

“Pack up the RV Susie and let’s go see Cousin Fred down in Mississippi.” “OK Joe. I’ll air it out and vacuum out as many of those bad-smelling bugs as I can if you’ll load us up some firewood from that ash tree we just had taken down.”



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Invasive Insect Pests to Be Alert for this Fall—and next year too: The list of non-native insect pests that could potentially invade Mississippi is far too long to cover in a single newsletter. Here we will focus on only five pests. Two are wood-boring beetles that are easily transported in firewood and logs. Two are “stink bugs” that readily hitch rides in RVs, mobile homes, transport trucks, and similar vehicles. One is an insect that has been in South Mississippi more than 100 years but is still considered a serious invasive threat to some other areas of the country, including North Mississippi. Photos and additional information on these invasive pests are easily found on the internet. Please be alert for these pests and report any potential detection to extension or Department of Agriculture personnel.

Red Bay Ambrosia Beetle: These invasive beetles were first detected in Mississippi last year through a sample submitted to our Extension Insect Identification Lab. These beetles and the red bay wilt disease they vector have already resulted in the death of large numbers of red bay trees, *Persea borbonia*, in the Jackson County area. Because this problem has not yet been reported in Alabama, it appears this introduction is due to infested material being brought into the state, rather than to natural spread from established infestations farther east. Firewood or infested nursery stock, such as avocados, are two of the more likely ways these beetles could have hitched a ride into Mississippi. The beetles carry the disease spores with them wherever they go—in special “pockets” called mycangia.

This insect-vectored disease was first detected in the US in Georgia in 2002. It has already killed most of the red bay trees in the heavily infested areas of Georgia, South Carolina, and Florida, and it continues to spread. Although they are not an important timber species, red bay trees will be missed by residents of areas where this tree occurs. Currently, there is no known, effective way to stop the spread of this insect/disease.

Most Mississippi residents are probably not familiar with red bay because it is restricted to the southern portion of the state. This is a small understory tree, similar to dogwood and sassafras in size. Recently killed red bays stand out in the forest understory because they die with most of the leaves still attached. Residents of other coastal counties should be alert for dying red bays in their area. It is much easier to spot the dead trees than the adult beetles, which are only about 1/12 inches long. The beetle also attacks sassafras, but sassafras seems to be a bit more tolerant of the disease, though sassafras trees can still be killed. It remains to be seen whether this problem will move into areas of the state that have sassafras but not red bay. Avocado, which is in the same genus as red bay, is also attacked, and this insect-borne disease poses a serious threat to the Florida avocado industry.

We already know red bay wilt is present in Jackson County, but if you observe dead or dying red bays in other areas, please alert someone in the Department of Agriculture or Extension Service. **Emerald Ash Borer:** Emerald Ash Borer (EAB) was first detected in Michigan in 2002. This insect is a native of Asia and was probably introduced in wood pallets or crates for products shipped into Michigan. Since this first detection EAB has inexorably spread through much of the northeast, killing tens of millions of ash trees. This is a serious and costly situation. Not only is an important forest tree being lost, but it is expensive to have dead trees removed from yards or from public or commercial property.

EAB continues to expand its range and was just found in Tennessee this year. This does not necessarily mean north Mississippi will be the first place in the state to see this problem. All it takes to introduce EAB into an area is to have someone haul in some infested firewood or logs, and there are a lot of dead ash trees in areas that have already been infested!

Unlike red bay ambrosia beetle, EAB does not need a disease to help it kill trees—it does it all by itself. The larvae feed just under the bark, creating winding S-shaped galleries that cut through the cambium. Although a single larva usually does not damage a large enough area of cambium to kill a tree, several dozen larvae feeding in the trunk of a tree can effectively girdle and kill a tree. Thinning in the upper 1/3 of the tree is usually the first symptom to appear, but this is followed by continued leaf loss and decline, production of large numbers of sprouts in the lower portion of the tree, splitting of the bark, lots of woodpecker activity, and death of the tree. Fortunately ashes are the only species attacked. EAB does not attack hickory, pecan, walnut or other hardwoods. However, black walnuts have their own problems; thousand cankers disease, a deadly bark beetle-borne disease of walnuts, was also detected in Tennessee this year.

Adult EAB are pretty little peg-shaped beetles that are about ½ inch long and a solid, shiny metallic green in color. They belong to the beetle family buprestidae, which are known as “metallic wood-boring beetles.” We have many non-pest species of buprestids in the state that have shiny metallic coloration, but few are this small and solid green in color. Emerging adults leave BB-sized D-shaped emergence holes in the bark. Peel away the bark of a heavily infested tree and you will find the winding S-shaped galleries of the larvae. The larvae are creamy white, legless “worms” that have a flattened, distinctly segmented body, with the individual segments being somewhat bell-shaped.

Watch your ash trees and let someone know if they start showing the symptoms described above. And, please do not bring in any firewood from up north!

Brown Marmorated Stink Bug: This is another Asian import. BMSB was first detected in Pennsylvania in 1998. Since then it has been found in more than 25 states, but heaviest populations continue to occur in the northeast: Pennsylvania, Maryland, New Jersey, and neighboring states. This has been a big year for BMSB with unusually heavy populations being reported from infested areas. This stink bug has displaced bed bugs in the news media in some areas because of high numbers of overwintering adults accumulating on or in buildings and because of the damage it has caused in fruit orchards and other crops.

BMSB feeds on or damages: fruit, such as peaches and apples; row crops, like corn and soybeans; vegetables, including tomatoes and peppers; ornamental plants, including many trees, shrubs, and annual plants; and it invades homes in large numbers in the fall. This is an unusually wide range of hosts and problems for a single pest. So far BMSB seems to favor more northern areas of the country, but there seems to be no reason why it can't move into the South, where it could potentially complete more generations and build to even higher numbers than it does in the north. Their habit of invading homes, as well as RVs, trucks and other vehicles in search of overwintering sites allows them to easily hitch rides to other areas of the country.

Brown marmorated stink bugs look much like many of our native stink bug species. Adults have a shield-shaped body, are about 5/8 inches long, and are a mottled brown to grey in color. The outer edge of the abdomen is banded with alternating light and dark rectangle or triangle-shaped spots, and this is one of the best ways to identify BMSB. We do have a few native species of predatory stink bugs, known as rough stink bugs, that look a lot like BMSB, but these rarely occur in large numbers. Like most stink bugs, BMSB have a strong, objectionable odor.

If you notice large numbers of stink bugs that fit the above description accumulating in or around your house this fall, please catch some and get them to you County Extension Office so they can submit them for identification.

Bean Plataspid: Bean plataspids, *Megacoptera cribraria*, are also known as lablab bugs and globular stink bugs. Although they are similar to stink bugs in many ways, including having a strong odor, these insects belong to a different insect family. These Asian natives were first detected last October in Georgia when homeowners contacted their extension insect identification lab about large numbers of unusual, smelly bugs accumulating in and around their homes in a manner similar to Asian lady beetles. Kudzu, another non-native invasive species, is a favored host for these bugs and the first homes to report these insects were located near large patches of kudzu. At first it might seem like a good thing to have an insect that eats kudzu, but bean plataspids also feed on soybeans and other economically important legumes, and heavy numbers of these new bugs have been observed in Georgia soybean fields this year. They will also damage green beans, butter beans, and several other garden legumes.

Adult bean plataspids have a distinctive shape and are relatively easy to identify. With a body length of around ¼ inch, they are considerably smaller than most of our common pest stink bug species. The body is dark brown mottled with a light tan and covered with tiny pits. When viewed from above, the abdomen is widest at the back end of the body; when viewed from the side, the abdomen angles sharply downward toward the rear. In areas where they occur, these insects accumulate in large numbers on the sides of buildings, vehicles and similar objects in late fall as they search for overwintering sites.

Alert your County Extension Office or the Department of Agriculture if you notice some of these insects around your home or work place this fall and collect some to submit for identification.

Sweet Potato Weevil: Sweet potato weevils have been present in south Mississippi since the late 1800s, but they are still considered a potentially invasive pest in the northern part of the state. Sweet potatoes are not grown on a large commercial scale in south Mississippi because of this pest, though they are commonly grown in home gardens. The problem is that many areas of the country have active quarantines against importing potatoes from weevil-infested areas. Sweet potatoes are an important commercial crop in parts of north Mississippi, especially Calhoun, Chickasaw and surrounding counties. This area of the state does not have sweet potato weevil and there is a quarantine against importing sweet potatoes from known weevil infested areas, including south Mississippi. Interstate 20 roughly divides the quarantined area. North Carolina and other areas where sweet potatoes are economically important have similar quarantines.

Adult sweet potato weevils are about ¼ to 1/3 inch long and are unusual looking insects. With their dark elongate head and snout, orange thorax, long orange legs and shiny blue-black abdomen they look like a creature from a science fiction movie. The legless white grubs bore into stems and tubers of living plants and also infest tubers in storage. Infested tubers develop a characteristic bitter taste that makes them unfit to eat, even if it weren't for the grubs. Sweet potato weevils do not diapause but continue to develop through the winter on stored potatoes, and this is what makes them so potentially easy to transport into non-infested areas.

Do not move sweet potatoes, either tubers or plants, from south Mississippi into the northern part of the state, or into other weevil free areas. Alert state officials if you detect infested sweet potatoes, or insects you suspect may be sweet potato weevils, in the northern portion of the state.

Entomological Highlights of Joe and Susie’s Vacation: While visiting Fred in Van Cleave, Joe helped him cut and load some dead red bay wood for Fred to carry to a friend over near Mobile. The guy likes to use red bay for his smoked mullet. Joe also left a few sticks of ash for Fred to try some time on one of his smoked meat dishes. Some folks like ash for smoking fish.

Fred had made a bumper crop of sweet potatoes and he insisted on sending a couple of bushels back with Joe and Susie. Said he never was able to store them all the way through the winter anyway because of some bugs that always get into them. Joe and Susie went through Calhoun City to see Susie’s Aunt Katie on the way back home and left a grocery bag full of sweet potatoes with her. Katie lives next to a large sweet potato farm, but they never give her any potatoes. Katie has a fire place and was low on wood, so they also unloaded what was left of their ash firewood. Two days later she had two cords of oak delivered and the ash ended up at the bottom of the stack.

On their way home through the Appalachians, Susie noticed a lot of the bigger trees growing along some of the mountain streams had died recently. They were told these were hemlock trees that had been killed by some sort of tiny insect and that a similar pest had killed most of the Frasier Firs some years ago. “That’s terrible,” remarked Susie. “The government ought to do something to keep things like that from getting into the country!” “These kinds of problems can be pretty bad. I remember hearing of a disease that killed out all the chestnut trees in the early 1900s,” responded Joe. “Grandpa said the country never was the same without chestnuts.”

When they stopped to buy some sourwood honey Joe noticed someone having a tree professionally removed from their yard. He sympathized with the guy because of that big ash he and Susie had just lost. Seven hundred and forty dollars! And, the tree wasn’t all that big. Joe went over and struck up a conversation and came away with a six foot bolt of straight, clear black walnut. He’s letting it air dry in the shed for a year or so to use in a special woodworking project. Joe and Susie both like black walnut and even have two large beautiful trees in their back yard (at least for a little while longer). Two days after they got home Susie got a nice note from her friend in North Carolina saying she was glad they dropped by on their way home and thanking them for the sweet potatoes they left with her. All in all, it was one of their longer and more memorable road trips, and they are already planning a similar trip to Georgia next year.

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