Hughie Jones – Jan 2012

Juglans cinerea
Butternut

When I am giving a tour and passing by a tree that is endangered in its native habitat, I like to mention one of the functions of a botanical garden - having plants that are already extinct, rare or vulnerable in the wild.

We are standing under the one butternut tree in VanDusen. 90% of these trees native to northeastern North America have died. And the culprit is an exotic fungus, butternut canker. It first showed up in the late 1960s.

Not far away are two American chestnut trees (*Castanea dentata*), once the dominant hardwood species in eastern North America. The culprit is again an exotic fungus – one that came in on the Chinese chestnut (*Castanea mollissima*) in the early 1900s. This fungus co-exists on the Chinese chestnut but decimated the American one in fifty years. The American chestnut now exists as sprouts from old stumps and root systems.

It's not always a fungus from another continent that affects our native trees. In the case of the Bishop pine (*Pinus muricata*) and Monterey pine (*Pinus radiata*), the fungus (pitch canker) slowly moved up from Mexico infecting them. Now the Monterey pine has only one stand on the mainland that is not infected and the Bishop pine just a few areas left with wild stands.

Native diseases and insects, droughts, windstorms and wildfire periodically affect forests or specific tree species - leaving dead or weakened trees. This can be a local area or a large one. But they don't cause species extinction. On the other hand, exotic diseases and pests can threaten the continued existence of a species.

There is no known treatment for the butternut canker, so conservation efforts are focused on finding and protecting resistant trees. The question is whether the few trees that appear resistant are genetically pure. Butternuts can hybridize with other trees like the Japanese walnut, introduced to North America in the 1800s. Also, the butternut is increasingly rare in the landscape, so many people are unfamiliar with it.

It wasn't always that way. Though many people have never heard of the butternut, it has had a long history of usefulness. Native Americans tapped it for syrup, used the bark for medicine and dye, and ate the tasty nuts raw or boiled them to produce a buttery vegetable oil.

The Vikings gathered butternuts and took them back to their Newfoundland settlement. Confederate soldiers used the husks to dye their uniforms a golden

brown, earning them the nick name ‘butternuts’. The rot-resistant wood, often called white walnut, was favoured by woodworkers and the nuts important to wildlife.

William Bartram first described the butternut in *Travels* (1773-74). In addition to his contributions via drawings, specimens and general botanical knowledge, Bartram collected information on the use of medicinal botanicals by Native Americans.

Colonial America had an extreme shortage of competent physicians and European medicines. Native Americans possessed a great deal of knowledge about botanicals, particularly medicinal botanicals. Many people sought medical care from Native Americans or relied upon indigenous medicinal botanicals.

Bartram believed it was important to learn and document as much as possible from Native Americans before their medicinal botanical knowledge was lost. We feel that way about our endangered trees but hope they will never be lost.

mature butternut

Historical records indicate that butternut trees were once much more common than they are today, and that they may be able to occupy more habitats than those on which they are currently found.

Sources:
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