

## The scientific wood collection (Xylothek) of the Thünen Institute, Hamburg

### 1. History

The wood collection is based on individual pieces from the "Institute for Foreign and Colonial Forestry" founded in 1931 in Tharandt (Saxony). However, a systematic recording of the collection did not begin until 1945 at the "Reichsinstitut für Ausländische und Koloniale Forstwirtschaft" (Reich Institute for Foreign and Colonial Forestry) in Reinbek near Hamburg under the direction of **Prof. E. Schmidt**. He began to catalogue and enlarge the collection, which at that time already comprised around 4,000 samples. When he retired in 1956, the collection had more than doubled to around 9,500 samples. Already at this time the collection no longer had a "museum" character, but was fully integrated into wood research as an important working instrument.

In 1956 **Dr. H. Gottwald** took over the collection as curator, which had since become part of the Federal Research Centre for Forestry and Forest Products, Reinbek. In spite of many additional tasks, H. Gottwald succeeded in expanding the collection as an indispensable scientific instrument for wood research and teaching during the almost three decades under his responsibility. Through intensive international exchange with other institutions and his own collection activities in many tropical countries, the collection had grown to about 18,000 samples by the end of 1983. Even more important than the numerous expansion was, however, the processing of the collection for microscopic examinations, which probably led to a worldwide uniquely high degree of processing (approx. 70 % of all collection samples are documented several times by corresponding micropreparations).

From 1983 to 2004 **Dr. H-G. Richter** was responsible for the wood collection. During this period he reorganized the collection with the help of computer-aided data processing programs. The entire bibliographic data of the collection, which in the meantime has grown to almost 24,000 samples, were transferred to an electronic data processing system, from which all information can be retrieved in a time- and cost-saving manner. New entries and the continuous updating of the bibliographic database are handled via this system.



Scientific wood collection (left) and dublettes collection (right) of the Thünen Institute

Since 2004 **Dr. G. Koch** has been in charge of the collection, which has been continuously expanded through scientific exchange/contact with international research institutions. In 2008, the Dr. MAUTZ private collection, known to "wood collectors" as particularly aesthetic and valuable, with over 1,000 species on permanent loan, was integrated. Since 2013, the scientific wood collection and the duplicate collection with an additional 6,000 samples have been an important basis for the legal and commercial wood species regulations at the Thünen Centre of Competence on the Origin of Timber, which was founded at the same time as the European Timber Trade Regulation (EUTR) came into force.

## 2. Application

The collection is the most important prerequisite for the anatomical determination of wood species, a service that is in great demand both nationally and internationally. Such requests come mainly from the timber trade and industry, from public authorities and private individuals who have to deal with the question of "What kind of wood is this" for various reasons. The collection is also becoming increasingly important for testing under the Washington Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

In addition, the collection serves the scientific investigation of botanical genera or families with contributions of the wood structure to taxonomy and systematics and is an indispensable basis for the databases for the computer-assisted determination of wood species (Commercial Timbers, macroHOLZdata, CITESwoodID and softwoodID) created at the Thünen Institute of Wood Research.

## 3. Statistics

- Number of specimens: approx. 35,000 (*including dublettes*)
- Number of families: approx. 245
- Number of genera: approx. 2,400
- Number of species: approx. 11,300

Plant families represented particularly extensively	
• Boraginaceae	• Fabaceae
• Dichapetalaceae	• Magnoliaceae
• Dipterocarpaceae	• Monimiaceae
• Ebenaceae	• Myristicaceae
• Lauraceae	• Palmae (Genus Rattan)

Important collections (integrated):

**Wester Africa:** JENTSCH, MILDBRAED, ZENKER (Cameroon); KERSTING (Togo); COOPER (Liberia); DETIENNE (Ivory Coast); DECHAMPS (Angola); BRETELER & al. (Dichapetalaceae)

**Eastern Africa:** SCHLIEBEN (Tansania)

**Latin America:** OTS (Organisation of Tropical Studies, Costa Rica); TESSMANN (Peru); POVEDA (Costa Rica); KRUKOFF (Brasil); SCHMIDT (Bolivia); SCHROEDER (Uruguay); EGGERS & BERGE (Caribbean Islands); STAHEL (Surinam)

**North Amerika:** BWC Syracuse

**Asia:** KRUKOFF (Sumatra); GAMBLE (India); BZF Bogor (Indonesia)

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