4. *A Botanical Odyssey: the evacuation of the Hamburg Herbarium 1943-1990*

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Large parts of the Hamburg Herbarium (**HBG**) were evacuated during the Second World War. They were transferred in 1943 to Central Germany, in 1945 to Leningrad (now St Petersburg) in Russia, and finally in the 1950s to East Berlin, from where they were returned to Hamburg in 1990. The collections have remained untouched for nearly 50 years and are now being incorporated. The history of this unique 'botanical odyssey' illustrates both the changing attitudes towards, and the permanent commitment for, natural history collections.

Keywords: Second World War — Russia — Germany — history — natural history collections — war damage.

INTRODUCTION: HERBARIA AT HAMBURG UNTIL 1943

In Germany, the traditional centres of research in systematic botany are widely scattered and very different in their structure. Hamburg has always been in a special situation. Owing to its geographical situation and its economic importance, it was at the very source for scientific material coming in from overseas especially during the first part of the 19th century. The botanical garden was founded in 1821. Its first directors Johann Georg Christian Lehmann (from 1821 to 1860) and Heinrich Gustav Ludwig Reichenbach (from 1863 to 1889) were the only professional botanists in this city, but substantial research was also carried out by 'gentlemen scientists' like Sonder, Steetz, Klatt and Gottsche (Poppendieck, 1990). Owing to the lack of a permanent botanical institution, and to the reluctance of the state of Hamburg to acquire scientific collections, their herbaria and those of Lehmann and Reichenbach went to other places. Nevertheless, several important collections from the time of the 'gentlemen scientists' have remained here by chance: Drège, Ecklon, Carl Ludwig Preiss, H. W. Buek, and Lehmann's and part of Sonder's Algae to name a few. However, at the end of the 19th century systematic biology at Hamburg had shrunk to insignificance.

This trend was reversed after 1890. Both the infamous cholera epidemic at Hamburg in 1892, and the beginning of German colonial commitment, stressed the importance of basic research into natural history — if only for economic reasons. A small botanical museum, founded in 1883, was combined with a botanical laboratory in 1897. By then, it had already taken over the material from the privately owned Godeffroy Museum with important early collections from Queensland and Samoa. The director Eduard Zacharias combined botanical garden and botanical museum into the 'Botanische Staatsinstitute', which, under his successors, was incorporated into the university newly founded in 1919. Before 1914 the herbarium flourished. The economic situation was excellent, and herbaria from all over the world could be purchased. Large collections like those of J. A. Schmidt and Brandis were donated to the herbarium, and a very large set of duplicates was received from the botanical museum at Berlin. Important activities after the First World War were the collections of Winkler in Borneo (1923) and the various journeys of Wissmann and Rathjens to Arabia. But despite the importance and the size of the collections the staff remained small — a single curator was responsible for a collection of more than a million specimens, and a scientific profile comparable to Berlin could not develop.

GERMAN MUSEUM COLLECTIONS AND ARCHIVES DURING AND AFTER THE SECOND WORLD WAR

During the Second World War works of art were transferred on a large scale by the respective parties: both German and Allied Forces confiscated museum collections, libraries, etc. This transfer and the exchange of the evacuated material is still the subject of political negotiations between Germany and Russia. Surprisingly enough there seems to be no scientific study about the evacuation of archives and museums in Germany during the Second World War which could illustrate the policy of the National Socialist Regime towards safeguarding the material culture. For the present study, a generalised picture must suffice (A. Heuss, pers. comm., 1995). Evacuations began immediately after the beginning of the War in 1939. As air raids were expected to come from the West, the archives, libraries and museums were moved mostly into the east of Germany. In many cases these evacuations were criticised by the authorities because of their effects on the civilian population: it was feared that they might be interpreted as signs of weakness or panic. The State did not pursue a coordinated policy and did little to assist museums in this matter. The structure of National Socialist rule in Germany was pluralistic and for museums, libraries and archives this meant that some offices or party organisations would order the evacuation of the holdings while others tried to prevent just this. Each institution had to care for itself, and had to negotiate on its own with the owners of suitable storage places as well as with transportation agencies.

At Hamburg, the 'Patriotische Gesellschaft' was denied permission to evacuate its invaluable library apparently because it was considered to be 'internationalistic' by the regime. The Zoological Museum at Hamburg evacuated parts of its

scientific collections but maintained the public museum as a showfront until it was bombed out in summer 1943 (Weidner, 1967 and pers. comm., 1994). A similar policy was pursued by other museums. Since Diels as director of the Botanical Museum Berlin-Dahlem apparently made no preparation for evacuation, it is suspected that museums at the capital were under much more political pressure than 'provincial' ones like those at Hamburg (Friederichsen, pers. comm., 1995).

The damage to natural history collections in Germany was documented by British authorities. Dr Alston from the British Museum (Natural History) was commissioned to visit German herbaria and institutes in the autumn of 1946 in order to ascertain the nature and extent of taxonomic work in Germany during the war years, and to prepare a list of publications to be secured for libraries in Great Britain. Furthermore, he was to enquire into the state and location of herbaria containing type specimens, so that these types could become available to monographers as soon as possible. Alston visited Hamburg, Göttingen, Giessen, Frankfurt, Berlin, Stuttgart and Munich. His report is based on personal observations and talks with colleagues and gives a vivid account of the state of the respective German institutions in 1946 (see Table 1). The 'Alston Document' (Alston, 1946) stands out as a document of concern of the international taxonomic community for its personel and institutional resources. Although the situations are very different, we are today witnessing a similar concern for the systematic botany resources in the former Soviet Union, help being organised by Drs Jeffrey (Kew) and Raven (St Louis).

TABLE 1: War damage to selected German scientific collections as reported by Alston (1946)

Berlin	Botanical Museum destroyed, but some 400,000 sheets saved. Zoological Museum severely damaged but less than 10% of the collections lost.
Frankfurt	Senckenberg Museum badly damaged, 90% of the herbarium destroyed.
Göttingen	Herbarium survived but at that time still packed up.
Munich	Botanical institutions survived almost unharmed.
Kiel	Herbarium survived but seemed to be liable to deteriorate — which for the larger part it did.
Leipzig	Completely destroyed.
Jena, Weimar	Herbarium Haussknecht without damage.
Stuttgart	Natural history collections burnt out: Museum a hollow shell!
Hamburg	Museum of Natural History (now: Zoological Museum) and a large part of its collections completely destroyed.

THE HAMBURG HERBARIUM 1943-1982

In spring 1943, the Hamburg herbarium was put into 404 wooden boxes internally lined with zinc plates. The first 100 and another 23 boxes, mostly phanerogams, went to Schloß Mutzschen near Dresden. They comprised a large part of the general (= extra-German) herbarium: gymnosperms, monocotyledons and dicotyledons up to Guttiferae in the Englerian sequence, together with a large set of unmounted material. They arrived in July 1943, a few days before the great air

raids of 2 and 3 August turned large areas of Hamburg into ashes. The rest remained at or near Hamburg and survived — only seven boxes of lichens and part of the Reineck herbarium were buried under the ruins of a wing of the botanical institute.

When teaching was resumed in 1946, conditions were miserable. Students had to bring their own coal with them or were forced to do their practicals in unheated rooms, with their coats on. When conditions normalised, the herbarium could move in again from its evacuation, as far as the material from the Hamburg area was concerned. All members of the institute helped to rearrange the holdings. To compensate for the loss of the Mutzschen material, the local Altonaer Museum was taken over, and several local collections were acquired.

But since the Institut für Allgemeine Botanik gradually diversified to include other disciplines such as microbiology and cell biology, the herbarium lost the competition for storage room and it became nearly impossible to rearrange the collections in a systematic order: there was simply no place to move the specimens! Numerous collections like those of Ule, Mildbraed, Winkler, etc. had to be kept separate. When the requests for loans increased in the 1960s, it became more and more tedious to select specimens from the various collections. It was a great relief when the herbarium moved to the new building of the Institut für Allgemeine Botanik in 1982 where it occupies two floors in the basement of the building. The incorporation of the separate collections into the general herbarium commenced immediately and this work was well under way when negotiations about the return of the evacuated material began in 1987.

DIPLOMATIC AFFAIRS: THE RETURN OF THE EVACUATED MATERIAL

As to the fate of the Mutzschen collections — an eye-witness' report from 1950 stated that, after having been inspected by professors from Moscow in autumn 1945, the collections were removed at night by trucks, probably to a place in Russia. From that time until the 1980s, the curators of the Hamburg herbarium untiringly attempted to get the material back: in 1950, Dr Domke turned to the Russian military mission at Karlshorst; in 1962, his successor Dr K. Walther turned to the Komarov Botanical Institute at Leningrad and suggested an exchange of duplicates from Hamburg for the return of the evacuated material. He had heard rumours, later to be confirmed, that the plants might be there; whenever, later on, requests were made to the Hamburg herbarium for the 'lost' material, applicants were directed to the Komarov. In the late 1960s there were new rumours that the material had gone to East Berlin, the capital of the German Democratic Republic (GDR), together with several other collections returned from the Soviet Union under Stalin's rule. In a letter to the director of the Institut für Allgemeine Botanik, Professor Stubbe from Gatersleben confirmed this: the return of the material from Leningrad to Hamburg had been discussed but the government of the GDR had decided to keep it as a security for parts of the Prussian state library which was said to be rotting away in a cellar at Marburg. Stubbe suggested that the respective holdings be exchanged as a contribution to 'normalise the complicated

affair', but this was not accepted by the government of the Federal Republic (FRG). After scientists from Leningrad had turned to us in 1967 for specimens from the 'lost' collection, Dr Walther enquired at the Deutsche Akademie der Wissenschaften (East Berlin) about their fate and got an exceptionally rude answer — the Cold War was at its peak at that time. After the relations between the two German states began to normalise, Dr Walther made another attempt in 1973, and the university turned to the West German government to renew its claims. However, nothing happened.

Even if all these activities had no tangible success, they had alerted the administrations of the university, of the state of Hamburg and of the federal government about the problem. This turned out to be decisive when East Germany began to co-operate in the late 1980s, shortly before the fall of The Wall. At that time the two German governments started to negotiate about an exchange of paintings, libraries, archives and natural history collections which had shared their fate with our herbarium. It was agreed to return these collections to their original places, but there was one problem — most collections had been moved to the East. As a consequence, the balance turned out to be in favour of the Federal Republic, and the GDR demanded cash in compensation, cash which was badly needed by a country on the verge of economic collapse. At last, most of the material was more or less bought back by the FRG from the GDR. Our task at that time was to see that our material received a high priority, because nobody knew then how long the favourable situation would last. We succeeded by stating that our material was unique and important, that scientists around the world had asked for it, and, perhaps crucially, that it had next to no cash value.

When in 1988 the decision had been made to return the material, we had to face problems of: a. finance and staff, b. logistics, c. rooms and storage, d. pest control, and e. red tape. Most of our efforts went into the last. The colleagues at the Museum für Naturkunde were very helpful and had done a good job safeguarding the collection, especially Dr Gerrit Stohr who was in charge of this task. It took our staff one week in summer 1990 to remove the material quickly and efficiently but still in an ordered fashion. We had to wait another two years until the storage facilities within the institute were available and though the bulk of the material is now available for loan or inspection, it will take us several years before it is really well arranged for efficient use.

THE PRESENT SITUATION

A survey is given in Table 2. The herbarium is rich in material from the former German colonies in Africa (Walther, 1965; Poppendieck, 1990). Many isotypes of specimens which were lost at Berlin in 1944 are to be found, e.g. in Euphorbiaceae. Chief collectors are Mildbraed, Dinklage, Zenker and — patchily represented — Stuhlmann. It is because of these specimens that our herbarium is sought after by researchers working on the African flora. We are still making discoveries: Blume types from the Eastern tropics in the old garden herbarium; Roxburgh types in the Brandis collection; drawings and specimens of Solanaceae chimerae produced by the geneticist Winkler; cones of the 'living type specimens' of Lehmann's cycads

surviving in the botanical garden. The most important discovery was made almost accidentally among the recently returned material: the Kränzlin orchids. The herbarium of this prolific author was sold to Berlin in 1907 and was destroyed in 1944, but Kränzlin had kept fragments for his study. This private herbarium was acquired by us in 1935, a fact that had remained almost completely unknown. In a recent study Christenson (1994) was able to trace some 500 type specimens in the Kränzlin herbarium and Darius Szlachetko from Gdansk (Poland) later detected several more.

But progress in arranging the collections is slow. Restoration of damaged material, identification and documentation, filing and handling of duplicates, and the proper utilisation of the collections for contemporary systematic studies, e.g. by presenting lists of types on the internet, will take years. Most of the work has to be done by technical staff who must work on the evacuated material in addition to their routine jobs (incoming material, loans, exchange, mounting, etc.). Though we received the material back without pests, many specimens had been damaged by insects during their odyssey, and are covered by a fine dust made up from a mixture of insect faeces and powdered plant material. To avoid allergic reactions, we have to clean these specimens in a fume cupboard. This unique problem seems to be one of the few issues which are not treated in the *Herbarium Handbook* (Forman & Bridson, 1989).

TABLE 2: Survey of principal collections in the Hamburg Herbarium

HERBARIUM HAMBURGENESE (HGB)
Status: State university (Universität Hamburg).
Foundation: 1879.
Number of specimens: 1,800,000 - 2,000,000.
Incorporated collections: Museum Godeffroy (1886: A. G. Dietrich, Gräffe); Altonaer Museum (between 1920 and 1950: Drège, Ecklon, L. Preiss).
Herbarium: Vascular plants; bryophytes; fungi; algae; lichens. 2/3 phanerogams and 1/3 cryptogams. 50% worldwide and 50% Central Europe.
Scientific staff: Klaus Kubitzki (director); Hans-Helmut Poppendieck (curator of phanerogams); Tassilo Feuerer (curator of cryptogams).

IMPORTANT PHANEROGAM COLLECTIONS
Collections which had been partly evacuated between 1943 and 1990 and are now available again are marked with an asterisk (*).
(This applies also to the following larger families: Gramineae*, Liliaceae *s.l.**, Orchidaceae*, Caryophyllaceae*, Cruciferae*, Euphorbiaceae*, Ranunculaceae*, Rosaceae*, Fabaceae*.)

Africa: (see Walther (1965)).
Southern Africa
Drège, Ecklon, Zeyher, Dinter*, Kässner, Rudolf Schlechter*, Ihlenfeldt, Hartman, etc.

Tropical Africa
Dinklage*, Mildbraed*, Preuss*, Ledermann*, Zenker* (nos run up to 4766, nos 1-2700 catalogued), G. A. Fischer*, Stuhlmann*, Grimme*, Kässner*, Schlieben,

Volkens*, Stolz*, Holst*, Zenker*, etc.; many duplicates of other collectors 'ex herbario Berolinense'.

Northern Africa (few)
Kotschy*, Schimper*.

Northwest African islands (Macaronesia)
J. A. Schmidt*, Bornmüller*, Kraepelin*, Burchard*, Lindinger*.

Asia
Brandis* (India), Brünig (Borneo), Clemens* (Borneo), Elmer* (Borneo), H. Hallier* (Philippines, South Sea, Singapore), Merrill* (Borneo, Philippines), Winkler* (Borneo), Wilson* (China); single sheets of Beddome*, Prain*, Wight*, Gamble*, Schlagintweit*, Hollrung*, etc.

Australasia
A. Dietrich* (Queensland), Graeffe* (Samoa), Schlechter* (New Caledonia); and W. Forsyth*, F. v. Müller*, Pritzel*, Sieber*, Meebold, etc.

Arabia and the Near East
Wissmann*, Rathjens*; and Kotschy*, W. Schimper*, Bornmüller*.

Neotropical collections
Ule*, Buchtien, Feuerer, Hatschbach; Lauraceae; also Fiebrig*, Moritz*, Lorentz*, Sintenis*, Fuertes*, Curtiss*, Bornmüller* (Brazil), v. Türckheim*, Dusén*, etc. Chile: Philippi*, Werdermann*, Ch. Bock*, Buchtien.

North America
Pringle*, Purpus*, F. Brendel*, Franck*, C. J. Moser*, T. C. Porter*.

Central Europe
P. Junge*, P. Prahl*, J. A. Schmidt*, Justus Schmidt, A. Schumacher, etc.

IMPORTANT CRYPTOGAM COLLECTIONS
P. W. Magnus (fungi), C. F. E. Erichsen (lichens), W. Moenkemeyer (bryophytes), F. Binder (algae). Alphabetical lists of collectors of the cryptogam herbarium are available on internet: http:\\www.uni-hamburg.de\biologie\ialb\herbar\listen.htm.

CONCLUSIONS

The unique fate of the Hamburg herbarium collections illustrates the changing attitudes and national policies towards collections of cultural or scientific importance. Until 1883, at Hamburg, herbaria were thought to be a private affair and there was no botanical institution to take care of them. Between 1883 and 1919, the Botanical Museum was developed into a local reference collection for colonial botany, a timely discipline. After 1919, and within the university, the herbarium was utilised as a research tool for systematic botany. The collections grew considerably both in quality and quantity and had reached 1.2 million specimens by 1943 when they were evacuated.

The lack of a national policy for safeguarding collections in Nazi Germany left the task of evacuation to individual museums and curators. A survey on war

damage to German collections by British authorities documented international concern for natural history collections. Russian and German authorities used the collections as a security for negotiations during the time of the Cold War and only the change of the political climate in the late 1980s made the return possible. During these years, the curators of the various institutions showed an extraordinary commitment towards these collections: those who evacuated them during the war, possibly putting at risk at least their job or career; those who safeguarded them in trust at Leningrad and East Berlin; and those who untiringly asked for them during the time of the Cold War stressing the importance of collections to politicians even when there seemed to be no real chances for their return.

It is not without significance that in Germany a coordinated policy for natural history collections is still lacking, as it was more than fifty years ago. Still each institution which curates collections of national and international significance has to care for itself and to fight with their local authorities for support. A central funding by agencies like the UK's National Heritage (there is no such authority in Germany), the Ministry of Science (which seems to be only marginally interested), or National Research Foundations, has not been possible so far. Attempts to change this are developing slowly. At present, the funds for herbaria like ours have to come from universities which themselves are under hard financial pressure. Today the main task is to safeguard the collections within the scientific and academic environment.

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