



STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
MAINE FOREST SERVICE
Insect And Disease Laboratory
168 State House Station-50 Hospital Street
AUGUSTA, MAINE 04333-0168

PAUL R. LEPAGE
GOVERNOR

WALT WHITCOMB
COMMISSIONER

*Forest & Shade Tree – Insect & Disease Conditions for Maine
June 26, 2013*

Insects

Asian Longhorned Beetle (*Anoplophora glabripennis*) – The Asian longhorned beetle (ALB) has not been detected in Maine, but many of its look-alikes have been spotted (and many *have* spots!). We get a high volume of calls and e-mails this time of year with false ALB sightings, and we really appreciate people are out there looking and care enough to contact us with concerns. The US Forest Service along with University of Vermont have a recent publication on ALB and its host trees (<http://na.fs.fed.us/pubs/detail.cfm?id=5268>), which includes a page with photos of some of the insects most commonly mistaken for ALB (<https://twitter.com/foresthealth/status/345626398293102594/photo/1>). We encourage you to use this and other resources to weed out the insects that are obviously not ALB, **but if you have any doubt, please contact us!** More information on this pest can be found at www.maine.gov/alb.

Bare-patched Oak Leafroller (*Pseudexentera spoliata (cressoniana)*) – This is a tiny moth that flies early in the spring and lays its eggs on the buds of red oaks. The larvae hatch, initially feed on the buds, then roll the leaves from the tip down and feed inside the leafroll. They finish up feeding in June and drop to the ground to pupate and stay there until the following spring. It has only rarely been reported as a problem but it caused over 7,000 acres of defoliation in Maine last year. It is feeding again near Cherryfield in Washington County and Augusta in Kennebec County this year. The damage is not anywhere near as severe as in 2012.

Brown Spruce Longhorned Beetle (*Tetropium Fuscum*) – According to the CBC, New Brunswick has been declared free from brown spruce longhorned beetle (BSLB). Two years ago, a single adult BSLB was caught in a trap in Kouchibouguac National Park. Intensive survey and monitoring since then around the positive site have yielded no additional finds. <http://www.cbc.ca/news/canada/nova-scotia/story/2013/05/16/nb-longhorn-beetle-kouchibouguac-cfia.html>.

Trapping for BSLB in Maine for 2013 started in the middle of May. Sites monitored for this invasive insect include recreational and tourist destinations as well as industrial areas and receiving yards for raw spruce products from Nova Scotia. You can learn more about BSLB at: www.maine.gov/forestpests#bslb.

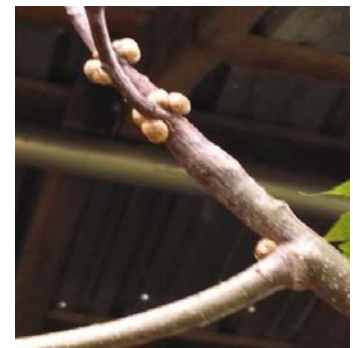
Elongate Hemlock Scale (*Fiorinia externa*) – This invasive insect pest has been found on planted trees from Kittery to Mount Desert Island and in forest trees in Kittery. The most recent detection was on planted hemlock in the northern end of Mount Desert (Hancock County). The hemlocks have been in the ground for more than 15 years, and the scale insect was also found on native fir. The trees were being treated for hemlock woolly adelgid when the scale was found. Elongate hemlock scale is most visible when white flocculence from male scales is on the host

needles, from late spring to early fall. Look for this scale on planted fir and hemlock and in the forest where hemlock woolly adelgid has been found. Please contact us if you suspect you have found this insect. More information about this pest can be found at www.maineforestservice.gov/EH_Scale.htm.

Hemlock Woolly Adelgid (*Adelges tsugae*) – The hemlock woolly adelgid (HWA) quarantine was last revised in August 2007. The process to revise the rules for the HWA quarantine has begun. A public comment period and public hearing are anticipated this summer. Details will be shared on the electronic mailing lists of the Maine Forest Service and will be published per state rules.

We had a recent report of declining adelgid-infested hemlock on Great Diamond Island (Portland, Cumberland County). The insect was originally detected on the island in 2010, but was well established by that time. Hemlocks growing on shallow soil in “warm” coastal areas are particularly prone to adelgid-related decline. HWA infested forest hemlocks have been found along the coast from Kittery (York County) to Bristol (Lincoln County).

Kermes Oak Scale and Lecanium Scale on Oak (*Allokermes* spp. and various genera) – Insect pests of oak are receiving a lot of attention this year, perhaps due to the poor crown conditions caused by other issues (see *Diseases* below). It also may be a good year for scale insects. A forester sent in images of Kermes oak scale causing twig dieback of red oak in New Gloucester (Cumberland County). A sample of oak from Owls Head (Knox County) that was heavily infested with Lecanium scale was submitted by the Soil and Water Conservation District. Hand picking of scales may be possible on small ornamental trees. Natural enemies can contribute significantly to mortality of scale pests and use of horticultural oil or soap helps to conserve natural enemies. A fact sheet from Ohio with details on Lecanium scale management is available at: <http://bugs.osu.edu/~bugdoc/Shetlar/factsheet/ornamental/Lecaniumscales.PDF>. Kermes scale on ornamentals can be managed using horticultural oil or soap applications in the spring (two applications spaced two weeks apart, with the first at bud break).



Kermes oak scale on red oak, New Gloucester. Photo: Paul Larrivee.

Uglynest Caterpillar (*Archips cerasivorana*) – Uglynest caterpillars are around every year webbing up small cherry saplings along roadsides and hedgerows. But occasionally they go wild. This year there have been multiple reports of ‘Uglynest Gone Wild’; from Orono to South Berwick. The pale yellow larvae with paired black spots feed on cherry and other hardwood trees and shrubs. There is one generation a year but they can be around from May until September. Once they eat all the leaves off a tree they make webs across lawns, fields and objects in their way as they move to other trees. This may be a one-year phenomenon.



Uglynest Caterpillar, Brunswick, June 2013. Photo: Maine Forest Service.



Winter Moth Defoliation. Harpswell, June 2013.
Photo: Maine Forest Service.

Winter Moth (*Operophtera brumata*) – Winter moth caterpillars have finished up feeding for the year. The oak and other hardwoods defoliation is dramatic in parts of Harpswell, Cape Elizabeth, Vinalhaven and Peaks Island. There is light damage in other coastal towns. The larvae have spun down to the ground to form cocoons in the soil where they will stay until December. **Do not move plants including tree saplings - or soil from winter moth infested areas** as you will be moving the winter moth cocoons in the soil. They are small and look like small clumps of soil.

The Maine Forest Service has received word that the USDA-Forest Service plans to underwrite parasitic fly biocontrol efforts in 2014.

Diseases and Injuries

Balsam Fir Branch Flagging – Numerous calls have been received this month regarding branch “flagging” in balsam fir. Trees of any age may show the symptoms of needles that are discolored to a tan or reddish appearance. Samples have been observed from Acton, Arrowsic, East Sebago, Livermore, Richmond, Whitefield, and Windham. No specific pathogen or insect has been identified; a few but not all of the twigs were injured (fed on) by pine sawyer beetle adults. This does not account for all the damage or the severity of damage on some individual trees. Several hypotheses for the cause of damage include fine root-tip injury due to the excessively warm late winter of last year to root and butt rot activity. It may be that the visible dieback is a non-specific symptom of tree stress that develops from any of a number of causes. So far a satisfying diagnosis has not been found, but the condition will continue to be examined and monitored.



Branch dieback of balsam fir, Acton. Photos: Maine Forest Service.

Long-Term Effects of the Ice Storm of 1998 – An alert landowner from Livermore has reported that many if not most trees harvested in one particular woodlot showed signs of internal cracking of live, green stems. Nearly all trees harvested were around thirty years old, and included mostly red maples, poplars, and birches. Some considerable internal staining was also evident in many stems.

While the following explanation may be difficult to prove, a very likely cause of this defect development was the Ice Storm of 1998. The area was well within the high-impact zone for the storm. At that time, the trees would have been saplings around 12 to 15 years old. During the ice storm, many of these young trees would have been bent or “doubled over” for some time following the event. Flexing such as this can result in the development of severe stresses and “shake” in the wood. Shake is a separation of the wood cells, either along the radial axis (ray shakes), or of the annual rings along the longitudinal axis (ring shakes). Some top and branch breakage may also have occurred, and could easily account for the dark staining in the centers. Such defects are not especially common in forests growing under normal circumstances, but extreme events such as the ice storm can significantly alter the growth and development of the stems throughout the life of the affected trees



Ray shakes common to many freshly-cut trees in a young woodlot. The separation was not due to drying after cutting. Photo: Maine Forest Service.

Oak Foliage Damage – There have been at least two problems (other than insects) affecting oaks throughout central and southern Maine this year. Sometimes both are to blame, but not always. The new, developing foliage of many oaks was moderately to heavily infected with oak anthracnose (*Apiognomonia quercuum*), a common, native disease. The outbreak was likely initiated during the extended rainy period of the weeks from about May 15 thru May 27.

A second problem has been frost damage. The frosts occurred on May 13th and 14th, with another episode about a week later, in many places. In general, the frosts were “light,” (not a deep or extended freeze) and resulted in some marginal leaf damage, but did not freeze the entire leaf. Both problems have occurred right at the time of budbreak and leaf expansion for oaks – a critical time for leaf development, hence the “cupping” of leaves on many trees, and/or the premature defoliation on some.



Oak leaf cupping and spotting displaying an early infection stage of oak anthracnose. Photo: Maine Forest Service.

With rare exception, the injury is not thought to be enough to cause any long-term or serious damage or mortality. The oak crowns will look “thin” this year, but will set bud and should appear normal (notwithstanding other subsequent problems) next spring. Some individuals that have received heavy frost damage (not many) may develop a second set of buds and new leaves later this spring/summer. While this is more serious to tree health (it uses twice the energy reserves in one season), some branch dieback may develop over time. But even for trees that “re-foliate,” mortality is unlikely.

White Pine Needle Damage – White pine needle damage, caused by one or more of several fungal pathogens, is again widespread and evident throughout the range of white pine in Maine and other northern New England states:

http://na.fs.fed.us/pubs/palerts/white_pine/eastern_white_pine.pdf. In Maine, the central- and southwestern mountain regions again appear to have the highest incidence and severity of the disease. Severity of damage can vary considerably from individual to individual, with occasional trees with dense, full crowns intermixed with trees showing yellowed and browned crowns.

Of concern now is the number of years the damage has occurred. First reports of widespread occurrence of this damage began in 2007, with increasing severity noted yearly until 2010. During 2011 and 2012, the problem was judged to be somewhat less severe. This year then marks the seventh consecutive year of partial defoliation of many white pines. Many affected trees have recently shed lower branches, a symptom of increased stress levels. In some situations, mortality has occurred where affected trees were growing on adverse sites, or were otherwise previously compromised by other damaging agents. If high levels of infection and needle loss continue in future years, the potential exists for greater losses to mortality.



White pine needlecast, Bethel, June 2013. Photo: Maine Forest Service.

Conditions Report No. 2, 2013

On-line: <http://www.maine.gov/doc/mfs/ConditionsReportsIndex.htm>

Maine Forest Service

Forest Health and Monitoring

Contributors: Charlene Donahue, Allison Kanoti, William Ostrofsky, Colleen Teerling