

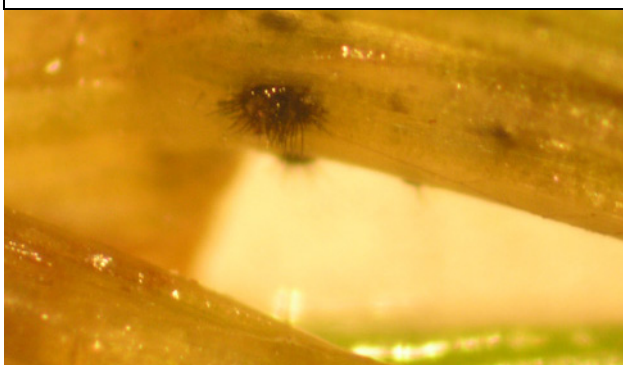


This bulletin from the Cooperative Extension Plant Health Clinic (Plant Disease Clinic) is an electronic update about diseases and other problems observed in our lab each month. Input from everybody interested in plants is welcome and appreciated.

Turf

During periods of high temperature stress, turf will often develop Anthracnose, caused by *Colletotrichum graminicola*. This fungus can cause both foliar blight and basal rot. Symptoms are a reddish-brown leaf discoloration. Sometimes oblong reddish lesions appear on the leaves. Crowns appear water-soaked or black. Small areas of turf or individual plants turn yellow and die. Areas of affected turf may coalesce and form large areas of dead and dying turf. Fruiting bodies of the fungus, (acervuli), with their distinctive hair-like structures are readily seen with a hand lens. Anthracnose is most often a problem on turf that is stressed by factors such as low mowing height, mechanical injury, high temperatures, compacted soils, poorly drained soils, and soils with inadequate nutrition. Fungicides registered for anthracnose control are Daconil Ultrex, Daconil WeatherStik, Banner Maxx, Lynx, Endorse, Heritage, Compass, Insignia, Cleary 3336, and Chipco Signature. Homeowner fungicides that are effective are Scotts Lawn Fungus Control, Green Light Systemic Fungicide, Fertilome Systemic Fungicide, Monterey Fungi-Fighter, and Ortho Lawn Disease Control.

Turf Anthracnose –*Colletotrichum graminicola*



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Ground pearls

Ground pearls, *Margarodes* spp., are a type of scale insect found in the soil that feed on the roots of turf. Like other scale insects, they are sap feeders. They prefer centipedegrass, but are also found on bahiagrass, carpetgrass, St. Augustine, Zoysia, and Bermuda. They are often associated with low pH soils. Symptoms are circular to irregular areas of sickly looking, thin turf. The grass yellows, then turns brown and dies, especially in hot, dry weather. Adult females have pinkish sac-like bodies, about 1.6mm long, with well-developed front legs and shorter second and third legs. Males are tiny white to pinkish gnat-like insects. Mature females emerge from their overwintering cysts in late spring, and crawl to the soil surface where they mate with the tiny winged males (they can also reproduce without mating). Once they have mated, the females dig back into the soil where they lay a cluster of 20 to 100 eggs in a mass of waxy strands. The eggs hatch into crawlers. The crawlers attach themselves to grass roots, and begin to cover themselves with a protective coat of yellowish to light purple wax, giving them their characteristic pearl shape. This waxy coating, unfortunately, makes them impervious to most insecticide applications. Applications twice a year of a mixture of imidicloprid, fine horticultural oil, and wetting agent have been only moderately effective. Removal of the soil and existing turf is only successful when at least a foot of the soil is removed, which is impractical for most homeowners. Healthy turf can tolerate some levels of infestation. Damage can be minimized by proper pH, fertilization, mowing height, and watering during dry periods.

Turf Ground pearls –*Margarodes* spp.



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Turf Ground pearls –*Margarodes* spp.



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Verbena Bud moth stem damage-*Endothenia hebesana*



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Verbena

Verbena is sometimes attacked by the larvae of a small brown moth known as the Verbena Bud moth, *Endothenia hebesana*. The larvae of this moth also attack Iris, Tiger flower, Snapdragon, Mullein, and Gentian. The moth is a small, inconspicuous brown Tortricid moth with a wingspread of 1/2". The larvae attack flower heads, seed, and stalks. When they bore into the new shoots of flowering plants, the shoots wither and die. The larvae vary in color from greenish yellow with a black head and are a little less than 1/2" long when mature. Unless infestations are severe infestations can be controlled by handpicking, or by or clipping and disposing of the infested tips. Insecticides such as malathion, or carbaryl, or bifenthrin, or cyfluthrin, or pyrethroids, or *Bacillus thuringiensis* may be used for heavy infestations.

Verbena Bud moth larva - *Endothenia hebesana*



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**Verbena Bud moth stem
tunneling-*Endothenia hebesana***



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and angular in shape. Protective fungicides should be applied starting after bloom, and continuing at 14 day intervals until August. Captan, Abound, Sovran, Flint, Pristine, or Maneb may be used. Follow label.

**Muscadine Angular leaf spot –
*Mycosphaerella angulata***



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**Muscadine Angular leaf spot –
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Muscadine

Angular leaf spot of Muscadine grapes, caused by *Mycosphaerella angulata*, is an important disease in the southeastern United States, including Arkansas. The disease can cause extensive defoliation and yield loss. Symptoms begin as light yellow flecks or spots. The centers of older lesions become dark brown to black,