

**Big Tree of the Month - Butternut (*Juglans cinerea*)**  
**By Anne Krantz, NH Big Tree Team**

The name butternut sounds good - like candy (Butter Nut candy bars of the 1950s made by Hollywood Candy Co.), or pretty - a soft yellow-orange color for clothes. So it is sad to learn that butternut trees are fast fading from their native habitat, North American forests, due to a deadly fungal canker disease. Although it's nearly impossible to find a healthy butternut tree today in New Hampshire, a lovely one was discovered recently in a residential neighborhood in Manchester.

Like black walnut trees, butternut trees are shade intolerant and grow in full sun, growing rapidly as young trees. They become nice shade trees with a straight trunk and a full symmetrical high crown. The large compound leaves cast dappled shade and turn yellow in the fall.

Like most nut trees, they are deep rooted and not easily transplanted. But early farmers planted the nuts near farmhouses to make it easier to gather the nuts in the fall. The oily butternuts were used in baking and candy making, especially maple-butternut candy in New England. Husks were used to make a soft orange-yellow dye for work clothes, and the wood was used in fine cabinetry and later for veneer.

Butternut trees are smaller than black walnuts and generally shorter lived – 75 years. But they are hardier in cold climates and are found further north in New Hampshire. The long oval-shaped nuts are an easy way to identify the tree – quite different from the round black walnuts. Both nuts have a very hard shell.

Last fall I collected a handful of butternut nuts from under a local tree. I stored them on the screened porch all winter. Now that I understand how rare they are, it just

occurred to me that I should taste one, although they aren't at all appetizing looking in their dried-up brown husks. I rubbed off the husk and tried cracking the shell with a nut-cracker with no success. Hammers make such a mess and mush of the nuts, so I tried cracking it in the vise, which worked nicely.

The nut was larger than expected and not at all shriveled. No odor, so I bravely tried it and found it tasty, more like an English walnut than the sharp distinctive taste of the black walnut. Obvious this is why butternuts once were so popular and commonly sold in markets in the fall. Definitely a loss.

Before butternut canker disease virtually ended the harvesting of butternut trees, the moderately hard wood that saws and carves easily and has a natural golden luster, was popular for furniture, cabinetry, instrument cases, interior woodwork, including hand-carved wall panels and trim.

Butternut trees began to decline rapidly in the 1960s due to the mysterious fungal canker disease of unknown origin. Branches would die giving the crown an untidy appearance. Spread of the sticky fungal spores is accomplished in a variety of ways, such as insect movement, birds, mammals, and rain splash.

Kyle Lombard, NH Division of Forests and Lands, Forest Health Section, reports most butternut trees grow well when young or on rich, well-drained soils. However, as time passes the tree growth slows allowing the disease to get a foothold. By the time a butternut is greater than 10 inches in diameter, it's already in a state of decline.

The Division is interested in saving butternut trees by locating any resistant, existing trees to graft onto black walnut root stock to create a seed orchard of resistant butternut trees. The idea is that these resistant trees can



be cross pollinated to produce resistant seed that can then be out-planted in the native forest environment butternut once dominated. The process is called "intraspecific tree breeding." Nuts from resistant trees in the wild can't be used because the origin of the pollen may be from a non-resistant tree.

The nuts are beginning to fall so now is a good time to find butternut trees; the challenge is to find the nuts under the trees before the squirrels do. Many butternut trees are on the NH Big Tree list, but the data for them is out of date, and the suspicion is that they are all dying or dead.

For this reason, the NH Big Tree Committee is working with Lombard to collectively locate healthy butternut trees. If you know of any butternut tree over 10 inches in diameter, growing naturally, not planted, has no sign of disease, and has dead and dying butternut nearby, call Lombard at 603-464-3016. He will do a site visit to inspect the tree for disease and determine its suitability for this project.

The project started in 1996. Since then, we have surveyed more than 3,000 possibly resistant trees at over 300 different sites statewide. To date, we've found only eight butternuts that meet our strict standards and show signs of significant resistance to the disease. From those 'super trees' we have established a one acre seed orchard at the state forest nursery in Boscaawen and a smaller orchard at the Fox Research Forest in Hillsboro. We graft approximately 50 scions a year with a success rate of about 50 percent. That's an excellent success rate for hardwoods such as walnut and butternut. The oldest grafted trees (grafted in 1997) are four feet tall now, and we expect to hand pollinate and produce seed in five to ten years.

To view the New Hampshire record for big butternut trees, go to [NHbigTree.org](http://NHbigTree.org) and click "State and County Listing of Big Trees." You will find information about the program with a link to the list of state and county champions. If know of a healthy BIG butternut (either planted or growing naturally in a forest), follow the instructions for submitting a Big Tree nomination for measuring by a county team. The Big Tree committee always welcomes the discovery of any kind of native tree that seems larger than those on the list.