The 17th and 18th centuries were a time of great discovery of our physical world and all the wondrous things to be found in it. Many Europeans of titles and means were drawn to collect these wonders of nature and exotic cultures in their personal small museums or "Cabinets of Curiosities" as they were known. One suspects there might have been a certain one-upmanship among these collectors. Wood and tree specimens were certainly among the items included.

Out of these first efforts collections grew as did scholarship about the collections. In the case of wood, this took the form of "Wood Books" which is the subject of this article. They included not only the wood and parts of the tree but other natural elements of its environment. These Wood Books are now treasured in their own right as historical artifacts.

This article was written by Tjerk Miedema, an IWCS member (#1744) from The Netherlands. It was first published in the December, 1999 World of Wood (Vol. 52, No. 12) and it is now updated by the member. All photos are by the author unless indicated otherwise.

Historic plant, wood collections surviving in Europe

In Europe, during the 16th and 17th centuries, people were keen to discover and learn about the unknown.

Consequently, they investigated new material, animal and plant. Wealthy merchants, chemists, physicians and scientists collected material and curiosities from nature and displayed them in cabinets.

Such display cabinets in The Netherlands (Holland) and Germany were called *rariteitenkabinetten* and *Wunderkammers*, respectively. These collections contained all kinds of strange and exotic things such as the horns of rhinoceroses and alleged unicorns, exotic materials, stones, animals, shells, coral and bizarre items - but also wood.

The Dutch chemist Seba (1665-1735) probably was the first wood collector. He possessed a large collection in Amsterdam of shells, animals, insects, wood and various curiosities. In 1717 his collection was sold to the Russian Tsar, Peter the Great (1672-1725), also a fanatic collector.

However, during the 18th century, everything became more organized and structured. It is the period that Swedish naturalist Carolus Linnaeus (later, Carl Von Linné, 1707-1778) developed his scientific system of binomial nomenclature for classifying plants and animals. His approach is used to this day.

Old documents from 1719 tell about the wood collection of a Doctor Houttuyn in Amsterdam, who made his collection available for publishing a wood *vademecum* or easily carried guidebook.

First collections in "book" form

At the end of the 18th Century, particularly in the German-speaking



Part of the 158-item Ferdinand Alexander Von Schlümbach wood collection in "book" form preserved in Museum Martena, Francker, The Netherlands.

Photo by Museum Martena.

areas, there were idealists and nature lovers who made enormous efforts to describe nature in "book" form.

Although these "connoisseurs of nature" had opinions or visions of their own, they were idealists but not collectors. They thought ordinary people did not know enough about nature or had inadequate knowledge of trees and their wood.

Then, the names of trees and their wood were not well known and often, much as today, confusing. Therefore, the primary purpose of making these "book" forms in wood was educational.

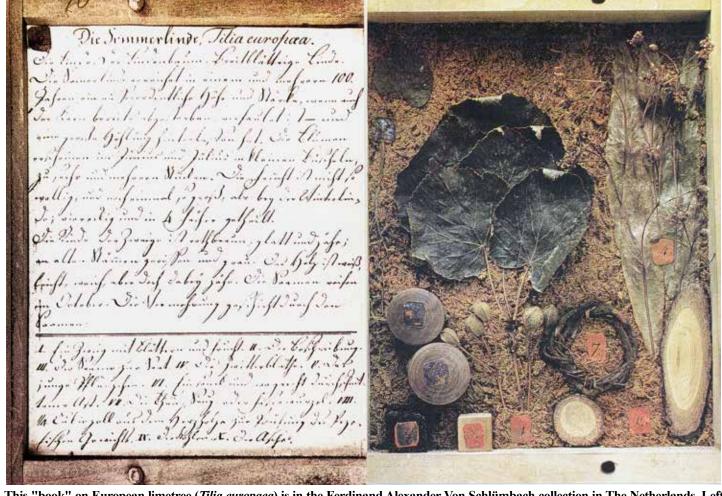
One hundred to 200 "book" forms were made of different woods, usually taken from local trees. In Germany, these sets of "book" forms were known as *Holzbibliothek*, in Holland, *xylotheek* and, in Italy, *siloteca* (Greek World of Wood

xylos = wood, *thèke* = storage or library). So in English, they could be named "wood libraries."

Many of these collections were accumulated by wealthier people living in castles and other strongholds. Also, many monasteries and cloisters often became the proud owners of such works. After a while the makers were unable to make a living this way, which led to selling their works to other people, museums, etc.

In Europe a few wood-library makers are known: Goller, Von Hildt, Von Hinterlang, Huber, Reisner, Schildbach and Von Schlümbach. But some wood libraries exist whose makers are unknown. The setup and presentation of these various collections differ, but the principle is the same.

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This "book" on European limetree (*Tilia europaea*) is in the Ferdinand Alexander Von Schlümbach collection in The Netherlands. Left box contains a description in Old German of the tree and its wood; right box holds tree parts and a cube to find wood's specific gravity.

All makers originated from the German-speaking part of Europe, mostly in the south of Germany and Austria. About 50 collections have survived and are scattered throughout Europe in monasteries, museums and ancient castles.

For Holland, Ferdinand Alexander Von Schlümbach (1772-1835) was the most important wood collector. He was born in Erlangen, Germany, but finished his education in Nürnberg because his father had to change jobs. Subsequently, Von Schlümbach specialized in botany and forestry.

From 1808 he worked as a district inspector in the Forestry Department at Theta. As an inspector, he must have had in-depth knowledge about matters concerning forests and trees.

In 1810, he published Abbildungen der hauptsachlichsten in- und ausländischen Nadelholzer, die besonders in Baiern wild gefunden werden, nebst denen dabei sich aufenthaltenden Insekten (pictures of mainly native and foreign softwoods found in the wild in Bayern,

and insects occurring on the plant).

Ferdinand Alexander Von Schlümbach's name is irrevocably connected with these unique books in Holland!

How a wood library looks

A xylotheek or wood library is a series of wooden "book" forms in which each "book" is made of a different kind of wood. Each book form consists of two boxes that hinge together by means of leather strips. The wood construction is glued together without further connections.

The back of the "book" is made from the bark of the tree or shrub and, if relevant, may show the lichen or another lower plant that occurs on the bark. On the back, there also is a small plate showing the botanical name of the tree and a number. Usually the wood was collected from trees outside the maker's local environment. The "books" measure about 21.5 x 17.5 x 4.5 cm (~ 8 7/16 x 6 29/32 x 1 3/4 inches). If one opens a "book," it shows an upper box on the left-hand side and a

lower box on the right-hand side.

The upper box contains a short description of the wood, where the tree grows best, usage of the wood and a table of contents in Old German handwriting.

The lower box contains plant material, seedling, seeds, leaves, twig, bud, flower, cross-section of a twig, an oblique section, fruit, piece of the root, two small boxes containing pollen and ash, and a cube to calculate the specific gravity of the wood.

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This Wunderkammer in Germany exhibits strange and exotic items, including a wood collection.

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All items are numbered and placed on a moss bed. Tree species that did not provide sufficient wood for boxes are exhibited in pine (*Pinus* spp.) boxes.

Placed on a shelf, a set of book forms looks like a normal library and, from an optical viewpoint, provides

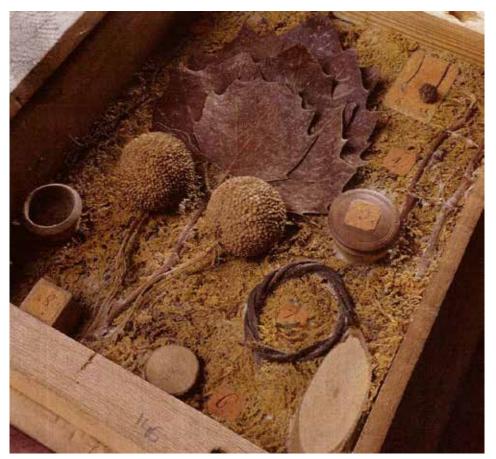
an encyclopedic "picture". However, it should be noted that, in Austria, Belgium and Slovenia, different bookform collections exist where each "book" is made of massive wood.

Arrival, revival of wood libraries

Once there were five "wood library" collections in Holland, all in universities. The 68-item wood collection of the Agricultural University Wageningen did not survive World War II, and nobody seems to know what happened to it.

This collection showed great similarities with the one in the Hungarian Museum of Natural History in Budapest. Unfortunately, its maker is unknown. During the 1930s, a Wageningen University professor brought the wood collection to public attention again.

About 1810, when Holland still was occupied by the French, the three largest and most important wood collections, made by Von Schlümbach, arrived through a grant of King Louis Napoleon to the universities of Leiden, Harderwijk and Franeker (my birth town).



Sycamore (*Platanus occidentalis*) "book" in 146-item Ferdinand Alexander Von Schlümbach collection in Museum Twentse Welle, Enschede, The Netherlands.

Photo by Onno Meeter.

A few years later, the universities of Harderwijk and Franeker were closed, but the wood collections survived. The University of Groningen also had a wood library made by Von Schlümbach, but in 1906 it got lost in a building fire.

The three currently available "books" likely belonged to this collection.

In the 1980s, then-director Roding of Museum Twentse Welle saved these old wood libraries from oblivion in his search for collections throughout Europe. He wrote several publications and, since then, these collections gradually came in the open again, accessible to the public.

In 1999, four collections survived.

Conservation, restoration, presentation

It is inevitable that this kind of wood collection suffered after 200 years.

First, under the tooth of time, which implies that smaller pieces dried out and deteriorated. Furthermore, they suffered from environmental conditions: heat, moisture, shrinkage, mould, woodworm, etc.

The other major threatening factors were bad management of collections and unprofessional restorations.

In particular, two wood collections - the Harderwijk and Leiden



Closed and open "books" of Siberian Dwarf Pine (*Pinus pumila*) and its wood, from 147item Ferdinand Alexander Von Schlümbach collection in Kasteel Groeneveld in Baarn, The Netherlands. Photo by Kasteel Groeneveld.

compilations - went through some periods where they were neglected and not taken care of, and improperly stored under bad environmental conditions. Therefore, those collections suffered considerably.

Also, they underwent some bad restorations where the wrong replacement wood and other improper materials were used. The Franeker Collection remained more or less in the same location and suffered less.

At age 12, I often played with a friend in and around the museum, not knowing the importance of this wood collection.

These old wood libraries are marvelous examples of Europeans' early efforts to document and preserve information on woody plants, for us to study centuries later. Efforts to rehabilitate and preserve these "books" are highly commendable.

One restorer, Maurice Steemers (NEHOSOC, see July 1999 *WoW*) of Enkzicht Restaurateurs, is meticulously doing this monkish work. He is the only restorer to gain so much experience in taking care of this old collection.

This activity requires three disciplines: first, the skill to conserve the wood, inside and outside plant material; a skill available in-house. Second, the skill of identifying the plant material to be replaced, conducted by Piet Versteegh (IWCS #5153L, deceased). Third, the treatment of the paper and leather was done by Paul Peeters from Eerbeek.

Steemers has developed an approach involving a complete inventory and analysis of each "book," a precise registration of every detail requiring repair or change, and photography before and after the changes. This documentation is stored in a computer for possible review and maintenance.

During the early 1990s, the original Leiden Collection (now in Baarn) underwent a complete overhaul to make the collection presentable. Missing wood was replaced with the same species, missing items were replaced with new items of the same species, and broken pieces repaired.

Currently, the original Harderwijk Collection (owned by Vereniging tot Beoefening van het Overijssels Regt en Geschiedenis, and in custody at Museum Twentse Welle) is under conservation so the wood can be presented to the public again.

A different concept of conservation restoration is followed here. There will be no replacement of wood or other items. It will be treated so that the "book" forms remain as much as possible in their original state, so they can be exhibited again.

Furthermore, they will be stored in climate controlled cabinets in the museum

A new feature will be replicas, which will be made so the public can hold these "books" in their hands and admire them. This tedious and demanding work represents humanity's best hope for maintaining these treasures for generations to come.

Locations of old wood collections

In Holland, there are five locations where the Von Schlümbach collections are: in the old castle "Kasteel Groeneveld", where the 147-item stored collection resides; at Francker in the Museum Martena

with its original set of 158 items; and, as mentioned earlier, the 146-item collection of Museum Twentse Welle in Enschede.

These three are the primary and largest collections of wooden book forms.

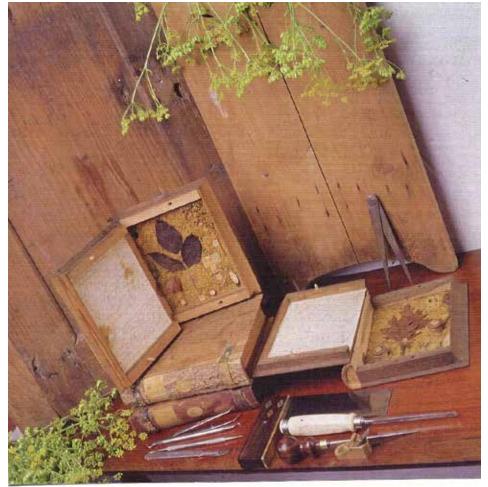
The two small collections with three items and one item, respectively, are in the University Museum of Groningen and the Veluws Museum of Harderwijk.

The single item in the Veluws Museu of Harderwijk is part of the Museum Twentse Welle, Enschede collection and is there because of the historical relationship, related to the time that Harderwijk had a university.

It is very fortunate, and probably just in time, that current museum directors in Europe have realized the need to preserve these old wood collections and make them presentable for future

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generations.



Restoration equipment for conserving "books" in Ferdinand Alexander Von Schlümbach collection in Museum Twentse Welle, Enschede, The Netherlands. Photo by Onno Meeter.