

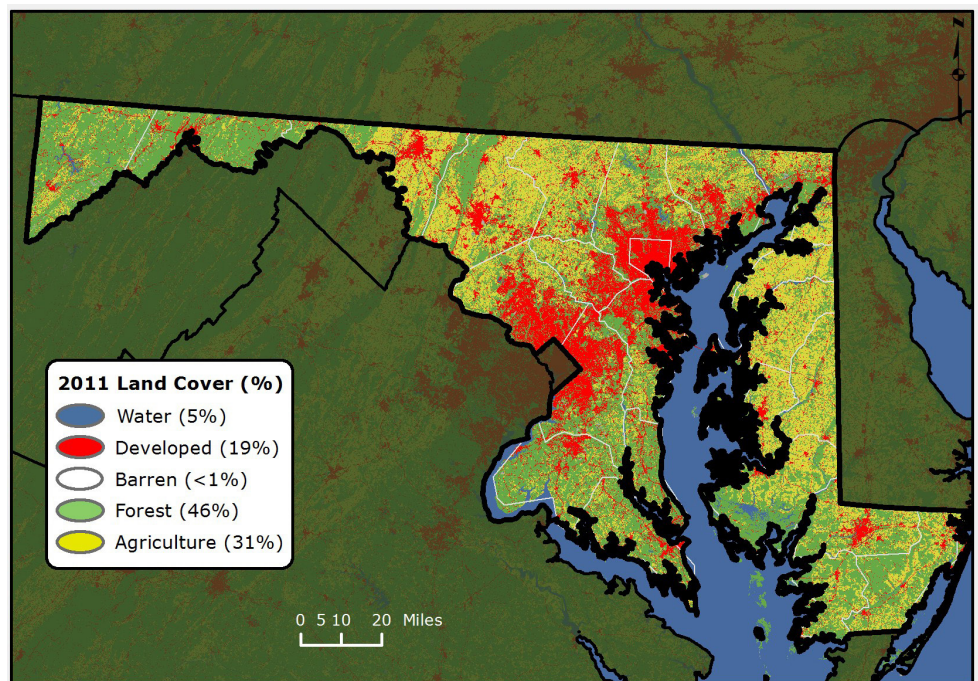
2014 Forest Health highlights

MARYLAND

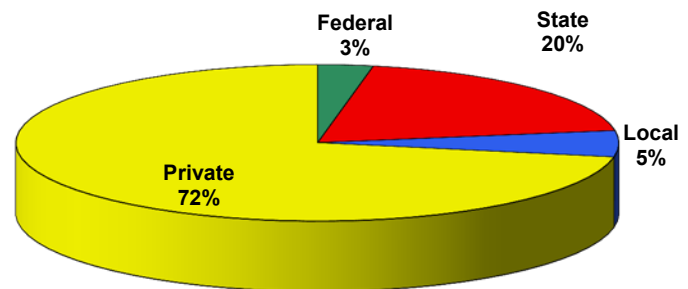


Forest Resource Summary

Maryland occupies a land area of 6,264,876 acres. Forest land comprises 2,709,062 acres, of which 72 percent is privately owned. Healthy, productive forests are critical in urban and rural areas for soil conservation, clean air and water, wildlife habitat, outdoor recreation, and aesthetics. The forest products industry is the largest employer in Allegany and Garrett Counties and the second largest employer on the Eastern Shore.



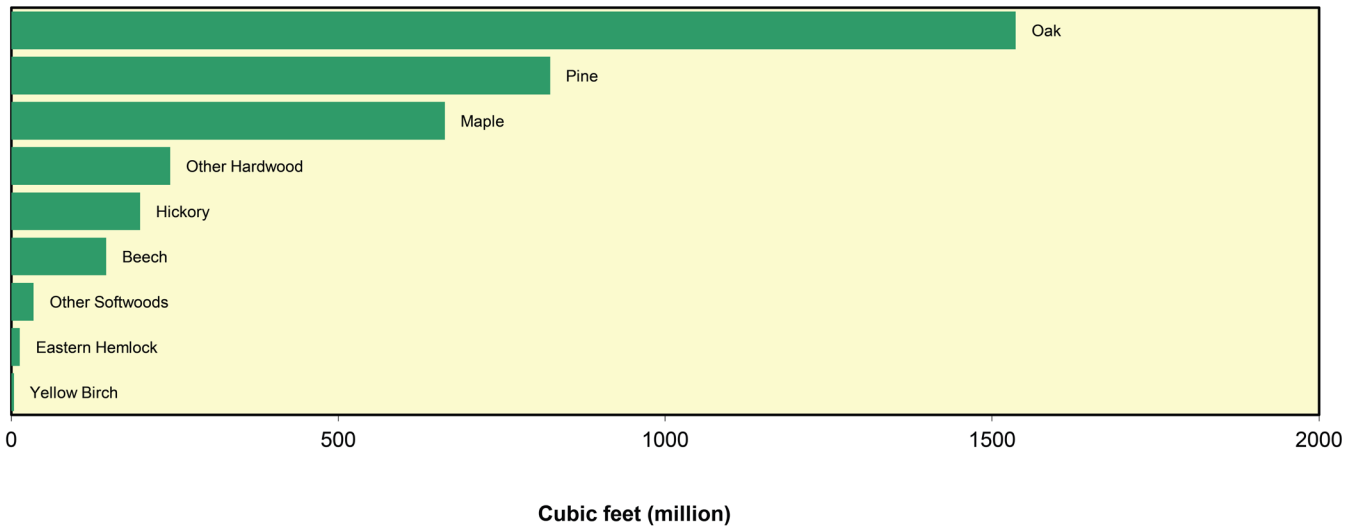
Forest Land Ownership in Maryland, 2012



Forest Health Programs

State forestry agencies work in partnership with the U.S. Forest Service to monitor forest conditions and trends in their State and respond to pest outbreaks to protect the forest resource.

Net Volume of Growing Stock on Timberland by Species in Maryland, 2012



Forest Pest Issues

Gypsy Moth

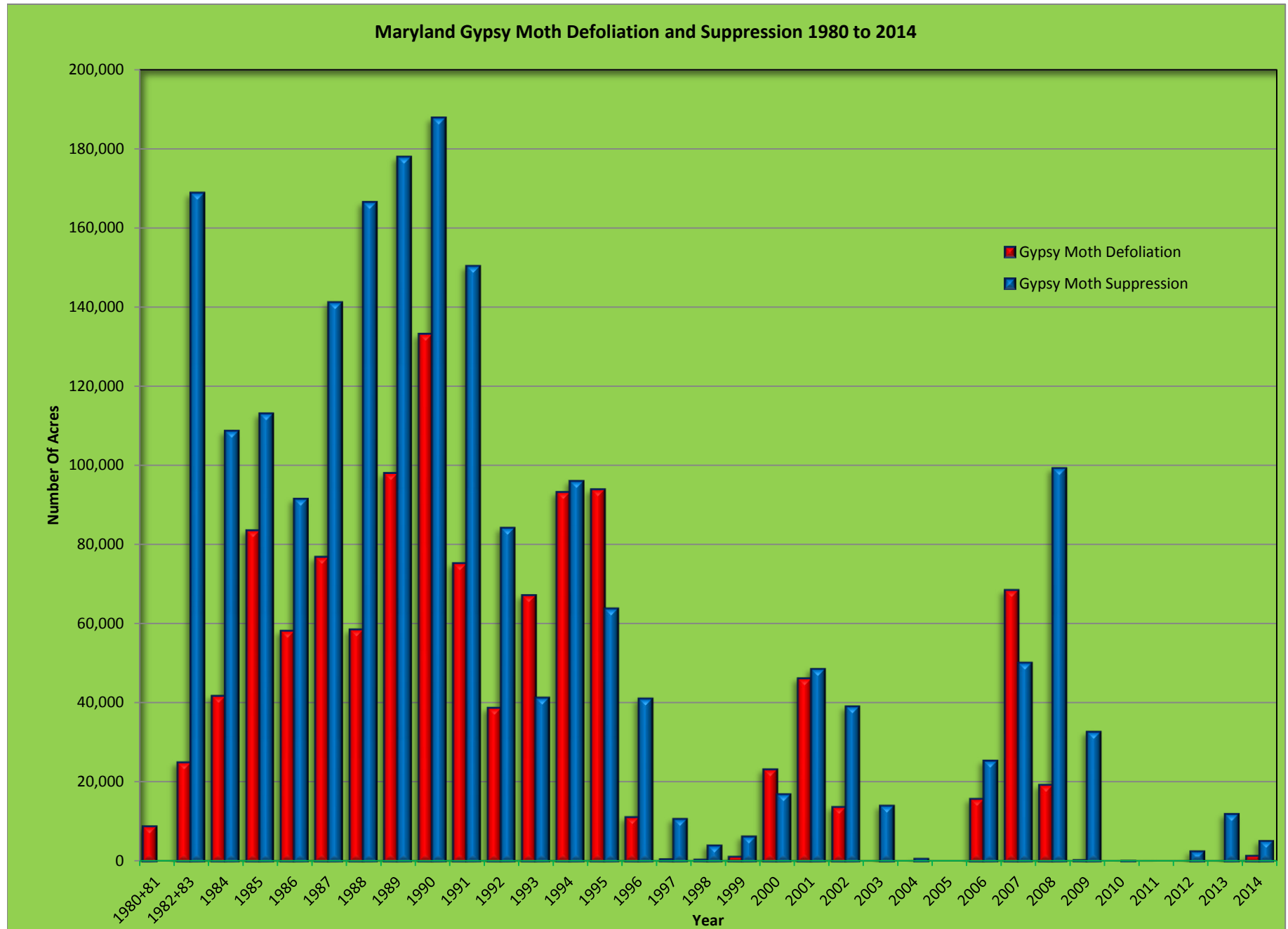
The gypsy moth is the most serious threat to oak forests in the United States. The first eggs were detected in Maryland in 1971, and the first extensive defoliation occurred in 1981. Each fall and winter, the Maryland Department of Agriculture (MDA) conducts an extensive survey for gypsy moth egg masses to determine potential areas of defoliation. From August 2013 through March 2014, MDA Forest Pest Management personnel conducted gypsy moth egg mass surveys on 479,198 acres of "high-value" forested lands. "High-value" forested sites include areas with development, recreational use, managed forest and wildlife resources, and other site conditions that render dieback and mortality economically and socially important. The survey results indicated that the current populations were sufficient to cause moderate to heavy defoliation on 5,699 acres of high-value rural and urban forest in 2014. During 2014, MDA sprayed 5,164 acres in 37 spray blocks with

Foray 48B. All spray areas were in Garrett, Allegany, and Talbot Counties. Application started May 6, 2014, and concluded May 30, 2014.



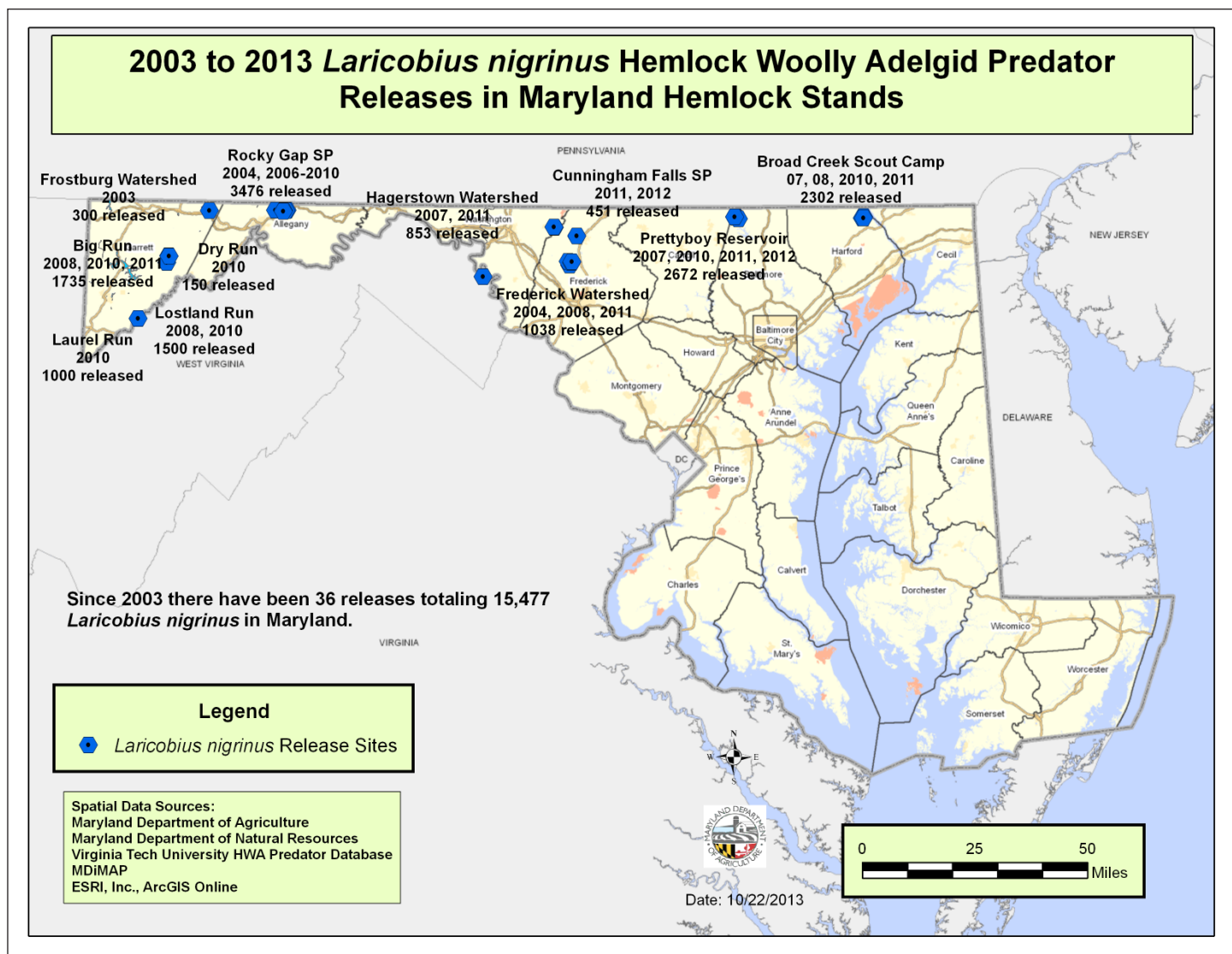
Gypsy moth (Lymantria dispar (Linnaeus)). (Photo courtesy of USDA APHIS PPQ Archive, UGA1148049, forestryimages.org)

Historical Gypsy Moth Defoliation and Suppression



Hemlock Woolly Adelgid (HWA)

HWA remains the major threat to the health of eastern hemlock. Infested hemlocks occur in the metropolitan area between Baltimore and Washington and in natural stands from Harford to Garrett Counties. *Laricobius nigrinus*, a predatory beetle of the hemlock woolly adelgid, has been released in several areas since 2004.



Hemlock Woolly Adelgid Suppression

A joint task force of MDA and Maryland Department of Natural Resources personnel addressed the multidisciplinary needs of the HWA infestation. The task force prioritized more than 50 hemlock stands and selected them as the sites where suppression might be attempted. Only publicly owned sites would be part of this suppression project.

Fall 2013 - Spring 2014 Imidacloprid Treatments for Hemlock Woolly Adelgid in Maryland							
Hemlock Stand	County	Trunk Injection #Trees	Trunk Injection Inches DBH*	Soil Injection # Trees	Soil Injection Inches DBH*	Total #Trees	Total Inches DBH*
Green Ridge State Forest	Allegany	95	1339	674	6924	769	8,263
Prettyboy Reservoir	Baltimore	155	1275	840	7439	995	8,713
Frederick Watershed	Frederick	378	2488	779	4614	1,157	7,102
Cranesville Swamp**	Garrett	281	3523	381	6338	662	9,861
New Germany State Park***	Garrett	484	5503	7859	86977	8,343	92,479
Potomac State Forest	Garrett	280	2275	94	624	374	2,898
Savage River State Forest	Garrett	454	4445	257	2305	711	6,750
Swallow Falls State Park	Garrett	0	0	436	4677	436	4,677
Broad Creek Boy Scout Camp	Harford	0	0	99	1732	99	1,732
Seneca Creek State Park	Montgomery	157	1342	167	1132	324	2,474
South Mountain State Park	Washington	0	0	145	1057	145	1,057
Total		2,284	22,190	11,731	123,818	14,015	146,008
*DBH = the diameter of the tree trunk at 4.5 feet above the ground							
** Owned By The Nature Conservancy							
*** *Treatments done by Forest Pest Mangement and Maryland Conservation Corps (Department of Natural Resources)							

Southern Pine Beetle (SPB)

SPB is one of the most destructive insect pests of pines. Maryland is at the northern edge of its range, and this pest is commonly found on the lower Eastern Shore and southern Maryland. Since 1989, Maryland has participated in a multistate SPB survey throughout the Southern United States using pheromone-baited traps. Trap data indicated that SPB numbers would continue to remain low in 2013. Populations have been below outbreak level since 1994.

Sirex noctilio (Woodwasp)

Sirex woodwasp has been the most common species of exotic woodwasp detected at United States ports-of-entry associated with solid wood-packing materials. Recent detections of this woodwasp outside of port areas in the United States have raised concerns because this insect has the potential to cause significant mortality of pines. The

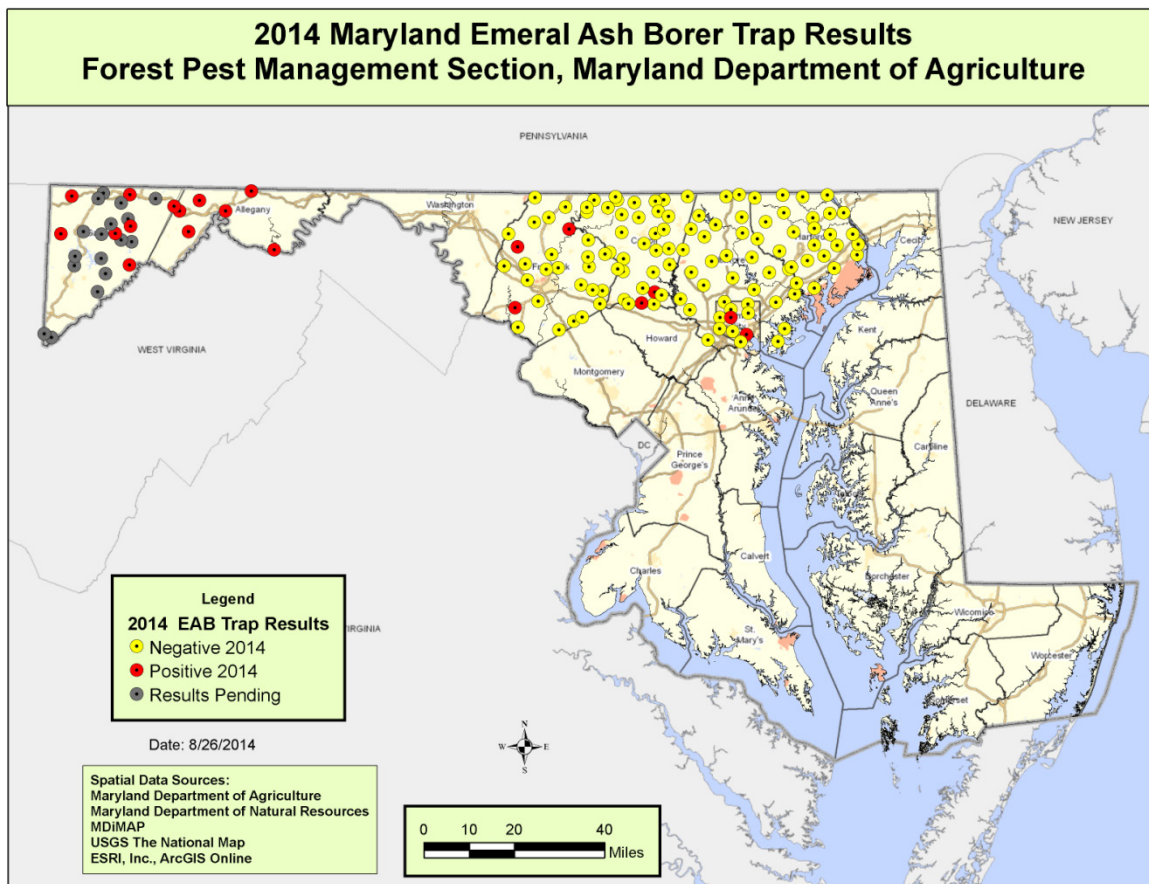
Sirex woodwasp has not been detected in Maryland but is known to be in Pennsylvania. To detect this insect, MDA placed two traps per county in the northern tier counties and one trap for all other counties, for a total of 30 traps in pine woods. All traps were negative during FY 2013.

Emerald Ash Borer (EAB)

The emerald ash borer (*Agrilus planipennis* Fairmaire) is a metallic green, wood-boring beetle originally from Asia that was first detected in the United States in 2002 near Detroit, MI. Since then, this invasive insect has spread to at least 15 other States, including 13 counties in Maryland. It is responsible for the death of millions of ash trees across the United States. Infested trees usually die within 3 to 5 years as the flow of water and nutrients within the tree is cut off by boring EAB larvae that feed on the inner bark.

An estimated 5 million ash trees greater than 5 inches in diameter are growing on forest land in Maryland. The highest concentrations of ash are in western Maryland forests. But ash is also an important urban tree often planted along streets or growing in landscapes. An estimated 5 million ash are thought to be growing in urban settings within the Baltimore metro area alone.

Currently, the Maryland Department of Natural Resources has a federally funded project to help communities assess their risk to emerald ash borer and to make plans to mitigate its impacts.



Thousand Cankers Disease of Black Walnut (TCD) and Walnut Twig Beetle (WTB)

Eastern black walnuts planted in the Western United States have experienced dieback and mortality. The WTB spreads TCD. An infested tree usually dies within 3 years of visible symptoms. This beetle and disease had not been reported in the natural range of the eastern black walnut until they were discovered in Tennessee in 2010. Since then, TCD has been found in Pennsylvania, North Carolina, and Virginia.

MDA Forest Pest Management (FPM) started surveying for this disease with other Mid-Atlantic States in 2011. In 2013, MDA FPM staff visually inspected for visible symptoms of TCD. So far, the disease has not been seen in Maryland. Twenty-eight traps baited with a pheromone for the WTB were set statewide. No WTB have been found.

Bacterial Leaf Scorch (BLS)

BLS was prevalent all through the State this year. It was observed not only on ornamental trees but throughout the State in forested areas. BLS was less severe this year than last.

Beech Bark Disease

Beech bark disease has been found only in Garrett County. There are 154,473 acres of infested forest in Garrett County.

References

Land Cover Map:

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Forest Land Area by Ownership:

Oswalt, Sonja N.; Smith, W. Brad; Miles, Patrick D.; Pugh, Scott A. 2014. Forest resources of the United States, 2012: a technical document supporting the Forest Service 2015 update of the RPA Assessment. Gen. Tech. Rep. WO-91. Washington, DC: U.S. Department of Agriculture, Forest Service, Washington Office. Table 2.

Net Volume of Growing Stock on Timberland by Species:

Oswalt, Sonja N.; Smith, W. Brad; Miles, Patrick D.; Pugh, Scott A. 2014. Forest resources of the United States, 2012: a technical document supporting the Forest Service 2015 update of the RPA Assessment. Gen. Tech. Rep. WO-91. Washington, DC: U.S. Department of Agriculture, Forest Service, Washington Office. Table 23 & 24.



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