



Arkansas Plant Health Clinic Newsletter

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Holly

Hollies are very popular landscape plants available in both evergreen and deciduous species. Evergreen varieties are grown for their attractive glossy leaves and showy berries. Deciduous hollies are grown for their spectacular berry display and usefulness as backdrop plantings and hedges. Several of the holly samples coming into the clinic this week have been infested with scale insects and whiteflies. Most of the whiteflies had been parasitized by a species of tiny wasp. The affected whitefly dies and becomes black with a fuzzy white border. This may be misidentified as Holly black scale. The black scale, *Saissetia oleae*, is found on aspen, bay, citrus, cottonwood, holly, maple, oleander, olive, palm, pear, poplar, privet, stone fruit, walnut, and others. Black scale is a member of the soft scale family. They are generally rounded, more convex, and larger than the armored scales. Unlike the armored scale, soft scale retains their legs and antenna at maturity and can move slowly. Soft scale reduces plant vigor but seldom kill the plant. The copious amounts of honeydew they produce encourages sooty mold which is unsightly and can reduce photosynthesis. The best control for scale is to

provide plants with good growing conditions, especially good irrigation, so they are more resistant to scale infestation. Heavily infected branches should be pruned out where practical. Where cultural practices prove insufficient for control, an application of fine horticultural oil or insecticidal soap is usually adequate. Soil applications of imidacloprid provide long-term control of soft scale but not of armored scale. Brown soft scale (*Coccus hesperidum*) is another soft scale found on holly. Armored scale such as Greedy scale (*Hemiberlesia rapax*), Oleander scale (*Aspidiotus nerii*), and Oystershell scale (*Lepidosaphes ulmi*), also attack holly. The same controls apply for armored scale as soft scale except for imidacloprid. Malathion may be used against the crawler stage of all scale species but has the drawback of injuring beneficial species that prey on scale. This can eventually lead to an increase in populations of scale. Follow label directions in all cases to avoid damage to foliage.

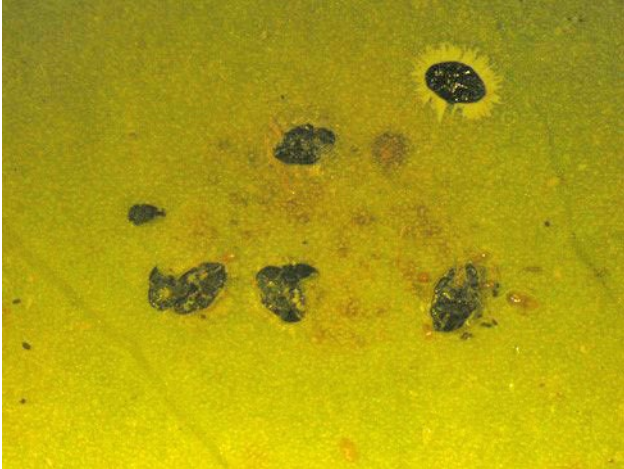
Holly Whiteflies-Parasitized



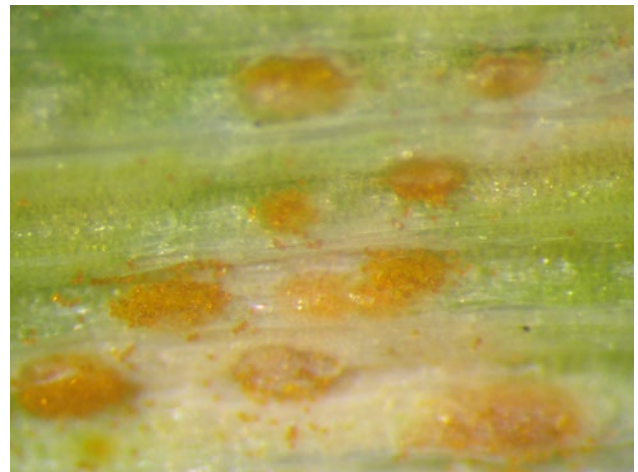
Photo by Sherrie Smith, University of Arkansas
Cooperative Extension



Holly with Parasitized whiteflies



the leaves and the heads of wheat plants. Resistance is the best defense, followed using fungicide sprays. Quadris, Tilt, Propimax, Quilt, Stratego, and Headline are all labeled for Stripe rust in Arkansas.



Wheat

The clinic is involved in a wheat stripe rust survey. We'd like counties to submit wheat for a race study being done by Dr. Chen of the USDA-ARS, the Wheat Genetics Unit at Washington State University. Include as much information as you have available, including location, cultivar, incidence, and severity. So far, we have identified Stripe rust in Arkansas, Lee, Chicot, Monroe, Prairie, and Lafayette counties. Historically, the disease has been severe in eastern Arkansas, the western Arkansas River valley and southwest Arkansas, where the fungus has overwintered. Symptoms are yellow to orange powdery pustules on the leaf surface, arranged in stripes parallel to the veins in the leaf. It can affect plants at all stages of growth. In the case of seedlings, pustules are scattered across the leaves in no order. Spores can be found on both



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Centipede grass

Centipede grass makes a desirable lawn in places that are too shady for Bermuda grass, although it is not as shade tolerant as Zoysia or St. Augustine. It is very well adapted to the sandy acidic soils often found in the southeastern United States. It does poorly in soggy soils or soils with a high pH. All turf species are susceptible to pythium diseases when conditions are favorable. Pythium blight is most readily recognized as small spots or patches of blighted grass that suddenly appear during warm, wet periods. Grass will begin to yellow and turn brown in patches. Examination of the roots will reveal rotting and oospores may be observed under the microscope. Cultural controls for controlling the disease include coring to improve drainage and root zone, avoiding overhead irrigation, and using a balanced fertilizer. Centipede does poorly with large applications of nitrogen. Ideal fertilization of centipede grass would be 0.5 pounds of nitrogen per 1000 square feet in April, June, August, and October. Soil test for pH and nutrients. The ideal pH for centipede is 5.0-6.0 the proper mowing height is 1 inch at weekly intervals. A fungicide for pythium containing aluminum tris is available for homeowners as Monterey Alette. The best product for commercial turf people is Subdue Maxx.



Slime molds

As the weather warms up, we are seeing some slime molds begin to make their appearance in lawns and other favorable environments. Slime molds are fascinating animals belonging to the kingdom Protista. They were once thought to be fungi, but there are significant differences. **Slime molds move and lack chitin in their cell walls.** Yes, they move when in their plasmodial or slug states. Some of the physarums move about 1mm per hour. That's not very fast, but the fact that they can shift locations over the course of several days can come as a shock to unsuspecting homeowners. There are over 400 species in a variety of colors and shapes. They like damp locations and rotting wood so are often found in mulched flower beds and lawns. Some species resemble vomit. Veterinarians receive calls



every year from homeowners who find a slime mold in the back yard and think their pet is sick. Slime molds are not dangerous to animals or the plants they are found on. They ingest bacteria, fungal spores, and maybe other smaller protozoa.

Dog Vomit Slime Mold- *Fuligo septica*



Slime Mold sporulating on turf- *Diachea leucopodia*



**Photo by Rick Cartwright, University of Arkansas
Cooperative Extension**

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.

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