

Look for new bug invaders

By Tom Stebbins – This Week in the Garden

Today there is a BioBlitz going on at the Chattanooga Nature Center. This is an event to see how many plants, birds, insects, fungi and other species can be counted in a 24-hour biological survey of CNC and the adjacent Reflection Riding Arboretum & Botanical Garden.

Similar blitzes take place annually nationwide. These are biological snapshots appraising all living things in an area.

It is amazing how many plants and creatures are found each year. Chattanooga is considered one of the richest areas of biodiversity in the world. In the three years of conducting the BioBlitz, there have been as many as 693 species of plants and animals identified. More than 100 scientists and volunteers take part in this effort.

Related Results

- [2010 Bug Season Officially Arrives With Warm Spring Temperatures](#)
- [Infogrames Invades Stores This Week With Looney Tunes Collector: Alert! for...](#)
- [Sarah called the other day and asked if I wanted back the \[pounds sterling\]6m...](#)

The blitzers may find some species that are new to our area. Some new arrivals may be invasive species that can upset the balance of native plants or animals. Two invaders -- one here already, one on the way -- threaten to devastate our forests.

HEMLOCK HAVOC

The hemlock woolly adelgid is a new insect pest recently found on Lookout and Signal mountains. This pest attacks the Eastern and Carolina hemlock trees (*Tsuga* sp.). It has spread from New England to North Carolina and is causing extensive damage in the Great Smoky Mountains.

HWA is easily seen on the branches of an infested tree. Hemlock leaves become covered with white cottony material. These are the females enclosed in their own fluffy white wax coating.

The female lays her eggs in February. Tiny crawlers hatch from the eggs and feed on the leaves. The insect has a mouthpart with a thread-like tube used to draw sap from the plant.

High numbers of the pest can prevent tree growth. Eventually the needles turn pale and drop. Left untreated, a tree may defoliate and die within a few years.

Wind and animals disperse this insect. Landscape plantings may need treatment if infested. Homeowners can purchase and apply a systemic product. These products can be purchased at garden and farm co-op stores. The cost estimate for this chemical control product has been calculated at about \$1 per inch of tree diameter. Commercial application cost is somewhat higher.

BILLION DOLLAR BEETLE

The emerald ash borer is an exotic beetle that was discovered near Detroit. This shiny green insect, native to Asia, probably came into the United States about 20 years ago on solid-wood packing material carried in cargo ships or airplanes. Since that time, this insect has spread rapidly. So far, EAB has killed millions of ash trees in about 15 states and several Canadian provinces. Last fall, EAB was found near Knoxville.

The Tennessee Division of Forestry estimates that 10 million urban ash trees in Tennessee are potentially at risk from EAB. The risk represents an estimated value loss of \$2 billion. There are an estimated 261 million ash trees on Tennessee public and private timberland, potentially valued as high as \$9 billion.

The Tennessee Department of Agriculture has issued a quarantine prohibiting the movement of firewood, ash nursery stock, ash timber and other material that can spread EAB. Department of Agriculture plant inspectors and foresters are conducting a survey to assess the extent of the infestation.

There are no good chemical control measures at this time.

Adult beetles are dark green, half an inch in length and one-eighth of an inch wide. They bore into the bark, make tunnels and lay eggs. Larvae feed on the inner bark of ash trees. This disrupts the tree's ability to transport water and nutrients. Typically, the emerald ash borer beetles can kill an ash tree in three years. Look for ash trees with thin or dying foliage. Unusual woodpecker activity may indicate beetle larvae under the bark.

LEARN MORE

Awareness can help us prepare for and lessen the negative impact of these invaders. Come to the BioBlitz to learn more about these and other threats to our beautiful forests.

For more information see www.tn.gov/agriculture/regulatory/eab.html and <https://utextension.tennessee.edu/publications/Documents/SP503-G.pdf>.

Contact Tom Stebbins at tstebbins@utk.edu or 423-855-6113.