Lake States
Forest Health Watch

Northeastern Area

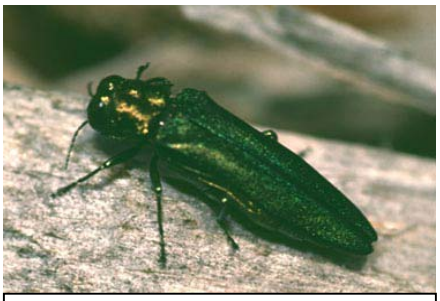
October 9, 2002

About this newsletter…

The Forest Health Protection unit of the Forest Service located in St. Paul produces this newsletter. Its intent is to keep land managers abreast of forest health related issues such as insect and pathogen outbreaks. In order to do that, we need your assistance, please contact us with your observations.

Emerging concerns…

Emerald ash borer – Another new exotic insect has been introduced into the Great Lakes region. This one is an Asian beetle called the emerald ash borer, *Agrilus planipennis*. As the common name implies, it attacks and kills ash (*Fraxinus*) trees. The infestation is located in southeastern Michigan, around the Detroit area, and in adjacent parts of Windsor, Canada. Extensive tree mortality is occurring and it appears that this insect is a significant threat to all of our native ash in the region. The state of Michigan has placed a quarantine on six counties surrounding Detroit. A concern is the movement of infested firewood out of the area, perhaps north to cabins or hunting camps.



Emerald ash borer adults have a metallic green hue and are about 3/8 inch in length. Watch for them on the bark of ash trees in June, July and early August.

For more information on this insect please visit our emerald ash borer web site at: http://www.na.fs.fed.us/spfo/eab/index.html

We have several native *Agrilus* beetles that foresters may be familiar with, including the bronze birch borer, *Agrilus anxius*, and the twolined chestnut borer, *Agrilus bilineatus*. The pattern of attack on a tree is very similar between the emerald ash borer and the two species mentioned above. Initially, dead twigs and branches occur in the upper crown. This can be followed by the death of larger branches and then eventually the entire tree dies. It can take 2-3 years of repeated infestations to kill trees. Characteristic D-shaped exit holes show where adults have cut holes through the bark to emerge. Removing the bark reveals characteristic serpentine (winding) larval galleries.

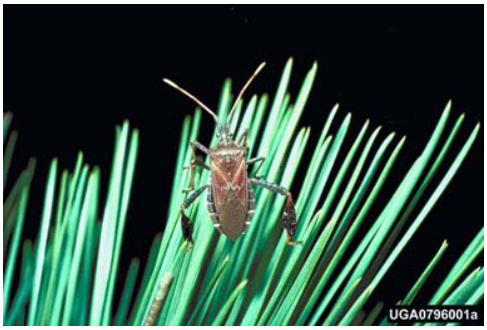
One complicating factor is that ash trees, especially in urban areas, can have dieback similar to that described above without emerald ash borer being present. For a number of years we have been receiving reports of ash decline and ash yellows, especially in areas such as southern Michigan, Indiana and Iowa. These declining trees probably are prime targets for a beetle that thrives in a stressed host. Further, we do have several native insects that tunnel into ash trees causing entrance and exit holes and galleries under the bark. For more information on common ash pests, visit: http://www.forestpests.org/ash/ashpests.html

Late summer/fall insects and diseases…

There is a large group of caterpillars that feed on the leaves of hardwood trees in late summer through early fall. As a general rule, late season defoliation is thought to be less damaging to trees than is early season defoliation. This year we had reports of several late-season defoliators including **fall webworm**, *Hyphantria cunea*, **redhumped oakworm**, *Symmerista canicosta*, and **walkingsticks**, *Diapheromera femorata*. **Fall webworm** is a common species throughout the Lake States that is easily identified by the large silk tents that it constructs. These tents can enclose large branches and at high populations entire trees can be covered in silk. The caterpillars are hairy and relatively large when fully developed, about 25 mm in length. Fall webworms feed on a wide variety of trees, but seem to prefer walnut and ash. **Redhumped oakworm** defoliation was reported on the Huron National Forest. Historically, large outbreaks have been reported in the oak types found in the Lower Peninsula, so perhaps this smaller localized outbreak may expand next year. **Walkingsticks** are generally regarded as a novelty insect, but they can cause significant defoliation, especially in oak forests. Walkingstick defoliation is most often localized, it is unusual to have widespread outbreaks. Walkingsticks in the northern states tends to have a 2-year cycle, with egg hatch delayed one year. This leads to high populations occurring in intermittent years, rarely would you have two consecutive years of defoliation in the Great Lakes states.

In August and September, there were numerous reports of scattered dead and dying oaks across the northern half of Wisconsin and Minnesota. It appears that most of these trees were infested with **twolined chestnut borer**, *Agrilus bilineatus*. This beetle is a native species. We tend to have outbreaks following periods of tree stress, most often drought. In this case the likely culprit is repeated defoliation by the forest tent caterpillar (FTC). FTC has been at very high levels across most of the areas reporting this oak mortality. Twolined chestnut borer mortality shows up in late summer with the leaves on infested trees turning reddish-brown. These leaves tend to hang on to the twigs, they don't drop quickly like those on oak wilt infected trees. Removing the bark should reveal the winding galleries made by the larval stage of this small beetle. D-shaped exit holes may also be visible on the outer bark surface. For more on this insect see
http://www.na.fs.fed.us/spfo/pubs/fidls/chestnutborer/chestnutborer.htm

Winding galleries and larvae of the twolined chestnut borer.

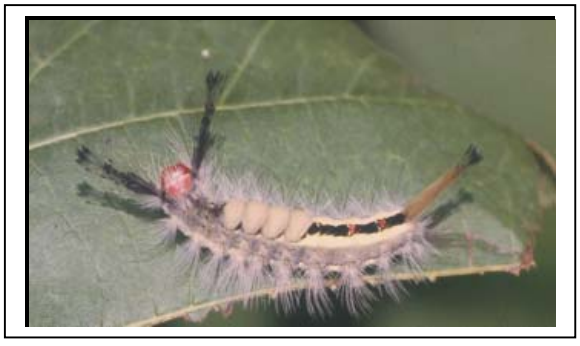


Other common late-season insects to watch for are **box elder bugs,** the **multicolored Asian ladybeetle,** and **conifer seed bugs**. This group is encountered on the sides of homes and cabins during sunny autumn days. Adults are trying to find a well-protected location where they can spend the winter. Asian ladybeetles have been abundant the last few years though few reports have been received this year.

<<The **conifer seed bug** pictured is a relatively large insect that feeds on developing pine seed. These bugs also congregate on homes and try to find sheltered locations for the winter.

Quiz…

Test your knowledge on a couple of late season insects. The beetle on the left is one of our more common long-horned wood borers. Adults can be found visiting goldenrod in September, especially when the goldenrod is located near black locust trees (hint). The caterpillar is a common species found from mid-summer through early fall. It feeds on a variety of hardwoods. Key characters include the different types of hair tufts. Answers are found below.



Hot topics…

Color change, if you would like to access a nice publication that explains why and how trees change color visit:
http://www.na.fs.fed.us/spfo/pubs/misc/leaves/leaves.htm

Quiz answers…

The beetle is a **locust borer**, *Megacyllene robiniae*. This is one of our most striking long-horned beetles with the bright-yellow bands across the thorax. The third band on the wings is W-shaped. The larvae of this beetle tunnels extensively through the heartwood of black locust. Adults emerge in late summer and often congregate on goldenrod blossoms. The adult sugar maple borer, *Glycobius speciosus*, looks very similar but has two black dots in a large yellow band at the end of the wings. The caterpillar is the **white-marked tussock moth,** *Orgyia leucostigma*.

This is a common species that feeds on many hardwoods. It can have 2 generations in a summer so it is found throughout the year.

Publications and resources…

Copies can be obtained by contacting our office at the address or phone number listed to the right.

Almost all of our publications are available via our home page found on the World Wide Web. This can be accessed at:

http://www.na.fs.fed.us/spfo/

We have several new publications that are available including the following:

Emerald ash borer, USDA FS Pest Alert
http://www.na.fs.fed.us/spfo/pubs/pest_al/eab/eab.htm

Eastern larch beetle, USDA FS Forest Insect and Disease Leaflet
http://www.na.fs.fed.us/spfo/pubs/fidls/elb/elb.htm

Directory of exotic forest Insect and disease pests, Michigan State Univ, Ext. Bull. E-2811
Not available on the web

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