

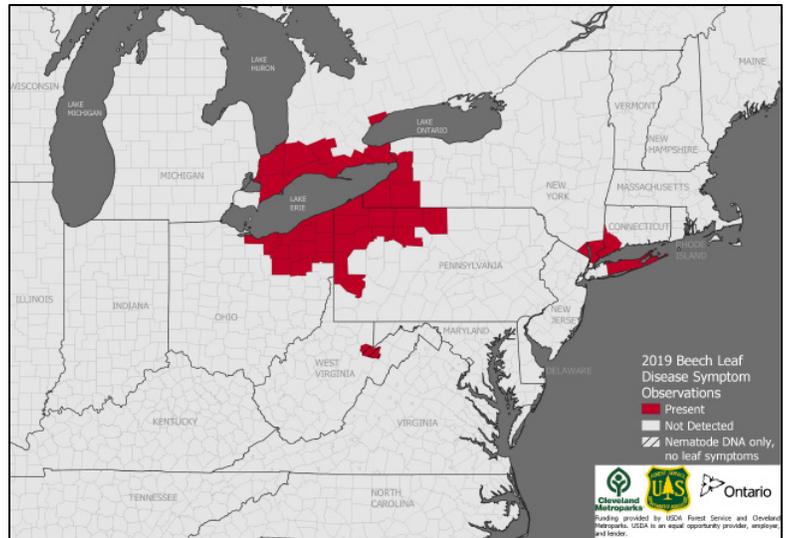
Forest Health Pest Alert

Beech Leaf Disease

November 2019

Hosts and Distribution

An affliction generically referred to as beech leaf disease (BLD) has been contributing to the decline and mortality of American beech across Ohio, Pennsylvania, New York, Connecticut, and Ontario. BLD was initially discovered in Lake County, Ohio in 2012 and now affects at least 40 counties (see map). To date, BLD symptoms have been found on American beech (*Fagus grandifolia*), European beech (*F. sylvatica*), and Oriental beech (*F. orientalis*). While the causal agent has yet to be officially identified, diagnostic efforts have revealed an association with a foliar nematode (*Litylenchus crenatae*).



List of counties with beech leaf disease (BLD) symptoms in 2019: OH – Ashtabula, Cuyahoga, **Erie**, Geauga, Lake, **Lorain**, Mahoning, Medina, Portage, Stark, Summit, Trumbull, Wayne; PA – **Allegheny**, **Beaver**, Crawford, Elk, Erie, **Forest**, Lawrence, **McKean**, Mercer, Potter, **Venango**, Warren; NY – **Erie**, **Cattaraugus**, Chautauqua, **Suffolk**, **Rockland**, **Westchester**; CT – **Fairfield**; WV- **Tucker** (no leaf symptoms, nematode DNA only); ON, Canada – Chatham-Kent, Elgin, Haldimand-Norfolk, **Lambton**, Middlesex, **Niagra**, Oxford, **Toronto**. Counties in bold were detected in 2019

Symptoms

Very early symptoms include dark bands between lateral veins of leaves. Banding is most apparent when viewing from below, looking upwards into the canopy and is evident immediately upon leaf-out in

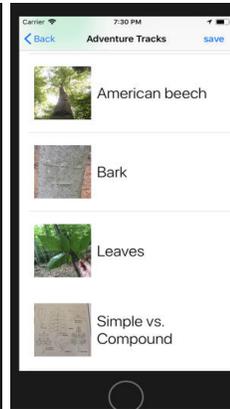
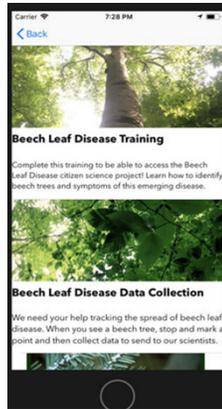


Top left: Early BLD symptoms showing interveinal banding. (photo credit: Tom Macy). Bottom left: Advanced symptoms showing darkened and thickened leaves. (photo credit: Constance Hausman). Right: All range of symptoms present on the same branch (photo credit: C. Hausman)

the spring. Later stages result in heavily banded-darkened leaves that are thickened and leathery in texture, often with shriveled or curled edges. Aborted bud development and reduced leaf production results in a loss of canopy cover. Mortality has been noted in saplings within 2-5 years.

What can you do?

Report symptom observations using Tree Health Survey, an iOS app that trains users to identify beech trees and beech leaf disease symptoms (an Android version will be available by Spring 2020). Tree Health Survey can be used to record location, symptom severity, and submit photos. It is necessary to record both healthy and symptomatic trees to help delineate range and extent. In addition, contact your state forest health administrator if BLD symptoms are observed.



Left to right: Reduced canopy as a result of beech leaf disease. (photo credit: John Pogacnik)
Tree Health Survey main screen where training and data collection can be done. Training uses pictures to help identify beech and BLD symptoms.

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