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Insect Pests of Broadleaf Trees

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Lilac borer/ ash borer



Identification

- On ash and lilac.
- Round holes about 3/16-inch in diameter appear on the trunk and branches.
- May have sawdust-like material in rough areas of the bark.

Control

- Spray the trunk and large branches with permethrin (Astro, Hi-Yield 38 Plus) or bifenthrin (Onyx)* around May 10 and repeat in 3 weeks.

Red oak borer



Identification

- On red, bur and other oaks.
- Wet spot on the bark.
- Sawdust-like material may be present on the bark and ground.

Control

- Improve tree health by mulching and watering about 1 inch per week. Avoid overwatering.
- For high value, heavily infested trees, spray the trunk with permethrin (Hi-Yield 38 Plus)* in July or treat the soil with imidacloprid (Merit, Bayer Advanced Tree & Shrub Insect Control) in May of odd-numbered years.

Carpenterworm



Identification

- On ash, cottonwood and other broadleaf trees.
- Round holes up to about 1/2-inch in diameter appear in the bark of the trunk and branches.
- Sawdust-like material on the bark and ground.

Control

- Improve tree health by mulching and watering about 1 inch per week. Avoid overwatering.
- Chemical controls are typically not very effective, but an application of parasitic nematodes sometimes provides good control.

Bronze birch borer



Identification

- On paper birch or other birch with white bark.
- Tree begins dying from the top.
- Swellings may appear in the stems.
- D-shaped holes, 1/8-inch across, in the bark.

Control

- Spray trunk and branches with permethrin (Astro, Hi-Yield 38 Plus) or bifenthrin (Onyx) in late May and repeat in 3 weeks or treat soil with imidacloprid (Merit, Bayer Advanced Tree & Shrub Insect Control) in March (has 60-day delay). Can trunk inject for emergency treatments with imidacloprid (Pointer, Imicide, Ima-jet).*
- Improve tree health by mulching and watering about 1 inch per week. Avoid overwatering.

* Trade names are examples of available products. No endorsement is implied. Always follow pesticide label instructions.

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More information: www.nfs.unl.edu

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Insect Pests of Broadleaf Trees

Caterpillars



Identification

- On many broadleaf trees.
- Foliage is missing, stripped or partially chewed.
- Insects are present.

Control

- Caterpillars almost never cause permanent harm to broadleaf trees. Damage is temporary, so a control is rarely needed.
- For a small tree, knock the insects off the tree.
- For larger trees, if a control is desired, spray with Bacillus thuringiensis (Dipel), spinosad (Conserve), permethrin (Astro, Hi-Yield 38 Plus), or carbaryl (Sevin)* when larvae appear.

Fall webworm



Identification

- Mostly on cottonwood but can be on many trees.
- Web nests are present near the ends of branches in mid to late summer with caterpillars inside.

Control

- Usually not needed for the health of the tree.
- Spray with Bacillus thuringiensis (Dipel), spinosad (Conserve), permethrin (Eight, Astro, Hi-Yield 38 Plus), carbaryl (Sevin)* or other product labeled for caterpillars when webs appear (mid summer).

Mimosa webworm



Identification

- On honeylocust.
- Dead leaves are webbed together with a caterpillar inside.

Control

- Spray with Bacillus thuringiensis (Dipel), spinosad (Conserve), permethrin (Astro, Hi-Yield 38 Plus)* or other product labeled for caterpillars when webs appear (June & August).

Bagworm



Identification

- On many trees.
- Bags made of dead leaves hang from branches and have a caterpillar inside.

Control

- Spray with Bacillus thuringiensis (Dipel), spinosad (Conserve), permethrin (Eight, Astro, Hi-Yield 38 Plus), tebufenozide (Mimic), bifenthrin (Talstar), deltamethrin (DeltaGard)* or other product labeled for caterpillars when bags appear (early June).
- On a small tree, hand pick and destroy bags.

Elm leaf beetle



Identification

- On Siberian and American elm.
- Blackish larvae are present.
- Leaves have holes or the bottom layer eaten with just the top layer and veins remaining.
- Leaves turn brown and drop from the tree.

Control

- Usually not needed for the health of the tree.
- Spray with imidacloprid (Bayer Advanced 12-Mo. Tree & Shrub Insect Control), spinosad (Conserve), permethrin (Eight, Astro, Hi-Yield 38 Plus), or carbaryl (Sevin) when larvae appear, or treat soil with imidacloprid (Bayer Advanced 12-Mo. Tree & Shrub Insect Control, Merit)* (60-day delay).

Spider mites



Identification

- Mostly on honeylocust.
- Leaves develop small yellow spots, especially near the base of the leaflet or leaf, then turn mostly yellow or brown.
- Many tiny mites and mite eggs can be seen with a magnifying glass.

Control

- Spray when mites are present (as early as April, but mostly June through August). Make a second application 7 to 10 days later with a different (to reduce resistance) or same product.
- Products available include horticultural oil/growing season oil (Volck, Saf-T-Side), insecticidal soap (Safer, Concern), bifenthrin (Talstar), spiromesifen (Forbid), etoxazole (TetraSan), and abamectin (Avid)*.

Aphids



Identification

- On many trees.
- Small insects present, usually in groups.
- Sticky honeydew or a dark mold covers leaves, the ground and objects under the insects.

Control

- Usually no control is needed.
- Spray with insecticidal soap (Safer, Concern), horticultural oil/growing season oil (Volck, Saf-T-Side)* or other labeled product when insects appear.

Plant bugs



Identification

- Mostly on honeylocust.
- Leaves are twisted or do not emerge.

Control

- Usually no control is needed.
- Spray as for aphids with soap, oil or other labeled product* when leaves fail to appear in the spring.

Lace bugs



Identification

- Mostly on hackberry, linden, oak and sycamore.
- Leaves have yellow spots or turn yellow or brown.
- Small black spots or lacy insects are on the leaves.

Control

- Spray as for aphids with soap, oil or other labeled product* when insects appear (June).

Oystershell scale



Identification

- Mostly on ash and maple.
- Branches die and hold leaves later into the fall.
- Scales are present on the stems.

Control

- Spray as for aphids with soap, oil or other labeled product* when eggs hatch and yellow crawlers appear (late May; some products are NOT for maples). Repeat as directed.