InsideWood:

A new internet-accessible wood anatomy database

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Objectives

Create searchable site to retrieve images and anatomical data using IAWA features, keywords, or taxon names

Maintain extensive, permanent collection of information in a robust, portable structure

Provide virtual reference collection of microscope slides

Serve as a resource for teaching about internal structure of woody plants

Archives

Represents a repository for photomicrographs and databases representing multiple entry keys

Image collection archives photographs from recent systematic wood anatomy studies:

Incorporates data on "orphaned" United States Geological Survey collections (J. Wolfe), including woods of Fiji and New Caledonia, as well as Puerto Rico

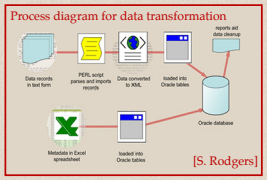
Cornaceae
Shuichi Noshiro - FFPRI
Lauraceae
H.G. Richter - BFH
Leguminosae
P. Gasson - Kew
Sapindaceae
René Klaassen - NHN

Data

Over 5500 description records

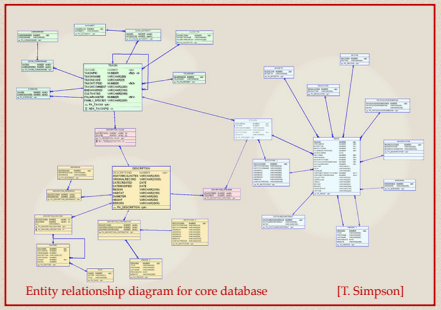
More than 250 angiosperm families and 2500 genera described

Some descriptions represent multiple species with similar anatomy



Original OPCN / GUESS dataset follows tradition of L. Chalk, Commonwealth Forestry Institute, Oxford

OPCN data encoded into robust, portable XML format



Entity relationship diagram for core database [T. Simpson]

Partnership

College of Natural Resources

NCSU LIBRARIES

Interface

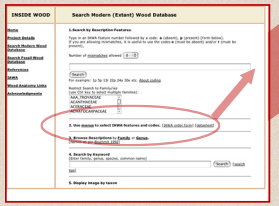
Identify unknowns using either of two search protocols

Website uses IAWA standard wood anatomical terminology

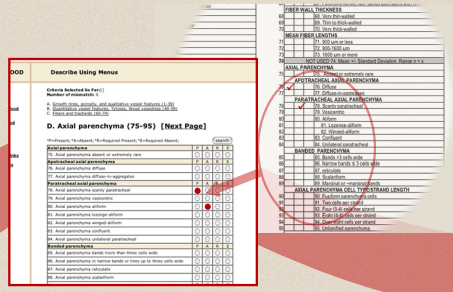
Retrieve descriptions in IAWA features

Can also browse taxa or search by keyword, including taxonomic and common names

Mirrored and preloaded for rapid response



Search Modern Wood Database page



Menu search option using established IAWA feature numbers

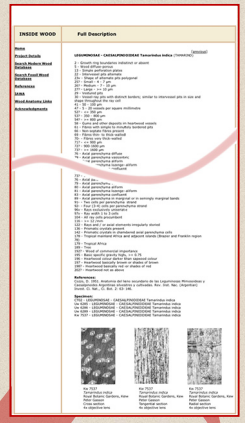
A new, extensive, Internet-accessible wood anatomy reference, research, and teaching tool

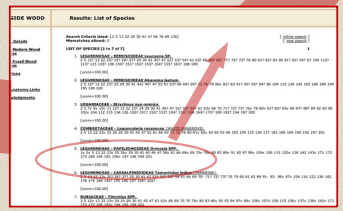
Results

Matching results are displayed alphabetically by family, with IAWA features present in each matching record displayed

Full description gives text for the IAWA features present, a list of references and wood samples used to create the description, and 'live' thumbnails of linked images

The initial search can be revised by 1) adding or removing mismatches between the unknown description and the database descriptions, 2) changing the unknown description by adding or deleting features used, or 3) restricting the search to selected families





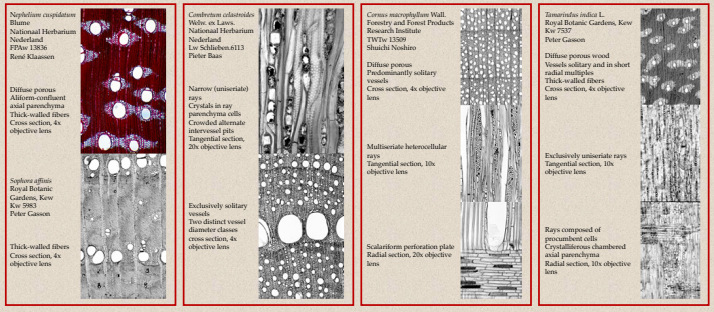
Search results page and full description for selected record (circled)

Images

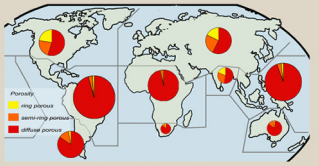
Over 13,000 archived digital image files as of October, 2004

Will be dynamically linked to descriptions

Each will possess rich, searchable metadata and keywords, including photographer's name and host institution, collection, specimen ID number, and technical information



InsideWood is a resource for mapping geographic distribution of wood anatomical features



Global distribution of ring porous vs. diffuse porous woods

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