TSU NURSERY NEWS TO USE

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FLATHEADED APPLETREE BORER *Chrysobothris femorata* and other closely related flatheaded borers are metallic woodboring beetles belonging to the family Buprestidae that feed on apple, crabapple, pear, crapemyrtle, dogwood, hawthorn, linden, maple, cherry and oak. The larvae of this borer coin the name due to the thoracic segments being wider than the rest of the grub's body. Adult flatheaded appletree borers are metallic, shiny and gray to bronze on top; the lower surfaces are also metallic and greenish.

The flatheaded appletree borer, immature stage of a metallic woodboring beetle.
Photo by James Solomon, USDA Forest Service, Bugwood.org

The adults are 1/2 to 3/4 inch long and appear throughout the summer most abundantly in May and June laying eggs under bark scales or in crevices of the main trunk and larger branches. The grubs bore into the bark and feed in the phloem and outer sapwood in the cambium layer. Stressed trees are more susceptible to damage and infestation. Stress includes drought, over-watering, mechanical damage or other stress events such as potential freeze damage resulting from last winter's freeze event. Protect your trees by practicing good stewardship as well as applying a soil drench of imidacloprid or dinotefuran if you have not already. The cooler Spring has delayed flights but warmer weather is here!

Granulate Ambrosia Beetles (Xylosandrus crassiusculus) are pests of dogwood, redbud, maple, ornamental cherry, Japanese maple, crape myrtle and many fruit trees. Females bore into twigs, branches, or small trunks of live trees. Once inside, the beetles inoculate the tree with ambrosia fungus and lay eggs to produce a brood. Damage can be clearly seen from the sawdust strands exuding from the holes drilled by the female (photo right). In addition to direct damage to the tree, secondary pathogens may find their way inside the holes once the female has bore inside. While typically active in early March, initial flights may occur once temperatures exceed 70°F occurring as early as February. It takes 55 days to complete one generation and the adults overwinter in galleries within the trees. The beetles feed on the ambrosia fungus as they develop so it is difficult to control them once they have made it inside. Best management strategy for controlling ambrosia beetles is to maintain healthy trees and to apply pyrethroids 2 to 3 weeks before beetles are in flight and reapply every 2 weeks. Due to the cooler weather this spring a major ambrosia beetle flight has been delayed until last week between 5/10 and 5/12 at the nursery research center. Due to winter freeze damage, more frequent scouting measures need to be taken due to the excess stress on the trees starting the year. Alternative treatment options for ambrosia beetles are being researched however, at the present time, the most effective treatment currently available is trunk sprays of Perm-Up 3.2EC at the rate of 5 quarts per 100 gallons. Reapplication may be necessary in the case of a weather event.


Boring dust from adult beetles on a cherry tree PHOTOGRAPH BY Johnathan


Prickly sida (*Sida spinosa*) PHOTO CREDIT: DR. ANTHONY WITCHER

WEED OF THE MONTH: Prickly sida (*Sida spinosa*) is a warm season annual broadleaf weed native to North America and distributed across most of the eastern United States. Prickly sida prefers full sun and moderate soil moisture with good drainage but can persist under dry conditions. Prickly sida can form dense colonies of plants, is a troublesome weed in agronomic crops, and is also commonly found in landscapes, nursery fields, and in non-crop areas (roadsides, gravel pads, etc.). Prickly sida has an erect and branching growth habit from 1 to 3 ft tall. Leaves are alternate and simple (1 to 2 inches long by 0.5 to 1 inch wide), oval to lanceolate with toothed margins, and have a spine at the leaf node. A similar species, arrowleaf sida (Sida rhombifolia), can be easily distinguished due to lack of serration on half of the leaf margin. Flowers are very small (<0.5 inches across) with 5 yellow petals, occurring individually or in clusters on a short stalk arising from the leaf axil, and appear below the leaves. Fruits have 5 segments with sharp spines on top, each segment containing a single seed which are triangular and reddish brown. Over 3,000 seeds can be produced on a single plant, seeds can be dispersed on fur and clothing and also float in rainwater or irrigation runoff. Prickly sida has a shallow taproot with branching fibrous roots. Glyphosate can be used to control actively growing plants, ideally prior to flowering. Pre-emergent herbicide applications can prevent prickly sida establishment and effective products contain flumioxazin, indaziflam, isoxaben, oxadiazon, oxyfluorfen, pendimethalin, and simazine. Please contact Dr. Anthony Witcher (awitcher@tnstate.edu) for more information on nursery weed control practices.

Further extension publications for more information on Flatheaded Appletree Borer and ambrosia beetle below:
https://www.tnstate.edu/extension/documents/Controlling the Flatheaded Appletree Borer in the Nursery Using Systemic Drenches - COMPLETE VRS..pdf

https://www.tnstate.edu/extension/documents/Ambrosia beetle Factsheet 01312023.pdf

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