

The Australian botanical collections of 19th Century German naturalist Amalie Dietrich



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About the author

Hannah McPherson was the recipient of the Australia Germany Association Educational Fellowship in 2008. In early 2009 she conducted a research and curation project at the *Herbarium Hamburgense* on the botanical collections of Amalie Dietrich (1821-1891). She has also previously received an Australian Postgraduate Award in 2007, the Friends' of the Royal Botanic Gardens Staff scholarship in 2006, and the Hansjörg Eichler Scientific Research Fund (Australian Systematic Botany Society) in 2005. Hannah holds a PhD in Botany from the University of New England. She has worked as a botanical curator at the National Herbarium of New South Wales (Botanic Gardens Trust, Sydney, Australia) and she is currently employed as Biodiversity Research Officer at the Botanic Gardens Trust in Sydney. In 2003 she worked at the Natural History Museum in London, United Kingdom, as Lichen Curator and as Conservator of 'Sir Hans Sloane's Collection of Vegetables & Vegetable Substances', a botanical collection dating back to the 1680s. Hannah's research interests are in evolutionary ecology and conservation of native plants, botanical history and collections management.

Table of contents

1 Introduction	1
Aims	1
2 Language classes at the Goethe-Institut in Hamburg	2
3 Amalie Dietrich	3
4 Exploring around	7
Amalie Dietrich's home town, Siebenlehn	7
<i>Grassi Museum für Volkerkunde</i> , Leipzig	8
<i>Biozentrum</i> and Botanic Gardens, Hamburg University	9
Around Hamburg	10
5 The plant collections of Amalie Dietrich at the <i>Herbarium Hamburgense</i>	12
6 The project	15
7 Outcomes	17
8 Sources	19
9 Appendices	19

1 Introduction

Amalie Dietrich is a prominent figure in German and Australian botanical history. In 1863 she was commissioned by the wealthy shipping merchant, Johann Cesar VI Godeffroy to voyage from Hamburg to Australia to collect specimens for the newly established Museum Godeffroy. For the following nine years Dietrich collected extensively around the often harsh and often remote landscapes of colonial Queensland. In an era when science and exploration were primarily domains of well-educated, wealthy men, Dietrich - a working class woman from provincial Saxony with little formal education – was not the obvious choice for the voyage. A prolific collector of all manner of natural artifacts, her great passion was for botanising and her botanical collections, shipped back regularly to the Museum Godeffroy in Hamburg, constitute the first records of many Australian species and provide a unique record of the Australian flora prior to land-clearing for expanding agriculture and urbanisation.

Dietrich's immense contribution to natural history was recognised by her peers and successors, and many species are named in her honour. A number of duplicate specimens were donated to Ferdinand von Mueller, the first director of Melbourne's botanic garden, and others have been dispersed throughout Australian and European herbaria. When the Museum Godeffroy was disbanded in 1886 the most complete set of her botanical collections was sent to the Botanical Museum in Hamburg and form the basis of the current *Herbarium Hamburgense*.

Several prominent botanists have accessed Dietrich's collections in the past, not least Karel Domin. Domin authored important works on the taxonomy of Australian plants and based descriptions of many new species on her specimens. Nevertheless, many of Dietrich's specimens remain largely inaccessible for scientific research and virtually untouched by specialists. While efforts have been made to catalogue the collections, serious curatorial work has been intermittent and resulted in several incomplete card indices.

Aims

- To conduct a botanical and curatorial project on the collections of the nineteenth century natural historian Amalie Dietrich.
- To gain further insights into the life and botanical career of Amalie Dietrich

2 Language classes at the Goethe-Institut in Hamburg

I arrived in Hamburg on 4 January, 2009 and made my way to the north of the city where I had arranged a flat to rent for the duration of my stay. I was struck by the dark, red brick (*Backstein*) of many of the buildings and also by the network of canals that weave throughout the city. Hamburg is an ultra-modern, vibrant and multicultural port city. It is also currently home to the largest building site in Europe – the new *Hafencity* where the Hamburg *Philharmonie* will cut an impressive figure on the waterfront in the near future. Nevertheless there remain traces of the former mediaeval walled city and remnants of many different periods in Hamburg's colourful history.

The first two months of the fellowship were primarily spent studying German at the Goethe Institut in the impressive and beautiful *Hühnerposten* building that also houses Hamburg's city library. Formal teaching hours were from 9 am to 1 pm and classes consisted of grammatical exercises, comprehension of written works and improving conversation and listening skills. The atmosphere at the Goethe Institut was relaxed and friendly and attending classes every day was a treat. My teachers Arvid Storch, Martina Schiwek and Claudia Leist were enthusiastic, patient and extremely supportive, and my fellow students, from all around the world, equally excited to be there.



Left to right: Frau Jensen beginning a tour outside the *Hühnerposten*; German class B1.2, January 2009

My interest in German began with friends I made at University. They were on an exchange program from Bonn University for a year and we have kept in touch ever since. I visited them in Bonn almost ten years ago and I attended a two-month intensive language course there. On my return to Sydney, however, there were limited opportunities to practice and develop my German language skills. There were many beginner, and several advanced courses but very few at my level. I tried to read German novels (mostly for children!) and watched German news and films to keep my German going. Nine years ago, for a single term, I attended a conversation course at the Goethe Institut in Sydney. The teacher, Nicole Köhnke, was great and it was really inspiring to be surrounded by people with the same enthusiasm for Germany and German language but the course was too advanced so my learning ended there. I would never have imagined at that point that I would have the opportunity so much later to travel to Hamburg for the next installment of my German education. It was also hard to believe that on my first day in the Goethe-Institut in Hamburg I should find that one of the teachers there is Nicole.

After class each day the *Kultur/Freizeit Programm* began, with an opportunity to listen and speak German for the rest of the afternoon. We took walking tours of different parts of Hamburg, visited galleries and museums, explored the container terminals, and sampled Hamburg's restaurants and pubs. The walking tours were led by Frau Jensen, a knowledgeable, enthusiastic and entertaining former teacher who provided wonderful perspectives on the people, architecture and history of Hamburg. I asked Frau Jensen if she knew of Amalie Dietrich or the Godeffroy Museum. She had only a few details to hand but over the course of the next month she helped me to source literature and discover the remaining traces of the life of Amalie Dietrich around Hamburg – I will expand on this further below.

3 Amalie Dietrich



Amalie Dietrich (pictured left) was born (as Konkordie Amalie Nelle) on the 26 May 1821 in Siebenlehn, a small village in Saxony about 40 kilometres from Dresden. Her interest in plants began as a child. Her mother was knowledgeable about wild plants growing in the area and their traditional medicinal uses, and taught Amalie the fundamentals of plant collection and preservation. Her family lived below the main village square where her father, a leather worker, also had his workshop. At the age of 14, Amalie left school to help her father with his business. Although she enjoyed reading and learning it was not usual for the female children of artisan families to receive an extended formal education.

In 1846 Amalie Nelle married Wilhelm Dietrich who had come to Siebenlehn nine years earlier to take up a position as a pharmacist. For his work Wilhelm collected plants and was well versed in natural medicines and their preparation. His passion was for the natural sciences and together they traveled on foot through Europe collecting plants, insects and minerals which they sold to herbaria, doctors, pharmacists, and university professors and students. Eventually this work enabled Wilhelm to give up his work in the pharmacy and concentrate on scientific research. Wilhelm shared with Amalie his botanical knowledge, including an understanding of Linnaeus' classification system and, over time, through the sale of her collections, she became known as a scientist in her own right.

When they married, the Dietrichs rented the *Forsthof*, a large farmhouse in Siebenlehn. Amalie's parents also moved in and there was room enough for Wilhelm's library and collections. In 1848 Amalie gave birth to their daughter, Charitas. Amalie continued to travel throughout Europe searching for plants and insects and sending them back to Wilhelm to study. Charitas and the household were cared for by Wilhelm and Amalie's mother, Johanna Nelle. After the death of Amalie's mother they hired a nanny to care for their daughter. Finding out soon after that Wilhelm had been having an affair with the nanny Amalie took Charitas to Bucharest to live with her brother. This was the first of many temporary homes for Charitas. After a year they returned to Siebenlehn where Wilhelm had been planning a large collecting expedition.

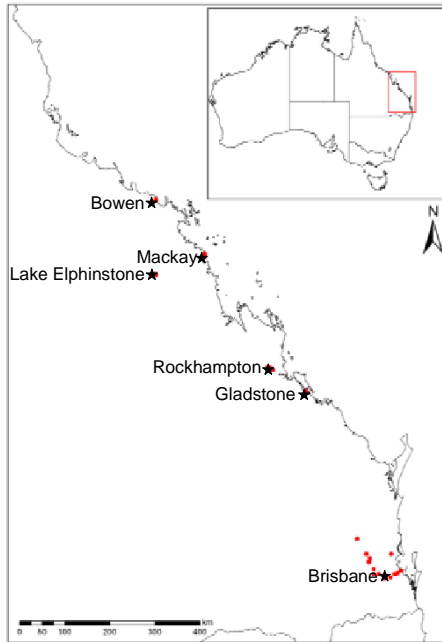
Charitas remained with her father and Amalie set off on foot through Belgium and Holland with a dog and cart to carry her specimens. In Holland she fell ill and spent many weeks in hospital. On return to Siebenlehn she found that Wilhelm had given her up for dead, left the Forsthof and taken a teaching post with a wealthy family. There was no room for her or their daughter on Amalie's return and so she left Wilhelm, and moved with Charitas to Hamburg. She continued to sell her collections and through a customer she was introduced to Johann Caesar VI Godeffroy, a wealthy shipping merchant who had recently opened a museum among the warehouses of Hamburg's famous *Speicherstadt* (pictured right).



Godeffroy (pictured left courtesy of *Herbarium Hamburgense*) was known in Hamburg as the “*König der Sudsee*”. He employed several natural history collectors to undertake expeditions mainly in the South Pacific and ship collections back to Hamburg for his museum. In 1863, after an initial unsuccessful attempt at seeking work with Godeffroy, Amalie Dietrich became the first and only female natural historian in his employ. On the 15 May 1863 Dietrich began the 119 day journey to Australia on board, *La Rochelle*, a ship in Godeffroy's fleet. Over the next nine years Dietrich collected plants, animals and ethnographic specimens and shipped them back to the Godeffroy Museum. Most of her wage went towards educating her daughter in boarding school in Germany.

During her time in Australia, Dietrich collected approximately 20,000 plant specimens ranging from trees, shrubs, ferns, grasses to mosses, lichens and algae. She collected marsupials, fish, sea slugs and coral and her entomological collections include hundreds of beetles, many butterflies and the first significant collection of Australian spiders.

From 1863-1865 Dietrich lived and worked in Moreton Bay in Brisbane. It is from here that the majority of her specimens were collected. She spent a short time in Gladstone during 1864 and 1865. From 1865 until June 1867 she collected in Rockhampton and afterwards moved to Port Mackay. In Rockhampton she collected one of her most important specimens, a brown snake new to science that would later be commonly known as the taipan.



In 1868-1869 she collected around Lake Elphinstone and it is here that she made her most significant collection of birds. In total she collected 266 species of birds, 116 of which came from Lake Elphinstone. This probably represents the largest collection of Australian birds ever collected by a single person. For nine months in 1869 she returned to Port Mackay before spending the remainder of her time in Bowen, her most northerly destination.

Many of Dietrich's ethnological specimens were collected in Bowen including painted rainforest shields, spears, clubs and fishing items. An impressive ironbark canoe was among the collections but it was destroyed during the Second World War along with a large crocodile and several human skulls.

Figure 1. Approximate collecting localities (Herbarium collections from the National Herbarium of New South Wales indicated in red)

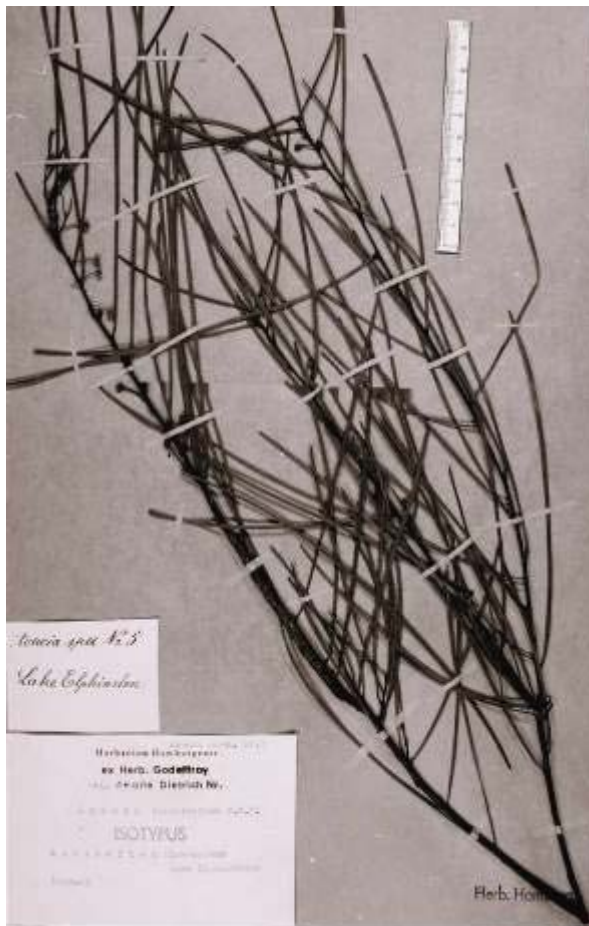
Each of Dietrich's plant collections constituted at least one specimen for the Museum Godeffroy and in most cases several duplicate specimens. The specimens were to be displayed in the museum in sets and duplicate sets were to be sold to raise revenue for the museum. In October 1866 a catalogue entitled "Plants of New Holland collected by Mrs. Amalie Dietrich at the Brisbane river, Col., Queensland by order of Mr Joh. Ces. Godeffroy & Son in Hamburg" was issued. It contained a list of almost 350 plant species available for purchase in sets. This was the only catalogue ever issued despite plans for at least a one other. In 1886 Godeffroy was declared bankrupt, he was forced to close his museum and his collections were split up and relocated.

By the time Dietrich returned to Germany Charitas had married Christian Bischoff, a pastor, and moved to Rendsburg in Denmark. It is thought that Dietrich worked as a curator at the Godeffroy museum until its closure in 1886 however there is no evidence to support this. In fact very little is known of her life in back in Germany. In 1891 while visiting her daughter in Rendsburg she died.

Much of our knowledge of the life and work of Amalie Dietrich stems from a book written nearly 15 years after her death by her daughter. Bischoff was widowed and her book *Amalie Dietrich – Ein Leben*, was a great success and provided her with financial security for her remaining years. Her book tells a fascinating tale confirmed, through analysis by Australian historian Ray Sumner, to be a mixture of fact and fiction. It has been republished many times since its original release in 1913. Much of the subsequent published work has assumed the work is historically accurate and many fictitious stories were perpetuated until the 1990s. Despite the literary license taken by Bischoff, her book is the story of an undoubtedly remarkable woman. Since most of Amalie Dietrich's original correspondence has been lost it provides our best insight into her life. Dietrich's collections have also had an interesting history, surviving two world wars and now housed among many cultural and scientific institutions throughout Europe and Australia. The specimens

are the legacy of her enormous contribution to science which has also been recognised by the many species named in her honour.

Amalie Dietrich's collections were immensely important in Europe at a time when little was known about Australian flora and fauna. They remain as evidence of a unique period in the expansion of the natural sciences and global exploration by German botanists – a rich history that included Ferdinand von Mueller and Ludwig Leichhardt as contemporaries of Dietrich. Aside from their cultural and historical value, the specimens collected by Amalie Dietrich also remain highly relevant and important to the scientific community. As the first collections of many species from Australia they are essential for the identification and naming of plants that are still growing in Australia and for the documentation of plants that have disappeared due to land clearing and habitat fragmentation. Therefore they are a vital resource to help inform management decisions for long term conservation of the flora of Australia, particularly with respect to predicting and responding to climate change.



Left: A type specimen of a rare *Acacia* collected in Lake Elphinstone by Amalie Dietrich and later named *Acacia dietrichiana* in her honour by Ferdinand von Müller. Type specimens are particularly important scientific specimens since they are the plant that the original description of a new species is based on.

4 Exploring Germany

Amalie Dietrich's home town, Siebenlehn

In March 2009 I visited Siebenlehn in eastern Germany. I had heard of a small *Heimatsmuseum* there showcasing the life and work of Amalie Dietrich. On her return from Australia, Amalie Dietrich donated a subset of her collections to her former school in Siebenlehn. After reunification of East and West Germany the administrations of Siebenlehn and surrounding areas were amalgamated. Siebenlehn lost their mayor, and their historical collections and archives were for the most part moved to the new, larger jurisdiction.



Above: Siebenlehn main square, March 2009

Dedicated volunteers worked hard to ensure that a large portion of Amalie Dietrich's collections remained in Siebenlehn. The *Heimatsmuseum* was closed down but since the town hall was no longer needed a new, smaller museum could be established. Through the webmaster of the Siebenlehn website, Jürgen Lucht, I was introduced to volunteer, Frau Bärsch, who kindly agreed to open the Museum for my visit and also show me around Siebenlehn.

Since the majority of Dietrich's collections were split up when the Museum Godeffroy was closed, the museum at Siebenlehn is the only place where such a range of her botanical, zoological, ethnographic collections are displayed together. There are birds, mammals, plants, fish and aboriginal artifacts collected by Amalie Dietrich in Australia, along with an impressive library of resources pertaining to her life and collections. The continued involvement of the local school is evident in a display of projects about Amalie Dietrich, Siebenlehn and Australia.



Left to right: Frau Bärsch and Hannah McPherson at the museum in Siebenlehn; some of the displays in the *Rathaus*; street sign depicting Amalie Dietrich with her dog and cart

After a good look around the museum Frau Bärsch showed me around Siebenlehn. We began in the village square, walked past the village church and former pastor's house down the hill to Dietrich's former school. Continuing down the narrow streets beyond the school we came to the site of Dietrich's parents' home and leather workshop – long since destroyed by fire. A relief sculpture depicting Australian animals and plants and the ship Dietrich sailed on denotes the site and commemorates her life and work. It ends with the words "*Besser ein schweres Leben als ein leeres Leben*".

From the Dietrich family home we wandered back into town, passing the house that she had lived in briefly with her daughter when Wilhelm had taken a teaching post with a wealthy family nearby. Further towards the edge of the village stands the Forsthof where Amalie and Wilhelm had lived and worked together. Frau Bärsch, now retired, formerly ran the Kindergarten in Siebenlehn. In 1979 the Kindergarten was named after Amalie Dietrich and a statue of Dietrich stands in the front garden. The children care for the gardens around the statue in order to learn about Amalie Dietrich and the importance of the environment. Inside hangs a portrait of Amalie Dietrich that Frau Bärsch commissioned for the Kindergarten. There are very few images of Amalie Dietrich in existence and each is very formal. Concerned that the children might find her appearance somewhat stern Frau Bärsch asked that the artist make her look a bit friendlier. A park in Siebenlehn also bears her name, as do some street signs. One elaborate street sign shows Amalie Dietrich setting out on a collecting expedition with her dog and cart.

Grassi Museum für Volkerkunde, Leipzig

The ethnographic collections from the Godeffroy Museum are now housed at the *Grassi Museum für Volkerkunde* in Leipzig. The museum was undergoing renovations when I visited and the permanent Australasian collections were in storage pending the opening of a new section of the museum later this year. Curator Birgit Scheps kindly showed me behind the scenes and I was privileged to see Dietrich's ethnographic collections that I had only previously seen in photographs. Birgit Scheps' research into the Godeffroy Museum and the associated collectors had taken her to Queensland where she had traced Dietrich's footsteps from Brisbane up to Bowen. It was fascinating to hear of her research and quite surreal to be sitting in Leipzig learning about the Aboriginal cultural heritage of Australia.



Left to right: Birgit Scheps and Hannah McPherson; Grassi Museum für Volkerkunde, Leipzig

Biozentrum and Botanic Gardens, Hamburg University



During the first two months of my stay I met with Hans-Helmut Poppendieck at the Biozentrum at Klein Flottbek, west of the city centre (pictured left). This part of the University of Hamburg houses the biological research departments and the *Herbarium Hamburgense* in which Amalie Dietrich's plant collections are housed. We began to discuss and plan the project and I was very fortunate to find in him a very knowledgeable and enthusiastic colleague with a passion for the history of Hamburg. Not only was Hans-Helmut Poppendieck a supportive and encouraging collaborator, he and his wife, Gesine, also took me on an excursion to the *Vierlande*, the agricultural area surrounding Hamburg to introduce me to other aspects of Hamburg's history. We explored canals lined with beautiful *Fachwerk* cottages, ate local fish for lunch and visited an amazing old farmhouse preserved as a museum. I was introduced to Hamburg's flora and we wandered the windy, cobbled streets of a nearby mediaeval town on the river's edge.



Left to right: Cottage in *Vierlande*; Hans-Helmut Poppendieck, Hannah McPherson and Gesine Poppendieck

Back at the University I presented my PhD work to the Botany Department. Laboratory manager Barbara Rudolf gave me a tour of the DNA laboratories and introduced me to the range of botanical research at Hamburg University.

The Botanic Gardens adjacent to the *Biozentrum* building were covered in snow when I arrived but towards the end of my stay they had transformed into a sea of colour with crocuses and snow drops and other signs of the beginning of spring. On my last night in Hamburg I was privileged to attend the opening of the *Loki Schmidt Haus* in the Botanic Gardens. Loki Schmidt, now 90 years of age, is credited with introducing the concept of plant conservation in Germany in the 1970s. The *Loki Schmidt Haus* is an education centre within the Botanic Gardens showcasing the uses of plants.



Left to right: *Loki Schmidt Haus*; spring begins in the Botanic Gardens, Hamburg

Around Hamburg



The beautiful old warehouses of the *Speicherstadt* in Hamburg are a stark contrast to many of the modern buildings of the port city - skinny canals separating rows of tall, redbrick warehouses from various eras. I walked down *Alterwandrahm* where the Godeffroy Museum once stood and tried to imagine how it would have looked in Amalie Dietrich's time. Number 26, the former Museum Godeffroy, does not exist any more but what remains of the *Speicherstadt* continues to be a trade area for Hamburg as well as home to a number of museums.

Left: A row of warehouses in the *Speicherstadt*

Like many wealthy shipping merchants Godeffroy had his business in town but his family home was in the country further down the river. The Godeffroy *Landhaus* can still be found in Hirschpark in Blankenese in west Hamburg. The landscape of Hamburg and its surrounds is mostly flat but Blankenese is a hilly suburb of colourful houses with winding alleys and steep staircases. The stately home of Godeffroy on a hill overlooking the Elbe now serves as a dance school.



The Godeffroy *Landhaus*, Hirschpark on the Elbe

Many traces of Hamburg's history can be read in the street signs. My home for three months was in *Tischbeinstraße* in Barmbek in Hamburg's north, an intriguing name which, I learnt, is the surname of a family of famous painters. Just around the corner, with the help of a book by Charlotte Ueckert about important women in the history of Hamburg, I found *Amalie-Dietrich-Stieg*. Bischoff returned to Germany from Denmark after the death of her husband and lived out the remainder of her life in Blankenese. It is here that she wrote her famous novel about Amalie Dietrich. The *Charitas-Bischoff-Treppe*, a steep staircase in the area reminds us that Bischoff herself was an important figure in Hamburg's history. The importance of the Godeffroy family is also evidenced by *Godeffroystraße* in Blankenese.

I also visited the *Hamburg Volkerkunde Museum* to see some of the collections from the former Museum Godeffroy. At the *Zoologischen und Botanischen Museum der Universität Hamburg* I met Helene Kranz, curator of the current exhibition entitled "*Johann Diedrich Möller – Die Kunst, Diatomeen zu legen*". J.D. Möller was another famous Hamburg figure at the end of the nineteenth century and, like Amalie Dietrich, quite an unexpected scientist. Originally studying as a painter he later became an expert in diatoms and optics. In 2005-2006 Helene Kranz mounted an exhibition in the *Jenisch Haus* near the Botanic Gardens on the Museum Godeffroy so it was great to discuss Amalie Dietrich with her while she showed me through her fascinating new exhibition.



Above: Street signs around Hamburg

5 The plant collections of Amalie Dietrich at the Herbarium Hamburgense



The extent of the collections sold by Amalie Dietrich and her husband from 1845-1862 throughout Europe is not known, nor do we know how many remain today. Ray Sumner reports that some of their early European plant collections are held by the Natural History Museum in Freiberg. The majority of Amalie Dietrich's plant collections, those collected in Australia, are housed in the *Herbarium Hamburgense* belonging to Hamburg University. In 1886, after the company J. C. Godeffroy & Sohn was declared bankrupt, the collections from the Museum Godeffroy were split among several cultural and historical institutions in Germany. Thirty-thousand plant specimens including about 20,000 collected by Amalie Dietrich in Australia were incorporated into the Hamburg Botanical Museum established just three years earlier. These collections form the basis of the *Herbarium Hamburgense*, the collections of which expanded rapidly, now totalling approximately two million specimens.

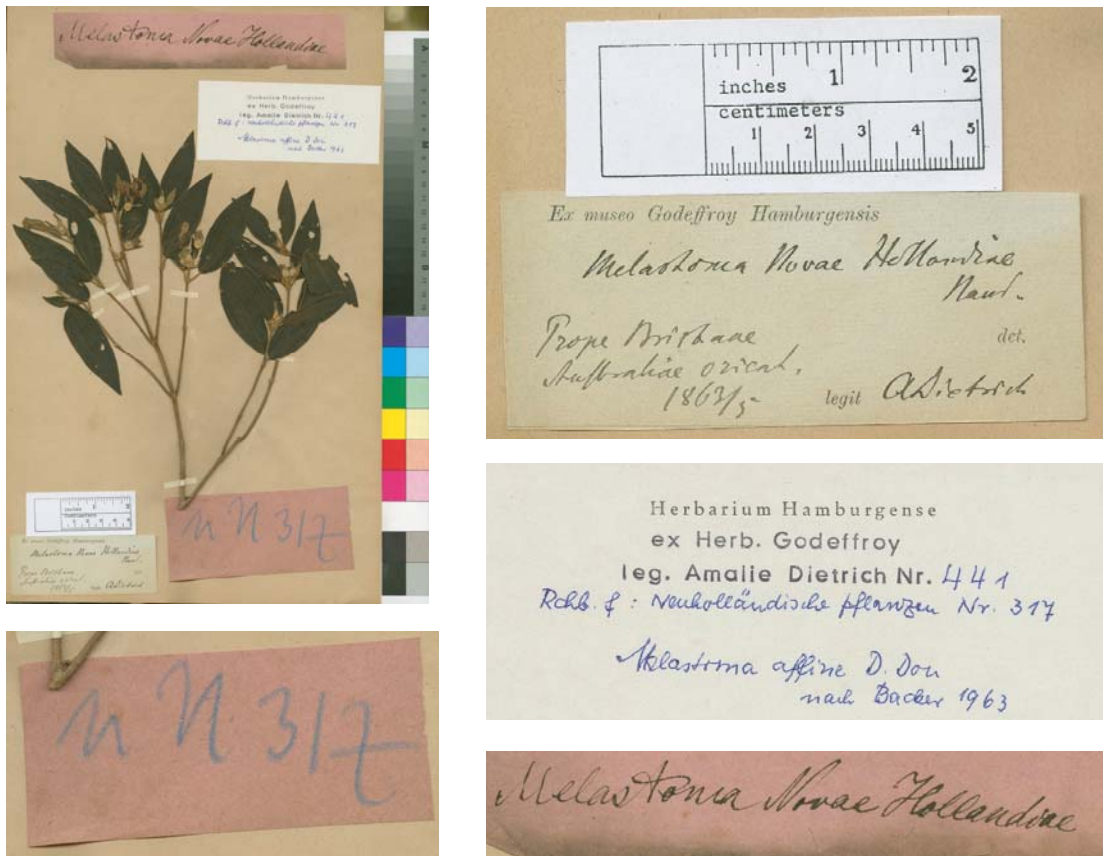
Above: Long corridors of specimen boxes in the *Herbarium Hamburgense*

Many notable botanists including Reichenbach, Müller (Halle), Luerksen, Böckeler, Grunow, Domin, Klatt, Hallier, and von Mueller studied Dietrich's specimens and between them named more than 20 plant species in her honour. Nevertheless a large number of specimens were not accessed by experts and many are unidentified and not yet catalogued. According to Ray Sumner as early as 1911 Karel Domin from Prague stated that "...an account of A. Dietrich's complete collection is no longer possible". Most of the specimens have been incorporated into the herbarium collection in Hamburg and since the herbarium is arranged alphabetically by Family, Genus and then Species and there is no complete list of Dietrich's specimens it would indeed be close to impossible to retrieve them all.

Over the past 100 years duplicate specimens have been sent around the world. In Australia there are specimens collected by Amalie Dietrich in herbaria in Brisbane, Sydney, Melbourne, Canberra and Adelaide. Most were dispatched from *Herbarium Hamburgense*, however, a small collection in Melbourne was probably sent directly from Amalie Dietrich to Baron Ferdinand von Mueller, the first director of Melbourne's Botanic Garden. Duplicate material was also sent to Prague, London, Copenhagen, Berlin, Singapore and other herbarium collections.

Dietrich's first shipment of collections from Moreton Bay, Brisbane area, were identified by Heinrich Gustav Reichenbach (the director of Hamburg Botanic Gardens) and a catalogue of approximately 350 plants was compiled by Johann D. E. Schmelz (curator at the Museum Godeffroy) in 1866 from which plants or plant collections were to be available for

purchase. Dietrich was directed by Godeffroy to collect multiple specimens precisely for this purpose, however, the catalogue of specimens to be sold was the only one published. The specimen numbers in the catalogue do not correspond to the collecting numbers assigned by Dietrich in the field or those assigned at the Museum Godeffroy. In fact, since access to, and work on, the collections has been so patchy there are many separate numbering systems throughout that make the work of piecing it back together difficult. Ferdinand von Mueller, for example, gave numbers to specimens based on his identifications and these have been mistaken by subsequent workers as Dietrich's collecting numbers or Museum Godeffroy accession numbers.



Clockwise from top left: Specimen of *Melastoma* collected by Amalie Dietrich in the Brisbane River area, Queensland Australia; early label indicating the specimen previously belonged to the Museum Godeffroy; *Herbarium Hamburgense* label with Amalie Dietrich's collection number (probably Walther's handwriting); Amalie Dietrich's handwritten label on pink paper; example of a number given by the Museum Godeffroy during preparation of material for the sale catalogue.

The original register from the Museum Godeffroy is held at *Herbarium Hamburgense* along with lists from Domin and other botanists. Most of the specimens are also tagged with a collecting number (presumably assigned by Amalie Dietrich or staff at the Museum Godeffroy). There have been several attempts over the years to catalogue the collections, resulting in three incomplete card indices and a spreadsheet with a colour code that presumably meant something to someone once upon a time but is now somewhat of a mystery. Professor Kurt Walther was Senior Curator in the *Herbarium Hamburgense* until 1964. Walther compiled at least one of the card indices with original numbers and identifications and while he worked on the collections he edited and updated them.

He sorted specimens, identified and annotated them and compiled and recorded information from previous workers. He continued to work on Amalie Dietrich's collections until well after he retired and his handwriting and identifications can be seen throughout. His work was a great help in deciphering many of the overlapping numbering systems.

The specimens themselves are still nearly perfect in condition, some still holding their colour, others faded but retaining intricate botanical detail. Most have been mounted onto archival card and incorporated into the general herbarium collection.

Unincorporated specimens are mostly housed in newspaper. It is still common practice among botanists to press and dry specimens between newspaper in the field before housing in more suitable materials in museums or herbaria.



Above: an *Acacia* collected by Amalie Dietrich, housed in 1950s newspaper from Hamburg

Very few of Dietrich's specimens are still in the original sheets of 1860s Brisbane newspaper, the remaining specimens have been transferred into Hamburg newspapers from various decades throughout last century.

6 The project

The aim of the project was to initiate a long-term strategy for curation of Amalie Dietrich's collections in order to make more accessible some of the earliest records of species and/or past distributions of the flora of Australia. On arrival I realised that was easier said than done. I focused the project on the Amalie Dietrich specimens that have not yet been incorporated into the general herbarium collection of the *Herbarium Hamburgense*, approximately 20 percent of her total collection. Until I arrived these specimens were stored off-site only partially sorted and for the most part unidentified due to a history of insufficient curators and Australian plant experts, and the evacuation of many herbarium and museum collections during the Second World War. Many collections were only returned in the 1980s bringing with them an enormous curatorial load for staff.

The long-term goals are to:

- Locate and analyse Amalie Dietrich's collection
- Update taxonomy, nomenclature and type status
- Uncover past distributions and range extensions

These goals will only be realised once identification of the specimens is complete and all the original specimens are incorporated into the herbarium collection. Even then, the task will not be easy until the Hamburg herbarium collections have been databased and we can search for her specimens by collector name. Currently the specimens are housed according to plant name so without a complete list of plants she collected it is impossible to retrieve all of them from the herbarium collection at present.

The collection for my project comprised approximately 150 boxes including 3000-4000 specimens. They were partially sorted into two categories: (1) original material to be kept in Hamburg and (2) duplicate material for other herbaria. I began by separating original from duplicate specimens and ordering them alphabetically by plant family. Originals will be incorporated into the general herbarium or kept aside to be identified by Australian botanists. Duplicates will be distributed once it is verified that the corresponding original specimen is lodged in Hamburg.

Figure 2 shows the curatorial process I undertook. The process ensured that the original specimens were located and either prepared for incorporation into the general herbarium if already identified, or kept aside if not yet identified. Duplicate material, where the original had been located (either in the working project collection or general herbarium), was databased and put aside for labeling and sending to Australian herbaria. If no original specimen could be located a new 'original' was designated from the duplicate specimens to ensure a complete collection remained in Hamburg.

Unidentified material was kept separate from the rest of the collections. In this case duplicates will be sent to Australian herbaria for Australian experts to identify and keep for their collections. The results will then be given to Hamburg so that they can update their database and incorporate the original specimens into the general herbarium collection. All boxes were labeled at the end of the project according to the stage in the process they were up to e.g. originals ready to be labeled, mounted and incorporated, duplicates ready to send to Australia, duplicates awaiting verification of original specimen, etc. Curation staff at Hamburg is continuing the process and as duplicate specimens arrive in Australia I will

maintain contact with botanical experts and send identifications and information back to Hamburg herbarium.

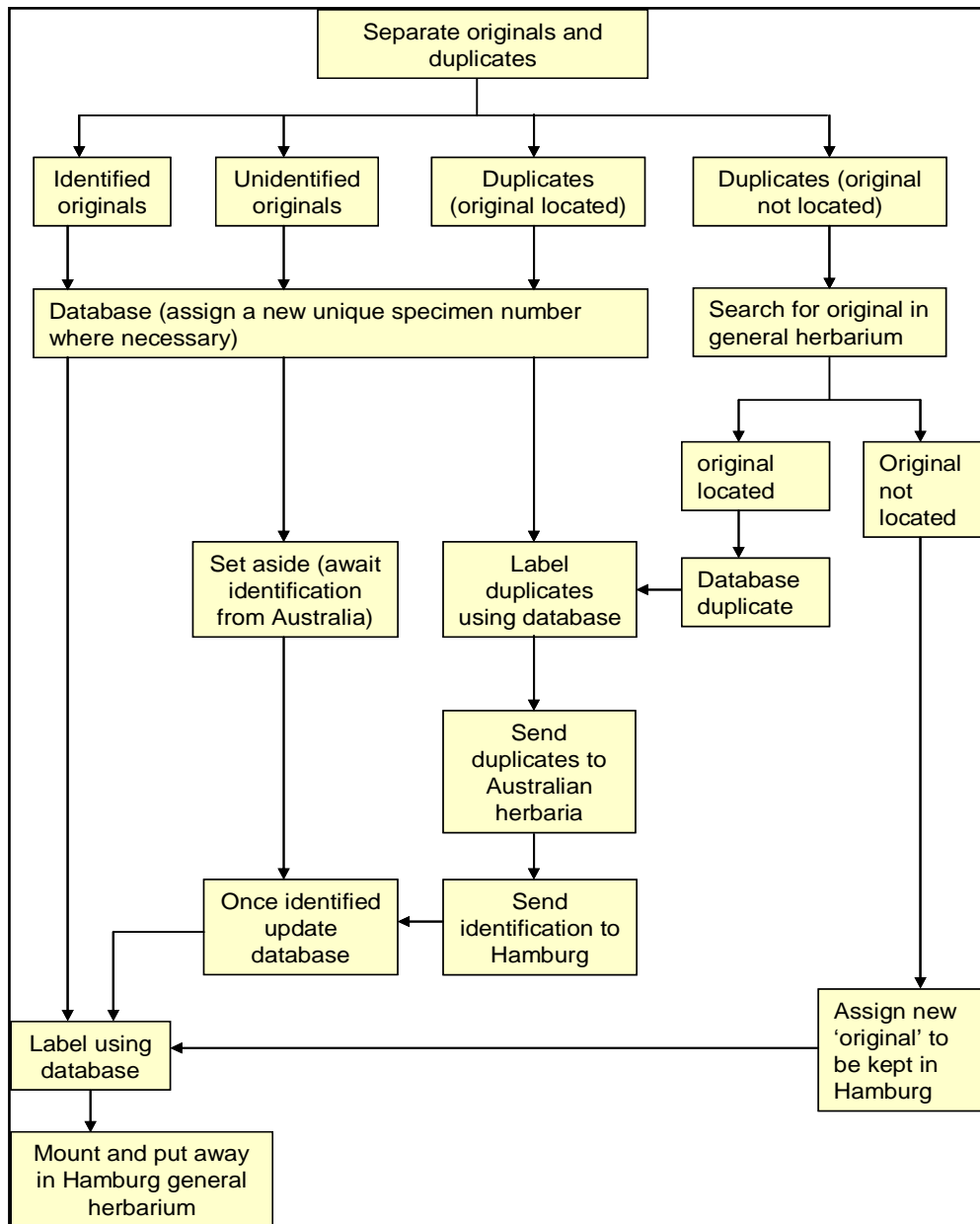


Figure 2: Curation process for unincorporated Amalie Dietrich specimens

Rather than create a database from scratch the existing spreadsheet compiled from the three card indices was used to record and update specimen information. The spreadsheet contains approximately 3000 numbered accessions. Anton Perkins (my partner and volunteer worked through the spreadsheet standardising plant names and verifying spelling and nomenclature using the Australian Plant Name Index (www.apni.org). The list now comprises correct botanical names however the identifications and nomenclature may still require updating when they are shown to specialists in particular plant groups. An

extra 500 unique numbers were assigned by the author or Sabrina Schmidt (curator at *Herbarium Hamburgense*) for collections seen that did not already have numbers assigned to them.

Specimen information for approximately 2000 specimens was added to the spreadsheet. The following fields were recorded where possible:

- Collection number
- Identification (including family, genus and species)
- Collecting locality
- Collection date
- Notes from past botanical experts
- Original handwriting and different numbering systems (including Godeffroy & Sohn catalogue number)
- Number of original specimens (more than one original was assigned if the sheets had original Amalie Dietrich handwriting or other important notes: e.g. identifications by Reichenbach or Domin, or where the original specimen was infertile and a fertile duplicate was available, since identification of plants often relies on reproductive material)
- Number of duplicate specimens

7 Outcomes

At the end of one month most of the unincorporated Amalie Dietrich specimens had been seen and the collecting information recorded. Taxonomy and nomenclature were updated for all records in the spreadsheet and all boxes of unincorporated specimens were labeled with the stage of processing and the next steps required for their curation. The spreadsheet will be used to populate the Hamburg herbarium database and to produce labels for original and duplicate specimens.

Since my return to Australia in April 2009, colleagues at the *Herbarium Hamburgense* have completed sorting and checking the unincorporated Amalie Dietrich material. A curation plan is now in place which will allow duplicate material to be sent to Australia for identification. This will provide Australia with important historical collections and botanical information.



Above: boxes of Amalie Dietrich specimens sorted and labeled for further processing

Australian botanists will identify the specimens and update taxonomy and nomenclature and this information will be sent back to Hamburg. Since the unidentified specimens are now databased and can be clearly labeled, it will be possible for German and Australian herbaria to share information on the collections of Amalie Dietrich.

Very few examples of Amalie Dietrich's handwriting remain apart from fragments on specimens where she recorded collecting localities and/or collecting dates. Many more fragments have been located and recorded as part of this project, including a short description of a plant and use of it by Aborigines. In "A woman in the wilderness" Ray Sumner analyses the work of Charitas Bischoff in an attempt to extricate the facts of Amalie Dietrich's life from fiction. She brings the timing and duration of Amalie Dietrich's time in Gladstone into question. Bischoff suggested that Dietrich was there for two months but Sumner could find little evidence to confirm this and suggests that it could rather have been a few days in 1865. In contrast, the Siebenlehn museum presents the duration of her stay in Gladstone as approximately three months. Although I saw only 10-20 percent of Amalie Dietrich's plant collections I recorded specimens from Gladstone on the following dates: November 1964, December 1964 and January 1965. There were also some specimens with printed labels (from the Museum Godeffroy or the *Herbarium Hamburgense*) recording general collecting dates of 1864, 1865 or 1864-65. Two specimens from Gladstone were recorded from January 1864 but with further analysis of the collection in its entirety these may turn out to be incorrect. Sumner also reports that the time of Dietrich's arrival in Rockhampton is unclear but that she was well established there by February 1866. My records indicate that she was there as early as February 1865 with collections made in most months throughout the rest of the year. Undoubtedly as more of Amalie Dietrich's collections are databased more accurate information will come to light.



On 13 May 2009 I presented my work at the Royal Botanic Gardens in Sydney in a seminar entitled: - "An Australian in Germany on the trail of a German in Australia...". As part of the National Science Week celebrations I will be presenting a seminar at the National Herbarium of New South Wales Open Day (23 August 2009 – Royal Botanic Gardens, Sydney) entitled "Intrepid women scientists" on the life and botanical collections of Amalie Dietrich. I have also written an article for the Botanic Gardens Trust News (staff newsletter August 2009) entitled "An extraordinary woman".

Left: Amalie Dietrich aged 60 (courtesy of the *Herbarium Hamburgense*)

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9 Appendices

Two updates sent from Hamburg to the Australia Germany Association during the course of the fellowship.

Australia Germany Association/Goethe Institute Scholarship Hamburg January 2009



After a month in Hamburg it is well and truly time for an update. I have settled into a little flat (which came with a bike) in the north of Hamburg, and I peddle along the Alster each morning to my German lessons at the Goethe Institute. It's a cold ride but very beautiful. Classes take place in the impressive Hühnerposten building (pictured left) on the edge of Hamburg's Altstadt.

There are approximately 70 students from all over the world. My class, level B1.2, is pictured right. The lessons are fantastic: the atmosphere in the class and throughout the Institute is friendly and my teachers are excellent. I've learnt so much and it has been great fun. I can hardly believe the first 4-week course is already over.



The Kulturprogramm that complements the morning lessons is also great. Most afternoons there are activities including tours of the city or harbour, visiting museums and galleries and nearby towns, or sampling Hamburg's restaurants and pubs. Frau Jensen, a knowledgeable, entertaining teacher and tour guide (pictured top left with the purple hat) leads walking tours through the city. She has provided a wonderful overview of Hamburg from a mediaeval walled city, later transformed by fire, flood and two world wars, to the port city of today with modern architecture shaping the new Hafen city area (apparently the biggest building site in the Northern Hemisphere).



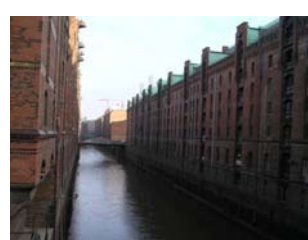
I have also been warmly welcomed at the Herbarium Hamburgense by the curator of flowering plants, Hans-Helmut Poppendieck. The herbarium houses approximately 1.8 million plant specimens and among them are about 20,000 specimens collected in Australia between 1863 and 1872 by Amalie Dietrich (pictured right).



The specimens are well preserved (see the wattle above) but there are many curatorial challenges and together we have begun an assessment of the material. As early as 1911, Domin (a well-renowned botanist from Prague) wrote that an account of Amalie Dietrich's botanical collection as a whole would no longer be possible since it contained so many new and unidentified specimens. Nevertheless several European botanists have worked on the collection over the past 150 years and different ideas can be seen on handwritten notes throughout.

Some parts of the collection are well understood and documented but others have never been touched. There is still a large amount of unidentified material and many duplicate specimens that need attention. I can only imagine what lies ahead as I look down the aisle of boxes of Amalie Dietrich's collections (pictured above left) and wonder what treasures lie within.

Viele Grüße, Hannah



Australia Germany Association/Goethe Institute Scholarship Hamburg January 2009



Amalie Dietrich wurde als Konkordie Amalie Nelle am 26. Mai 1821 in einem kleinen Dorf, genannt Siebenlehn, in Sachsen geboren. Ihr Interesse an Pflanzen fing an, als sie noch klein war. Sie lernte von ihrer Mutter, wie Pflanzen als Medizin benutzt werden konnten. Ihre Eltern waren jedoch arm und als Amalie 14 Jahre alt war, beendete sie ihre Schulausbildung, obwohl sie gern las und lernte.



Amalie traf Wilhelm Dietrich, der 1837 nach Siebenlehn gekommen war, um eine Stelle als Apotheker anzunehmen. Er arbeitete viel mit Pflanzen. Mit 24 Jahren heirateten Amalie und Wilhelm. Wilhelm lehrte Amalie wie Pflanzen gesammelt, gepresst und getrocknet wurden. Sie lernte auch wie man Pflanzen identifizierte und mit dem System von Linnaeus klassifizierte. Mit diesem gemeinsamen Interesse reisten sie zusammen durch Europa um Pflanzen für Wilhelms Arbeit zu sammeln. Amalie und Wilhelm verkauften ihre Sammlungen an Herbarien, Ärzte, Apotheken, Professoren und Studenten.

1848 wurde ihre Tochter, Charitas, geboren. Nach der Geburt reiste Amalie immer noch durch Europa auf der Suche nach besonderen Pflanzen und Insekten. Charitas und der Haushalt wurden in diesen Zeiten von Wilhelm und ihren Eltern versorgt. Der Tod ihrer Mutter war ein grosser Schock für Amalie und kurz danach hatte ihr Mann eine Affäre. 1861 trennten sich Amalie und Wilhelm und Amalie zog mit Charitas nach Hamburg. Dort begann sie wieder gesammelte Pflanzen zu verkaufen um sich und ihrer Tochter ein neues Leben zu ermöglichen.



In Hamburg gab es einen reichen Händler, der Johann Caesar VI Godeffroy hieß. Godeffroy hatte ein neues Museum in der Speicherstadt eröffnet und organisierte und bezahlte Expeditionen in die Südsee. Auf diese schickte er Naturwissenschaftler, die Exlempare für das Museum sammelten.



Ein Kunde von Amalie stellte sie Godeffroy vor und bald war sie die einzige Frau, die Godeffroy als Naturwissenschaftlerin anstellte. 1862, als sie 41 Jahre alt war, fuhr Amalie nach Australien um Pflanzen, Tiere und ethnographische Exemplare für das Museum Godeffroy zu sammeln. Charitas ließ sie in dieser Zeit in einer Schule in Deutschland zurück.

Amalie arbeitete fast 10 Jahre lang in Australien. Was für ein Abenteuer! Am Anfang war alles fremd – die Sprache, die Landschaft, die Pflanzen und Tiere, das Klima und auch die Menschen. Die Bedingungen waren sehr schwierig und sie arbeitete meistens allein. Trotzdem hatte sie viel Erfolg und schickte tausende von Exemplaren, die nie zuvor in Europa gesehen worden waren, nach Hamburg.



Leider existiert das Museum Godeffroy nicht mehr. Wenige Jahre, nachdem Amalie Dietrich aus Australien zurück gekehrt war, wurde Godeffroy zahlungsunfähig und das Museum musste geschlossen werden. Die Sammlung von Amalie Dietrich wurde geteilt: Die meisten Exemplare kaufte die Stadt Leipzig. Die Pflanzensammlung blieb jedoch vollständig in Hamburg. Es handelt sich um ungefähr 20.000 Exemplare, die sich heute im Herbarium Hamburgense der Universität befinden.

Viele Grüße, Hannah

