Taking beech bark disease seriously

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By Chris Drost

Humans are not the only ones facing disease that has come from other places. During the 1890s European beech seedlings shipped to Halifax contained a bug that carried infectious fungus that inoculates the beech tree and eventually kills it. It is typically mature trees over eight inches in diameter that are impacted.

Beech bark disease (Nectina coccinea var, faginata) causes severe cankers, deformation of the tree steam and eventually tree mortality either as a direct result of the disease or in combination with other stress factors the tree may be experiencing. Other signs include dark green bands between the veins of the leaves, uniformly darker leaves that are shrunken, crinkly and leathery in appearance and thinning of the crown. Feeding punctures made by the scale insects produce cracks through which causal fungus enters the tree. Fungal spores spread by rain splash and wind allow it to enter through the wounds. Evidence of small orange-red fruiting bodies appear by late summer or fall. Tree branches covered with waxy woolly secretions of beech scale insects are also a telltale sign the tree is infected. The affected limbs stop producing buds and over time the tree dies.

According to Fred Werner, local registered forest professional and director with the Bancroft Chapter of the Ontario Woodlot Association, initially in Ontario, beech bark disease was first evident in remote areas where, through human action, dead beech wood was transported from park to park for recreational purposes. ?The parks were hit first. There is a grove at Silent Lake and a large tract near Victoria Lake. Algonquin Park was hit earlier because of all the forest and recreational activity in the area,? Werner says. There is generally a lag time between scale infestation and appearance of fungus infestation of two to 10 years.

The importance of not moving wood from one area to another cannot be stressed enough, according to Werner.

Virginia deCarle, Nature Connects and Forestry Education coordinator/facilitator, forestry technician/certified tree marker and president of Bancroft Area Forest Industry Association, says beech bark disease is spreading quickly. ?I have seen large tracts in this area infested with it,? she says. According to deCarle, one of the other big concerns is that in a period of drought, other trees in the forest that rely on beech trees for shade, may also be at greater risk. ?It can spread when you disturb soil and even by animals,? she added.

There has been considerable research into beech trees that are resistant to the disease. Studies in the U.S. and Canada show that between one and six per cent of the beech have a resistance. It could be genetic or it could be related to minerals in the soil. Regardless, it may be the way to help fend off the disease.

Werner explains that when an infected large tree starts sprouting from its roots, shoots that are often 15 to 20 feet in height start to grow. They are already infected with the disease and there can be so many beech sprouts that it is almost like a jungle. Those sprouts need to be nipped off near the ground below the lowest bud on the stem.

On the other hand, some of the beech trees within a forested area may not have the disease. They are the resistant ones that offer a future for the continued presence of the beech tree in our forests. ?Within two metres of a resistant tree, save those roots. Those roots from resistant beech trees can be grafted and may be the future forest,? says Werner.

When a larger infected tree is taken down it should be used locally for firewood, not moved anywhere else. When the beech becomes infected the wood can eventually turn to powder creating a danger to the person cutting it down. ?This is called beech snap and is a big danger,? says Werner. Once a diseased tree has been felled it can be used for firewood locally or it can be left on the forest floor. Werner suggests cutting the beech as soon as a problem is identified as it may still be usable as a saw log.

While Werner says trees infected with the disease may last anywhere from five to ten years before going down. ?There is a degree of hope that with up to six per cent being resistant trees,? suggests Werner. In Wisconsin and Minnesota research stations are actively grafting resistant trees and putting them in their nursery.

Beech serve as habitat for a variety of animal species in our forests, especially black bear and woodland birds. A huge loss of beech trees would also mean an increase in carbon in the air we breathe.

With the threat of beech bark disease, some landowners are planting different species now to help protect local animal and bird species with the threat of the disease becoming more widespread. Locally, the Bancroft Area Stewardship Council has introduced what it calls its ?Heathy Planet Bundle? as part of its annual tree and shrub seedling program, available through its online store. See www.bancroftstewardship.ca This bundle includes white cedar, red oak and chokecherry, all species that will provide a food source

for local bears, squirrels and birds.