

# Alabama

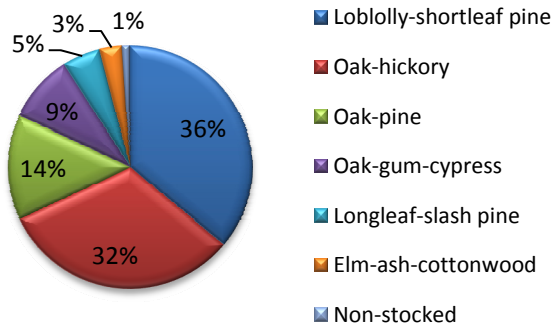


## Forest Health Highlights 2009

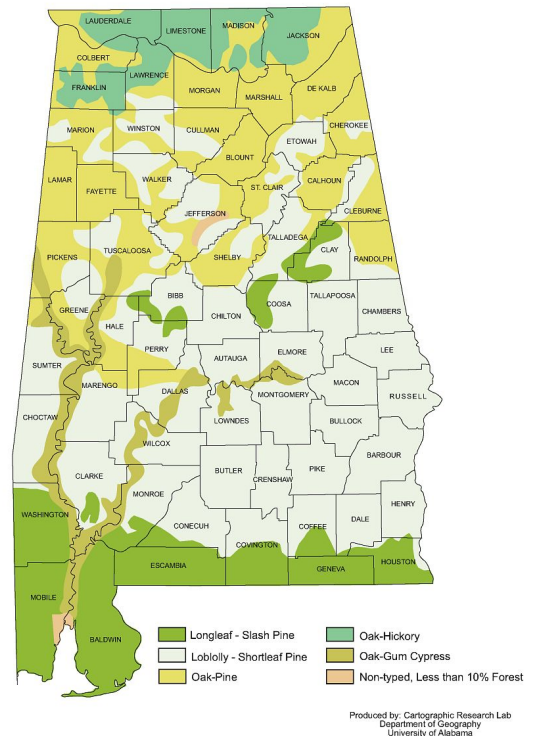
### The Resource

Alabama's forest resource remains consistent throughout the years. Still maintaining the status of being one of the largest commercial forestland in the nation, Alabama's forests cover approximately 22.7 million acres. Of the million acres of forestland, the majority, 80% is owned by private, non-industrial landowners, a slight increase from previous years. The amount of forestland owned by forest industry is persistently declining from 17% to 15% and now to approximately 14% due to divesting of property. The amount of public forests, primarily State and National Forests, remains relatively constant at approximately

**Alabama Forest Type Distribution**



**Alabama Forest Types**



6% of the total forestland in the state. From the Appalachian Mountain plateaus of the northeast to the flat sandy beaches of the Gulf Coast, Alabama illustrates a continuous example of scenic diversity through sustainable forestry. To completely visualize the diversity that exists in the Alabama landscape, a graph is presented illustrating the major forest types in the state. The forest type distribution has changed dramatically since historical time, with longleaf-slash pine forests being severely reduced. In recent years, the amount of oak-hickory forests in the state has slightly increased from 30% to 32%. The current distribution of forestland types, however, has generally remained the same for the last several years.

## Forest Influences and Programs

**Southern pine beetle (SPB)** was not a serious threat to Alabama's forests this year. Generally one of the state's most destructive insect became a passive, retreating pest. With cool spring temperatures and sufficient amount of precipitation, the weather in 2009 was quite favorable for low SPB infestation. The 7-year to 9-year cycle of the beetle's population may have had an impact on the level of infestation as well. Despite the drought of 2006 and 2007, the number of SPB attacks continued to decline from that struggling time period to 2009. In the months of August and September during the height of SPB activity, only 18 spots with 445 infested trees were detected statewide. No spots were reported on national forest or other federal land.



**Pine engraver beetle** also experienced a decrease in the number of detected attacks in 2009. Very few infestations were reported from ground surveys and even fewer were detected by aerial method. The amicable weather definitely had some influence on the declined infestation. There was an increase in the number of reported attacks towards the latter part of the year. During the August/September aerial flights, 4 spots with 350 infested trees were initially recorded as SPB spots, but later identified as engraver beetle infestation.



**Black turpentine beetle** infestation has always been rather low, and this year was no exception. Very few reports from individual landowners were recorded concerning declining pines from black turpentine beetle infestation. Practically all of the trees under attack were mature pines in a residential or commercial area and damaged by some type of mechanical equipment (weed eater, lightning or vehicle). Declining and weak from attack, surprisingly none of these infested trees succumbed to the pest.



**Nantucket pine tip moth** was quite recognizable this year. Several reports from numerous counties identified pine saplings being infested with pine tip moth. The occurrence of this pest was greatest during the months of March through August on planted loblolly pines. The majority of these pine stands



received intensive site preparation, reducing understory vegetation and ultimately reducing the habitat of the tip moth's predators. With most of the available systemic insecticides to control pine tip moth banned from the market, a new systemic insecticide by BASF called PTM was recently introduced as one that can potentially control this pest.

**Loopers** such as the linden looper and the cypress looper increased their presence and awareness this year. The cooler temperatures and adequate rainfall may have decreased the attack from bark beetles, but perhaps increased the population of these defoliators. Loopers, basically a periodic pest, do not generally cause death to a significant amount of trees unless the attack is severe. With natural predators around to reduce the presence of loopers, the hardwood trees that were attacked by the linden looper started to recover by the end of the summer. The baldcypress trees that were attacked by the cypress looper received more damage. Approximately 200 acres of baldcypress trees were affected by this pest.



**Pine sawflies**, also a defoliator, caused significant damage to pines this year. The Virginia pine sawfly devastated several acres of Virginia pines this past spring while the redheaded pine sawfly attacked loblolly pines in the latter part of the summer. Pine trees in both infestations recovered by control methods or natural means.

**Fusiform rust** is quite common in Alabama, but genetic improvements of pine seedlings have reduced the occurrence of this disease. Besides occasional reports from landowners about this infection on loblolly pines, this disease has not caused significant death to trees in the state.

**Annosus root disease** occurrences have been few this year. The Alabama Forestry Commission places strong emphasis on awareness to landowners about the importance of monitoring pine stands for annosus root disease. Pertinent information about good management practices for pine stands (harvesting during the summer months, the use of Borax after harvesting, etc...) contributed significantly to the prevention of annosus root disease in the state.



**Weather** conditions for the second consecutive year were relatively mild for Alabama. The state is finally recovering from the two-year drought of 2006 and 2007, with cooler temperatures and significant amount of precipitation. No major damaging storms occurred in the state, making the recovery from the drought more expedient.

**Sudden oak death surveys** were conducted in early spring 2009, with surprising results. Traps baited with rhododendron leaves were deployed in streams neighboring the selected seven nurseries. The pathogen, *Phytophthora ramorum* was detected from three of these nurseries in Alabama. Secondary surveys were conducted at these positive sites to determine if the pathogen had escaped into the local environment. The results from the secondary surveys suggested that the pathogen was detected, but the disease had not moved into the surrounding environment.

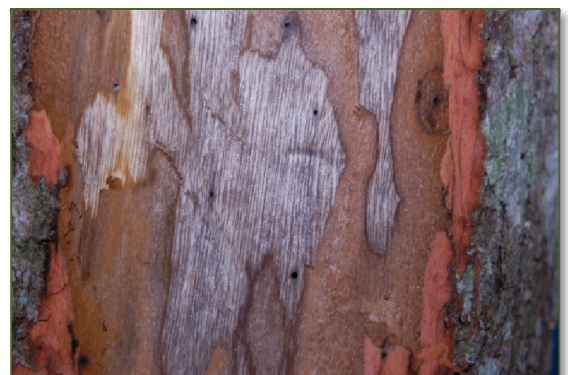


**Cogongrass** continued to be one of the most recognized non-native, invasive plant species in Alabama. With collaborative efforts from several organizations to assess and identify cogongrass, additional accomplishments were done in 2009. In September, the 2009 American Recovery and Reinvestment Act Grant was awarded to the Alabama Forestry Commission to assess, control, and possibly eradicate this noxious weed in the state. To efficiently implement the process, the 6.3 million-dollar grant was eventually contracted to Larson & McGowin, Inc., a consulting firm in Montgomery, AL. The firm will organize an effort to initially treat identified infestations north of Highway 80.



**Emerald ash borer**, a non-native, invasive insect that is causing havoc on ash trees in the mid-western states has finally reached its boundary in the southeast. Detected in Virginia and Kentucky, the emerald ash borer has spread rapidly towards neighboring states mainly by the transportation of untreated and unregulated ash firewood. With this unexpected and highly concerned situation, the southeastern states started the campaign to halt the transportation of untreated firewood. Alabama (The Alabama Department of Agriculture and Industries) continued forward with this effort by deploying emerald ash borer detection traps throughout high-traffic, forested areas in the state. From the surveys, no emerald ash borers were detected in Alabama.

**Redbay ambrosia beetle** has finally reached the border of Alabama. Previously detected in east Georgia, South Carolina, and Florida, this non-native, invasive insect was found in Jackson County, Mississippi in July, 2009, a county that borders Mobile County, Alabama. With its rapid spread of attacking trees in the laurel family, current control methods have been rather obsolete. Believed to have been introduced into Mississippi by untreated firewood, this exotic forest pest was only a threat to Atlantic Coast states, but now has become a serious threat to Alabama.



**The Southern Pine Beetle Thinning Cost-Share Program** was available again in 2009 to non-industrial, private forest landowners to reduce the risk of SPB infestation in susceptible, dense pine stands. Through this program, financial assistance was provided to encourage timber stand improvement practices, such as thinning,

to reduce the susceptibility of attack. For the 2008-2009 SPB Thinning Cost-Share program, 123 applications requesting 6,966 acres thinned were received by the Alabama Forestry Commission.

## **Future Concerns**

Kudzu, the exotic, invasive vine that has completely invaded the South may now have a naturally occurring fungus to control it. In the July 2009 issue of *Agricultural Research* magazine, the article, “Fungus Tapped to Take on Kudzu” by Jan Suszkiw proclaims the fungus, *Myrothecium verrucaria* is a biological herbicide that is very effective on controlling kudzu.

In Stoneville, MS, plant pathologist Doug Boyette and colleagues tested *Myrothecium verrucaria* on kudzu and noticed how efficient this fungus was on the non-native plant. Kudzu vines were sprayed in the morning and by mid-afternoon the treated plants were illustrating signs of damage. Even greenhouse experiments proved to have positive results. In 1998, a spray formulation of the fungus was used in the experiment that killed 100% of the treated kudzu seedlings and 90% to 100% of the treated older plants. In later tests, *Myrothecium verrucaria* also showed that non-targeted plant species like oak, cedar, pine, hickory, pecan, sassafras, and blackberry that were exposed to the spray formulation received little to no injury. Other experiments and results have proven the efficacy of this newly detected fungus on kudzu as well. Could this be the breakout discovery on controlling this aggressive, exotic plant?

## **Forest Health Assistance in Alabama**

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