

InsideWood: A Web-Accessible Resource for Dicot Wood Anatomy

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<http://insidewood.lib.ncsu.edu/search>

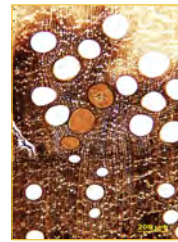
InsideWood includes 5,700+ modern wood descriptions, 1,600+ fossil wood descriptions, and 32,000+ images.

Modern wood descriptions use IAWA Hardwood ID Features. *IAWA Committee. 1989. IAWA List of Microscopic Features for Hardwood Identification. IAWA Bull. n.s. 10: 219-332.*

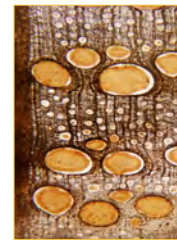
Fossil wood descriptions use a subset of the IAWA Hardwood Features. The core of the fossil wood database is a 1200-record database used for a 1991 survey of changes in wood structure through time (*IAWA Bull. n.s. 12: 272-332*). Some 400 records have been added since then (*ms. in prep.*). Additions and corrections to the fossil and modern wood databases will continue to be made via a controlled access cataloging piece.

New in InsideWood (2008 additions)

- Ability to search for **modern and/or fossil woods**.
- Browsing by family or genus or keyword searching yields lists showing taxa with descriptions only, taxa with descriptions and images, and taxa with images only.
- Images of North American fossil woods.
- Ability to export search results.



Eocene Fagaceae



Miocene Oak



Recent White Oak.

Example: Key Word Search for *Fagus*

Search Page 2008 version

<http://insidewood.lib.ncsu.edu/search>

Results of Key Word Search for *Fagus*

Note that the second fossil *Fagus* sp. description has many features coded as ?, as the publication this description is based on did not explicitly mention whether those features were present or absent, so they are coded as unknowns.

Individual description page

FAGACEAE *Fagus crenata* Blume

Specimens:

TW13542: FAGACEAE *Fagus crenata*

Features:

- Growth ring boundaries distinct
- Wood diffuse-porous
- Solitary vessel outline angular
- Simple perforation plates
- Scattered perforation plates with -10 to 16
- Scattered perforation plates with 10 - 20
- Wettable, biconcave, and 1 or other types of multiseptate perforation plates
- Interseptal pit-aciculariform
- Interseptal pits opposite

etc.

Luna Insight for Images. Zoom-in feature

Fossil wood database

Some IAWA features are not included because they are rarely mentioned in the fossil wood literature. Features for age are included. Features unique to the fossil wood database are numbered in the 300s.

Fossil Wood Menu

Ulmu baileyana (Miocene, Vantage Fossil Forests, WA) has distinct growth rings, ring-porous wood, and vessels in tangential bands and its description would be among those retrieved with these search criteria.

etc.

Uses for InsideWood

- Wood identification aid (multiple entry key)
Describe unknown wood by choosing presence / absence of IAWA features
- Teaching tool, e.g., provide images for use in plant anatomy classes.
- Research tool, e.g. investigating changes in wood structure through time and incidence of wood anatomical features in different geographic regions.