



"Red Cedar: New Hampshire's Big Tree for January 2008"

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While measuring a humongous sycamore tree last fall to update the New Hampshire Big Tree records, we spied another enormous tree growing nearby in front of the charming 1785 cape home in Merrimack. In fact it soared so high above the 35 foot house that it looked like a doll house.

The coniferous tree was a symmetrical cone shape, but not that familiar. It had slender scale-type evergreen needles, but instead of little cones found on arborvitae, it had pretty blue berries like junipers. We measured it: 88 feet tall with a trunk that measured 81 inches around and a nice crown with a 50 foot average crown spread.

Not until we checked references did we determine for sure that this magnificent tree is a native Eastern red cedar (*Juniperus virginiana*), and easily the New Hampshire State Champion. It must be as old as the house!

This evergreen tree is confusing to identify because it grows in varied shapes; sometimes a tall narrow column, sometimes with multiple trunks, and sometimes broad at its base forming a cone-shape. To confuse matters more, two forms of needles or scale-like foliage can grow on the same tree. It is difficult to know what to call the foliage, but young twigs may have prickly pointed needles while later growth is thin thread-like twigs composed of three-sided overlapping scales.

Unlike all other trees, neither junipers nor cedars have buds that burst open in the spring with the season's new growth. These trees seem to grow imperceptibly with no obvious way to distinguish the two to six inches of annual growth. Growth does occur at the tips of the branches with a slightly lighter color than the mature scales covering the twigs. The seasonal growth occurs from May to the end of June and then hardens off to the scale form.

But most confusing is its name; it isn't really a cedar, but with its distinctive grey-blue berries that look like wild blueberries, it belongs to the *Juniperus* species. These fleshy blue berries are unexpectedly bright green inside and contain one or two small round seeds. The pretty berries persist through the winter, making the greens attractive for Christmas decorating.

The usefulness of Latin names in horticulture is apparent for the various 'cedar' trees. The word cedar is used to name three different species of trees in New Hampshire, and the US Dept. of Agriculture, Natural Resources Conservation Service, lists 44 'cedar' entries.

William Cronon, in his fascinating book, *Changes in the Land, Indians, Colonists and the Ecology of New England*, Hill & Wang, 2003, explains the "natural tendency for the colonists to apply European names to American species which only superficially resembled their counterparts across the ocean." It seems that hemlock was simply called fir, and hickory was called walnut. The lucrative exported market for cedar trees led enterprising settlers to confuse "native juniper with European cedars for the same economic reasons, so that the red cedar has carried a misleading name ever since." Of course the importers in Europe never saw the foliage or berries, just the logs and wood.

In addition to the red cedar (*Juniperus* species), the colonists discovered the native Atlantic white cedar (*Chamaecyparis thyoides*) that grows in swamps, and our native arborvitae (*Thuja occidentalis*) or Northern White cedar. Its scale-like foliage is flat, and instead of blue berries has small cones that produce seeds. And finally there is the common juniper shrub (*Juniperus communis*), that always has the prickly-type needles. The widely-exported

western red cedar (*Thuja plicata*) from the Pacific Northwest and Canada and used in house siding and shingles is an arborvitae. All these trees belong to the Cypress Family.

Jon Nute, Hillsborough Extension Educator, Forest Resources, simplifies the confusion: “Because New Hampshire is such a long state north to south, straddling different forest zones, we have three cedars that can be found in the state. Our spruce fir forest north of the White Mountains contains the Northern White Cedar (*Thuja occidentalis*). South of the White Mountains, the Eastern Redcedar (*Juniperus virginiana*) can be found, mostly associated with old fields. Also in southern New Hampshire, the more unusual Atlantic White Cedar (*Chamaecyparis thyoides*) is found in only about 22 wetlands in New Hampshire.”

Today, red cedar is often seen popping up in old pastures or in hedgerows where birds drop the seed. It’s a ‘pioneer’ species that sprouts and grows in sun and tolerates all kinds of soils except very soggy sites. It grows vigorously until overtaken by hardwoods that shade it out causing growth to slow and eventually die out. Young trees with multiple trunks are very vulnerable to ice storms that splay the stems apart ruining their neat shape. When used in landscaping, it’s best to prune to a single trunk. Some homeowners winterize their junipers and red cedars shrubs by tying them together with rope (a spiral of rope wound around the tree from the top works). In colonial times, red cedar was valued for split rail fences and outdoor uses because it doesn’t rot. It was popular for exported shingles and clapboards as it is lightweight as well as resistant to rot. Lightweight roofs made it possible for American houses to be built with thinner walls than houses of the Old World.

Red cedar has stringy bark. Its heartwood has a distinctive reddish color and the wood is typically striped with darker and lighter bands. It became so popular for pencils that rails from fences were removed and recycled into pencils. Although it burns nicely, it is so slow growing that it’s not an important fuel source. However, where the tree has invaded the dry mid-west it can be a fire hazard because with its very flammable bark.

Oil of Juniper, distilled from the wood and leaves of several species, is used in perfumes and in medicines such as diuretics. The distinctive fragrance is thought to deter moths, and cedar chests and closets became an important use of the wood. It has a fresh, balsamic, woody pine needle odor and is used with citrus room sprays and in masculine outdoorsy perfumes, aftershaves, and spicy colognes.

The berries are edible (in small amounts) and Irma Rombauer in the *Joy of Cooking* says: “Three to six per serving are prized for seasoning game, bean dishes, and certain alcoholic drinks like gin. In fact, one-half teaspoon of these berries soaked for a longtime in a marinade, or cooked long in a stew, gives a seasoning equivalent of a quarter cup of gin.”

Cedar apple rust causes unsightly, orange, oozing, golf ball-sized galls to grow on the cedar tree in the spring, releasing spores that cause rust spots to grow on the leaves and fruit of apple trees. Commercial apple growers remove cedars adjacent to their orchards. The galls can easily be trimmed off the cedar tree, or can be sprayed with a fungicide to prevent transmission to nearby apple trees. However, this disease threat to the once booming apple industry in New Hampshire, along with the usefulness of cedar for rail fences and shingles, probably accounts for the relative scarcity of large cedar trees in New Hampshire today.

Should you encounter one that looks to be taller than 88 feet with a trunk over two feet in diameter, contact the NH Big Tree State Coordinator, Carolyn Page, carolyn_page@hotmail.com, 603-664-2934. To view the list of New Hampshire county champion trees, visit the NH Big Tree Web site at: www.nhbigtrees.org UNH Cooperative Extension and the NH Division of Forests and Lands sponsor the NH Big Tree program in cooperation with the National Register of Big Trees through American Forests.

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