



November 2023

Environmental Message

Beech Leaf Disease

American Beech is widely regarded as one of the great trees of North American forests east of the Mississippi river. Mammals and birds alike find beech tree nuts a staple of their fall diet as they prepare for the upcoming winter months. Ruffed grouse, turkeys, wood ducks, blue jays, white-breasted nuthatches, and various woodpeckers, as well as black bear, foxes, squirrels, chipmunks, mice, and deer all partake of the fall bounty beech trees provide. Additionally, they make up a large percentage of our urban forest population. American Beech (*Fagus grandifolia*) and its cousin the commonly planted European Beech (*Fagus sylvatica*) make up about 12 percent of the urban forest within its range. The beeches rival maples and oaks as the most commonly planted trees within our communities.

Recently, a new disease called “Beech Leaf Disease” is severely impacting beech trees, in our forests and urban forests alike. The disease was first identified in Ohio in 2012 and is rapidly spreading eastward. In addition to Ohio, Michigan, Pennsylvania, New York, Massachusetts, Connecticut, New Hampshire, Maine and the Province of Ontario have identified cases of Beech Leaf Disease. Researchers have identified a microscopic nematode as the source of the disease, which is causing the beech trees to die, either outright or weaken the tree and allow other pathogens to cause decline and death.

The symptoms include dark banding of the leaves as the nematodes feed in between the upper and lower layers of the leaves causing the dark bands to turn brown. What is particularly troublesome with the nematodes is that they will migrate from the leaves into the buds of the tree as fall turns into winter, ready to reinfect next spring’s leaves. Due to their extremely small size, it has been a challenge for researchers to positively identify how and when the disease spreads from tree to tree. Some early thoughts are from the nematode catching a ride on wind, birds or mammals.

Even though pruning and removing trees can cause tree diseases to spread, it is not thought at this time that Arboricultural activities are causing the spread of this ailment on Beech trees. There are no quarantines associated with Beech Leaf Disease. As Utility Vegetation Managers, we need to be aware of insects and diseases that impact the trees on which we perform our vital work.

Source: National Park Service <https://www.nps.gov/articles/000/bee-leaf-disease-at-cape-cod-national-seashore>.

Photo credit: Mihail Kantor

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