Extension
ALABAMA A&M & AUBURN UNIVERSITIES

Common Insects and Disease Pests of **Turfgrasses & Ornamentals**

► Five pest groups, insects, and related arthropods, snails and slugs, vertebrates, plant disease agents, and weeds can cause problems in urban landscapes and nursery production. Of these, insects and related arthropods and plant disease agents are the most likely to outbreak and cause problems. Use these images and brief descriptions to learn about the most common plant disease symptoms, insects, and related arthropods.

Common Pests and Beneficial Insects of Turfgrasses

Ground pearls are most often observed in the cyst (nonfeeding stage) or when the pink females are mobile.

White grubs are the C-shaped, root-feeding immature stages of scarab beetles. All white grubs have a distinct head and three pairs of legs.

Billbug adults are snouted beetles that feed on grass as adults (before egg laying).

Immature billbugs differ from white grubs because they are legless and feed inside plants as younger larvae.

Green June beetle larvae are much larger than other white grubs and crawl on their backs if found alive.

Tawny and southern mole crickets are introduced species that cause the most problems in turfgrass.

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Mole cricket controls are often timed with egg hatch. This image shows **newly hatched mole crickets** in the immature stage called nymphs.

Surface tunneling activity is the easiest way to indicate the presence and damage from mole crickets in turfgrass.

Red imported fire ants create mounds in turfgrass and landscape plantings. These mounds lack a hole in the top because imported fire ants enter and exit the mound from satellite holes around the mound.

Unlike some other ants, **imported fire ant workers** can vary significantly in size, but all are stinging, sterile females. A potato chip can be used to determine if fire ants are active and will pick up baits.

Southern chinch bugs are major pests of St. Augustinegrass. Adults have wings, but all life stages suck juice from turfgrass. (Photo credit: Lyle Buss, University of Florida)

Lawns attacked by **southern chinch bugs** show damage in full sun and may not recover. (Photo credit: Lyle Buss, University of Florida)

Two-lined spittlebug adults are pests of turfgrass and ornamentals feeding on plant xylem.

Two-lined spittlebug immature stage called **nymphs** feed inside a spittle mass produced from the excess water they consume when feeding on plant sap.

Rhodesgrass mealybug is one of the few mealybug pests of turfgrass. It has a threadlike filament coming from the rear and produces honeydew.

Cicada killer wasps are among the largest wasps in Alabama. Females grab cicadas from the trees and take them into burrows they make in sand or bare soil. Males, similar in color and size, usually hover around these burrows waiting for females.

This wasp, called the **mole cricket hunter** or *Larra bicolor*, was introduced to Florida for biological control of mole crickets. It is now found in Alabama as far north as the Auburn-Opelika area.

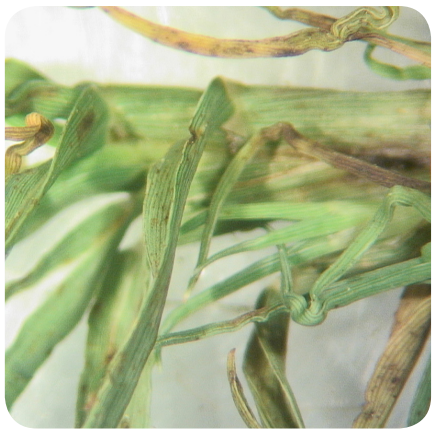
Paper wasps can sting when disturbed, but they are also beneficial, eating caterpillars such as armyworms and webworms that attack turfgrass.

Fall armyworm egg masses on flags or fence posts are a noticeable sign that populations are very high. Eggs hatch in just a few days and larvae begin feeding.

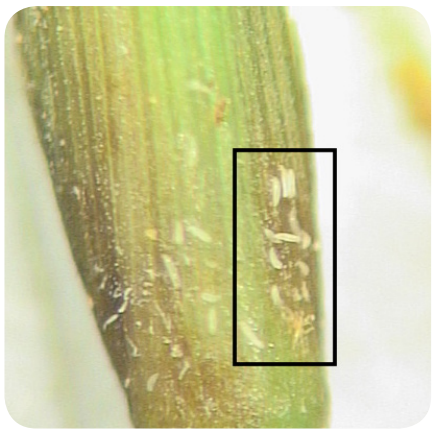
Fall armyworm larvae are larger, striped larvae with four distinct dots on the rear end and a white wishbone suture on the head.

Tropical sod webworm larvae lack stripes but often have blotches or spots on segments. These spots that do not cross body segments are common on webworms. (Photo credit: Lyle Buss, University of Florida)

Predators, ants, beetles, and spiders eat eggs and immature stages of many common pests reducing the need for insecticides in most turf stands.



Damage from **bermudagrass or zoysiagrass mites** causes bunching of growth or a straplike distortion to the tip of the grass blade.



Eriophyid mites are virtually microscopic, elongated mites (highlighted in box) that feed inside the leaf sheaths of grasses.

Common Pests and Beneficial Insects of Ornamentals

Tea scale, an oystershell-shaped scale, is the primary pest of camellias and sometimes hollies. The females are dark and the males are white.

False oleander scales are elongated white scales common on leaves of southern magnolia.

The adult stages of most scale insects typically don't have legs and cannot move. **Scale insects** have a mobile stage called *crawlers* that disperse from under their mothers to find new places to feed and grow.

Azalea lace bug adults have lacy translucent wings and the immatures have a spiny body. They suck plant sap from azaleas and leave distinct black excrement spots on the underside of leaves.

Lantana lace bugs are the main pest concern on lantana. Their feeding can cause the plant to stop flowering and make the leaf edges have a scorched appearance.

Insects are so small that the immature stages can feed between the top and bottom layers of a leaf causing a blotch or linear mine.

Daylily leafminers are maggots of small flies that make linear mines in the leaves of daylilies.

Whitefly adults are small winged insects that suck plant sap. Lantana and gardenia are commonly attacked by whiteflies.

Honeydew is the sugary liquid excrement of mealybugs, aphids, whiteflies, and most soft scales (but not armored scales). Honeydew will make leaves look shiny and ants, bees, and wasps will also feed on it.

Sooty mold are nonpathogenic fungi that grow on honeydew. Leaves and stems of plants will have a dark appearance that lasts from year to year.

Treehoppers suck plant sap but have unique forms.Some use their unique form as camouflage.

Caterpillars, like azalea caterpillars shown here, chew the leaves of plants and may defoliate trees. They typically start as eggs on or near the plant, and feeding is often unnoticeable until the caterpillar gets larger.

Tent caterpillars and fall webworms live inside nests in trees made of silk. Fall webworm nests are on the ends of tree branches in the late spring to early summer.

Bagworms are caterpillars that live and grow in individual bags made of silk and decorated with plant parts for camouflage.

Thrips are small and typically found in flowers on the undersides of leaves. The adults (with fringed wings) and immature stages suck plant sap.

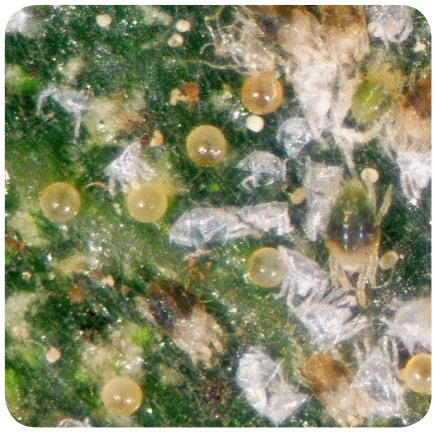
Sharpshooters, plant hoppers, and leafhoppers also suck plant sap. The glassy-winged sharpshooter is common in summer on sunflowers and crapemyrtle.

Many beetles, like **Japanese beetles** shown here, chew the leaves of plants. Japanese beetles also like to eat blooms of roses and other flowers.

Pesticide regulations now protect pollinators, such as **bees,** by limiting the spraying of ornamental plants only when plants are not in flower.

Canna leafroller uses silk to keep the leaves of canna from unrolling. The rolled leaf protects them as they chew the leaves.

Galls, tumorlike growths on leaves and stems of plants, can be caused by disease, insects, or mites. Insects or mites typically live inside galls that they cause on plants.



Spider mites, which are not true insects, are more closely related to ticks and spiders. They insert their mouthparts into plants and suck plant sap of many types of garden plants. They are small (about the size of a period in a sentence) and can't fly but can produce silken webs.

Spider mites produce silken webbing over host plants.

Stippling is a form of plant damage caused when spider mites, some leafhoppers, and azalea lace bugs feed and remove the green parts of plant cells. It can be confused with a nutrient deficiency.

Rose slugs look and feed like caterpillars on rose leaves. They are not true slugs or caterpillars. They are sawfly larvae in the order Hymenoptera with wasps, bees, and ants.

Borers often attack dead or dying plants, but some ambrosia beetles attack living plants. Ambrosia beetles produce frass sticks that look like pieces of toothpicks on the trunk of trees they attack.

Lady bugs are a gardener's friend. Most people recognize the adult beetle but not the larval or pupal stages shown here. Larvae and adults eat many pests such as aphid scale insects and whiteflies.

Common Diseases of Turfgrasses

Spring dead spot on 'Tifway' bermudagrass.

Spring dead spot in late spring on 'Tifway' bermudagrass.

Severe **brown patch** damage to St. Augustinegrass lawn.

Gray leaf spot on St. Augustinegrass.

Gray leaf spot on St. Augustinegrass.

Yellowish cast associated with **Emerald rust** on zoysiagrass.

Typical symptoms of **leaf spot and crown rot** on leaves of 'Common' bermudagrass.

Typical **fairy ring** with associated mushrooms.

Sting nematode damage on bermudagrass.

Improper fertilizer application can cause discoloration like certain plant diseases.

Improper use of herbicides like glyphosate can cause symptoms like some foliar plant diseases.

Take-all root rot on St. Augustinegrass.

Fungal mycelia of take-all root rot on St. Augustine stolons.

Dollar lesions can confirm the fungus that attacks several common lawn grasses.

Dollar spot symptoms are small yellow spots in grass that are about the size of a silver dollar coin.

Dollar spot on bermudagrass. Note the cottony growth of casual fungus on blighted leaves.

Immature **Physarum slime mold fungus**.

Slime mold on all turfgrasses.

Immature **slime mold fungus**.

Slime molds can also grow in mulch beds.

Common Diseases of Ornamentals

Crown gall on euonymus.

Leaf gall on 'Gumpo' azalea.

Alternaria leaf spot on marigold.

Azalea Septoria leaf spot on older leaves.

Phyllosticta leaf spot on cherry laurel. (Photo credit: Penn State Department of Plant Pathology and Environmental Microbiology Archives, Penn State University, Bugwood.org)

Apple scab on crabapple.

Cedar-apple rust on crabapple.

Powdery mildew on crapemyrtle.

Powdery mildew on dogwood.

Dogwood anthracnose on flowering dogwood. (Photo credit: John Hartman, University of Kentucky, Bugwood.org)

Spot anthracnose on 'Cloud 9' dogwood leaves.

Spot anthracnose on dogwood blooms.

Closeup of **fireblight** on flowering pear.

Fireblight on flowering pear.

Boxwood blight leaf spot and defoliation. (Photo credit: David L. Clement, University of Maryland, Bugwood.org)

A planting of boxwoods with symptoms of **boxwood blight.** (Photo credit: Adria Bordas, Virginia Polytechnic Institute and State University, Bugwood.org)

Leaf loss and refoliation of stem infected with **boxwood blight.** (Photo credit: Mary Ann Hansen, Virginia Polytechnic Institute and State University, Bugwood.org)

Symptoms of **bacterial leaf scorch** on red oak leaves. This disease is vectored by certain leafhoppers, treehoppers, and sharpshooters.

Symptoms of **bacterial leaf scorch** on sycamore leaves can appear to be drought.

Hypoxylon canker on oak.

Oak leaf blister on southern red oak.

Oak leaf blister on Toomer oak.

Entomosporium leaf spot (black acervuli) on photinia.

Healthy photinia (left) and photinia defoliated by **Entomosporium leaf spot** (right).

Entomosporium on Indian hawthorn.

Springtime Entomosporium leaf spot on Indian hawthorn bush.

The fruit of ornamental hawthorn trees with healthy green fruit and fruit showing signs of **quince rust**.

Cedar-apple rust with spore tendrils on native red cedar. (Photo credit: USDA Forest Service–Region 8–Southern, USDA Forest Service, Bugwood.org)

Cedar rust limb canker on red cedar.

Anthracnose on red maple.

Anthracnose on sugar maple.

Anthracnose defoliated sugar maple.

Rose rosette shoot damage on 'Knockout' roses.

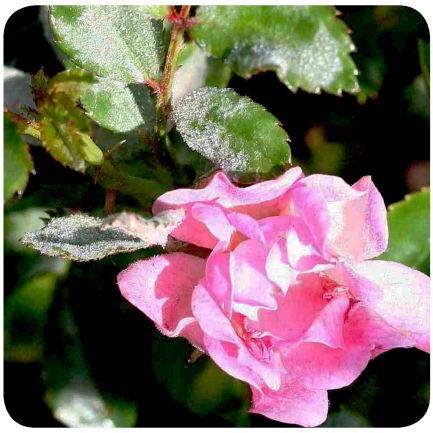
Blackspot on rose.

Blackspot defoliation on rose.

Rose rosette disease can produce abnormal growth like thickened stems and canes.

Cercospora leaf spot on 'Freedom' rose.

Downy mildew on rose.



Powdery mildew on rose.

Rose mosaic, a common virus disease of rose. (Photo credit: Jennifer Olson, Oklahoma State University, Bugwood.org)

Leaf gall on camellia.

Algal leafspot on sasquana camellia.

Algal leafspot on southern magnolia.

Cercospora leaf spot on 'Caddo' crapemyrtle.

Cercospora leaf spot defoliation on 'Rhapsody in Pink' crapemyrtle.

Powdery mildew shoot on crapemyrtle.

Nectria canker on sweet gum.

Seiridium canker on Leyland cypress from a distance.

Cercospora needle blight on Leyland cypress.

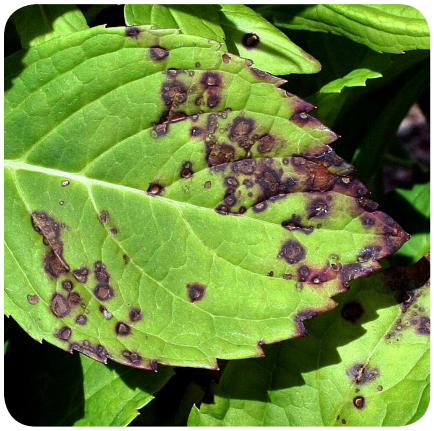
Root knot galling on 'Gigantus' sunflower.

Web blight, *Rhizoctonia*, on vinca.

Symptoms of **tomato spotted wilt virus** on vinca.

Phytophthora root rot on vinca.

Cercospora leaf spot on bigleaf hydrangea.



Corynespora leaf spot on big leaf hydrangea.

Powdery mildew on big leaf hydrangea.

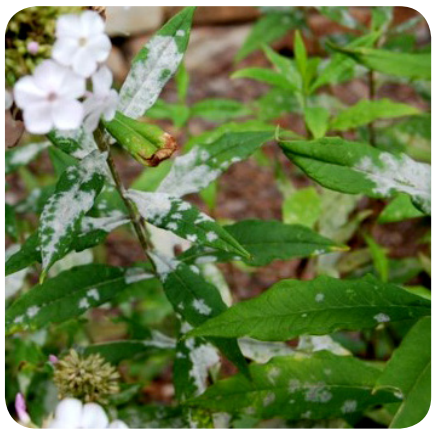
Botrytis blight sporulation on pansy.

Roots on pansy showing symptoms of **black root rot**.

Roots on pansy showing symptoms of **black root rot**.

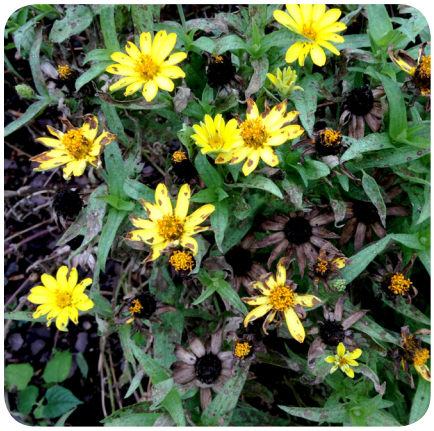
Impatiens that have been defoliated by **downy mildew**.

The appearance of **downy mildew** on the underside of leaves on impatiens.



Powdery mildew on tall garden phlox.

Powdery mildew on leaves of zinnias.



Alternaria leaf spot on zinnia.

Planting of petunia with symptoms of **Phytophthora blight**.

Daylily leaf rust or **daylily rust** on foliage.

Dodder, a parasitic weed, on coleus.

Dodder, a parasitic weed, in English ivy.

Fasciation (mycoplasm) on tickseed. (Photo credit: Department of Plant Pathology, North Carolina State University, Bugwood.org)

Host virus X symptoms on hosta leaves.

Foliar symptons of **virus infection** on peony.

Symptoms of **Armillaria root rot** on Yoshino cherry.

The bark of this Yoshino cherry was removed near the soil to show the mycelium of **Armillaria root rot**.

Bot canker on shrub dogwood.

Leaf scorch on dogwood trees.

Powdery mildew on dogwood.

David Held, Associate Professor; **Austin Hagan**, *Extension Specialist,* Professor; **James Jacobi**, *Extension Specialist*; **Pat Cobb**, former *Extension Specialist,* all in Entomology and Plant Pathology, Auburn University

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