Scouting for Billbug Adults in Bahiagrass

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Has your bahiagrass been disappearing? The billbug named *Sphenophorus coesifrons* can cause problems in bahiagrass pastures and hayfields in Alabama. Damage from this insect starts as small dead patches. The patches get bigger each year, until all of a sudden the bahiagrass is gone from a large part of your field. Both larvae and adults of this insect can kill bahiagrass. The key to understanding this insect is to know that the adults do not fly. They get into your field by crawling or inadvertently being moved by vehicle or farm equipment. If you suspect billbug damage, you can use homemade pitfall traps during May and early June to determine when (if) the adult billbugs are crawling in your field. A timely spray to kill these adults is the only tool we have for managing billbug problems.

Bahiagrass billbugs killed most of the bahiagrass in this field in central Alabama. This field has so much damage it needs to be renovated.

An image taken in May showing where the bahiagrass has disappeared from the edge of a field. The grass looked healthy last year. Damage started on the left edge of the field. Billbugs crawled in from the adjacent field, which had been severely damaged.
The billbug was reported as a pest of bahiagrass in Georgia in the 1970’s (Morrill and Suber, 1976). The billbug occurs throughout the southern U.S. and northern Mexico. Billbug damage has also been reported on warm season turfgrasses in Florida (see images at bugwood.org). Damage to bahiagrass in Alabama is probably more common than we think, but widespread damage has not been observed. Rather, reports of damage are usually isolated and discovered a single field at a time. This is partly a result of the life history of the billbug. The adult billbug (see below) does not fly, so infestation is generally localized.

Adults begin to emerge from the soil in the latter half of May, and feed during June and July, resulting in ragged holes in in the fleshy base of bahiagrass tillers. This feeding can result in tiller death. Based on the biology of similar billbugs, eggs are presumably laid in in the holes gouged in live tillers in mid-summer. Larvae hatch and begin boring into the bahiagrass rhizomes in late summer and feed through late fall. The feeding damage by the larvae results in the death of more tillers. When fully grown, the larvae leave the rhizomes, and overwinter in the soil. In late April and May, the insect pupates, where it transforms from the larval into the adult stage.

Adult *Sphenophorus coesifrons*. Photo credit: David Shetlar, The Ohio State University, Bugwood.org

Larva (feeding stage) of *Sphenophorus coesifrons*.

Tillers killed by the adults in summer (red arrow) are scattered among the healthy tillers in the field.

Feeding damage from adult billbugs at the base of a bahiagrass tiller.
Billbug larva inside the rhizome.  Damaged rhizome

The following spring, the full extent of the damage can be seen when plants heavily injured the previous year fail to green up. Spring is the time to attempt to rescue a slightly to moderately damaged field. Use homemade pitfall traps to catch the adults as they emerge from the soil, and walk from the dead areas into healthier areas. Place 6-8 traps in the green fringe around the dead area, starting around the 20th of May. Check the traps every few days. When you start catching billbugs, apply an approved insecticide such as a pyrethroid or carbaryl, and continue to check the traps. A second application may be necessary.

Making a Pitfall Trap

Reference:

Use pesticides according to the directions on the label. Follow all directions, precautions, and restrictions that are listed. Do not use pesticides on plants that are not listed on the label. The pesticides in this publication are recommended only if they are registered with the Environmental Protection Agency and the Alabama Department of Agriculture and Industries. Trade names are used only to give specific information. The Alabama Cooperative Extension System does not endorse or guarantee any product and does not recommend one product instead of another that might be similar.