

Kudzu Bug Information

Kudzu bugs (*Megacopta cribraria*) are members of the family Plataspidae. Related to stink bugs, they are the only member of that family to be found in the continental US. Kudzu bugs were first identified in Georgia in 2009, and they spread rapidly through Georgia and South Carolina during the summer of 2010. The first report in North Carolina occurred in the fall of 2010, and was at only one site. During the spring and summer of 2011, surveys showed the kudzu bug to be present in approximately $\frac{3}{4}$ of North Carolina's counties, mostly in kudzu in low numbers. Genetic studies indicate that the bugs were introduced at one time from a single population in Japan. The kudzu bug has been reported to occur in other parts of Asia as well.

Being true bugs, they feed by sucking plant juices through needle-like mouthparts, and develop from eggs into 5 nymphal stages before becoming adults. Adults are globular with blunt ends (almost cubical) and light brown to olive green in color. Nymphs are pale green when small and become darker in later instars. They are oval, flat, and appear to have a serrated edge.



Most feeding occurs on the stems, and the nymphs are well camouflaged on the hairy stems of kudzu and soybeans. Eggs are laid on the foliage or stems, and are usually laid in a double row. The bug has a bacterial endosymbiont to aid its digestion, and small packets containing this bacterium are placed between the rows of eggs. Upon hatching, nymphs feed on the packets to acquire the symbiont.



Kudzu bugs appear to pass their first generation in kudzu, and in late June – early July move to soybeans to produce a second generation. The first soybean field where bugs were found was about 1.5 miles from the nearest kudzu. The bugs appear to prefer soybeans about 8 – 10" tall. Most feeding by adults and nymphs occurs on stems and petioles. On

soybeans the feeding leaves purplish-black lesions on the stems. They do not feed directly on pods, but reduce yield by stress induction. The average yield loss in Georgia and South Carolina during 2011 was 18%. A study in Georgia showed a loss of 33 – 50% of kudzu biomass. Adults are more mobile than nymphs, and often reinfest fields after treatment. Nymphs do not return after insecticide treatment, so it is likely that treatment after nymphs appear will be the most effective. Kudzu and soybean are the most common hosts, but the bugs may feed on other legumes. Consult with the Cooperative Extension Service for the most up-to-date recommendations.

Kudzu bugs are also considered nuisance pests, invading buildings in the fall. As soybeans or kudzu senesce and days shorten, they move in large numbers to overwintering sites. They are attracted to white and light colors, especially when they are presented in contrast to darker elements, as trim on windows, doors, and fascia. They may enter through small openings in soffits and cracks and crevices. They give off a characteristic (unpleasant) odor and any that enter the home should be removed and discarded. Preventing entry is preferred, and may require screening, sealing and plugging openings. Approved pesticides may be applied around doors and windows, but caution is required. Activity will be most noticeable in October and again in the spring when bugs leave their winter quarters.

Selected internet references:

<http://www.gabugs.uga.edu/documents/KudzuBugCircular991.pdf> (Two page extension guide for homeowners).

<http://www.gabugs.uga.edu/documents/M.cribrariaArticleForYourRecords.pdf> (Journal article on discovery in GA with basic biological information, an expanded version of the above note).

<http://www.gabugs.uga.edu/documents/Egeretal2010.pdf> (Journal article (Insecta Mundi) about kudzu bugs. Contains good review of biology).