



Virginia

Forest Health Highlights

2013

The Resource

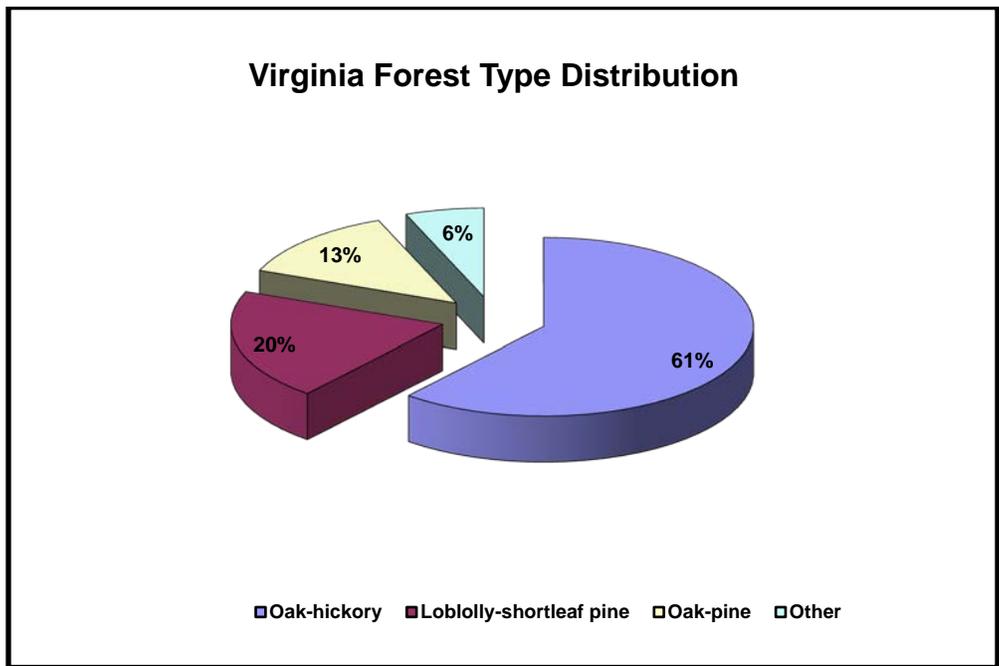
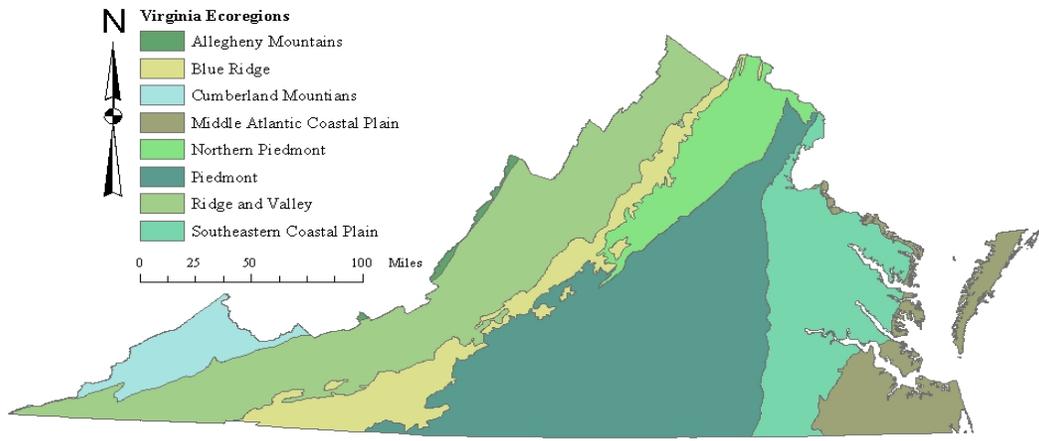
Virginia's forests cover 15.8 million acres, more than 62% of the state's land area. The majority of the state's forested land, some 10 million acres, is in non-industrial private ownership, while approximately 1.6 million acres are in national forests. Virginia's forests are prized for their scenic beauty, supporting tourism and outdoor recreation and providing wildlife habitat from the

Appalachian Mountains to the lowlands of the Atlantic Coastal Plain. Major forest types in the state include oak-hickory, loblolly-shortleaf pine, and mixed oak-pine. Other minor types account for 6% of this acreage. The most abundant tree species by volume is tulip poplar, followed by loblolly pine, chestnut oak, white oak and red maple.

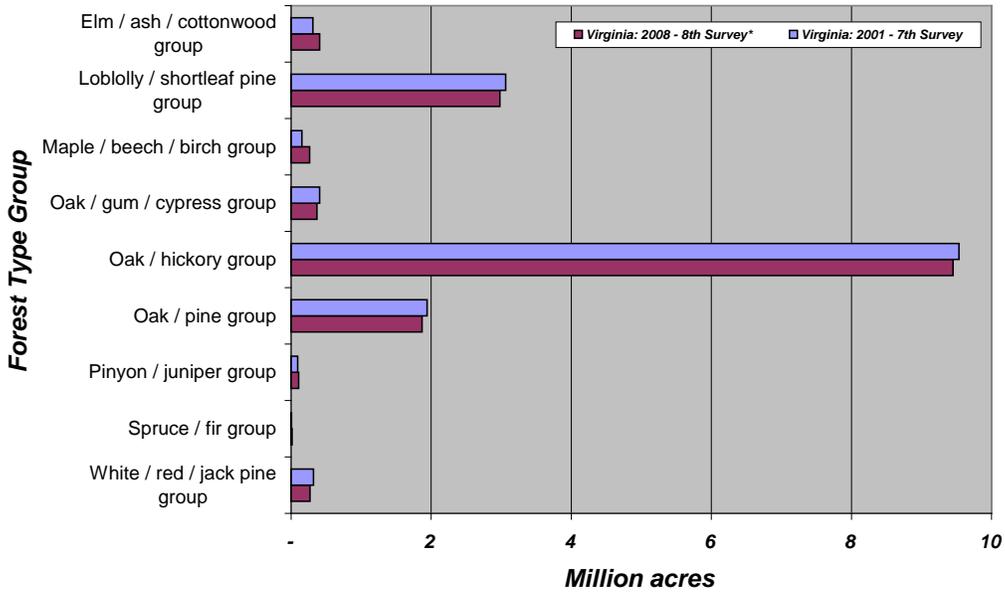
The most abundant trees species by number of trees is red maple, followed by loblolly pine, tulip poplar, sweetgum, and blackgum.

Nearly 85% of Virginia's forests are natural, while 15% are planted. A number of tree species have undergone a significant decline from historical abundance, including table mountain pine, pitch pine, shortleaf pine, eastern hemlock, Atlantic white cedar, and longleaf pine. Restoration efforts are underway for many of these species.

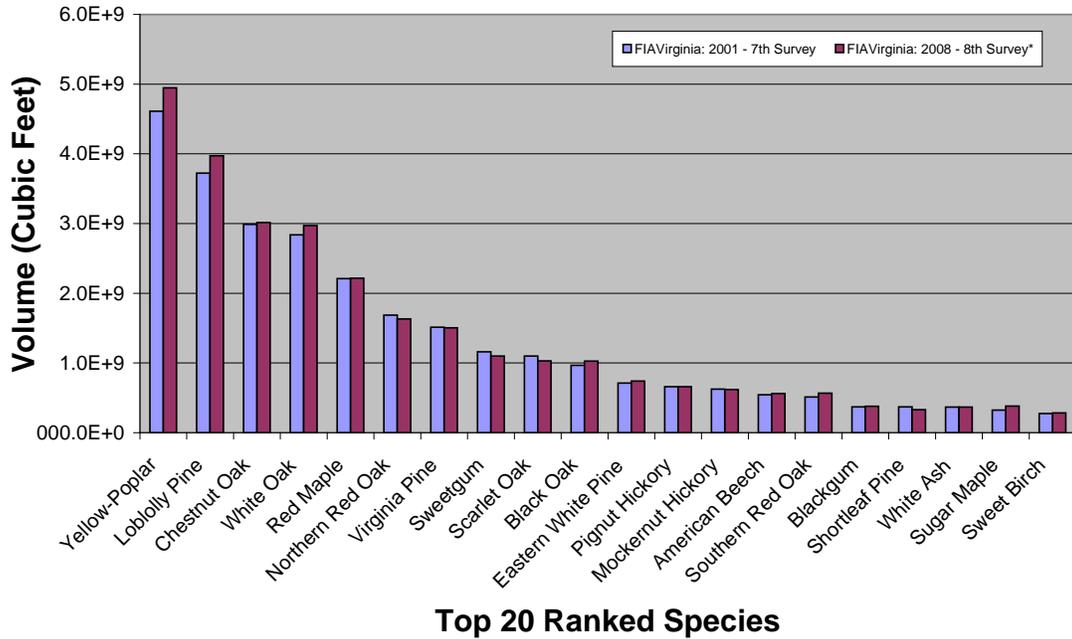




Acres by Major Forest Types

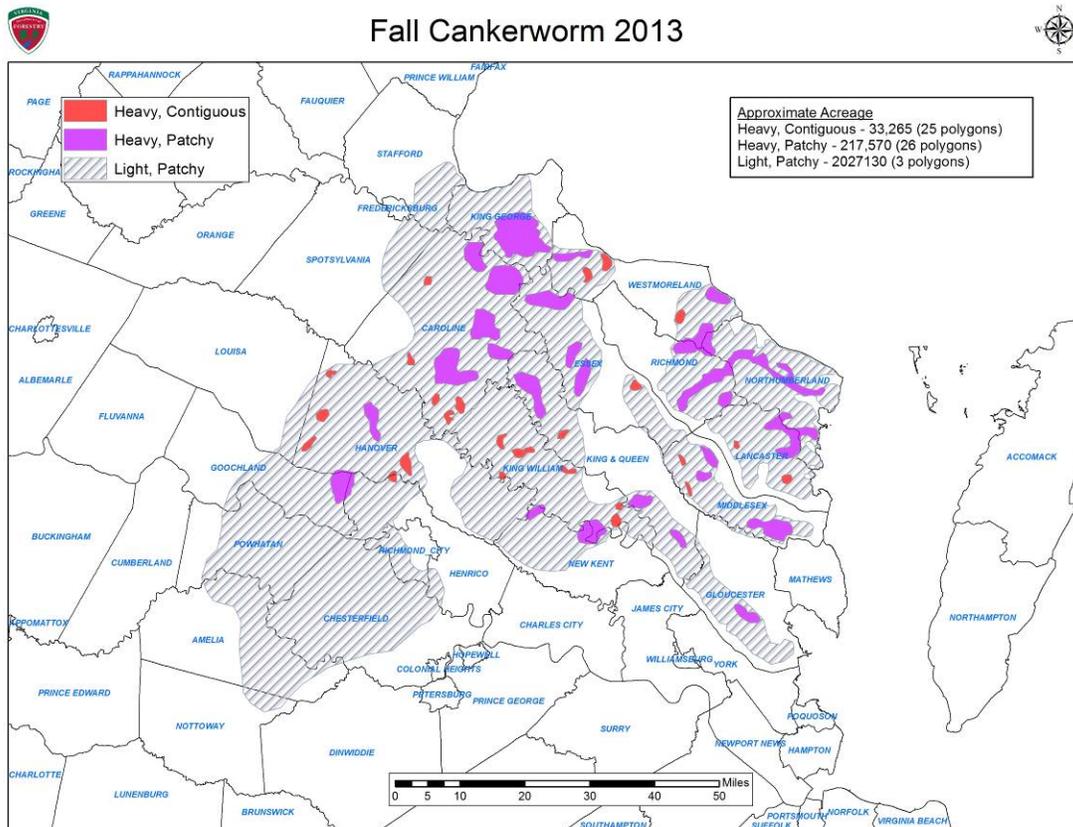


Volume of all live on forestland by species (cu/ft)



Forest Influences and Programs

The third year of an extensive **fall cankerworm** outbreak spanned a very large area covering much eastern Virginia. The worst-hit areas included Powhatan, Hanover, Henrico, and Caroline counties and the City of Richmond. In total, over 20 counties and a total area spanning almost **2.3 million acres** were variably impacted, although a majority of the defoliation was light and patchy in nature. Approximately **33,000 acres** were classified as having heavy, continuous defoliation and an additional **217,000 acres** were classified as heavy but patchy. Most of the severely defoliated trees were oaks, while maple and beech also saw some moderate to heavy defoliation. Due to a continuously wet spring and summer, most trees re-foliated very quickly and are expected to live through the event. An outbreak of this duration and magnitude is unprecedented as far as Virginia records go, particularly for this part of the state. Typically, cankerworm outbreaks occur in the mountains at the higher elevations.



The [southern pine beetle](#) has been relatively quiet during the last 10 years. In general, the southern pine resource in central and southeast Virginia remains healthy and productive. Federal funds from the USDA Forest Service, Forest Health Protection support our (Southern Pine Beetle Prevention) cost-share program with landowners and loggers for thinning of pine stands. To date, Virginia has thinned about 45,000 acres of loblolly pine out of approximately 130,000 acres estimated to be overstocked. Overstocked pine stands are more vulnerable to bark beetle outbreaks, and thinning is the best method of reducing this threat.

Numbers remain low in most places based on the spring trapping survey results and relatively few reports, and there has been a decrease in activity since last year. In total, **19 spots amounting to 134 acres of dead loblolly pine across 5 counties were detected. An additional 458 infested trees were reported among 12 separate reports.** A large majority of the acreage came from one

area in western Hanover County where, in 2011, a spot within an unthinned pine stand that was converted into subdivisions and had gone undetected for years was allowed to grow and was never reported or dealt with. About 400 acres of this area were ultimately clear-cut and managed, but due to the complex ownerships and insufficient, untimely cutting and removals, SPB has since spread to other adjacent and nearby properties. No counties were in outbreak status, although, on top of the 300+ acres in western Hanover last year, there continues to be spillover from these past outbreaks and this remains an active area. The other area where several spots were concentrated was central Cumberland County within the Cumberland State Forest. However, most of these spots were inactive and quite small.



For the fourth year in a row, we have reported **virtually 0 defoliated acres** from [gypsy moth](#) from aerial survey, although **1 acre of light defoliation** was reported from a ground observation by a VDOF forester. This occurred in Tazewell County (Southwest Virginia) just to the west of Burkes Garden, an area that has seen elevated STS trap catches during the last couple of years and bears keeping a close eye on for next spring. Since 2009, continued wet spring weather and the resultant impact of *Entomophaga maimaiga* has likely contributed to low gypsy moth levels during this time period. However, the next dry spring will likely portend populations gradually building up to damaging levels again.

A more recent threat is the [emerald ash borer](#) (EAB). First discovered in Virginia during 2003 in Fairfax County, it has since spread to at least 17 counties across the Commonwealth and was also found to be causing widespread ash mortality in several forested areas throughout Virginia. Virginia and the nation face the prospect of losing all ash species from natural and urban landscapes in the forthcoming decades. In Virginia, the impact may include the loss of the approximately 187 million ash trees in her forests and could eventually cost the Commonwealth many millions of dollars. No new county detections



occurred in 2013, but the pest is spreading to new areas, including the north end of Shenandoah National Park.

Significant hemlock decline continues in many areas due to the [hemlock woolly adelgid](#), although trees in some areas that have supported infestations for many years are still hanging on. The adelgid continues to spread and has more-or-less permeated the entire range of hemlock within Virginia, minus a few pockets here and there. Hemlock mortality levels average about 22% in the southwest portion of the Commonwealth from Bath and Rockbridge counties southwest to Lee County. This is a 2% increase from last year's mortality level estimate. Details of the HWA survey are outlined in a separate report.

The newest threat to Virginia's forests is [thousand cankers disease](#) (TCD) of black walnut. Beginning in June 2011, positive identification of the fungus and the associated walnut twig beetle occurred for five counties and two municipalities: these include the counties of Henrico, Chesterfield, Hanover, Goochland, and Powhatan and the cities of Richmond and Colonial Heights. With the deployment, by VDACS, of walnut twig beetle pheromone traps across the Commonwealth, new TCD infestations were discovered in northern Prince William and Fairfax Counties in northern Virginia in 2012. This now makes two major metropolitan areas in Virginia where WTB/TCD appear to be pretty widespread. Surveys by VDACS continued in 2013 but no new counties or municipalities were added to the quarantine. WTBs were caught in the far southeast corner of Louisa County (A piedmont county adjacent to the currently quarantined Goochland County) this summer, but no disease or cankers were found in this county as of yet. Louisa County could be quarantined next year if continued monitoring reveals TCD there.



Brood II of the [periodical or 17-year cicada](#) emerged throughout the Piedmont and western Coastal Plain this May. Many locations within these regions showed extensive 'flagging' of vegetation, particularly on oak trees, due to oviposition damage by the cicadas. The worst flagging was on trees along roadsides and the edges of fields, making these trees highly visible to the public. Damage was sometimes quite extensive, but very spotty in nature across the outbreak area. Most trees are expected to recover just fine, but some already weakened may be further impacted due to foliage loss and dead branches leading to secondary infections from invading fungi. Small trees that were hit hard will likely be heavily impacted by dieback, but most will re-sprout vigorously.



Wavy leaf basketgrass (WLBG), a relatively recent emerging weed problem, has been confirmed in several areas of northern Virginia and is widespread in central Maryland, but nowhere else in the U.S. to date. It's a shade-loving grass that often grows with Japanese stiltgrass, which it eventually dominates. It thickly carpets the forest floor and outcompetes and inhibits native flora. Sticky seed-heads promote spread by animal and human movement of seeds stuck to shoes, clothing and fur and can be transported potentially long distances. While most of the major non-native invasive plants in Virginia have had hundreds of years to establish and become very widespread, WLBG is still in the relatively early phase of invasion. Currently, only 15 distinct populations have been identified among 7 counties, totaling approximately 220 acres. These populations range in size from 1 square foot to 80 acres. Therefore, with sufficient funding and effort, Virginia has a real chance to eradicate this species if it acts quickly. Previous control efforts at several sites have been ongoing for years but have stalled out due to lack of funding. New USDA Forest Service, Forest Health Protection funding will help revitalize efforts to control this species and survey Virginia for additional infested sites, which no doubt exist.

