

Guignardia Leaf Blotch

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Guignardia leaf blotch infects *Aesculus* species, which include the native plants Ohio buckeye (*A. glabra*), bottlebrush buckeye (*A. parviflora*), along with the less common painted buckeye (*A. sylvatica*) and red (*A. pavia*) buckeye. The non-native horse-chestnut (*A. hippocastanum*) is also a susceptible host of this disease (Fig. 1).



Figure 1.



Figure 2

Symptoms

The fungus *Guignardia aesculi* (pronounced Gwin-yard-ee uh) infects the leaves of *Aesculus* species, causing an irregularly-shaped reddish-brown lesions or 'blotch' on leaflets. These blotches are often surrounded by a yellow, chlorotic halo (Fig. 2). Lesions expand and blotches may envelop the entire leaflet. Blotches that occur on the margin of leaves may result in distortion, curling and wrinkling. Unlike many foliar diseases, *Guignardia* blotch infected leaves often remain attached to the branch.

Careful examination of the leaves will often reveal black, pinhead-sized pustules (pycnidia) that may be readily observed with a hand lens and are a key diagnostic sign of this disease (Fig. 3).

These pycnidia serve as a source of spread during the summer and overwintering inoculum on fallen leaves. This asexual state (imperfect) is sometimes referred to as *Phyllosticta* spp.

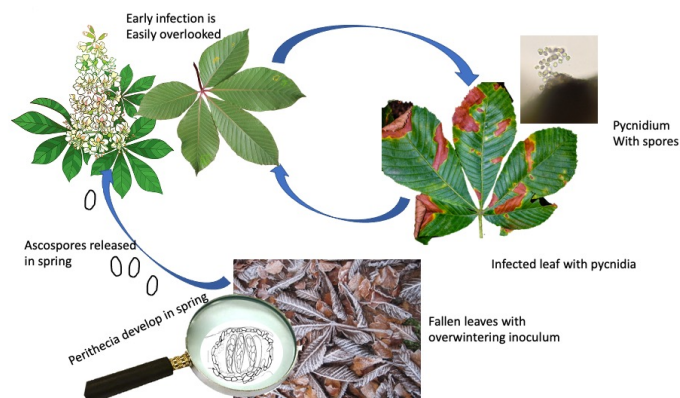


Figure 3

Disease Cycle

Leaves are infected mid-spring, just as *Aesculus* species are blooming. Weeks later, the first symptoms of the disease appear, beginning with discrete lesion appearing on the leaflets. Lesions expand and the fungus sporulates and reinfects whenever weather is wet. The fungus overwinters, undergoing meiosis (sexual recombination) in the spring, releasing ascospores from fallen leaves and repeating the disease cycle (Fig.3). Although dramatic in appearance, the disease has little impact on otherwise healthy trees and shrubs.

Management

Although unsightly, the disease does not impact the overall health of the infected plant. Pruning to open the canopy will increase air circulation, promote drying and prevent some infection. A number of fungicides (Table 1) are labeled for disease management, and will preserve the appearance of specimen trees, but are not recommended or warranted in most instances. Begin applications to prevent prior infection by ascospores prior to bloom and after bloom, followed by one to two additional applications if the weather is conducive for disease (i.e., repeated rainfall with cooler weather).

Table 1

TRADE NAME	COMMON NAME	FRAC Code	Protectant or Systemic	REI	SITE
Armada	trifloxystrobin + triademfon	11+3	S	12h	N, L, I
Avelyo	mefentrifluconazole	3	S	12 h	G, N, L, I, S
Banner Maxx Propiconazole	propiconazole	3	S	24h	N,L
Broadform	trifloxystrobin + fluopyram	7+11	S	12 h	G, N, L, I, S
Camelot O	copper	M	P	4 h	G, N, L, I, S
Captan	captan	M	P	48 h	G, N
Cleary's 3336; OHP6672	thiophanate-methyl	1	S	12	G,N,L,I
Compass,	trifloxystrobin,	11	S	12 h	G, N, L, I, S
Concert II	propiconazole + chlorothalonil	M+3	P+S	12h	N,L
Daconil, PathGuard	chlorothalonil	M5	P	12 h	G,L,I
Disarm, Fame	fluoxastrobin	11	S	12	G, N, L, I, S
Eagle, Systhane	myclobutanil	3	S	24	G,N, L
Heritage	azoxystrobin)	11	S	4 h	G, L, N, S
Mural	azoxystrobin + benzovindiflupyr	7 + 11	S	12 h	G, N,S, L
Orchestra	fluxapyroxad + pyraclostrobin	7 + 11	S	12 h	G, N, L, I, S
Pageant Intrinsic	pyraclostrobin + boscalid	11+7	S	12 h	G, N, L, I, S
Palladium	cyprodinil + fludioxonil		S	12 h	G, N, L
Protect DF	mancozeb	M	P	24 h	
Rubigan	fenarimol	3	S	12	N,L
Spectro 90	thiophanate-methyl + chlorothalonil	M+1	P+S	12	G, N, L
Strike, Bayleton	balyeton	3	S	12	G,N,L
Sulfur	Sulfur	M	P	varies	
Terraguard	triflumazole	3	S	12	G, N, L
Torque	tebuconazole	3	S	12	N,L
Tourney	metconazole	3	S	12	N,L
Trinity	triticconazole	3	S	12	G, N, L, I, S
Zyban WSB	thiophanate-methyl + mancozeb	M+1	P+S	24	G, N, L, I

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