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## ***Forest & Shade Tree - Insect & Disease Conditions for Maine July 16, 2010***

**Firewood Ban** - With the Fourth of July behind us and Labor Day not far away, this seems like a good time to remind our readers about the firewood bill enacted by the Legislature in April. This bill mandated that the Maine Forest Service develop rules to prohibit entry into the state of untreated firewood. Those rules are under development and will be available for public comment. In the meantime, an Emergency Order has been drafted, and we hope it will be in place before the end of the summer. Once the order is in effect, there will be legally binding restrictions on moving untreated firewood into the state. State parks, Acadia National Park and many private campgrounds are already strongly discouraging the use of out-of-state firewood and helping raise awareness of the ban.

Please be reminded (and remind your friends and neighbors), that it is never a good idea to transport firewood long distances. Detection methods for devastating forest pests that can move in firewood are often poor, and it can be years after establishment before infestations are detected. The Asian longhorned beetle was in Worcester, MA for at least a decade and a half before it was reported.

**Biosurveillance for Emerald Ash Borer** -This will be our second summer with a wide-scale program to monitor for emerald ash borer (EAB) using *Cerceris fumipennis*. *Cerceris* is a non-stinging wasp that hunts metallic wood-boring beetles related to EAB, and is also very efficient at hunting EAB when present. Rather than us looking directly for EAB, which can be hard to detect, we find colonies of the wasp and see whether EAB is among its prey. We have volunteers throughout the state, who have 'adopted' colonies of wasps in their towns and will spend a few hours this summer monitoring them. The wasps have already emerged and the females are busily collecting prey for their progeny.

We have found most *Cerceris* colonies in baseball and softball diamonds. Information on what the wasp looks like and how to find it can be found on our website, [www.maine.gov/cerceris](http://www.maine.gov/cerceris). If everyone checked one or two baseball fields in their town, we might find many more colonies to help us monitor for the destructive EAB. So check your local ball field or other sunny, sandy locations and let us know if you find any colonies.

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## INSECTS

**Asian Longhorned Beetle** (*Anoplophora glabripennis*) – A small infestation of Asian Longhorned Beetle (ALB) was confirmed in six red maple trees on the grounds of Faulkner Hospital in Jamaica Plain (Boston, MA) over the Fourth of July weekend. This is located across the street from the Arnold Arboretum, a showplace for trees and their beauty. The infested trees were planted 5-8 years ago and were within a 50 foot radius of one another—they have since been removed and chipped. Exit holes were found and two live adult beetles were recovered on the trees. Within the infested trees, 30 larvae were found along with 10 adult beetles on the verge of emergence as well as 5-6 pupae. Although this infestation was found by professionals maintaining the hospital grounds, most infestations of this insect are found by everyday citizens. **If ALB is in Maine, we would expect adults to have begun emerging by this date;** peak emergence in central Maine would not be expected until late August. If you think you have found ALB, please try to capture and/or photograph the beetle and then contact our office or use the Maine Department of Agriculture on-line reporting form ([www.albmaine.org](http://www.albmaine.org), right hand column).

**\*Birch Leafminer** (*Messa nana*) – Birch trees across the state have heavy damage from birch leafminers this year. The sawflies observed to date have been *Messa nana* that reportedly have only one generation a year. Even so the damage is significant and it is too late for control this year. The adults emerge from the soil in late May – probably earlier this year – and lay their eggs on the margins of the leaves. The larvae hatch and feed between the layers of the leaf. You can see them inside the leaf by holding it up to the light. Some leaves have multiple mines per leaf. Once the larvae have finished feeding they drop to the ground and pupate.

**\*Browntail Moth** (*Euproctis chrysorrhoea*) – Larvae have finished feeding, pupated and the moths were present at the beginning of July, about two weeks earlier than normal. Infestations of browntail caterpillars were found in the greater Bath/Brunswick area, Falmouth, Turner, Auburn, Augusta and Kennebunkport. A population on Bustins Island that had been high for a number of years disappeared this summer, cause unknown. The Maine Forest Service has received a grant from the USDA- APHIS for a control project using a nuclear polyhedral virus (NPV) specific to browntail moth caterpillars. This will hopefully be an effective tool that can be used in sensitive areas.

**Chrysomela Beetle** (*Chrysomela* sp.) – Balsam poplars in Aroostook County were lightly defoliated by a leaf beetle this year. The species is yet to be confirmed. Balsam poplar does not usually have very many pests attacking it so this is a bit unusual. Many of the larval samples brought back to the lab contained parasitoid wasps so the population may decrease dramatically next year.

**\*Fall Webworm** (*Hyphantria cunea*) – Webworm numbers are expected to be high again this year especially in southwestern Maine. Although this insect causes an unsightly mess they do no lasting damage to the trees. Same drill as in past years - look for loose tents containing tiny, grayish, fuzzy caterpillars on alder, apple, ash, beech, birch, cherry, elm and oak. Clip and destroy these small developing tents to help reduce the problem locally. Carbaryl (Sevin), Diazinon, acephate (Orthene) and Bt are registered for use against this pest.

**Hemlock Woolly Adelgid** (*Adelges tsugae*) – Hemlock woolly adelgid (HWA) continues to turn up in new places. MFS had been surveying in coastal communities for this pest, however that is no substitute for homeowners, landowners and managers checking hemlocks on their properties and reporting suspected infestations to our office. Since early June MFS crews have uncovered infestations in the towns of Arrowsic, Brunswick, Bristol, South Bristol, and Georgetown. However, the most recent confirmed report in Westport

Island came from New Hampshire residents who were vacationing in Maine—the report came *after* we had completed a survey of our target areas in Westport Island, and had come up negative at all the sites we checked. *We need your help.*

To date HWA has been confirmed in the following Maine towns (2010 detections in *italics*):

- **Cumberland County:** *Brunswick, Harpswell, South Portland*
- **Lincoln County:** *Bristol, South Bristol, Westport Island*
- **Sagadahoc County:** *Arrowsic, Georgetown, Phippsburg*
- **York County:** Eliot, Kennebunkport, Kittery, *Ogunquit*, Saco, South Berwick, Wells and York

Adelgid crawlers are still abundant, so if you are living/recreating or working in or near HWA infested areas please bear in mind the risk of spreading the insect this time of year. More information about the life cycle of HWA can be found at: <http://www.maine.gov/doc/mfs/HWALifeStages.htm>.

Check your hemlocks for signs of this pest, especially those within 20 miles of the coast. If you do find HWA, please let us know so that we can target our survey and management activities.

**Japanese Beetle** (*Popillia japonica*) – After emerging late last year the Japanese beetles were early this year – starting at the end of June. The adults feed on a wide array of plants and although they can devastate plantings they will not kill trees. Beneficial nematodes can be used to treat Japanese beetle grubs in your lawn that will then reduce the adult population on ornamentals.

If you observe beetles with white dots on their backs – leave them alone. The dots are the eggs of a parasitic fly, *Istocheta aldrichi* that will kill the beetle in 5-6 days (healthy adult beetles can live 4-5 **weeks**.)

**\*Pine Leaf Adelgid** (*Pineus pinifoliae*) – This is a sort of good news story. When people started looking closely at the browning foliage on white pine this June (see Disease section) many reported seeing pine leaf adelgids on the needles. The adelgid females fly to white pine in the fall and lay their eggs on the needles. The adult then dies and protects the eggs with her body over the winter (such a good mother!). The eggs hatch in the spring and the crawlers move to the new shoots to feed. Well this year all those needles with adelgids on them fell to the ground before the eggs hatched. Not particularly good for the trees but it did short circuit a heavy infestation of adelgids on the pines this year.

**Spiny Elm Caterpillar** (*Nymphalis antiopa*) – The striking black and red spiny caterpillars of the mourning cloak butterfly feed gregariously on willow, elm, birch and poplar. Small willows in Aroostook County (they have everything this year!) were being defoliated by groups of caterpillars that will soon pupate. Populations rarely are high enough to cause significant damage but there should be more butterflies this year. The adults will emerge in a few weeks then aestivate (summer hibernate) until fall when they will seek winter cover for hibernation. The mourning cloaks then emerge in early spring; it is not unusual to see them on warm days in March, when they lay their eggs on the twigs of host trees.

## **DISEASES AND INJURIES**

**Balsam Fir Tip Blight** (*Delphinella balsameae*) – Balsam fir tip blight was identified from several infected trees in Frenchville (Aroostook Co.). The disease first became apparent in early to mid-June, and appeared as browning and shriveling of the current-season growth at the branch tips. Shortly thereafter, similar damage was identified in Dover- Foxcroft (Piscataquis Co.). In both cases, the disease was affecting sapling-sized to small pole-sized trees in the 4 - 8 in. diameter range. In past years, this tip blight has also been identified from Orono (Penobscot Co.).

In addition to balsam fir, this disease can also affect other true firs (*Abies*), including subalpine fir (*A. lasiocarpa*) and Concolor fir (*A. concolor*). Although the disease can appear quite dramatic on individual trees, it does not cause significant long-term damage, and is not especially common.

**Caliciopsis Canker of White Pine** (*Caliciopsis pinea*) – Dense, overstocked stands of eastern white pine are susceptible to a canker disease caused by the pathogen *Caliciopsis pinea*. Typical symptoms include pitching and slightly depressed bark cankers in the internodal sections of infected stems. Elongate, blackened, shallow bark cankers often develop, with visible bark cracks appearing. The excessive pitching is sometimes confused with white pine blister rust, but blister rust cankers nearly always originate at the branch whorl region.

*C. pinea* is considered to be only a weak pathogen, affecting trees of low vigor. It is reported to most seriously affect overstocked stands growing on sandy, well-drained soils. The recommended practice for the management of *Caliciopsis* canker in white pine stands is to reduce stand density through thinning, and to maintain good tree vigor. While mortality directly related to infections can occur, it is not common. The disease more often acts as an agent to hasten the natural stand thinning process. Affected trees can recover, if and competition is reduced and stand vigor is improved.

*Caliciopsis* canker was most recently reported from Canaan (Somerset Co.), and Sangerville (Piscataquis Co.). The disease likely occurs statewide, but is most prevalent in central and southern Maine

**Tar Leaf Spot Appearance** (*Rhytisma acerinum*) – Last summer, from about mid-July until leaf-fall in October, Norway maples throughout the state were heavily infected with the tar leaf spot pathogen. Many trees appeared severely scorched by mid-summer, and many shed the browned leaves by late July and through August. The disease did not cause significant long-term damage to the trees, despite its unusually high severity last year. However, every year we expect to see at least some tar spot and this year will be no exception. Leaf infections, and even some early development of the black tar spots, are now evident. A quick examination of the leaves now will provide an estimate of severity on yard and ornamental trees for the remainder of the summer and fall seasons.

**White Pine Needle Casts** (*Canavirgella banfieldii* and *Mycosphaerella dearnessii*) - A few affected white pines still retain an off-brown color to the lower crown, but the majority of the needles infected last year (and browned this year) by these two needle-cast pathogens have now been shed. Observations from around western, central, and southern Maine indicate that some trees have lost an occasional lower branch or two. The needle casts have been reported from as far north as Township 7 Range 12.

Unfortunately, some browning of current-season needles has recently been observed through the Livermore (Androscoggin Co.) and Dixfield (Oxford Co.) region. To date mortality, if it has occurred, is not common or is associated with trees already in a weakened state from other biotic or environmental conditions.

However, the crowns of many trees still appear quite thin, so the effects of this years' needle loss will likely affect tree vigor for some time. *For this reason, forest management activities including stand thinning and other practices that result in significant stand disturbance, are discouraged in stands that have had extensive needle loss, or where the crowns appear especially thin.* Reports of current-season needle browning notwithstanding, the expectation now is that infection levels on the current-season foliage has been lower this year, so trees should begin to recover their full complement of foliage by the end of the next growing season. Changing stand conditions will require regular monitoring for at least an additional year to better assess management risks.

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