



PAUL R. LEPAGE

GOVERNOR

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
MAINE FOREST SERVICE
168 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0168

WALTER E. WHITCOMB

COMMISSIONER

http://maine.gov/dacf/mfs/forest_health/index.htm

Forest & Shade Tree - Insect & Disease Conditions for Maine

June 12, 2014

Welcome to all new subscribers who have signed up through the Department of Agriculture, Conservation & Forestry's govDelivery account. To all our readers, we welcome your feedback always, but especially when we make significant changes in how we communicate with you. Also, as a reminder to all of our readers, you are an important part of the forest health monitoring network in Maine. Your observations of forest conditions are critical to helping us complete our mission. Thank you for your interest and participation.

Insects

Asian Longhorned Beetle (*Anoplophora glabripennis*) – The Asian longhorned beetle (ALB) has not been found in Maine. However, the beetle can be moved to new places on firewood, pallets and crates and other solid wood material. Its look-alike, the whitespotted sawyer (*Monochamus scutellatus*) has already been active this spring. There was a peak in reports of this native beetle after the first weekend in June when daytime highs were above 80 degrees Fahrenheit in much of the state. You can find more about both of these insects at www.maine.gov/alb.

Cornell University Cooperative Extension will be hosting a webinar next month titled *The Ecology and Management of Asian Long-Horned Beetle in Rural Woodlands*. To participate you must register as a user before the webinar at: <http://www2.dnr.cornell.edu/ext/forestconnect/web.htm>. The ALB webinar will take place Wednesday July 16th at noon and 7pm.



Browntail Moth.
Photo: Maine
Forest Service

Browntail Moth (*Euproctis chrysorrhoea*) – Browntail moth caterpillars are finishing up feeding on hardwood trees. It is too late to treat to either protect the trees or people. Besides defoliating oak, birch, apple and other trees these hairy brown caterpillars with white 'railroad track' strips and two red dots can cause a rash like poison ivy and/or respiratory distress in sensitive individuals.

After the caterpillars are gone they can still cause problems. The caterpillars molt six times each time leaving a skin covered with toxic hairs behind. These hairs are very persistent, lasting a year or more so any activity that stirs up the hairs is likely to cause a rash. Mow when the grass is wet, wear long pants and sleeves, do not sit on the grass where browntail moths have been present.

Areas hardest hit include parts of Topsham, Bowdoinham, Bath and West Bath (Sagadahoc County) and Brunswick and Freeport (Cumberland County). Isolated populations of these insects can be found scattered throughout the midcoast south and inland to Turner (Androscoggin County) and Vassalboro (Kennebec County).

Christmas Tree Pests – Are you looking for the 1999 guide for management of Christmas trees? You can find it online by visiting www.maineforestservice.gov and navigating to publications from the left-menu. From there, look for the link to Forest Health Publications link at the top of the page. Or follow this link directly to the guide:

http://maine.gov/dacf/mfs/publications/handbooks_guides/fhm_circular_11.htm.

Emerald Ash Borer (*Agrilus planipennis*) – Emerald ash borer (EAB) has not been found in Maine. Given temperatures this season, we expect the adults (beetles) would have started to emerge from host trees in southern Maine if they are there. The last of the traps are being deployed, they will be examined in July for EAB, and then taken down beginning in September. You can read more about the trap program on our website: www.maineforestservice.gov/purpletraps.htm.

Given the current known distribution of EAB relative to Maine's borders it is too early to be using pesticides to treat for the pest anywhere in the state. That doesn't mean it is too early to read up on the methods one might use to treat ash trees. The insecticide guidelines from the North Central IPM Center have just been revised and the brochure is available on-line:

<http://www.emeraldashborer.info/files/EAB%20Bulletin%202014-final.pdf>.

Hemlock Woolly Adelgid (*Adelges tsugae*) – *Sasajiscymnus tsugae* is a lady beetle that targets hemlock woolly adelgid (HWA) as its prey. 13,750 of the species have been released in Maine this year. Some of the beetles were received from North Carolina Department of Agriculture through a cooperative agreement with USDA APHIS PPQ. Others were purchased from a commercial supplier through a grant with USDA Forest Service. Release sites were in Bath (Sagadahoc County), Portland (Cumberland County), Sanford and South Berwick (York County) and Wiscasset (Lincoln County).

HWA crawlers are abundant right now. This time of year the insect can be easily moved to new areas on equipment and clothing; but also picked up by birds, mammals and wind and spread to new locations. For more information see: www.maine.gov/forestpests#hwa.

Spruce Budworm (*Choristoneura fumiferana*) – This notorious native insect is not defoliating fir and spruce trees in Maine - yet. However, our native population is starting to grow, and Quebec has a large spruce budworm infestation that may spill over into Maine in future years to augment our home-grown situation. Spruce budworm populations cycle with the spruce/fir forest every 40+/- years as the forest starts to mature and then becomes over-mature. Maine is just moving into a period of maturing spruce/fir and the budworm population is starting to increase.

Based on predictions that budworm will become a problem in the next few years the Maine Forest Service is coordinating a statewide spruce budworm monitoring program. Large landowners and managers are deploying pheromone traps in almost every township across the northern half of the state. This is close to 400 sites. The wide coverage will give us an idea of where and when the budworm are increasing in Maine. The monitoring program will continue each year to aid in making management decisions for protecting the spruce/fir resource.

In northern Maine keep an eye out for defoliation on fir (the favored host of spruce budworm) and spruce. In July report any moth flights of small brown moths. If possible catch some and send them to the lab.

Winter Moth (*Operophtera brumata*) – The green looper caterpillars of this new invasive insect are almost done feeding on oaks, maples, birch, basswood, apple, blueberry and many other hardwood trees and shrubs. The level of damage appears to be similar to 2013 with severe defoliation in Cape Elizabeth and light to moderate damage in other locations from Kittery to Rockland and the islands. At the moment

Harpswell's defoliation is not as severe as last year but then the larvae are still feeding. Aerial survey will delineate the extent of the defoliation in the coming weeks.

Parasitic flies, *Cyzenis albicans*, were released for the second year in Maine. We have been working with Dr. Joseph Elkinton, University of Massachusetts, who has been releasing the flies in New England with funding from the USDA. Students from Harpswell Coastal Academy and Vinalhaven Vital Signs program assisted in the releases. The following are the 2014 releases:

Town	Dates	Number of <i>Cyzenis albicans</i>
Kittery	May 16 & 23, 2014	1200
Harpswell	May 16 & 22, 2014	1200
Vinalhaven	May 21, 2014	2000

These flies are very closely tied to the life cycle of the winter moth. The adult flies are present for about three weeks in May and that is it. The rest of the year they are inside the winter moth larvae or cocoons.

It will take years for the parasite population to catch up with the winter moth population and start to make a difference but it is the long term solution. In the meantime, if you have winter moth, assess your trees and decide if you need to have them treated next May to protect them. Trees that are more than 50% defoliated are at risk of branch dieback and mortality if defoliated many years in a row. Trees that are 100% defoliated usually only survive a few years.



Students assist entomologist Charlene Donahue with the release of winter moth parasitoids, *Cyzenis albicans*. Photo: Hillary Morin

Do not move plants, trees or soil from areas infested with winter moth. The cocoons are in the soil from June through November and can easily be transported to new locations. The eggs are on host trees – especially apple and oak – from November through April and then the larvae are on the trees.

For more information go to: www.maine.gov/forestpests#wm.

Diseases and Injuries

Anthracnose Diseases (*Gnomoniella fraxini* on ashes; *Apiognomonina quercina* on oaks) – Occurrences of anthracnose diseases on hardwoods are reported every year, but overall damage from these diseases this spring appears to be less than that in recent past years.

Ash Anthracnose: Moderately heavy damage from ash anthracnose was identified from Clinton and Phippsburg. Symptoms include a distinct blackening of the leaflet margins, and leaf blade distortions of curling and cupping. This is not considered to be a significant problem in forest situations. Also, it is already past time for fungicide treatments to be effective on ornamental trees.

Oak Anthracnose: During the spring of 2013, oak leaves were damaged in many areas of the state from several problems. Oak anthracnose, frost injury, and insect defoliators (including winter moth) caused widespread damage to foliage, and commonly resulted in early shedding of leaves, especially in the mid- and south coastal areas of Maine. Although oak anthracnose has been seen this spring, it appears so far to be causing much less damage than last year. It is suspected that the occurrences of frost damage seen last spring were actually more damaging to leaves than was the anthracnose. For an update on damage expectations from winter moth, refer to the insect section of this *Conditions Report*.

Spruce Needle Rust *Chrysomyxa weirii* – A spruce needle rust has been reported from the Farmington area. The disease causes needle damage primarily to white and Colorado blue spruces, but may also infect black spruces. This is a rust fungus that does not require an alternate host to complete its life cycle, so the spores produced on infected one- or two-year old needles can infect current-season needles. The symptoms appear as yellow spots, which develop into erumpent, creamy-yellow pustules or blisters along the needle. In most circumstances the disease is not damaging enough or occurs frequently enough to justify fungicide treatment.



Chrysomyxa weirii rust on Colorado blue spruce.
Photo: Maine Forest Service

White Pine Needle Disease Complex

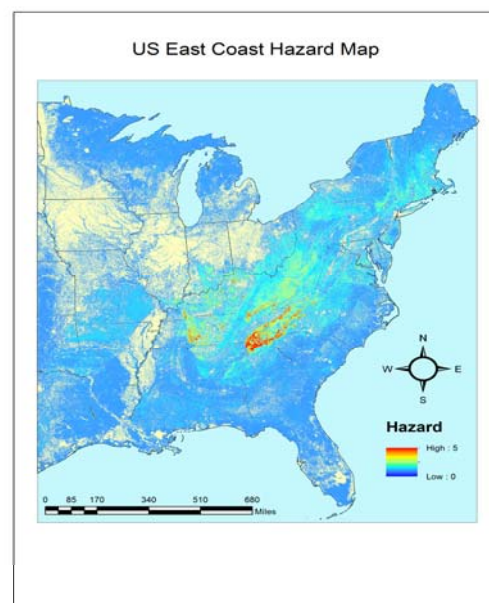
(*Lecanosticta acicola*, *Lophophacidium dooksii*, *Bifusella linearis* and others) – The yellowing, browning, and premature shedding of one-year-old needles of white pines appears to be developing slightly later than observed last year. Affected trees are likely to exhibit heavy needle drop any time between now and early July. Trees which have been severely damaged over several consecutive years may show early shedding of lower branches and a “thin” crown. Weakened trees are subject to additional damage from secondary insects and pathogens.

An Update on Ramorum Blight (Sudden Oak Death) (*Phytophthora ramorum*.) – The past winter has taken a toll on some woody species, especially Rhododendrons (see the May 2014 issue of the *Conditions Report*), which has prompted concerned homeowners, nurserymen, and foresters to ask for an update of the status of *P. ramorum* in Maine.

The disease known as Sudden Oak Death continues to be a threat to forests and woody ornamental plantings in the eastern United States. However, it is most damaging and of most concern on the west coast. Although the pathogen has been found in Maine on infected nursery stock on two separate occasions (in 2006 at a retail location, and again in 2012 at a residential location), subsequent eradication procedures appear to have been successful in eliminating the problem from the state. Forest and stream sampling for the pathogen conducted by the Maine Forest Service in 2007 and 2008 resulted in no positive occurrences. As of now, *P. ramorum* is not known to be present in Maine. In addition, Maine is considered to be a low risk for the establishment of a *P. ramorum* infestation under field conditions (see map). More specific information on *P. ramorum* can be found in a pest alert at:

http://www.na.fs.fed.us/spfo/pubs/pest_al/sodeast/sodeast.pdf

The following information was extracted from the *USDA APHIS Phytophthora ramorum Program 2013, 4th Quarter Summary*: The USDA quarantine program for *P. ramorum* has been in place since 2002. Between January 1st and December 31st, 2013, *P. ramorum* has been reported in 18 host nurseries located in three



regulated states (California, Oregon, and Washington) and one non-regulated state (New York). No host plants were shipped from the positive nursery in New York.

The pathogen has a very wide host range, including several species of oaks. A complete list may be found at:

http://www.aphis.usda.gov/plant_health/plant_pest_info/pram/downloads/pdf_files/usdaprlist.pdf

However, the most high-risk genera are *Camellia*, *Kalmia*, *Pieris*, *Rhododendron*, and *Viburnum*.

As this disease still poses a significant threat to the nursery and horticultural industries, it will require constant vigilance from federal, state, and private entities. However, at this time there is no indication that the disease occurs in the state or need for immediate alarm.

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

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Maine Forest Service - Forest Health and Monitoring

Contributors: Charlene Donahue, Allison Kanoti, William Ostrofsky