

Tree Rings

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Andrew Davis

How old is your antique furniture really?

An article in the Boston Globe last summer caught my attention. The story was not aimed at woodworkers, but rather at scientists trying to identify shipwrecks. Turns out that tree rings are one of the keys to solving these puzzles. The article referenced Argentina's Laboratory of Dendrochronology and ultimately pointed me to the periodical *Dendrochronologia*, which according to the journal's web site, is a "peer-reviewed, international scholarly journal that presents high-quality research related to growth rings of woody plants, i.e., trees and shrubs, and the application of tree-ring studies."

The globe article explained that researchers had cut off parts of a shipwreck whose identity they were trying to verify, and under a microscope measured the rings to the nearest 0.001 millimeter. Drought cycles imprint a "barcode" on tree rings which can help identify where and when a piece of wood came from (assume you have drought data). In the case of the particular wreck off the coast of Argentina the tree ring data was consistent with the 1849 date for the suspected Rhode-Island-built vessel but did not rule out other possibilities. In other words, it wasn't conclusive.

Tree rings tell not only the tree's age, but also how much the tree grew in a year and whether it was a hot or cold, wet or dry season, and also the location where the tree grew.

Dendrochronologists apparently have a database of tree origins matched to tree rings going back many years for many places, including Eastern Massachusetts.

Spurred by the success of the scientists in the globe story, I cut off one leg of my dining room table and using an online tree-ring database determined that the table was built in 2007 from a tree felled in North Quincy. Then I got curious about the plywood bookcase in my home office. Using a similar approach to that recommended by *Dendrochronologia*, I took a cross-section and determined the shelving was built in May of 2018 in Shenzhen, China! Who knew?