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## ***Forest & Shade Tree - Insect & Disease Conditions for Maine September 22, 2011***

This is the final issue of the *Conditions Report* for the season. This growing season started off with an overabundance of rain in May, but returned to near-normal conditions with the exception of a brief spell of hot and dry weather in July. Late summer and fall appear to be receiving above-average precipitation also. Forest soil moisture conditions throughout most of the state are considered well-charged, which will help to minimize winter injury to conifers from desiccation, and should provide a good start to the growing season next spring. Although the wet weather in early spring resulted in the intensification of several leaf and needle diseases, it also resulted in keeping some of the insect defoliators in check – most notably populations of the browntail moth.

Unfortunately, due to an oversight in our mailing procedures, many subscribers did not receive some of the issues this season. We regret the error, but also remind everyone that all past issues are always available on-line in easily printed format. If you have missed issues and would like a hard-copy edition, please contact the Maine Forest Service Entomology Lab any time. As always, we thank you for sending in tree insect and disease samples and for making other forest health observations through the year. We hope you have found these reports useful, and we appreciate your continued vigilance in keeping the trees and forests of Maine healthy. Enjoy the fall, and have a safe and comfortable winter.

### ***Firewood Implicated in the Spread of Brown Spruce Longhorned Beetle into New Brunswick, Canada***

An adult brown spruce longhorned beetle (BSLB), *Tetropium fuscum*, was identified from a trap in Kouchibouguac National Park, New Brunswick this season. This is the first detection of BSLB in North America outside of the province of Nova Scotia, and is more than 100 miles from the nearest known infestation. It is thought BSLB arrived in the park on infested firewood transported from Nova Scotia. Brown spruce longhorned beetle most likely traveled to North America on solid wood packing associated with cargo from overseas; it was first found in a park adjacent to the Port of Halifax.

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Some news reports of the detection in New Brunswick imply the BSLB is not a significant threat to the health of the forest, only to the health of the forest products economy. With our current understanding of the insect, **the Maine Forest Service considers this beetle to be a significant threat to our spruce forests. It will attack and kill healthy red spruce trees and thrives in stressed spruce. We take this threat very seriously.**

USDA-APHIS is currently assessing its various options for dealing with host material from the local area where the beetle was discovered. As of the time of this newsletter, the MFS had not yet received notification of any additions to the current federal order to address BSLB (which bans import of untreated spruce logs from Nova Scotia and untreated softwood firewood from anywhere in Canada). We will continue to monitor for the presence of this pest and are currently working with APHIS and the Maine Forest Products Council to forestall its introduction into Maine.

Symptoms and signs of attack by BSLB include crown decline; excessive resin flow down the stem; small oval exit holes; flattened, meandering tunnels beneath the bark; and L-shaped pupal cells in the sapwood. Adult beetles are small, brown longhorned beetles that strongly resemble our native *Tetropium*.

More information about the pest can be found on our Website:  
<http://www.maine.gov/doc/mfs/fhm/pages/BSLB.htm>

A CBC interview covering the recent detection of BSLB in New Brunswick is available on YouTube: <http://www.youtube.com/watch?v=Embhq-X4PpQ>

### ***Insects***

**\*Browntail Moth (*Euproctis chrysorrhoea*)** – Update on browntail moth: populations are down in the Bath/Brunswick area, up in Freeport, Falmouth and some of the Casco Bay Islands. Demonstration applications of a naturally occurring baculovirus (*Euproctis chrysorrhoea* nucleopolyhedrovirus, EcNPV) took place this year. A spring application in Bowdoinham on May 25, 2011 showed the virus was effective at killing the browntail moth caterpillars but the whole population was overcome by the fungus *Entomophaga aulicae* and all the caterpillars died. A second application was made in Freeport on September 12, 2011. Results of this treatment will not be known until spring.

**\*Elongate hemlock scale (*Fiorinia externa*)** – For the third year running a new detection of elongate hemlock scale has occurred in the last half of August, this time in Wells, ME. As suggested last year, it appears that late summer and early fall are good times to survey for this pest. A full growing season of feeding activity is behind them, and the waxy deposits created during that growing season are fresh. We expect elongate hemlock scale to be found on planted fir, hemlock planted before 2001 and in native hemlocks within areas where hemlock woolly adelgid has been detected. If you find elongate hemlock scale, please let us know. In order to slow the spread of this pest into the forest we are attempting to contain it when it is found in ornamental settings.

Wallet-sized identification cards are available by request, or look for them at forestry and 4-H booths at your local fair. More information about elongate hemlock scale can be found on our Website: [http://www.maine.gov/doc/mfs/EH\\_Scale.htm](http://www.maine.gov/doc/mfs/EH_Scale.htm).

**\*Hemlock Woolly Adelgid (*Adelges tsugae*)** – If you own or manage mature hemlock forest stands in near-coastal areas put “Check for hemlock woolly adelgid and related decline” on your to-do list for late fall through early winter. Readily apparent decline of forest hemlocks has now been observed in conjunction with infestation by hemlock woolly adelgid in several southern and coastal locations in Maine. The known areas of decline appear to be associated with adverse site conditions, such as shallow or dry soils. Within infested stands, hemlocks on more suitable sites appear to be tolerating adelgid better than those on challenging sites. For more information about managing affected stands, please contact our office.

At a recent workshop an arborist mentioned that many of his clients had the perception that the Maine Forest Service message was “get rid of ornamental hemlocks because they are all going to die”. This is not a message we are trying to convey.

In brief, what we are trying to tell people:

- Check your hemlocks for signs of adelgid, especially in areas within about 20 miles of the coast.
- If you have infested hemlocks, we’d like to hear about it to help inform our management of the pest.
- If you have infested ornamental hemlocks, there are good options for management of the pest, but they are not free.
- Management in the forest is more challenging, but there are some options available and others are under development.
- With current climate and insect adaptation to cold temperatures, we expect the most severe damage to both forest and ornamental hemlocks to be confined to areas right along the coast.
- Even within the most severely affected area we expect hemlocks to survive with adelgid for some period—likely more than a decade and potentially several decades—in the absence of other significant stress such as defoliation or drought. However, keep in mind many hemlocks in these areas, even in newly detected spots, have already been living with adelgid for several years.

### **Unwanted House Guests**

**Overwintering Insects** - Some insects come just for the summer, others want to spend the winter but seek shelter in our homes. Some of the insects that come inside in the winter are **Cluster Flies (*Pollenia rudis*)** and **Multicolored Asian Lady Beetles (*Harmonia axyridis*)**. **Western Conifer Seed Bugs (*Leptoglossus occidentalis*)** and **Brown Marmorated Stink Bug (*Halyomorpha halys*)** also are unwanted guests and are covered in more detail below.

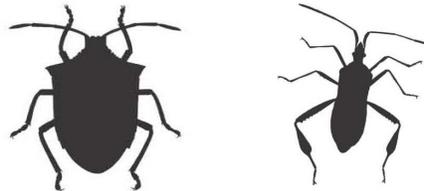
All these insects are “from away” and are looking for a sheltered place to overwinter. They are attracted particularly to the warm south side of buildings where they then squeeze through cracks and crevices to get into wall voids, attics and crawlspaces - unheated but protected locations. The insects then go in to a dormant state until the warmth of the house draws them inside or in the spring they head outside.

Tightening up your house by repairing screens, applying weather stripping and caulking cracks is a start to reducing the numbers of insects that enter your house. In extreme cases the exterior of the house can be fogged with pyrethroids to prevent the insects from entering.

**Western Conifer Seed Bugs (*Leptoglossus occidentalis*)** – White pines have produced an abundant seed crop this year. That means the numbers of western conifer seed bugs is likely to be high as well. These are ¾-inch brown bugs that walk or fly around in your house come fall and winter. They come inside to find a warm place to spend the winter. They do not bite, eat anything, lay eggs or do anything destructive, but they can be annoying. They also smell when you squish them. Gently pick them up and show them to the door if they do come in. People living near pines or other conifer will be most likely to have these uninvited “guests”.

**Brown Marmorated Stink Bug (*Halyomorpha halys*) – NOT KNOWN TO BE IN MAINE YET.** This true bug is in the insect family Pentatomidae and is an agricultural pest in Asia where it is native. It was first seen in eastern Pennsylvania in 1998 but probably arrived several years earlier. It is also a nuisance pest both indoors and out when it is attracted to the outside of houses on warm fall days in search of protected, overwintering sites. They are the typical “shield” shape of other stink bugs, almost as wide as they are long. To distinguish them from other stink bugs, look for lighter bands on the antennae and darker bands on the membranous, overlapping part at the rear of the front pair of wings.

People often confuse western conifer seed bug and brown marmorated stink bug. The seed bug is more elongate than the stink bug and has a flared section on its hind legs (see images below).



Above silhouette of stink bug (left) and seed bug (right) (taken from NH DRED forest and lands’ publication of insect silhouettes: <http://extension.unh.edu/fwt/docs/ALBpoolID2.pdf>).

If you suspect you have found the **brown marmorated stink bug** you can contact Clay Kirby at the Pest Management Office of University of Maine Cooperative extension: [clay.kirby@maine.edu](mailto:clay.kirby@maine.edu) or call (207) 581-2963 or 1-800-287-0279 (in Maine). More information about the pest can be found at Maine Department of Agriculture’s Website: <http://www.maine.gov/agriculture/pi/pestsurvey/pestinfo/BMSB.htm>.

### **Diseases**

**Armillaria Root Rot (*Armillaria* species)** – *Armillaria* root rot disease is caused by any of several species of fungi in the genus *Armillaria*. The genus *Armillaria* is reserved for “facultatively parasitic” root and butt rot fungi that produce rhizomorphs. A facultative parasite in this case is an organism which survives mostly on dead, woody tissues but can, under some conditions, act as a pathogen and infect living trees. Rhizomorphs are large cord-like strands of fungus tissue that allows the fungus to grow some distance through soil, under bark, and along tree root systems. The rhizomorphs give the common name of “shoestring root rot” to the disease.

The taxonomy of the group is complex and has gone through substantial changes through the years. There are about ten species (depending on the accepted taxonomic criteria) that occur in North America, with seven species occurring in the Northeast.

The fruiting stage of *Armillaria* fungi are gilled mushrooms. This year, because we have had abundant rainfall during the late summer, *Armillaria* mushrooms are now quite common in woodlands, and will be so for the next several weeks. During the past month, several instances of *Armillaria* root rot have been diagnosed, including decay and mortality of northern white-cedar on Vinalhaven, decay and stem failure of red oaks in East Winthrop, and decay of oaks and other hardwoods in Lyman.

**White Pine Decline** (Multiple causes) – Small groups of declining white pines have been noted occasionally through the years, often with differing explanations as to the cause. Last year we received reports of white pines along shorelines of lakes and islands to be most heavily infected with white pine needlecast diseases. Some limited mortality was reported. Recently, an additional site was diagnosed in Otisfield which showed a similar mortality pattern. Trees along shorelines are often growing on marginal, rocky sites with little rooting depth and fluctuating water tables. Trees growing under such conditions are often more vulnerable to damage from other diseases and insects. The white pine needle cast diseases which have caused substantial needle loss in white pines can be one such additional stress factor. As trees decline, they also become subject to attack by bark beetles, which can render the final insult and result in mortality.

**Anthracnose of Sugar Maples** (*Discula campestris*, *Kabatiella apocrypta*, and others) - There are still many reports arriving of damage to sugar and red maple foliage from anthracnose fungi. In some localized areas, the effect is quite striking. Heavy damage from anthracnose fungi on native maples generally is quite rare. The long-term effect on tree health will be inconsequential, but it does appear that some scattered central and southern Maine locations will not have an ideal fall color display.

### Calendar

**September 29, 2011** (Thursday) - Lyman. 9:00 AM -12:00 Noon. **Trophy trout habitat and white pine management.** Maine Forest Service is offering a free workshop for landowners, foresters, loggers and other interested parties. The concept of fish habitat enhancement called 'chop and drop' will be illustrated at Cooks Brook in the Massabesic Experimental Forest in Lyman. The workshop will also include a tour and discussion of white pine harvest and the results of thinning for regeneration and disease control. Experts will talk about current white pine issues and problems you may have noticed. A briefing on insects and birds trapped and studied at this site will be included. Continued Education and Forester credits are available. Contact Dennis Brennan for more information (207) 592-1251 or [dennis.brennan@maine.gov](mailto:dennis.brennan@maine.gov).

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On-line: [www.maineforestservice.gov/ConditionsReportsIndex.htm](http://www.maineforestservice.gov/ConditionsReportsIndex.htm)

Maine Forest Service

Forest Health and Monitoring