

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.

Liriope

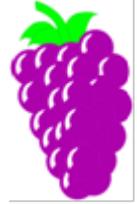
Liriope, also known as Lilyturf, Lirope, and Monkey Grass, is a hardy, useful plant for the perennial border. Some cultivars have very attractive blooms as well as decorative foliage. It does best in sun with moist, well drained soils, with a pH of about 6. Liriope is a very drought resistant plant once established. Although it prefers sun, it tolerates shade very well as long as the ground is not boggy. There are many cultivars available, in both variegated and green leafed varieties. Buyers should be aware that some are clump forming and others are aggressive spreaders. The spreaders are great for large areas on banks or under trees, but can be a huge nuisance in a bed with other perennials. Research the many cultivars available before choosing one for your particular needs. A common disease problem on Liriope is anthracnose, caused by *Colletotrichum* spp. It can become severe by the end of the growing season, particularly if the planting is under overhead irrigation. Red lesions appear on the leaves, usually starting at the tips and spreads downward. The spots coalesce, killing large areas of the leaf. Both disease and insect problems can be reduced by mowing or pruning the old foliage in late winter, and removing it from the planting. Spectracide Immunox, Fertilome Liquid Systemic Fungicide, Ortho Garden Disease Control, Bonide Fung-onil Multipurpose Fungicide RTU, and Bayer Advanced Garden-Disease Control for Roses, Flower, Shrubs, may be used along with cultural controls to limit disease. Start spraying in the spring at new growth. Limit overhead irrigation or schedule it early in the day so foliage can dry. Liriope may also suffer from serious root and crown rots when planted in soils that stay wet for prolonged periods. Both *Phytophthora* and *Pythium* spp. can cause serious disease in Liriope. Symptoms are yellowed leaves that appear water-soaked, discolored, and rotted at the base. Affected leaves become chocolate-brown near the base and are easily pulled from the crown. If the drainage cannot be improved, the best option is to plant Liriope in a different spot. Fungicides such as Monterey Aliette, Mancozeb,

or, Subdue Maxx, may be of some use if the drainage problems are corrected. Many homeowners, however, find the cost of these fungicides prohibitive.

Liriope anthracnose- *Colletotrichum* spp.



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Liriope crown rot-*Phytophthora* spp.



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Plum

Every spring the Clinic's receives inquiries about black, knobby growths on limbs and twigs of plum and cherry. These odd growths are a result of a fungal disease known as Black knot, causal agent *Apiosporina morbosa*, (*Dibotryon morbosum*). Black knot can girdle twigs, and limbs, resulting in disfigurement, weakened trees, yield loss, and sometimes tree death. Prunes, plums, sweet cherries, and sour cherries are all susceptible. Black knot appears very rarely on peach. The first symptoms are small, light brown swellings usually located on the fruit spur or at the base of the leaf petiole. These appear during the summer the first year after infection. Young knots may have an olive-green color, but later become hard, brittle and dark-colored. Older knots are black in color and hard in texture. The knots are usually asymmetrical, and protrude more on one side of the affected branch. Prune out and destroy all visible knots before new growth starts in the spring. The cuts should be made at least 6-8 inches below the lowest part of the knot. Cut out knots on large main branches and trunks with a knife or chisel, including an inch of healthy bark around the knot. All clippings should be burned, buried or otherwise removed from the property. Mancozeb, Captan, Topsin M, or fungicides containing chlorothalonil are helpful in controlling Black

Knot if the cultural controls are also practiced. Apply first spray in the spring just as green tissue begins to appear. Spray again just before and after bloom. Spray at 2-week intervals until new growth stops. Lime-sulfur sprayed during the dormant season is also helpful. Wild plums and cherries can serve as continuous sources of inoculum. When planning an orchard, it is wise to remove wild cherries and plums within 600 feet of the orchard. Check for resistant cultivars as some plums have good resistance.

Black knot-*Apiosporina morbosa*



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Holly

There are thousands of species of leafhopper insects found in North America. Depending on species, the adults range in size from 1/16 to 5/8 inch in length. Leafhoppers may be found on most types of plants from food crops to ornamentals to turf. They come in a wide range of colors and patterns. Both nymphs and adults can hop, and the adults can also fly. All feed on sap by inserting their stylet mouthparts into leaves and stems. Some species restrict feeding to the upper cells of leaf tissue, producing yellowish-white wounds. The discoloration occurs as a result of cell destruction from the feeding process as well as from the injection of toxic saliva. If leafhopper numbers are great enough, large areas of the leaf can turn yellow. These insects excrete small brown to black spots at their feeding sites, similar to those deposited by lace bugs. Leafhoppers are important pests as some can transmit plant pathogens



such as viruses, or mycoplasma-like organisms. There are many beneficial insects that prey on leafhoppers. Ladybugs, lacewings, and parasitic wasps are some among the many natural predators that eat leafhoppers. Insecticides such as Insecticidal soaps, Malathion, Sevin, Permethrins, and those containing Imidacloprid, and many others provide chemical control.

Holly with leafhopper damage



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Leafhopper excrement



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Grass sharpshooter- *Draeculacephala minerva*



Jack Clark, University of California - Davis, Bugwood.org.

Candystriped leafhopper- *Graphocephala coccinea*



Susan Ellis, Bugwood.org.