

Beech Bark Disease

Beech bark disease is a complex disease resulting from the interaction of sap-sucking insects, known as beech scale or *Crytococcus fagisuga*, and 2 species of fungi, *Nectria coccinea* var. *faginata* and *Nectria galligena*. Beech scales themselves do not threaten the health of beech trees, but the insects feed on the sap in the inner bark of the tree leaving exposed areas, making the tree susceptible to fungal colonization which causes their decline. In 1890 the beech scale was accidentally brought to Nova Scotia from Europe in an ornamental beech tree. By 1932 beech scale disease was killing mature beech trees in areas of the Maritime Provinces and in localized areas of Maine. Beech scale disease has continued to spread westward and southward and can now be found from Quebec as far south as the Great Smokey Mountain National Park and as far west as Michigan.

In midsummer, beech scale insects deposit pale yellow eggs on the bark of beech trees. The scale insects produce a white, waxy film which forms a thin but noticeable waxy crust on tree trunks. In late summer to early winter the eggs hatch. Once hatched, the insects look for vulnerable spots on the tree and begin to feed, then transform into a second stage nymph without legs and covered with a woollike wax. In the spring the nymphs molt to become adult females. There are no male scales.

There are three phases of the disease: the advancing front - trees infested with beech scale but not fungus; the killing front - high populations of beech scale, severe nectria attacks, and heavy tree mortality; and the aftermath forest - trees that withstood the initial attack. Mortality rates occur within 3-6 years after scales infest the area. Approximately 95 percent of the beech trees in the area will succumb to beech bark disease. On the Sherburne Property we are presently in the latter part of phase one.

Beech scales can be controlled by manually scrubbing infested trees with a soft brush or by power washing the trees with a moderate-high pressure hose. Once the fungi infect the trees, there is no treatment. If you are interested in helping inhibit the spread of beech bark disease or if you know of other areas in town that may be infested, please do not hesitate to contact me at 978-649-2300 ext. 116 Monday-Friday during normal business hours. ~Lori Capone, Conservation Agent~