

# Willow



Plant Problem	November 21-30	November 11-20	November 1-10	October 21-31	October 11-20	October 1-10	September 21-30	September 11-20	September 1-10	August 21-31	August 11-20	August 1-10	July 21-31	July 11-20	July 1-10	June 21-30	June 11-20	June 1-10	May 21-31	May 11-20	May 1-10	April 21-30	April 11-20	April 1-10	March 21-31	March 11-20	March 1-10
Aphid, Giant Willow & Black						■				■																	
Scale, Oystershell						■				■	■	■	■	■	■	■	■	■	■	■							
Scale, Scurfy								■	■	■	■	■	■	■	■	■	■	■	■	■	■						
Bagworm										■	■	■	■	■	■	■	■	■	■								
Cottonwood Dagger Moth										■	■	■	■	■	■	■	■	■									
Leaf Beetle, Cottonwood										■	■	■	■	■	■	■	■	■	■	■	■						
Leafhoppers										■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Sawfly, Willow										■	■	■	■	■	■	■	■	■	■	■	■						
Spider Mites										■	■	■	■	■	■	■	■	■	■	■	■						
Unicorn Caterpillar										■	■	■	■	■	■	■	■	■	■	■	■						
Webworm, Fall										■	■	■	■	■	■	■	■	■	■	■	■						
Borer, Cottonwood										■	■	■	■	■	■	■	■	■	■	■	■						
Borer, Flatheaded Appletree										■	■	■	■	■	■	■	■	■	■	■	■						
Carpenterworm										■	■	■	■	■	■	■	■	■	■	■	■						
Cankers	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

KEY: ■ fruit ■ flower ■ branches ■ leaves ■ trunk ■ crown ■ roots

# Willow

## Plant Problem

## Signs/Symptoms

## Treatment

### *Aphid, Giant Willow & Black*



In mid to late summer, large gray-brown, spotted, longlegged aphids occur in colonies on new twigs; many are winged. Foliage where infestations occur may turn yellow or wither.

These aphids have many hosts and are most evident in late summer. Older established trees tolerate them well, but monitor newly planted trees. For severe infestations, dislodge aphids with a strong spray of water, or treat with a contact insecticide.

### *Scale, Oystershell*



Very small, brownish, oystershell shaped scales crowded on branches often cover the bark completely. Infested branches suffering 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.

### *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.

### *Bagworm*



Early in the season the bags are quite small and foliage appears desiccated and riddled with small holes. In late summer, bags are large, and severe defoliation occurs around them.

Remove the previous year's bags on the host before May 1. Treat larvae while bags are small, before July 1. Use *Bt* or appropriate insecticides to conserve natural enemies. Later in the season, treat hosts with thorough coverage, but effectiveness may be poor.

### *Cottonwood Dagger Moth*



Yellow or white, fuzzy caterpillar with several tufts of long black hairs in a row along the top of the body; black head. Ragged holes chewed in leaves.

Usually not numerous nor damaging enough to justify control. Young caterpillars are susceptible to microbial insecticides.

## Plant Problem

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### *Leaf Beetle, Cottonwood*



Leaves skeletonized by young, yellowish-gray larvae feeding in clusters. Older larvae and adults with black dashes on yellow wings chew large ragged holes in leaves.

Damage is cumulative, as there are 2–3 generations. Monitor for yellow egg clusters or small larvae in May and regularly thereafter. Spray thoroughly as needed with neem oil, a horticultural spray oil, insecticidal soap, microbial insecticide or a contact insecticide.

### *Leafhoppers*



Leaves develop pale flecks, which in time spread densely over leaf surfaces. Leaves may turn yellow. Wedge shaped adults, nymphs and fecal spots are present on leaf undersides.

Nymphs cannot fly and are more easily controlled. A strong stream of slightly soapy water from a hose-end sprayer will dislodge and kill many. Other options include a horticultural spray oil, insecticidal soap, conventional insecticide, or systemic insecticide.

### *Sawfly, Willow*



Blackish worms,  $\frac{3}{4}$  inch long when mature, with yellow lateral spots on the body. Willow sawflies occur in clusters and chew holes into leaves, and then later entirely consume them.

There are two generations. Look for damage in late May, and again in July. 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.

### *Spider Mites*



Leaves stippled or yellow with fine webbing on undersides of leaves. Tiny greenish mites moving beneath webbing. When foliage turns brown, mites may mass together at tips of stems.

Populations explode during prolonged hot, dry weather. Monitor in late July, checking undersides of leaves. Keep host plants well-watered. Dislodge colonies with a strong spray of water. Apply an insecticide/miticide if infestations become serious; repeat in 10 days.

### *Unicorn Caterpillar*



Colorful caterpillars, not hairy, but with enlarged bumps on top of body behind a large head. Young caterpillars feed in groups. Leaves have ragged holes.

Infestations often spotty and not harmful to overall tree health. Groups of young caterpillars are easily controlled with a microbial insecticide, a horticultural oil or an insecticidal soap. Do not treat when caterpillars nearly mature, well over an inch long.

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## 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.

### *Borer, Cottonwood*



Large, clean, round exit holes through the bark at the base of the trunk; accumulations of coarse sawdust on the ground. Younger trees may be stressed with wilted branches.

Monitor in mid-June for the appearance of new exit holes, which indicate beetle emergence. Thereafter, until August, make regular applications of an insecticide to the trunk and major branches to discourage re-infestation.

### *Borer, Flatheaded Appletree*



Loose bark with shallow, serpentine tunnels beneath, packed tightly with fine sawdust. Oval exit holes evident on trunk and branches. Tree is stressed or with dead branches.

Monitor trees for exit holes beginning in May and through the summer. Keep especially younger trees healthy, with regular watering if needed. Treat the trunk and major branches of infested trees with an insecticide, and treat regularly thereafter as per label directions.

### *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.

### *Cankers*



Circular to oval, brown, sunken areas in the smooth bark of branches and trunks; areas enlarge and outer bark may become black, brown, gray, reddish-brown or yellow. Inner bark turns black; sapwood appears reddish-brown to black and water-soaked.

Prune out affected area.