

Pest Update (February 6, 2013)

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Note: samples containing living tissue may only be accepted from South Dakota. Please do not send samples of dying plants or insects from other states. If you live outside of South Dakota and have a question, instead please send a digital picture of the pest or problem. **Walnut samples may not be sent from any location – please provide a picture!**

Available on the net at:

<http://sdda.sd.gov/Forestry/Educational-Information/PestAlert-Archives.aspx>

Any treatment recommendations, including those identifying specific pesticides, are for the convenience of the reader. Pesticides mentioned in this publication are generally those that are most commonly available to the public in South Dakota and the inclusion of a product shall not be taken as an endorsement or the exclusion a criticism regarding effectiveness. Please read and follow all label instructions and the label is the final authority for a product's use on a particular pest or plant. Products requiring a commercial pesticide license are occasionally mentioned if there are limited options available. These products will be identified as such but it is the reader's responsibility to determine if they can legally apply any product identified in this publication.

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Common ash borers and bark beetles

Green ash is *still* one of the most commonly planted trees in South Dakota and considering the number of trees in windbreaks, along urban streets and in yards already, it is a surprise anyone would think we need more. In addition to the numerous pest problems we already have with this tree, the looming threat of emerald ash borer should make us a little more caution about wholesale recommending the use of this tree. We also need to be a more vigilant in examining dying ash. Emerald ash borer is presently as close as the Twin Cities

of Minnesota (Minneapolis-St. Paul) and the Twin Cities of Kansas City (Missouri and Kansas). These infestations were detected before the borer was well-established, perhaps only present for four years. This is in contrast with the Michigan experience where the insect went undetected for a decade or more. Recent studies indicate that year 8 is the tipping point, if not detected by this point, the borer population and tree mortality quickly expands. So the quicker it is identified and contained, the slower the spread. Unfortunately it is not easy to detect. There are lots of other insects that like to feed on ash. It is important to be able to determine whether what you see on a dying ash is one of our native pests or the emerald ash borer.



The most common ash borer in South Dakota is our native **clearwing ash borer** (*Podosesia syringae*). This insect makes an exit hole about the size of a pencil (1/4-inch) and usually the ground beneath the holes is covered with powdery sawdust. The galleries are often found deep within the wood, rather than just beneath the bark, and are usually clean of material.



Carpenterworm (*Prionoxystus robiniae*) is another common boring insect of ash trees. This insect creates an exit hole about 1/3-inch in diameter, slightly larger than a pencil. There will often be sawdust around the hole and on the ground beneath the tree. Sap may also be oozing from the holes and sometimes the empty pupal case left by the emerging adult insect can be found attached to the bark surrounding the exit holes.

The galleries may be 5/8-inch wide, often empty of sawdust, and extend deep into the tree. Tree infested by carpenterworms often have their branches weakened by the extensive tunneling and affected branches often break off in high winds. Woodpecker activity is also common on trees infested by carpenterworms.



It is possible to find both these insects tunneling in the same tree as the picture on the left shows. The clearwing ash borer larva, the one to the left, is about 1 inch long (at maturity) and is creamy white with a shiny brown head. The carpenterworm larvae, the one on the right, can become almost 3 inches long at maturity and is pinkish-white with a dark head. The clearwing ash borer has a one year life cycle so you

will typically only find the larvae in a tree from June to the following May. Carpenterworm may have a three year life cycle so it is common to find larvae of various sizes at almost any month of the year.



Other common borers of dead or dying ash trees are the **redheaded ash borer** (*Neoclytus acuminatus*) and the **banded ash borer** (*N. carpaea*). These insects create an oval exit hole, almost “fuzzy” D-shaped in appearance and are about 1/4-inch diameter (figure 6). The galleries beneath the bark are winding, often follow the grain of the wood and are packed with sawdust-like material. They are

similar to those created by the emerald ash borer. The primary difference will be that these galleries may extend deeper into the wood than those created by the emerald ash borer. If you cut into the wood beneath the bark and galleries are still present, the most likely cause is the redheaded or banded ash borer, not the emerald ash borer.



Another group of insects that can be found boring into dying ash are the **ash bark beetles** (*Hylesinus*). There are at least two species in South Dakota, the eastern ash bark beetle (*H. aculeatus*) and the western ash bark beetle (*H. californicus*). These insects create a round exit hole 1/16-inch diameter, about the size of a BB, and often these holes will encircle a shoot. The galleries beneath the bark

consist of a main tunnel with numerous smaller tunnels run off from it and following the wood grain.



The **emerald ash borer** creates a crisp D-shape hole (1/8-inch) as it exits the tree. The larvae as they tunnel form galleries just beneath the bark. These tunnels form a serpentine pattern and are filled with a sawdust-like material. There is no powdery sawdust on the trunk adjacent to the holes or on the ground beneath them. This is just a

brief description of the common borers and bark beetles found in ash trees. If you are not sure if you are looking at symptoms and signs of the emerald ash borer or one of our native insects, please contact me or any of the Department of Agriculture foresters to have the pest identified. Better to know for sure than possibly miss an infestation.



E-samples

Two e-samples came in during the past week. The first shows **Zimmerman pine moth** injury to a pine. While we focus a lot of attention on mountain pine beetle and pine engraver beetles in the Black Hills, the most common pine borer



throughout the state is the Zimmerman pine moth (*Dioryctria*). This is not a single insect but three closely related moths with different life cycles. The tree injury is the same, however, with infested pines often with distorted trunks and broken branches. Large pitch masses usually occur in association with branch whorls. A common control procedure is to treat infested tree with a trunk spray of an insecticide labeled for Zimmerman pine moth and containing permethrin as the active ingredient. The application should be made in early May.



The second shows a **peashrub (*Caragana*) that has been browsed** in Lyman County. The shrub is one of the toughest shrubs we can plant, extremely hardy and adapted to dry sites. The plant is common defoliated by grasshoppers and ash-gray blister beetles – I have seen entire plants defoliated within a day or two during the summer. The plant is also browsed heavily by deer – appears to be one of their favorites. Not the wood, just the bark and inner bark so the trunks are often stripped.

Samples received

One sample received this week

Perkins County

Plant identification

This is saltbush (*Atriplex*), a perennial native to the semi-arid and arid western US including western South Dakota. Despite the thorns, saltbush can be heavily browsed by livestock and wildlife – apparently nutritious and tasty.