

Keep Your Eye Out for Oak Wilt

by Lyn Chimera

Oak wilt is a very serious fungal disease caused by the *Ceratocystis fagacearum* fungus. It develops in the xylem, the water carrying cells of trees. Oak wilt fungus blocks the flow of water and nutrients from the roots to the crown, causing the leaves to wilt and fall off, usually killing the tree. It was first identified in Wisconsin in 1944. By 1998 it was in 22 states and confirmed in NYS near Schenectady in 2008. It has now been diagnosed in other NYS locations, some on Long Island and the others in Riverhead, and Southold in Suffolk County; Brooklyn in Kings County; and Canandaigua in Ontario County. A sample was recently submitted from Erie Co. but has not yet been confirmed as oak wilt (at the time of this writing).

Unfortunately, no oak species has been found to be immune to this disease. Infection has been found in 16 native oak species. Red oak is most commonly affected but other affected oaks are: white oak, burr oak, northern red oak and pin oak.

Symptoms in red oak start showing in spring as early as May. Starting at the crown "The leaves turn dull green or bronze, appear water-soaked, wilt, and then turn yellow or brown." Visible leaf damage starts at the tip and outer edges and progresses to the midrib and base. "Wilting leaves typically curl around the midrib and the line between the bronze and green tissues in individual leaves is very distinct." Leaf drop occurs during all stages of discoloration. Fungus mats caused by mycelium growth grow below the bark and can split the barks. Oak wilt progresses quickly and a tree can die within a few months or take up to a year.



Symptoms in white oak can vary although the foliar symptoms are very similar. One difference is that the disease doesn't show up until June or July. In white oak it also progress more slowly affecting one or more branches at a time. It can take years for white oak to succumb to oak wilt.

Oak wilt is spread in a few ways. Sap feeding beetles in the family Nitidulidae feed on the fungus mats and transmit the spores as they move to another oak tree. Oak bark beetles, *Pseudopityophihorus* also spread the fungus. The other way the fungus can be transmitted is through overlapping roots below the soil.

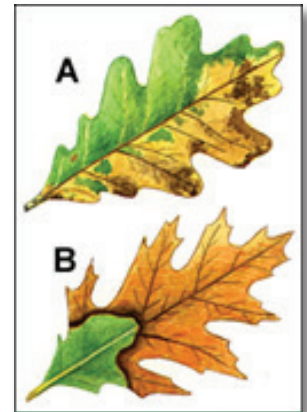
At this time there is no way to save an infected oak tree. Removal is the only option. However, there are some precautions that can be taken. Avoiding any tree wounds, including pruning, during the spring and summer is key. Open wounds are an invitation to infected beetles. If a wound does occur it is recommend that it be painted. When a tree is removed, trenching around the roots to prevent any spread through root grafts is recommended.

Since there is no cure, early identification and removal of infected trees is the best way to prevent the spread. The NYSDEC has recently announced a Summer 2017 Oak Wilt Management Actions in NYS program. This is being done in conjunction with the Cornell Diagnostic Lab. All sightings of oaks dropping leaves in spring and summer are asked to be reported.

Information for this article was taken from:
<http://www.dec.ny.gov/lands/46919.html>
<http://www.dec.ny.gov/press/107214.html>

Through a grant project, the Cornell Plant Disease Diagnostic Clinic has been developing resources for oak wilt detection and reporting. Don't take a sample for submission before reading information on this webpage, as wounding an oak tree can help spread the disease.

Credit for the photo of oak wilt:
 William M. Ciesla, Forest Health
 Management International,
Bugwood.org

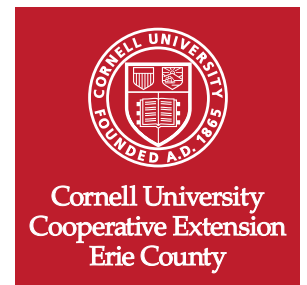


Symptoms of oak wilt in
 A. white oak and
 B. red oak

<http://plantclinic.cornell.edu/oakwilt/CU-PDDC-Form-OW-001%20%20002%20Sample%20Submission%20Form%20for%20Oak%20Wilt%20Project-Template%20v1.2%2006-15-17.pdf>

Sharon Bachman can also assist you in following these guidelines for submission.

For other information about diseases that affect maple or oaks go to: <http://blogs.cornell.edu/treeipm/>



21 South Grove Street
 East Aurora, NY 14052