Invasive Pest and Fall Home Invader: Kudzu Bug

HOUSEHOLD & STRUCTURAL PESTS

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LIFE HISTORY AND DESCRIPTION

The kudzu bug (Figure 1), *Megacopta cribraria*, is an invasive species in the United States. Other commonly used names include the bean plataspid, lablab bug and the globular stink bug. Of Asian origin, the bug was not found in the Western Hemisphere prior to 2009. It was first discovered in northeastern Georgia in the fall of 2009, where it was invading homes to overwinter. Within the seven years that the kudzu bug has been found in the United States, it has spread rapidly to several states (Figure 2).

The primary host plant for the bug is kudzu (Figure 3), but they also occur in large numbers in soybean and wisteria. Scientists believe that kudzu bugs will continue to spread wherever this plant is present. Kudzu bugs are members of the order Hemiptera and family Plataspidae; they are the only members of this insect family in the United States. Adults and nymphs have piercing-sucking mouthparts. The bugs are not of the stink bug family, yet they do emit a somewhat foul odor if disturbed or crushed. In the United States, kudzu bugs have a bivoltine life cycle, meaning that two generations occur per year. At the end of the second

Figure 1. Adult male (left) and female (right) kudzu bug. Photo courtesy of Scott Stewart, UT Department of Entomology and Plant Pathology.

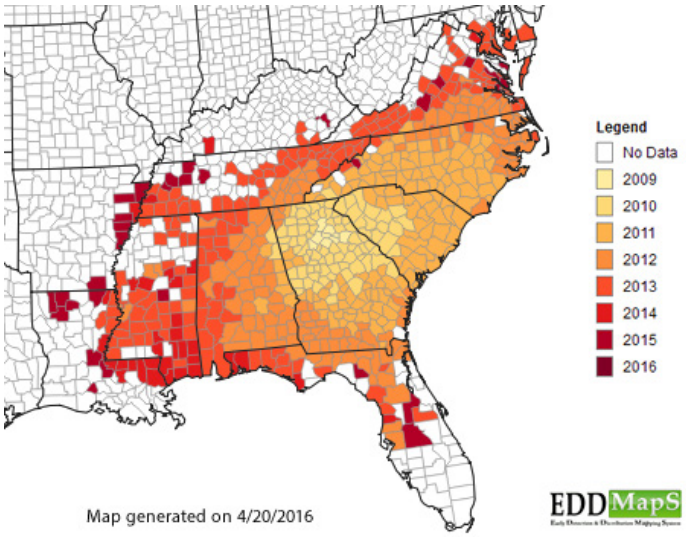

Figure 2. Kudzu bug distribution in the United States, 2009 to April 20, 2016. Photo modified from kudzubug.org

Figure 3. Kudzu. Photo courtesy of Kadie Britt, UT Department of Entomology and Plant Pathology

Figure 4. Kudzu bug nymphs soon after hatching. Photo courtesy of Kadie Britt, UT Department of Entomology and Plant Pathology

generation, the adults overwinter and subsequently begin the cycle again the following spring. Adults are 5/32- to ¼-inch long and are mottled dark green and brown. Females typically lay eggs in two side-by-side rows (15 to 20 eggs per mass). Lying underneath the eggs are capsules of endosymbiotic bacteria that the bug must consume soon after hatching (Figure 4) for the bug to live a normal life cycle.

HOME INVADERS AND MANAGEMENT

Kudzu bugs start to become a nuisance to homeowners in late fall and early spring. In late fall, they aggregate on kudzu (Figure 5) as temperatures begin to decrease before beginning to search for suitable overwintering habitats (Figure 6). The bugs are extremely attracted to white and tan surfaces, which is unfortunate for homeowners. To keep them out of homes, it is best to seal any possible openings on the exterior of houses. With the small size of the bug, even a small opening on the exterior of the house is subject to being entered.

Walk around the perimeter of the home to determine possible pest entry points and remove or seal them.

- Screen vent openings in foundation walls, soffits and attic.
- Ensure doors and windows are tightly sealed, which may involve adding sweeps to doors or weather stripping to doors and windows, caulking openings in window and door frames, and repairing holes in screens or adding screens. If you are unsure whether a door fits tightly, observe the door from the inside during the day when it is light outdoors. A good seal is lacking if light can be seen around the edges.
- Caulk or seal 1/8-inch or larger cracks, crevices and holes in outside walls, eaves and other external surfaces including voids around pipes.

Figure 5. Kudzu bugs aggregating on kudzu prior to seeking overwintering sites. Photo courtesy of Kadie Britt, UT Department of Entomology and Plant Pathology

- Apply pesticides around the entry points into a home before the bugs start to search for overwintering sites in the fall to supplement exclusion tactics.
- Remove any nearby kudzu as this is a reservoir for kudzu bugs and will enhance management of kudzu bug populations around the home.

Another easy solution is to remove kudzu bugs with a vacuum cleaner — the key is to place a stocking on the end of the vacuum tube before attaching the accessory so that the bugs can be removed easily and will not remain inside or leave odors in the vacuum cleaner. In early spring, bugs emerge from overwintering habitats of homes and loose bark of dead or decaying trees and search for living kudzu. These bugs can be annoying when they occur in high numbers. As the spring season progresses, bugs are less of an annoyance to homeowners because they feed outdoors on their thriving, preferred host plant, kudzu. In mid-summer and early fall as soybeans (and other legumes) are growing, the bug has an array of host plants to feed upon. At this point in the year, they are not considered a threat for home invasion, yet can still be an annoyance if legumes are in a home garden or kudzu is nearby.

Bugs can emit a somewhat strong, peculiar odor when disturbed, which some may find annoying. The smell can become strong and pungent if many bugs have gathered in the same place. It is extremely important not to crush kudzu bugs if they are found inside of the home or on skin. They will leave a yellow-orange stain on skin, clothing or walls. Some individuals will have an allergic reaction if the bug is smashed on the skin.

Figure 6: Kudzu bugs invading a structure to overwinter. Photo courtesy of Cory Vineyard, UT Department of Entomology and Plant Pathology

Kudzu management recommendations can be found in the following:

Invasive Weeds of the Appalachian Region
extension.tennessee.edu/publications/Documents/PB1785.pdf

Identification and Control of Non-native Invasive Forest Plants in Tennessee
extension.tennessee.edu/publications/Documents/SP627.pdf

Mobile Weed Manual
mobileweedmanual.com/default.html

For suggestions on pesticides for use by the general public or pest management professionals, vacuuming and additional pest-proofing techniques, see the "Household and Structural" web page of the Insect and Plant Disease Control Manual (Redbook) at ag.tennessee.edu/EPP/Pages/Household-Structural.aspx.

Reference:
KudzuBug.org (kudzubug.org), developed by the University of Georgia, Center for Invasive Species and Ecosystem Health.

Precautionary Statement

To protect people and the environment, pesticides should be used safely. This is everyone's responsibility, especially the user. Read and follow label directions carefully before you buy, mix, apply, store or dispose of a pesticide. According to laws regulating pesticides, they must be used only as directed by the label.

Disclaimer

This publication contains pesticide recommendations that are subject to change at any time. The recommendations in this publication are provided only as a guide. It is always the pesticide applicator's responsibility, by law, to read and follow all current label directions for the specific pesticide being used. The label always takes precedence over the recommendations found in this publication.

Use of trade or brand names in this publication is for clarity and information; it does not imply approval of the product to the exclusion of others that may be of similar, suitable composition, nor does it guarantee or warrant the standard of the product. The author(s), the University of Tennessee Institute of Agriculture and University of Tennessee Extension assume no liability resulting from the use of these recommendations.

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