



AgBrief

Forest Pest Management

Office of Plant Industries and Pest Management, April 2013

MDA's Forest Pest Management Section protects high-value forest and landscape trees in urban and rural areas from losses due to insects and diseases. High value forest land includes managed forests with wildlife resources and recreational areas that are considered economically and socially important. MDA monitors forests and conducts field activities from field offices in Harford, Allegany, Talbot and Frederick counties.

Cooperative Forest Health Program

Because Maryland has a limited area of uninhabited and unmanaged forests, forest owners, managers and public citizens are usually the first to discover insect and disease problems and report them to a local Forest Pest Management office. Once a pest problem is reported, MDA identifies the pest, and if appropriate conducts aerial and ground surveys, determines how large the infestation area is and what the impact of the infestation could be. MDA also develops possible mitigation activities and evaluates on-going progress. Several forest pests pose significant threats to the health of Maryland forests. MDA conducts annual surveys and projects to assess and manage the impact of these pests. The most dangerous are noted below.

Gypsy Moth

The gypsy moth is by far the most destructive pest of forest and shade trees in Maryland and a primary focus area for MDA's Forest Pest Management Section. The first gypsy moth eggs masses were detected in Maryland in 1971, and the first extensive defoliation occurred in 1981. Large periodic outbreaks of gypsy moth have affected hundreds of thousands of acres statewide.

The Maryland Cooperative Gypsy Moth Suppression Program is a partnership between the Department, the USDA Forest Service, local jurisdictions and landowners. The program is designed to protect priority forest and shade trees in selected sites on public and private forested land.



In a labor intensive process, Hemlock trees are injected by hand to protect them from the HWA.

Each fall and winter, MDA conducts an extensive survey for gypsy moth egg masses to determine potential areas of defoliation. Egg hatch begins in mid-to late April. By June, the caterpillars eat the leaves – sometimes all of the leaves -- of oak and other hardwoods. Trees that lose all or most of their leaves may grow them back in the same season, but they will be weakened, making them vulnerable to other forest pests, diseases, drought and other stresses. These stresses can lead to a significant loss of trees.

Naturally occurring predators, parasites, and diseases often kill gypsy moths; however, when natural enemies fail to suppress high infestations, MDA may work with federal and local governments to conduct aerial insecticide treatments to protect and preserve forest and shade trees.

In FY 2012, MDA surveyed more than 467,000 acres and treated 2,530 acres – all of it in Garrett County.



The last major outbreak was in 2007-2008 when more than 68,000 trees lost most of their leaves and MDA treated more than 99,000 acres.

In May 2013, MDA intends to spray one small area in Worcester County and one small area in St. Mary's County as well as 12,000 acres of 58 individual areas in Garrett County. When MDA does spray for gypsy moths, citizens can follow the aircraft(s) in almost-real time on Twitter @MDGypsyMoth.

Hemlock Woolly Adelgid

The hemlock woolly adelgid (HWA), a small insect the size of a dot, threatens to wipe out Maryland's 42,000 acres of Hemlock forests, most of them in Baltimore County west to Garrett County. HWA are most easily recognized by the white "woolly" wax they produce on young hemlock twigs. The "wool" is present all year but is most abundant and conspicuous during the spring and fall when egg masses are present. Most other life cycle stages are much harder to see.

The HWA came from Asia and arrived in Maryland in the early 1980s when there was virtually no way to fight it. Several hemlock stands which have been infested for more than 10 years have extensive decline and some mortality.

MDA, in cooperation with the Maryland Department of Natural Resources (DNR), have developed a HWA Management and Suppression Plan that includes injecting a pesticide directly into the tree or into the soil around the tree. This plan sets forth management options for HWA on public lands across the state. Treatments began in the fall of 2004 and have continued ever since.

During FY 2012, MDA in conjunction with DNR, the Maryland Conservation Corps and Boy Scout volunteers treated 1,947 trees by trunk injection and 10,365 trees by soil injection. Treated trees averaged a 77 percent reduction in HWA while non-treated trees averaged a 20 percent reduction.

Since 2004, MDA has also released predatory beetles to combat the HWA. In FY 2012, MDA released 2,606 beetles in Garrett, Harford, Frederick and Baltimore counties.

Monitoring and Surveying: MDA's Forest Pest Management Section also monitors dangerous pests that have either not shown up in Maryland in great numbers or have not yet crossed into the state. **The southern pine beetle**, for instance, is one of the most destructive insect pests of pines. It is commonly found on the lower Eastern Shore and Southern Maryland, but its populations have been below outbreak level since 1994. The **Sirex wood wasp**, which is also highly destructive of pine, has not yet been detected in Maryland, but MDA surveys the northern tier counties annually to determine if it has arrived.

New Technology: MDA began using new satellite imagery in FY 2012 to detect changes in forest conditions. Images in Garrett, Charles and St. Mary's counties document the damage done by gypsy moth as well as canker worms, which are not considered to be an invasive pest. The technology is called the Disturbance Mapper.

If you find an Invasive Pest: To report a suspect infestation or to ask specific questions, call the University of Maryland Home and Garden Information Center at 800-342-2507 or visit <http://extension.umd.edu/hgic>.

For more information about the Forest Pest Management Section and these pests, see: http://mda.maryland.gov/plants-pests/Pages/forest_pest_management.aspx



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