

## Scientific activity of wood collections at Wood Technology Faculty of SGGW in Warsaw

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**Abstract:** Information note about institutional wood collections at Warsaw University of Life Sciences (SGGW): ca. 5000 specimens, 553 genera, 1768 species, 115 families; well-documented species: 1119. Special emphasis on tropical wood species and different exotical tree-forming wood species. Collections works from 1962.

Key words: tree-forming plants, woody species, xylothea, important samples collections

### INTRODUCTION

General characteristics of Xylothea is following: The present Collection has been established and is useful among wood technologist and wood technology students, studying the utilization of European and imported (especially tropical) woods in the industry, trade and material engineering; also for use of foresters, botanists and others to whom wood is a research medium, and to provide a basic for solving problems in archeology, anthropology, law, wood identification and other applied fields where identified wood specimens are required for study and comparison [see “Index Xylariorum” of W.L. Stern, 1978].

Species are mainly presented as solid wood samples, veneers and microscopic slides. Majority of species have got a complementary documentation of wood structure (descriptions, schematic drawing, photograms, transparencies etc.) and a physical data sheet.

### WORK-STAND ORGANISATION

Foundation: 1962 in (formerly) Department of Mechanical Wood Technology, now Department of Wood Science and Wood Protection [Dzbeński, Kraińska, 1986].

Founder and Curator: Prof. Dr hab. Eng. Witold Dzbeński – Full Professor in Wood Technology (Structure in relation to properties and uses of natural or fossil woods).

Staff members: MSc Weronika Zakrzewska-Rudzińska (descriptive wood anatomy, manager of computer collection database);

Dr Paweł Kozakiewicz (identification of commercial timbers)

Test equipment:

- microscope (camera microscope, binocular microscope, polarization microscope, toolmaker’s microscope, projection microscope);
- simple or reading microscope to low-power micrography;
- tree-ring measurement station;
- microtome;
- USG defectoscope;
- isotopic densitometer (radioactive);
- chemicals preparation to wood microstructure examination.

Xylothea – on the whole (contents): ca. 5000 specimens (solid pieces, veneers, microscope slides, exhibits of technical and in appearance defects), 1768 species, 553 genera, 115 families: well documented species 1119 [Zakrzewska-Rudzińska, 2008].

Important samples collections: Dr R. Dechamps (Zaire), Dr A. Doria (Brazil), Prof. Dr Eng. G. Giordano (Italy), Prof. Dr Eng. A.M. Korzeniowski (Zambia), Prof. Dr Eng. Z. Laurow (Indochina, Latin America), Ms. M-T. Lopez de Roma (Spain, Canary Islands), Msc-Eng. L.

Martusewicz (Indonesia), Eng. J. Morze (Zimbabwe, South America), Prof. J. J. Solecki (Canada), Prof. Dr N. Torelli (Central Africa), Prof. Dr Eng. J. Ważny (Australia) and Other (see Tabl. 1).

#### CAPITAL EQUIPMENT

- Microscope slides: ca 1200 (350 species);
- Transparencies: 1000 (structure of wood, wood defects) + 500 (wood technology, engineering and utilization);
- Samples for sectioning: few species only;
- Additionally: posters, documentation, demonstration films.

Collections comprises tree-forming woody species, including some important shrubs, but not herbs, small bushes, climbers etc. Available: Central European woods and wood from Forest Garden in Rogów-SGGW, Poland (see "Index Seminum" Arboretum Rogów k. Koluszek 1962/63 and next).



Fig. 1. Woody stem with atypical structure: slender to stout liana *Hippocratea volubilis* L. (*Hippocrateaceae*).

Table 1. Our Partners in International Co-operation with institutional wood collections of the world

<b>Native country</b>	<b>Collectors and provenance of collection</b>	<b>Donors</b>	<b>Botanic Correctors</b>
America – Latin: Dominican Republic	Jardin Botanico Nacional - Apartado	Dr Rafael M. Moscoso	JBN-Santo Domingo
America – Latin: Guatemala	CORFOP Corporacion forestal del pueblo	Prof. Dr hab. Zb. Laurow	SGGW
America – Latin: Nicaragua	CORFOP Corporacion forestal del pueblo	Prof. Dr hab. Zb. Laurow	SGGW
Australia	- Forestry Commission of New South Wales - Forests Commission – Forest Products Section of Victoria	Prof. Dr hab. J. Ważny, Warszawa	For. Commis. Of N.S.W. For. Commis. Of Victoria
Bangladesh	Chittagong Division of Utilization		SGGW
Belgium	Koninklijk Museum - Tervuren	Dr R. Dechamps, Bruxelles	Koninklijk Mus. Tervuren
Brazil	- Museu Florestal - Sao Paulo - Cores Goiaz – Brasil - COBEC - Brasil	Dr A. Doria-Dernalowicz, Rio de Janeiro G. Sawyer, High Wycombe	Museu Flor. Sao Paulo Museu Flor. Sao Paulo Museu Flor. Sao Paulo
Brazil	Naveqacao – Paulo Peveira Limitado Manaus - Amazonas	Prof. Dr hab. Zb. Laurow	SGGW
Canada	University of British Columbia Vancouver	Prof. J. Solecki, Vancouver	Univ. Brit. Col.
Central African Republic	USA-Yugoslav Joint Board on Scientific and Technological Cooperation-Bayanga Region of CAR	Prof. Niko Torelli, Ljubljana	Univ. Ljubljana
China - Nationalist (Taiwan)	Taiwan Forestry Research Institute Taipei	Dr E.J-Chen Wang, Taipei MSc A. Umgelter, Warszawa	T.F.R.I. Taipei
Colombia	Desarolla Forestal en les Valles del Magdalena y del Sinu	Prof. H.J. Saa, Bogota	SGGW
Cuba	Centro de Investigacion Forestal - Habana	Prof. Dr hab. T.Wytwer, Warszawa	SGGW
Ethiopia	Forestry Research Institute Addis Ababa	MSc L. Martusewicz, Warszawa	SGGW
Ghana	Forest Department - Accra		F.P.R.L. Princes Risborough
Greece	Aristotelian University - Thessaloniki	Prof. Dr hab. W. Oniśko, Warszawa	Aristotel. Univ.
Indonesia	Forest Research Institute - Bogor	MSc L. Martusewicz, Warszawa	F.R.I. Bogor
Italy	Centro Nazionale del Legno - Firenze	Prof. G. Giordano, Firenze	CNdL-Firenze
Japan	University of Tsukuba	MSc A. Umgelter, Warszawa	Univ. Tsukuba
Japan	Takeyama Architect and Associates Motomachi Naniwa-ku Osaka	Mr. Michiaki Takeyama	SGGW
Korea - North	Politechnical Institut - Phenian	Prof. Li Czen-Hi, Phenian	Inst. Pol. Phenian
Laos, Malaysia	The East Asiatic Company Ltd. Kuala Lumpur	Prof. Dr hab. Zb. Laurow	SGGW

<b>Native country</b>	<b>Collectors and provenance of collection</b>	<b>Donors</b>	<b>Botanic Correctors</b>
Laos	Wood Enterprise in Amphoras Valley - Vientiane	MSc L. Martusewicz, Warszawa	SGGW
Mexico	Universidad Autonoma - Chapingo		SGGW
Mongolia	Technical Institut – Ulan Bator	Dr Czultemsurengijn Luwsandorż – Ulan Bator	SGGW
New Zealand	Forest Research Institute – Rotorua	C.L. Todorki B.A., B.Sc., Rotorua	SGGW
Papua New Guinea	Department of Forests – Division of Utilization	M.-Teresa Lopez de Roma Madrid	I.N.I.A. Madrid
Russian Federation	Moskovskij Lesotechniczeskij Institut		SGGW
Slovenia	Uniwerza v Ljubljani – Biotehnizska Fakulteta, VTOZD za Lesarstwo	Prof. Niko Torelli, Ljubljana	Univ. Ljubljana
South African Republic	Bosnaversinstituut – Department van Bosbou Pretoria	Eng. J. Morze, George, RPA	Inst. Pretoria
Spain – Canary Islands	Institute Nacional de Investigacion y Tecnologia y Alimentaria I.N.I.A. Madrid	M.-Teresa Lopez de Roma Madrid	I.N.I.A. Madrid
Tanzania	Sokoine University of Agriculture, Morogoro		SGGW
Tunisia	Wood Technology Institute - Poznań	Dr S. Splawa-Neyman, Poznań	I.T.D. Poznań
United Kingdom	Buckinghamshire College – High Wycombe	G. Sawyer, High Wycombe	F.P.R.L. Princes Risborough
USA	Forest Products Laboratory - Madison	Dr A. Krzysik, Madison Prof. Dr hab. I. Swaczyna, Warszawa	SGGW
USA		Prof. dr hab. Zb. Laurow	SGGW
Vietnam	Institut des Recherches Agronomiques et Forestieres - Hanoi	MSc M. Feldman, Warszawa MSc S. Podłowski, Warszawa	SGGW
Zaire (Congo)	- Koninklijk Museum voor Midden Africa - S.A. BOMACO – Bruxelles - Agents de Vente S-te PACHON, Galerie du Centre - Bruxelles	Dr R. Dechamps, Bruxelles	Koninklijk Mus. Tervuren
Zambia	Forest Department – Division of Utilization, Kitwe	Prof. Dr hab. A.M. Korzeniowski, Warszawa	F.D.D.U. Kitwe
Zimbabwe	Bosnaversinstituut – Departament van Bosbou Pretoria RPA	Eng. J. Morze, George, RPA	Inst. Pretoria

## CONCLUSIONS:

In Wood Collections at Warsaw University of Life Sciences existent actual problems:

1. Wanted: woods from all areas, especially from Central America, South America and Oceania;
2. Desirable: special rarity (e.g. Fig. 1);
3. Necessary: full documentation of wood structure and properties investigations (import from institutional wood collections of the world);
4. Disposition to exchange of wood pieces and microscope slides – but to a limited extent.

## REFERENCES

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**Streszczenie:** Działalność naukowa Ksyloteki Wydziału Technologii Drewna SGGW w Warszawie. Podano informację na temat Ksyloteki w Szkole Głównej Gospodarstwa Wiejskiego w Warszawie, obejmującej ok. 5000 próbek spośród 1768 gatunków botanicznych, zgrupowanych w 553 rodzajach botanicznych i 115 rodzinach; 1119 gatunków ma w pełni udokumentowane pochodzenie i fizyko-mechaniczną charakterystykę drewna. Ze szczególnym zainteresowaniem gromadzone są próbki i dokumentacja drewna tropikalnego oraz innych egzotycznych gatunków roślin drzewiastych. Ksylotekę założono w 1962 roku.

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