Top photo: NaJina McEnany; prepared by User:Ram-Man, CC BY-SA 2.5, via Wikimedia Commons

Bottom photo: Chris Light, CC BY-SA 4.0, via Wikimedia Commons

A madrone tree in Big Basin Redwood State Park, California.

Photo: mindgrow from Schwalmtal, Deutschland, CC BY-SA 2.0, via Wikimedia Commons

Working with PACIFIC MADRONE (*Arbutus menziesii*)

Christian Burchard

The British call it arbutus, the Spanish madroña, and here in Oregon, it is called madrone or madrona. Pacific madrone grows from British Columbia, Canada, down to Southern California along the coastal range. Madrone is a sacred tree to indigenous peoples of the area, symbolizing knowledge, strength, inclusion, and safety. Its webbed roots are said "to hold the splintered world together." It is a unique tree, a flowering broadleaf evergreen. Its berries were used for medicine and food. Its trunk always feels cool to the touch because its bark, which continuously peels, contains water.

A unique cell structure

Madrone wood has a very unique cell structure. A friend of mine looked at madrone through an electron microscope. He described what he saw and asked me to think of it as high-rise building, but one built with only cement and no steel. The cells are packed tightly together, and one cannot discern any difference between summer and winter growth. One of the effects is that as the wood dries and the water *between* the cells and the water *in* the cells evaporate, there is a lack of supporting structure inherent in many other woods. Absent from madrone is the stability that ▸

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encourages even drying. As a result, it is very difficult to dry the wood without it cracking or warping, but it is possible.

You will not find madrone lumber in your local hardwood store. But there are at least a few companies making madrone flooring by steaming and stabilizing it. Madrone, when dried properly for lumber, comes in a great variety of colors, from red to pink to light brown and nearly white—sometimes even with a light blue tint. Once stabilized and dried, there is no more wood movement to worry about. It machines beautifully, and working it with hand tools is a real pleasure. The wood is dense and hard and takes traffic well. It is also the most sought-after firewood in my area, as it burns very hot.

Turning madrone

I don't have a scientific understanding of madrone, but having worked with it for thirty years, I have first-hand knowledge of how it functions and how I can approach it. Wet madrone has a high water content and with its even structure, when freshly cut, it is a delight to turn, straight grain or burl. It cuts easily at the lathe and with skill, can be turned very thin, as Michael Hosaluk did with the bowl pictured above.

In general, if you turn forms from madrone burl, an even warping pattern will emerge as it dries. If you turn a bowl from straight grain, it will dry very oval. If you use the root, anything can happen!

Unless you know loggers or tree surgeons in the West, madrone is not readily available these days in the U.S. Large burls—and they can get up to 6000 lbs or more—are sought after for the veneer market, but even that has very much slowed down. Once in a while, a madrone burl will pop up on eBay. The burl color varies from a light pink to a deep dark red.

Should you find some freshly cut madrone, make sure to wax it thoroughly and keep it wrapped in plastic to keep it from losing moisture,

Turning thin and wet

Michael Hosaluk, Madrone burl (turned thin from wet wood and then dried), 5½" × 10" (14cm × 25cm)

Photo: Trent Watts

Madrone burl

Madrone burl can produce a variety of colors and patterns.

Twice-turned madrone burl

Dale Larson, Madrone burl (rough-turned wet, boiled, dried slowly, then finish-turned), 5¼" × 10¼" (13cm × 26cm)

Photo: Dan Kvitka

Madrone root

You might have to know a logger or tree surgeon to acquire madrone root, especially one of this size. Each part of the tree dries differently.

until you start working with it. Even then, you will need to work efficiently and quickly and once finished, find ways to slow the drying. Some people use a microwave oven with wet woods like this one, as it steams the moisture from the inside out and helps to relieve stresses and evens out the drying. You can also use the paper/plastic bag method to slow the drying way down to prevent cracking. Place your finished work in a paper bag, and place that inside a plastic bag. After a day, the paper bag will have absorbed some moisture. Exchange the bag for a dry one and continue this process till the work/bowl is dry. This way, moisture loss is very slow and even, and any small cracks can usually be taken care of.

You can use madrone to twice-turn bowls. Dale Larson from Gresham, Oregon, turns his madrone burl salad bowls green (freshly cut) and then boils them. He then dries the rough-turned bowls slowly using humidity control and then finish-turns them to their final shape. And they come out beautifully!

Sculptural work

You can use the burl, the roots, and the straight grain of madrone for more sculptural pieces. Each part of the tree dries differently, as the grain structure varies. This can be used to the maker's advantage, once you learn how to select the wood in a very particular way and dry it to your desired effect. And this is when working with madrone can be interesting and exciting: it is possible to use the cracking and warping to dramatic effect. If you expose the wet wood to heat, through sun or the use of an oven, beautiful cracking patterns emerge.

As noted, you *can* control this wood by boiling or otherwise stabilizing it, or you can go along with its general unpredictability and allow that freedom to flow into your work. ■

Christian Burchard is a sculptor living in the foothills of the Siskiyou mountains in Southern Oregon with his wife Kristy, their two dogs, and a small herd of goats. He is also an aspiring cheese maker.

Intentional warping and cracking

The author's sculptural work often involves intentionally warping and/or cracking madrone, using the wood's instability to great effect. *At left*, book pages are separated with wedges as they dry; see finished examples on page 50 of this issue.