

GUIGNARDIA LEAF BLOTCH ON HORSECHESTNUT AND BUCKEYE

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If you have noticed lately, the leaves of buckeyes and horse chestnuts (*Aesculus* spp.) look pretty brown and scorched. This is probably due to a fungal leaf disease known as *Guignardia* leaf blotch (GLB). Most *Aesculus* spp. are susceptible (i.e. Ohio, red, and yellow) however, bottlebrush buckeye (*A. parviflora*) and some varieties of Ohio buckeye (i.e. *arguta*, *monticola*, *sargentii*) appear to be less susceptible to GLB.

Guignardia leaf blotch (GLB) is more of a late season problem with infected leaves having large reddish-brown blotches surrounded by yellow tissue. Affected foliage will turn brown and be curled. Heavily infected trees may also show premature leaf drop. Most trees complete most of their growth by mid-season, so while unattractive and unsightly, GLB is usually more of an aesthetic problem by later summer (Figures 1, 2).

GLB will first appear as water soaked areas on the leaf which enlarge quickly forming reddish-brown leaf spots with yellow margins. Over time, the spots may grow together to form blotches (Figures 1, 2). Black pinhead-sized fungal fruiting bodies will appear in the leaf lesions and on the leaf petioles. The browning and curling of the leaves will resemble environmental (abiotic) scorch, but scorch symptoms will appear on the sides of the tree with prevailing hot dry winds and lack the black fruiting bodies, while GLB will affect all the leaves throughout the canopy. With the warm-hot dry weather we have been experiencing since early July and most of August, trees may show symptoms of both GLB and drought stress.

Like many fungal foliar diseases, the GLB fungus overwinters on fallen *Aesculus* leaves. In the spring, the fruiting bodies mature and then spores are spread during cool wet weather by wind and rain-drop splash. If leaf conditions are favorable, then leaf spots and blotches may appear in 10-20 days. Infection will continue as long as conditions are favorable with new fruiting bodies be produced through mid-summer.

Management of GLB is primarily through sanitation, pruning to improve canopy air circulation, host plant resistance, and application of chemical fungicides. In the fall, rake and dispose of infected leaves. Keep in mind that if there are lot of infected *Aesculus* spp. trees in the area, raking may not be all the effective. Where appropriate and needed, canopy thinning can help improve air circulation and drying of leaves. Be sure to follow proper pruning techniques for canopy thinning. If GLB is a chronic problem in the landscape consider planting some of the less susceptible species and varieties mentioned above. Fungicidal sprays are usually not warranted, but in cases where tree health is compromised, foliar sprays should be applied starting at bud break and then repeated at 10-14 day intervals while favorable disease conditions exist. As you can see, this may involve a number of sprays over several months. Keep in mind, that

fungicidal sprays are primarily preventative and will not make existing leaf spots-blotches disappear.



Figures 1 and 2: GLB leaf symptoms