



Many old-growth trees are on protected land that will never be forested. But some ancient wood makes it to market.

Is it worth working with?

We find out.

We crashed down a steep hill covered in ancient rhododendron thickets and the effect was complete. This forest was so old and civilization so far away that we could have been settlers forging through the Cumberland Gap. Poplars stood 120' tall and measured 4' in diameter. Their once-young, fine-textured bark was now riven with deep grooves causing us to misidentify them in their winter attire as chestnut oaks. The trees looked wrinkled, magnificent and old. Among the poplars were ancient hemlocks and 300-year-old beech trees, which grew neck-achingly tall on Pine Mountain's mossy, fern-covered south slope.

In another era, these trees would have been cut down and used for everything from furniture and firewood to bowls and fuel. But this particular forest – Blanton Forest in eastern Kentucky – is protected. These trees will never see a table saw. But some old-growth wood (mostly recycled) does. Many people believe old-growth offers richer color, tighter grain and more strength than newer wood. Before you begin searching for some old-growth lumber, here are some important things you should know.

What is Old Growth?

There are a slew of definitions for the term “old growth,” in part because different species of trees require different definitions.

But most scientists agree on these key conditions:

- A percentage of old, large-diameter trees must be present.
- The forest must exhibit a dense,

diverse canopy with trees of many different heights, standing snags (dead trees that simply refuse to fall) and a forest floor cluttered with decomposing logs.

- The soil of an old-growth forest is usually carpeted with moss, fungi and ferns, with large root balls pushing the earth apart.
- The forest must remain, for the most part, undisturbed by people. Because wood is, and always has been, integral to human life, “undisturbed by people” is what makes a virgin forest so rare.

History of our Trees

In 1630, 46 percent of the United States was forested, according to Jeff Ghannam, communications director at the Society of American Foresters. That number dropped to 30 percent in 1920, but has risen gradually to 33 percent (based on a 1997 figure).

In his book “A Reverence for Wood,” (Ballantine Books) Eric

Sloane describes the early importance of wood: “The century of magnificent awareness preceding the Civil War was the age of wood. ... It spanned rivers for man; it built his home and heated it in the winter; man walked on wood, slept in it, sat on wooden chairs at wooden tables, drank and ate fruits of trees from wooden cups and dishes. From cradle of wood to coffin of wood, the life of man was encircled by it.”

According to Sloane, a painter and chronicler of early American life, in the period following the Civil War, many iron factories began inventing things suitable for peacetime production. He writes: “Anything which hitherto had been made of wood was quickly duplicated and mass-produced in iron. ... The American reverence for wood had become old-fashioned and obsolete almost overnight, and the individual makers of wooden things

became rare artisans. There rose a quest for new ways to use wood, even to the point of wasting it.”

Plans were made for building wooden highways, called plankroads. Log jams in rivers were common occurrences. Steamboats and locomotives used wood for fuel. According to Sloane, the English criticized Americans for wasting trees.

Connecticut, which embraced manufacturing, is today well-known for its many trees. In fact, according to Ghannam, 60 percent of Connecticut is covered in forests (based on 2001 figures). But this wasn't always so. In his book, Sloane describes the view over Connecticut's Berkshires around 1865, looking north from Cornwall. Should you have looked at the countryside from any elevated point, he writes, you could have “counted the big trees on the fingers of your hands.”

Deforestation was as common an occurrence then (perhaps even more so) as it is today. According to Ghannam, national forests were created by the Organic Act of 1897 to combat the deforestation that occurred at the end of the 19th century. In the beginning of the 20th century, the creation of the U.S. Department of Agriculture, Forest Service and the profession of forestry helped deter deforestation by introducing scientific logging and re-planting techniques.

Most of today's forests are filled with second-growth wood – young trees that have revitalized the forests that were once stripped for settlers' needs. Today, we build most of our wooden furniture and homes from second-growth wood.

by Kara Gebhart

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ABOUT BLANTON FOREST

Pine Mountain is in Blanton Forest, tucked away in the southeastern corner of Harlan County, Ky. It is the 13th largest old-growth forest in the eastern United States. First recognized in 1992 and later purchased by the Kentucky State Nature Preserves Commission through efforts of the Kentucky Natural Lands Trust, the forest was opened to the public in 2001. The 2,350 acres of ancient beech, poplar, hemlock and oak are protected by a 4,350-acre buffer. Special thanks to our guides, Daniel Collett, Blanton Forest steward for the Kentucky Natural Lands Trust, and Kyle Napier, nature preserves regional manager for southeast Kentucky. For more information about Blanton Forest, call 877-367-5658 or visit blantonforest.org.



This Boise Payette Truck is hauling logs from somewhere around the Warm Lake area east of Cascade, Idaho. This picture, which was taken between 1933 and 1937, illustrates the size of trees logged in the early 20th century.

Old vs. New

What can trees become? Obviously, if left in place they can become great in size. Many of us have heard of General Sherman, California's giant sequoia that is 102.6' in circumference. Or Jardine Juniper, Utah's 3,200-year-old rocky mountain juniper. There's also Bennett Juniper, California's 3,000-year-old western juniper, and the late Wye Oak, Maryland's great white oak with a regal crown that spanned 119'. (Wye Oak died in June 2002.)

There are also the tales of 30"-wide by 8'-long tables built from one slab of wood, homes built inside of hollowed trees and local dances that took place on top of fallen ones.

But there's more to old-growth wood than size and age. Some species become more decay-resistant, stronger and darker in color as they age. Redwood is a

prime example, according to Regis B. Miller, a project leader in the Center for Wood Anatomy Research at the U.S. Department of Agriculture, Forest Service, Forest Products Laboratory.

By the time a redwood reaches the ripe old age of 100, it has had a lot of time to create the necessary polyphenols, fats, waxes, oils, resins, gums and tannins – what some scientists call extractives – needed for decay resistance. (Extractives also are a tree's aromatic and coloring materials.) When you look at old-growth redwood, it's very dark in color, Miller says. Darker color means more extractives, which signifies a higher resistance to decay.

According to Miller, Southern yellow pine is another prime example of the differences in old-growth wood versus second-growth wood. Old-growth Southern yellow pine (what many refer to as

heart pine, longleaf pine or hard pine) has distinct, heavy bands of latewood and distinct bands of earlywood. (In Southern yellow pine, the soft, light layers are earlywood and the darker, denser layers are latewood.) Typically these bands of earlywood and latewood are equal in width.

"As a consequence, you have a distinctive grain pattern that people are raving about," Miller says. Some reclaim this pine from reconditioned houses and buildings from the early 1900s and install it in new homes, he adds.

Most of today's Southern yellow pine is grown at a fast clip on managed plantations and is cut down when it's about 20 years old. Therefore, its band of latewood is much narrower than its band of earlywood. Latewood typically has higher density. So second-growth Southern yellow pine is lower in density, lighter in color and, according to Miller, not as strong. Today this wood is most commonly used in construction as a dimensional lumber.

Many people often cite the spacing of annular rings as another common example of a difference between old-growth and

second-growth wood. In many species of old-growth trees, the wood's annular rings are tighter. According to Miller, trees produce tighter annular rings when they grow slowly, which is often the case with old-growth trees. Some argue that when trees grow in an environment that provides a dense, multilayered canopy, the trees are competing for sunlight and therefore grow at a slower pace. Miller says that slow growth typically occurs when a stand is very mature and old.

Of course, all of this varies from species to species. For instance, when comparing old-growth hardwoods to second-growth hardwoods (versus softwoods), the differences in density and strength aren't as noticeable. For example, Miller says, the decay resistance of old-growth white oak, compared to second-growth white oak, is the same as far as we know.

Miller also says that second-growth white oak actually is stronger than old-growth white oak. When the growth of a white oak tree slows, it typically only produces earlywood, he says. This earlywood is lower in density,

VISIT AN ANCIENT FOREST

GORP.com, an online resource for outdoor recreation, publishes Top 10 lists on everything from scenic drives to favorite parks. Following is a list compiled by Mark Leger listing GORP.com's Top 10 ancient forests in the United States:

The East

Joyce Kilmer Memorial Forest, N.C.
Eglin Air Force Base, Fla.
Congaree Swamp National Monument, S.C.
Five Ponds Wilderness
Adirondacks State Park, N.Y.
Isle Royale National Park, Mich.

The West

Great Basin National Park, Nev.
Redwood National Park, Calif.
Opal Creek, Willamette National Forest, Ore.
Gila National Forest, N.M.
Tongass National Forest, Alaska

For more information about each forest, visit http://gorp.com/gorp/activity/wildlife/topten_oldgrowth.htm



Which one is old growth? In some species (such as Southern yellow pine) old-growth wood is easy to identify because of its distinct, heavy bands of latewood and distinct bands of earlywood. But in many hardwoods (such as the red oak shown here), the rings look the same. The top board is old growth. The bottom board is second growth.

leaving the wood weaker. In faster-growing second-growth white oak, the bands of latewood typically are wider, creating a stronger piece of wood.

Working with Old Growth

Intrigued by Miller's comments, we decided to compare the old with the new by building two doors. We built one door using salvaged antique red oak, which we obtained by contacting Antique & Vintage Woods of America (518-398-9663 or floorings.com). We built the second door using second-growth red oak, which we bought from our local lumberyard.

As you can see in the above photo, when looking at the end grain, it's hard to tell which piece of wood is old growth and which is second growth. The old-growth red oak was slightly darker in color and contained a few more knots. But we noted no differences when working with the wood. In fact, we had to mark the wood "old" and "2nd" to keep them straight.

So why work with old growth? In some species, you are going to find tighter annular rings, stronger wood that's richer in color and wood that has a higher resistance to decay. But in other species, the

benefits and joy of working with old growth are more psychological than physical: The properties of the wood may be similar to those of the wood you buy at your local lumberyard; it's the story behind the wood that makes it extra-special.

Buying Old Wood

Although comparatively rare and considerably more expensive, there are several ecologically sound ways to get your hands on old-growth wood. Of course, logging old-growth lumber from a protected forest is not one of them. If caught cutting down ancient trees in a protected area, you could be slapped with some hefty fines.

You're also not going to see old-growth wood marketed at your local home-center store or your local lumberyard. No company is going to market its lumber as "old growth" because of the stigma attached to the term, according to Michael Klein, spokesman for the American Forest & Paper Association.

But it's not just marketing that keeps old-growth wood out of the lumberyards. According to Klein, there really isn't much old-growth wood to market. Most of the old-growth wood that is owned has

been entered into land-swap agreements with the government or environmental groups, he says. But this doesn't mean old-growth trees aren't harvested.

According to Klein, most forestland is privately owned. If approached by the government or a conservation organization, a landowner typically will agree to allow the government or other organization to manage a small portion of the land but will then harvest the rest. When dealing with things such as urban sprawl, agreements such as this ensure a win-win situation, Klein says.

Although it's highly doubtful anyone's going to run a highway through an old-growth forest anytime soon, highways are built, urban areas do sprawl and nature does take its course, meaning old-growth trees still are harvested.

So if old-growth trees are present in your region, chances are you'll find a few boards while digging through the stacks at your local lumberyard. But there's not going to be a sign advertising it as such. The spacing of the growth rings will be your only clue.

Your best bet to find old-growth wood is to buy reclaimed wood. Reclaimed lumber includes fallen trees on personal property, and logs discovered in lakes or rescued from barns or old buildings. The price of old-growth wood recovered from bodies of water and older buildings built more than a century ago is about two to three times the cost of regular hardwood. For information on where to purchase old-growth wood, check out "Buying Antique, Vintage and Reclaimed Wood" at right. For more information about the recovery process from the Great Lakes, check out Gregory Crofton's article titled "Buying Submerged Lumber" online at popwood.com by clicking on "Magazine Extras."

BUYING ANTIQUE, VINTAGE & RECLAIMED WOOD

Check out the following companies for antique or vintage wood rescued from old buildings, old barns or people's private property, or reclaimed from lakes. Note that some of these companies sell wood only in large quantities (250 board feet or more):

Antique & Vintage Woods of America
518-398-9663 or floorings.com

Barn Shadow Enterprises
877-380-8446 or
barnshadow.com

Black's Farmwood
415-499-8300 or
blacksfarmwood.com

Colonial Lumber
301-334-3189 or
coloniallumber.com

Heartwood Associates, Int'l.
573-747-1733 or
heartwoodassociates.com

Old Growth Woods
651-690-3188 or
oldgrowthwoods.com

Timeless Timber
888-653-5647 or
timelesstimber.com

Vintage Timberworks
909-695-1003 or
vintagetimber.com

If you do get your hands on some old-growth wood, take a moment and think about its history. Perhaps it served as a rafter in an old barn for more than a 100 years, sank while being transported via a waterway or was logged to make room for human settlement. Regardless, the wood was around long before you were born, and with a little work and a little luck, you can turn it into something that will exist long after you're gone. **PW**