zetterstedt J. E.

Algeria Slovakia Austria, Hungary Kazakhstan: "Songaria" Austria Istria Bohemia Czech Republic Germany, Italy: Sardinia Egypt, Greece, South Africa Czech Republic: Liberec Austria Austria, Hungary Austria, Hungary Austria Greece Austria, Balkans, Italy Ukraine Austria Hungary France Italy "Balkan", Italy Asian Russia "Silesia" France Hungary, Romania: Transylvania Hungary Czech Republic Romania U.S.A. Spain Germany, Hungary, Switzerland Sweden

Hohenacker R. F. (ed.)

- * [with Pesati, Carnel & Savi] Plantae Italiae borealis
- * Don Pedro del Campo, Plantae Hispaniae pr. Granatam et in Sierra Nevada collectae
- * Bordère, Pl. m. Pyrenaeorum altiorium
- * Hostmann & Kappler, Plantae surinamenses
- * Kappler, Plantae surinamenses 1844

Willdenowia

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