



STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
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http://maine.gov/dacf/mfs/forest_health/index.htm

Forest & Shade Tree - Insect & Disease Conditions for Maine

June 26, 2018

This is a busy season for our division. Detection of emerald ash borer in the Madawaska/Frenchville area of Aroostook County and recent retirements will present short-term challenges requiring patience. Our preferred mode of reports is through the on-line reporting form at the following web address: https://www.maine.gov/dacf/mfs/forest_health/tree_ailment.html. This is routed to our receptionist, who does a great job sending requests on to the appropriate person. Second to that, you can call our main number at the lab (207) 287-2431. We do also welcome direct calls or e-mails.

If you have a question about turf, garden, household or structural pests or ticks, please contact the Pest Management Office at the University of Maine Cooperative Extension <https://extension.umaine.edu/ipm/> or (207) 581-3880.

Emerald Ash Borer in Maine

We knew it was a matter of 'when' not 'if' emerald ash borer (EAB) would be detected in Maine. The identification of a sample of EAB collected in Madawaska, ME on May 22, was confirmed by the official USDA APHIS identifier on May 28. A public meeting, attended by more than 50 people, was held in the town of Frenchville on June 18 to receive input regarding a proposed order to stop movement of ash and hardwood firewood from the towns of Frenchville and Madawaska. The order is being drafted, and the Maine Forest Service is still seeking public input.

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The Maine Forest Service and our partners are in the early stages of determining the extent of the infestation in the Madawaska area. In initial surveys, the infestations appear light and cover an area of



Brown ash (black ash, *Fraxinus nigra*) in an emerald ash borer-infested stand in Madawaska. In early stages of attack, trees show little outward sign of damage. Photo: Maine Forest Service, DACF.

less than one square mile. Infested trees have subtle clues of attack and one can easily walk through an infested stand without seeing evidence of damage. Were it not for the detection of the more intense infestation in Edmundston, the EAB in Madawaska/Frenchville would likely have remained undetected for several more years. It may be quite some time before we find infested trees in additional towns – however, given the nature of this insect and survey, new detections could be found before you open this bulletin.

Over the next several weeks, the department will wrap up deployment of roughly 250 traps for possible early detection of emerald ash borer populations in other Maine locations. In addition, about a dozen trap trees were created in the area around the Madawaska detection. The USDA APHIS contractor, Delta 21, is deploying an additional 411 traps in the area within 100 miles of the quarantine in New Hampshire (DACF will not be hanging traps in that area).

Even though this destructive insect has been found in the state, it is still too early in most of Maine to be

treating specimen ash with pesticides to protect them. Experts recommend holding off treatment until the EAB is within 10–15 miles of the trees in question. In the meantime, resources are better spent on inventorying ash and surveying and monitoring for the pest.

If you work with, own or rely on ash (*Fraxinus* spp.), then you should have some idea of how EAB will impact your life and work and some plan for adapting to a future with fewer ash. If you have ash growing near important infrastructure, such as buildings, driveways, town or city roads, public recreation trails or parks, you should have an idea of what you will do when the ash borer arrives, and consider whether you should remove and replace ash trees proactively.

The need for awareness and a plan is more urgent in areas that are closest to known infestations, but the detection in Madawaska should drive home the message that anyone who has the potential to suffer from the impacts of widespread mortality of ash should take some serious steps towards planning. Some planning resources are already available on the department website, www.maine.gov/eab; others will become available as the website is updated.

Caterpillars Cause Concern



Invasive browntail moth cocoon wrapped in invasive common buckthorn leaves beneath defoliated bur oak (Bangor, ME, June 20, 2018). Photo: Maine Forest Service, DACF.

Many reports received at our offices through the months of May and June concerned caterpillars defoliating trees or causing human discomfort and disgust. Prime offenders were **browntail moth**, **forest tent** and **winter moth** caterpillars. Unfortunately, most people notice these after it is practical to alleviate damage or discomfort from them.

Browntail moth is an invasive species from Europe that impacts tree and human health. Most of the caterpillars have completed development for this year, although some may still be wandering and the toxic hairs they shed will be present for a longer time. The caterpillars pupate singly or communally in a loose, hairy cocoon. Those cocoons are full of the signature, skin irritation causing, toxic hairs and should be avoided or removed with caution. Adults will

emerge from the cocoons beginning in Mid-July. To learn more about browntail moth, please visit our website: http://www.maine.gov/dacf/mfs/forest_health/invasive_threats/browntail_moth_info.htm



Exposure to hairs from browntail moth caterpillars can cause a painful itching rash or sometimes more severe reaction. Photo used by permission.

Browntail moth is capable of surviving in areas far beyond its current distribution. People can most readily move this pest from when the caterpillars are wandering from their webs through the end of adult flight in late-July (it can also readily be moved on ornamental plants outside that window). We have received reports of dozens of caterpillars on each tire of vehicles parked under infested trees, have seen pupae in innumerable places, and know adults can fly well, but also are transported by vehicles. If you travel regularly between browntail-infested areas and those not infested, but sure to keep an eye out in those uninfested areas for signs that you have unintentionally moved this caterpillar.

Unfortunately, with continued high populations of browntail moth in heavily populated areas, expansion of the affected area will continue and new, remote spots of infestation will develop. Addressing remote populations through management may help slow the expansion of new populations.

Forest Tent Caterpillar is the only native in this group of three offenders. It is hard to be grateful for this when thousands of caterpillars are pooping all over you and your home, keeping you inside and causing traffic concerns as they are spread across the pavement. However, there should be some comfort in knowing that there will eventually be relief from this when populations decrease and that the hairs left behind by these caterpillars are not toxic. We have had reports of intense defoliation in Blue Hill and Brooklin (Hancock County). Most of the wandering caterpillars will pupate by Independence Day, giving residents and visitors to



Forest tent caterpillar pupa in eastern white pine, Blue Hill, ME. Photo: Maine Forest Service.

the affected areas one more thing to celebrate. When the epidemic will subside is another question. This is the second year of recorded defoliation in that area. Forest tent caterpillar epidemics often subside after 3–5 years of defoliation.

Winter Moth is an invasive caterpillar from Europe. The caterpillars have wrapped up feeding for the year and pupate in cocoons in the soil beneath defoliated trees and shrubs. Those pupae remain in the soil until adults emerge beginning in November. Movement of soil and plantings from infested areas should be avoided.

Abatement of this pest may be on the horizon with continued work. Winter moth was much harder to find in Massachusetts this year, where it had been causing significant defoliation for around two decades. Soil-dwelling predacious arthropods and the introduced parasitic fly, *Cyzenis albicans*, are given credit for winter moth decline in these areas. The significant role of soil-dwelling predacious arthropods in the control of winter moth is a strong argument for applying the least toxic lawn care solutions – those that do not include broadcast use of broad-spectrum insecticides. Regarding the parasitic fly, the Maine Forest Service continues to release *C. albicans* when it is available. This biocontrol program is funded by USDA and coordinated by the Elkinton Lab at the University of Massachusetts, Amherst.

Diseases and Injuries

Smooth patch affects several species of hardwoods including Ash (*Fraxinus* spp.); birch (*Betula* spp.); basswood (*Tilia* spp.); elm (*Ulmus* spp.); hickory (*Carya* spp.); hop-hornbeam (*Ostrya virginiana*); hornbeam/musclewood (*Carpinus caroliniana*); maple (*Acer* spp.); oak (*Quercus* spp.); willow (*Salix* spp.).

The symptoms can be caused by fungi in the following genera: *Aleurodiscus*, *Dendrothele* and *Hyphoderma*. In Maine, *Aleurodiscus* is most commonly seen on mature ash and oak trees.

The fungi that cause smooth patch decompose the outer corky bark of their hardwood hosts, leading to bark sloughing off, leaving a conspicuous, often irregularly shaped smooth patches. Patches are more noticeable, since they are typically lighter in color than uninfected portions of bark. The patches vary widely in size and shape and can sometimes cover large portions of the lower boles of trees. Small (<1/4") ear-shaped mushrooms can be seen on affected areas of bark, but are often difficult to see, especially in dry conditions when these spore-producing structures shrivel and become barely detectable. Symptoms of this disorder are seen throughout the year.

The fungi that cause smooth patch only feed on the mature corky bark of trees and do not have a negative impact of the health of host trees. Thus, management is not recommended.



Several areas of smooth patch on an ash tree in a forested setting. Photo: Dennis Dobson.

White pine needle diseases (primarily caused by *Lecanosticta acicola*, *Lophophacidium dooksii* and *Bifusella linearis*) – The yellowing, browning, and premature shedding of one-year-old needles of white pines appears to be beginning in the region. Due to the wetter spring in 2017, symptoms are predicted to be moderate to severe this year throughout the range of white pine in Maine. White pine trees can be expected to exhibit needle yellowing followed by needle drop any time between now and early July. Trees that have been severely damaged over several consecutive years may show dieback of lower branches and an overall “thin” crown appearance. Weakened trees may be subjected to additional damage from secondary insects and pathogens that are better able to take advantage of chronically stressed trees.



Symptoms of White pine needle diseases. Image: Isabel Munck, USDA Forest Service.

Winter injury of white cedar/arborvitae cultivars has been reported in several locations in central Maine in late May and early June this year. Symptoms have included foliage with a bleached



Arborvitae top damage symptoms thought to be due to winter injury. Image: Deborah Keene.

appearance and varying degrees of dieback in a top-down progression. In many cases the plantings were between 15 and 20 years old and no sign of insect or disease agent was seen. The bases of trees were free of damage and no indications of girdling roots were seen (both of which can also be responsible for similar symptoms). It is believed that the damage may be associated with fine root dieback due to drought and/or freeze injury or the unusual warm-up periods experienced during the winter months. Trees in protected areas did not seem to be

affected, giving further indication of the disorder’s relation to adverse environmental conditions. Trees with more than 50% crown dieback should be considered for removal. Stressed/damaged trees can attract or become more susceptible to secondary agents like pathogenic fungi and bark beetles. Further, the loss of 50% of the living crown likely has severe impacts on the aesthetic quality of affected shrubs that are often chosen for their pleasant appearance in landscape plantings.

Office hours are 7:30 a.m. to 4:00 p.m., Monday through Friday, except for holidays. If you plan to visit either office, you may wish to call ahead just to make sure someone will be present to meet with you. (207) 287-2431 (Augusta) and 827-1813 (Old Town)

Conditions Report No. 2, 2018

On-line: http://maine.gov/dacf/mfs/publications/condition_reports.html

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Maine Forest Service - Forest Health and Monitoring

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