SOFTWARE REVIEW

HENRI D. GRISSINO-MAYER

Department of Geography
The University of Tennessee
Knoxville, TN 37996, USA

The Wood Explorer, v 1.0, developed by THE WOOD EXCHANGE. 2002, P.O. Box 426, Burlington, VT 05402, 802.238.5355, http://www.thewoodexchange.info, $49.95 (1-CD).

In my last software review (*Tree-Ring Research,* volume 57, number 2), I introduced the 2-CD set *Woody Plants of North America,* which contained detailed dendrological and environmental information on 470 species of woody plants found in North America. I consider this software indispensable for my research and for teaching students the most efficient means for identifying and describing trees commonly used in dendrochronology. To round out a comprehensive suite of software that covers the majority of species information useful to dendrochronologists, I recently bought *The Wood Explorer,* a CD that provides what could be the most comprehensive package of technical information on most tree species worldwide.

The Wood Explorer is exactly as its title suggests. The software emphasizes the technical details of wood properties of over 1,650 timber species from over 225 countries (searchable by country and even by multiple countries). The Windows-based software installs easily but requires time (*ca.* 10 minutes on my Pentium® laptop) to download the over 3,000 pictures of wood to your hard disk (100 Mb minimum free space required). Unlike the *Woody Plants* CD, this software runs directly from your hard disk—having the CD loaded in the CD tray is *not* required. The included serial number is required for the initial run of the software, but save the serial number as you'll need it to access all wood information on their companion web site! It's nice to know that, in case you don't have access to your laptop or personal computer, all information is available from their web site.

The vast amount of information available to you is dizzying. As an example, let's explore information for longleaf pine (*Pinus palustris* Mill.). To begin, select the "Search" function and type in "*palustris*" under the "Scientific Name" option. From the search return box, click on "*Pinus palustris*" (of the three species returned) and the software returns all general, numerical, physical, and woodworking information for that species. This includes: family, scientific, trade, and common names; regions and countries of distribution; common uses; environmental profile; and distribution overview (*i.e.,* topoedaphic requirements). Then comes technical information on: heartwood and sapwood color; grain; texture; odor; types of growth defects; durability; weathering; resin content; and tree size and bole identification information. Additional technical woodworking information is provided on: kiln drying schedule; planing; mortising; carving; nailing; staining; varnishing; sanding; cutting resistance; resistance to splitting; and many more properties too numerous to mention. Horizontal bars to the left of each property highlight the most common attributes for each. For example, the dominant heartwood color for longleaf pine is either brown or red, while the dominant sapwood color is either yellow, golden-yellow, or orange. Shorter bars indicate less frequent attributes (*e.g.,* sapwood color that is pink or pale red). Searching can be conducted using any of the names, locations, general, physical, numerical, or woodworking criteria.

To the right of the panel that opened for longleaf pine is another panel containing images of longleaf pine wood. Clicking on each enlarges the image for greater detail, but note, however, that not all

species have microphotographs available for details on cellular structure. Selecting "Photo Guide" from the Main Menu brings up color swatches for wood (*e.g.*, the "Whites," "Yellow-Browns," and "Lighter Browns"). Clicking on any swatch brings up a new window that contains swatches for all species represented by that color. Click on any swatch to see the species information described above. The photographs are perhaps one of the most useful and educational guides in this software, and key specifically on gross features of the wood only (*i.e.*, grain, color, resin) rather than micro-features. If you're looking for macro- and microphotographs of wood in all three sectional views—transverse, tangential, and radial—you won't find that level of detail in this software, nor on their web site.

Needless to say, users may require information for a set number of species, and these can be kept permanently by adding the species to and later selecting "My List." Properties for each species in "My List" can then be "Custom Compared" (*e.g.*

comparing the texture or sanding properties) or compared to other popular species not included in "My List." If the user is not sure about some of the terms used, the software comes with a comprehensive glossary—if more than one definition is available, it will be provided (three for "sapwood" alone). A very comprehensive reference section is also provided for each individual species at the end of the information section. The PC-based software is complemented by the web version, where you will find a new twist: information submitted by subscribed members to complement the "system" information. Users can also contribute microphotographs and images of the actual trees. Also found only on their web site are the actual geographic range maps for most species—I tried to find a species that did *not* have a range map, but was unsuccessful, even trying some of the more obscure African wood species. In all, this software and its companion web site are impressive, a very worthwhile investment, and a great learning tool for the dendrochronologist.