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**From the Coordinator's Desk**

Forest Health is an interesting term. It is defined by the *Dictionary of Forestry* (published by the Society of American Foresters) as "The perceived condition of a forest derived from concerns about such factors as its age, structure, composition, function, vigor, presence of unusually high levels of insects or disease, and resilience to disturbance." Like most definitions, that's a mouthful and open to many different interpretations.

Forest health has become much more than just forest management and needs to be looked at on a broader scale. Changes in the forest products industry and in private land ownerships have fragmented our forests more than ever. This fragmentation has resulted in more landowners, each with their own land management goals, ideas, and activities. Added to that are invasive plant and insect species which seem to be proliferating in Mississippi.

Lastly, is the public perception about what a healthy forest and forest management means. Pressures from the public have greatly changed the management on over a million acres of federal forest land in Mississippi over the last two decades. How long will it be until these public pressures change the management on private forest lands? All these factors together are creating the perfect storm for controversy, challenges, and the future of forest management in Mississippi.

Dr. Andrew J. Londo  
Former Extension Forestry Program  
Coordinator\*



Redheaded sawfly feeding damage

\*As of Sept 1, Dr. Londo has assumed the position of ANR program leader at The Ohio State University

**Feature Article**

**Invasive Species and Forest Stewardship**

by Butch Bailey, Extension Associate

*"Soon after I bought the woods a decade ago,  
I realized that I had bought almost as many  
tree diseases as I had trees."*

So said the father of wildlife conservation and management, Aldo Leopold, in his wonderful book, *A Sand County Almanac*. I think that every Mississippi timberland owner can relate. Even in the best of years, any forest will be plagued with fusiform rust cankers, pine sawflies, and bark beetles, just to name a few of the more common advisories to the timber manager. And some years, of course, are worse than others.

After this past winter's lack of much winter weather the table was set for a bumper year for all sorts of insects and diseases. Without a few strong "killing frosts" to thin the populations of these pests, 2013 was bound to become a year full of unusual problems. So far, that has proven to be the case. To give one example, pine sawflies, usually only a minor pest that might "ding" a few trees here and there, are infesting some southeast MS forests to the point of killing dozens of pulpwood sized trees. Sawfly damage is identified by the feeding pattern of the caterpillars which eat up and down the edges of the needles leaving straw-like remnants that turn brown and die.

Perhaps the greatest insect pest to pine forests, the southern pine beetle, is on the rebound. Populations are growing and expected to become major threats to southern MS pine stands over the next few years.

Emerging new insects and diseases continue to encroach. Hardly a month passes without news of the emerald ash borer, a devastating exotic insect, slowly moving south, closer and closer to Mississippi. It has now been confirmed in

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## The Overstory

### Feature Article (continued from page 1)

two Tennessee Counties. The redbay ambrosia beetle carries the laurel wilt disease, and has been identified and confirmed in Jackson County MS. Officials expect it to spread. This fungal disease attacks, and kills all members of the laurel family, which in MS includes our true laurels, bay trees, and sassafras.

For forest landowners looking to reduce their risk to insect and disease threats, the prescription is the same as it was in Aldo Leopold's time: active forest management with an eye towards tree vigor and healthy growth. Keeping trees well-thinned so they each have enough room to grow, with plenty of

sunlight and water is usually enough to allow trees to fight off insects and diseases on their own.

But for all the trials and tribulations that we face from insects and diseases and the financial toll they can take on our timber, Leopold offers another bit of wisdom. He instructs us once again that there really is a silver lining to every cloud and that our forests, managed though they are, are still a part of nature. For every "lost" tree we see, nature sees opportunity for diversity, for wildlife habitat, for life:

***"But for the disease and insect pests, there would likely be no food in these trees, and hence no chickadees to add cheer to my woods in winter."***

***"Land health is the capacity for self-renewal in the soils, waters, plants, and animals that collectively comprise the land."***

*Aldo Leopold ---Conservation: In Whole or in Part? (1944), R.M.G. 318*



Distinctive pitch tubes of the redbay ambrosia beetle



Laurel wilt disease on sassafras leaves caused by the redbay ambrosia beetle



Old logging road planted for wildlife and erosion control

## The Silviculture Regulatory Consistency Act

By John B. Auel, MS PLM Coordinator

Earlier this year, the Supreme Court ruled that forest roads do not need National Pollutant Discharge Elimination System (NPDES) permits. Traditionally, silvicultural activities such as timber harvests had been exempt from this process. A recent case, Northwest Environmental Defense Council (NEDC) versus Brown (Oregon State Forester) attempted to overturn this exemption. The 9th Circuit Court of Appeals found that forest roads should be permitted. The USSC overturned this decision, to the benefit of forest landowners.

However, this is a ruling on an agency's regulations. It does not have a specific law regarding the exemption of silvicultural activities from the permitting process. It will be challenged again and next time it may not stand up to Supreme Court scrutiny. Requiring permitting of forest roads would have devastating effects on the forest products

industry in Mississippi, in terms of increased costs, delays in harvesting activities and mandatory state inspections of each harvested tract across the country.

There is a chance that a law will be passed to ensure that forest roads will remain exempt from this permitting process. The Silviculture Regulatory Consistency Act attempts to codify this in the US Code. Both the Senate and the House have introduced this legislation. The House bill is HR 2026 and the Senate bill is S 971. Please call your representative and senators to urge passage of this important legislation. You can find contact information at [www.senate.gov](http://www.senate.gov) and [www.house.gov](http://www.house.gov).

If you have any questions about this issue, or these bills, please contact the MS PLM Program at 662-325-6852. Take a stand for forestry in Mississippi and the country.

## Being Proactive Could Save Your Forest

by James Floyd, Extension Associate

Forest health is the perceived condition of a forest derived from concerns about its age, structure, composition, function, vigor, presence of insects or disease, and resilience to disturbance. As foresters, our perception of forest health has changed. The old way of thinking was that if a stand was managed properly the health was guaranteed. Traditional management is essential, but no longer is it enough. A proactive approach is needed to insure that your forest stays healthy.

Insects, diseases, water quality, natural disturbances and invasive species can all affect forest health. In my opinion, invasive species are our biggest threat, and may be either plant, insect or disease. Invasive species not only threaten our trees directly, but they also outcompete native plants and animals to negatively alter forest ecology. The best way to control invasive species is through proactive management.

Being proactive means first educating yourself. As an active member of your county forestry association and reading newsletters such as this you're well on your way toward proactive management. Trees may exhibit signs and/or symptoms when under stress such as boring dust or loss of foliage etc. However, simply knowing the dangers isn't enough; you must visit your forest on regular bases. If you're not able to see your property regularly, then educate the family, friends, hunting camps, and others that do. Know who to contact if a problem should arise. In most cases your county forester or forestry consultant is a good place to start. Early detection, treatment, and monitoring are critical for overcoming forest health issues.

## Professional Foresters' Concerns Regarding Forest Pests in Mississippi

by Jason Gordon, Extension Specialist

Invasive species are recognized as the cause of significant ecological and economic damage across the United States. Despite many studies on the biological characteristics and migratory patterns of these threats, relatively little research has examined the human dimensions of invasive species. This is surprising given many of the worst pests have thrived as a result of their interactions with human processes. A recent Internet survey of 1,200 Mississippi foresters addressed their attitudes and silvicultural practices regarding Mississippi's most prevalent invasive plant and animal species. We focused on foresters because they are on the front line when it comes to invasive species management and the protection of the state's natural resources for continued social, economic, and environmental well-being.

Results indicated respondents had a slightly higher than average level of concern. More specifically, their level of concern depended on specific invasive species rather than a general measure of concern. Respondents were most concerned about feral hogs, southern pine beetle, and cogon grass. Important factors in predicting concern included the amount of time the participant had been a practicing forester and the type of employer, although these factors were not important for all species. As well, foresters who managed for wildlife in addition to timber were more likely to have higher levels of concern than those who managed only for timber. Finally, concerns tended to increase significantly when respondents had attended educational programs about invasive species, indicating the importance of education in creating awareness about the spread of invasive. This finding has important implications for Extension. By contrast, attitudes toward climate change had little influence on concerns, possibly because there is continued disagreement over the links between climate change and invasive species.

In this research, we explored a specific aspect of invasive species management – the concerns of professional foresters. However, the general public has greater impact both in transporting and mitigating the risk of invasive species. For example, many of the most destructive invasive species found in the Southeast (e.g., Kudzu *Pueraria montana*, Chinese Tallowtree *Triadica sebifera*, Chinese privet *Ligustrum sinense*, and Cogongrass *Imperata culindrica*) were established as a result of deliberate and unintentional practices stemming from international travel and trade, agriculture applications, scientific research, and horticultural activities. As the anthropogenic component of Earth's ecosystem increases through globalization of communications and economies, it is important to consider the sociodemographic and sociocultural dimensions of invasive species in terms of the causes, consequences, and responses to the problem.



Participants in a Forestry Extension course examining the result of forest pathogens on a stand

## Delta Hardwood Notes

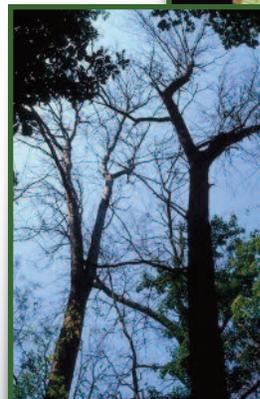
by Brady Self  
Extension Specialist

Typically people think of pines when insect damage to living trees is mentioned. However, there are numerous insect species that may cause severe damage, and possibly death, in hardwoods. One of the most threatening insect species to hardwood forests in the Delta is a relative newcomer to the United States. The emerald ash borer (EAB) is a member of the beetle family native to Asia. Adults measure 0.3 to 0.6 inches long, are slender, and a metallic coppery green. EAB signs are fairly easy to distinguish from those of native borers. Small (1/8") D-shaped exit holes in the bark, serpentine galleries under the bark, and the presence of flat, tapeworm-like larvae with bell-shaped segments are giveaways.

The species was first discovered in Michigan in 2002, and as of 2009, spread into more than a dozen states killing in excess of 100 million trees. The EAB only attacks ash trees, which is a major source of concern for Mississippi forests. Both white and green ash provide valuable ecological and economic benefits to Mississippi forests, with green ash being a major component on thousands of forested acres across the Delta. While not observed in Mississippi yet, the EAB has the potential to wipe out the majority of ash on most of this acreage. The Mississippi Institute for Forest Inventory places the potential mortality impact as high as 192 million trees in Mississippi alone.

Unfortunately, once trees are infected, there is little the owner can do other than remove the dying tree. Luckily the preventative solution is simple. Do not transport firewood. Entomologists are relatively certain that EAB was introduced to the U.S. in pallet/wood packing material. Due to EAB flair ups miles from the closest known infestation, it is reasonable to assume that the species is being transported in firewood. This led to USDA quarantines on firewood in some areas in the North. Consequently, firewood should be cut or purchased and used locally. If you find trees infested with EAB, contact someone with the Mississippi Bureau of Plant Industry, MSU Extension Service, or Mississippi Forestry Commission.

The emerald ash borer (EAB)



Effects



Signs

**Timber Market Outlook**

by James E. Henderson, Extension Specialist

Mississippi stumpage prices for the 2nd quarter of 2013, as reported by Forest2Market, indicated decreases for most product categories with pine pulpwood dropping \$1.21/ton to \$7.64/ton, chip-n-saw increasing a whopping \$0.17/ton to \$14.67/ton, and pine sawtimber falling \$0.41/ton to \$25.66/ton. The full price report is available at [msucares.com/forestry/prices](http://msucares.com/forestry/prices) or you can contact your local county MSU Extension Service office to obtain a copy.

The pace of new home construction began to level out some over the summer to an annual rate of about 900 thousand units; however the overall trend is still positive and many forecasts expect construction to return to the prerecession annual rate of 1.5 million during 2016 (See Figure). Yet, the slight cooling of home construction this summer hasn't helped timber stumpage prices, which will also continue to experience downward price pressure on the timber supply side. Standing inventories of pine sawtimber in the forests of Mississippi, for example, are conservatively estimated to be about 40% higher than the prerecession levels. So it will likely take a few more years to reduce that standing inventory. The Mississippi Institute for Forest Inventory (MIFI) and the Mississippi Forestry Commission have initiated a state-wide timber inventory, which will give us better estimates of standing timber volume in the state and provide an update to the existing MIFI inventory system.

The path to recovery continues and there is reason to be

optimistic. The sale of newly constructed homes is continuing strong, in spite of recent increases in interest rates, and the rate of home sales and construction should continue to gain as the U.S. economy continues to improve as indicated by growing GDP, increasing job openings, and a lowering of the unemployment rate. The economy certainly appears to be moving strongly ahead now after spending so many years being in the shadow of the last recession. This improvement in our national economy will result in improvement for our timber markets.



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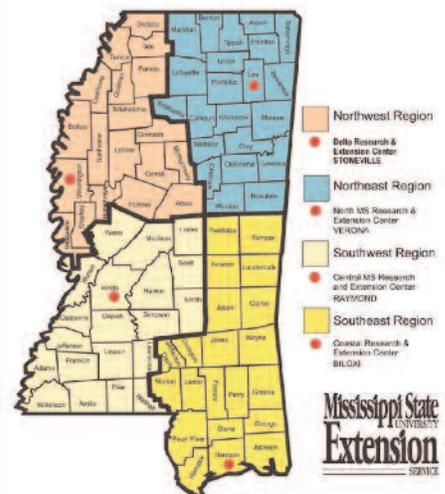
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**MSU-ES Region Map**



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