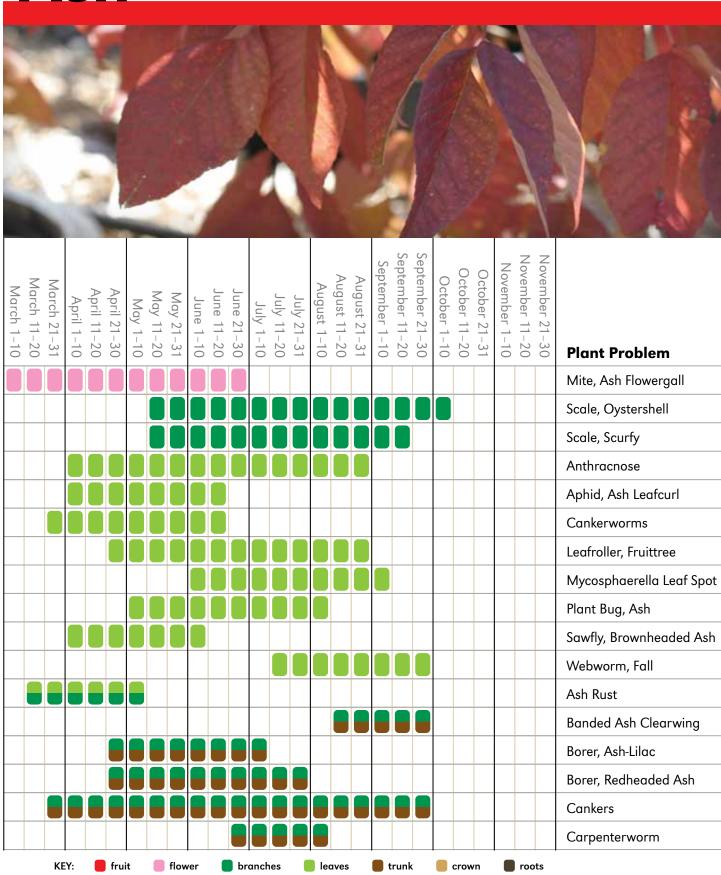
Ash



Signs/Symptoms

Treatment

Mite, Ash Flowergall (Eriophyid)



Hard, cherry-sized, rough, green galls occurring in clusters on male trees. By mid summer, they turn brown and remain attached to trees through several seasons.

Fertilized female mites overwinter beneath bud scales or in bark crevices. Apply an oil spray during the dormant season just prior to bud-break when mites have become active and exposed, but before leaf buds open. The galls are unsightly but not harmful.

Scale, Oystershell



Small, brownish, oystershell shaped scales are crowded on branches and may cover the bark completely. Infested branches suffer dieback. Newly hatched nymphs are white.

Prune out heavily infested branches, as appropriate. Dormant oils are not effective, as scales are in the egg stage beneath female shells. Monitor in June to detect newly hatched nymphs and apply oil spray, insecticidal soap or insecticide (apply systemic earlier).

Scale, Scurfy



Small, flat, pear shaped, dirty-white scales crowded on branches; heavy infestations look crusty. Plants are weakened, and dieback of twigs or branches may be evident. Prune out heavily infested branches, as appropriate. Dormant-season oil sprays not as effective as treating newly hatched nymphs ("crawlers") in June. Monitor to detect crawlers and apply an oil spray, insecticidal soap or insecticide.

Anthracnose



Pinpoint-sized, purple to brown lesions on fallen leaflets and rachises. Blotchy black lesions appear on older succulent foliage. Lesions turn tan as they mature. Lesions on expanding leaves cause leaf distortion. Small, elliptical cankers on young twigs. Twig dieback.

Sanitation. Improve air circulation. Foliar fungicide application just as buds are beginning to swell, but before bud break and repeat according to label instructions.

Aphid, Ash Leafcurl



Leaves on branch tips become stunted and balled up together. Sticky honeydew and lady beetles are often present. Cottony material and yellowish aphids are present within masses. Insecticidal treatment not often necessary, nor is it effective. Natural enemies often destroy colonies by early summer, and aphids migrate to alternate host plants. Spray leaf masses early with a strong jet of water from the garden hose to dislodge aphids.

Signs/Symptoms

Treatment

Cankerworms



Ragged holes in leaves; only veins may remain. These "inchworms" are greenish, brown or black and move in a looping fashion. Some may hang from silken threads when disturbed.

Healthy trees tolerate considerable defoliation; treat only if severe and when cankerworms are abundant and small. Microbial insecticides are effective and safe alternatives to chemical insecticides, especially in situations where drift is a concern.

Leafroller, Fruittree



Buds with holes, webbing and frass. Leaves rolled together with webbing and skeletonized or devoured. These green worms with shiny black heads wriggle violently when disturbed.

Rarely justifiable to control, as infestations tend to be spotty, and healthy trees tolerate even extensive defoliation. Should control be warranted, make several applications of a microbial insecticide, such as product containing *Bt* or spinosad.

Mycosphaerella Leaf Spot



Lesions on leaves are light colored with discrete margins; lesions coalesce to form larger necrotic areas. Premature defoliation with severe infections. Sanitation. Improve air circulation. Apply foliar fungicide just as buds are beginning to swell but before bud break and repeat according to label instructions.

Plant Bug, Ash



Leaves with brown speckles or patches. Leaves during growth can become distorted from plant bug feeding injury. Green nymphs or brown adults found scurrying about underneath. Insecticides are appropriate during years, or in local areas, where ash plant bug populations are high and damage is expected to become severe. Nymphs cannot fly and are more easily controlled. Options include a spray oil, insecticidal soap or an insecticide.

Sawfly, Brownheaded Ash



Leaves first have tiny holes, then later they develop large, ragged holes. The larvae are pale green and feed in clusters underneath leaves. Adults resemble small, black bees. Dislodge larvae from leaves with a strong jet of water from the garden hose. In cases where larvae are still small and severe defoliation is expected, treat with an oil spray, insecticidal soap, or insecticide. Treat mature larvae accumulating at bases of trees.

Signs/Symptoms

Treatment

Webworm, Fall



A nest of webbing covers several leaves initially, then later envelops entire branches as caterpillars grow. Fuzzy, yellowish or brown caterpillars feed on leaves inside webbing. Rake out nests, or dislodge with a powerful jet of soapy water from a power washer. Apply a microbial insecticide to control young caterpillars in small nests; larger nests are almost impenetrable with insecticidal sprays. Damage is more unsightly than serious.

Ash Rust



Yellow lesions on leaves, petioles and green twigs; lesions become swollen and distorted and develop into gall-like growths. Bright orange clusters appear on the gall-like growths. Lesions eventually turn brown and wither. Cankers develop on twigs and leaves fall to the ground.

Control alternate grass host (Cordgrass, *Spartina* spp.).

Banded Ash Clearwing



In late summer, small, round exit holes (5 mm) appear on the trunk and lower branches. Pupal skins may hang out from holes. Branches of host may show stress or dieback.

Apply an insecticide to the trunk and lower branches with a coarse spray to the point of wetness. Time treatment after pheromone traps capture the wasp-like adults or after exit holes first appear. Treat regularly to cover the adult emergence period, about 4–6 weeks.

Borer, Ash-Lilac



As early as late April, small, round exit holes (5 mm), appear on the trunk and lower branches. Pupal skins may hang out from holes. Branches of host may have failed to leaf out.

Apply an insecticide to the trunk and lower branches with a coarse spray to the point of wetness. Time treatment after pheromone traps capture the wasp-like adults or after exit holes first appear. Treat regularly to cover the adult emergence period, about two months.

Borer, Redheaded Ash



Clean, round exit holes through bark on trunk and main branches of larger trees; young trees have vertical tunnels in trunk. Tree hosts are stressed and may have dead branches. Since adults have an extended period of emergence from May to August, insecticidal sprays to prevent reinfestation must be applied regularly through this period. This beetle is attracted to stressed and dying trees, so be sure to assure optimal health of trees.

Signs/Symptoms

Treatment

Cankers



Discolored, sometimes sunken area with a distinct border on branches and twigs. Internal discoloration under bark. May girdle small branches.

Prune out affected areas.

Carpenterworm



Large, weepy, circular, exit holes usually at base of tree and in main branches. When adults emerge, pupal skins often protrude from holes. Some branches may be dead or stressed.

Since each carpenterworm maintains an open hole to the outside of the tree, inject an insecticide, or a slurry containing parasitic nematodes, or kill with a stiff wire. Apply a borer spray to the bark throughout the period of adult activity to prevent reinfestation.