Insecticides

Several insecticides are available for control of caterpillars on ornamental trees. **Read the label carefully to determine if your tree and pest is listed, and apply the product according to label directions.** Trade names are given as examples of available products. No endorsement is implied.

- **Bt or Bacillus thuringiensis** (Dipel; Thuricide)
- **Spinosad** *(Ferti-lome Borer, Bagworm, Leafminer & Tent Caterpillar Spray; Monterey Garden Insect Spray; Conserve)*
- **Permethrin** *(Eight; Hi-Yield 38 Plus; Astro)*
- **Cyfluthrin** *(Bayer Advanced Multi Insect Killer; Tempo)*
- **Tebufenozide** *(Confirm;* Mimic*)
- **Deltamethrin** *(DeltaGard;* Suspend*)
- **Malathion** *(Malathion)*
- **Acephate** *(Orthene)*

*Some chemicals are for professional use only or may need to be ordered from a chemical distributor.

Identification

- Leaflets of honeylocust turn brown; leaflets webbed together.
- Small, tan, brown or greenish caterpillars within webbing.

Common Host Trees

honeylocust

Life cycle

Mimosa webworm overwinters in cocoons under bark scales of host trees or in leaf litter. Moths emerge in early summer and lay eggs on leaves. Larvae web together leaflets and feed within the protective shelter. Two generations occur per year. First-generation larvae feed in early to midsummer (June-July), and second-generation larvae feed in late summer (August-September).

Control

Damage by mimosa webworm is mostly aesthetic, and trees are generally not heavily infested in consecutive years. Control with insecticides can be difficult because the larvae are well protected and usually feed only on the inner surface of the webbed leaflets. If control is desired, spray foliage in early June and in August. See back panel of this brochure for a list of insecticides.

Photo Credits, Front Panel:
Mimosa webworm: Joe Boggs, Ohio State University
Eastern tent caterpillar: Cornell University

Photo Credits, Middle Panel (from Bugwood.org):
Multiple tents: Steven Katovich, USDA Forest Service
Tent with caterpillars: Tim Tigner, Virginia Department of Forestry
Mature caterpillar: Clemson University, USDA Cooperative Extension
Egg mass: Brian Kunkel, University of Delaware

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Many caterpillars that feed on trees produce webs, tents or bags, which provide the insects protection from predation and poor weather. This publication will discuss the identification and management of these common pests.
Bagworm

**Identification**
- Bags up to 2 inches long hang from twigs.
- Bags covered with bits of needles or leaves.

**Common Host Trees**
- juniper
- crabapple
- redcedar
- sycamore
- spruce
- honeylocust
- pine
- maple
- arborvitae
- elm
- many other trees

**Life cycle**
Eggs overwinter in bags and hatch in late May to June. The tiny bagworms build cone-shaped bags, which are enlarged as the caterpillars feed and grow. Pupation occurs inside the bag in late summer. Adult male moths emerge in September and seek out females. Mating and egg-laying occurs within the bag.

**Control**
Small trees: Remove and destroy bags before May. Large trees: Thoroughly spray foliage with an insecticide while the larvae are small (mid-June). Better control may be achieved with a second application in early July. See back panel of this brochure for a list of insecticides.

Eastern & Prairie Tent Caterpillars

**Identification**
- Silken tent within the fork of major branches.
- Tents present spring to early summer.
- Mature eastern tent caterpillars 2 inches long with white stripe along back and bluish spots along sides.
- Prairie tent caterpillars are similar with bluish sides.

**Common Host Trees**
- plum
- apple
- cherry
- crabapple
- many other broadleaf trees

**Life cycle**
Eggs overwinter in egg masses attached to twigs. Eggs hatch in April and the caterpillars construct a small tent in the fork of branches. The tent serves as a resting place and provides shelter during wet weather. The caterpillars leave the tent to feed on leaves, and the tent is enlarged as the caterpillars grow. Pupation and adult emergence occurs late June to July (eastern tent) or August (prairie tent).

**Control**
Cultural control: Before April, prune and destroy egg masses on twigs. In spring when caterpillars are present in tents, remove tents with a stick or a gloved hand and drop in soapy water. Chemical control: Thoroughly spray foliage and tents with insecticide when tents appear (April). See back panel of this brochure for a list of insecticides.

Fall Webworm

**Identification**
- Silken webs enclose leaves at end of branch.
- Webs present late summer to fall.
- Caterpillars tan, pale yellow, or greenish, and covered with hairs.

**Common Host Trees**
- cottonwood
- redbud
- crabapple
- elm
- walnut
- maple
- many other broadleaf trees

**Life cycle**
Fall webworms overwinter in cocoons on the ground in soil or leaf litter. Adult moths emerge in summer and lay eggs on leaves of host trees. Young caterpillars feed in colonies on leaves enclosed in webbing. More leaves are enclosed as the caterpillars grow, and webs become more noticeable in late summer. One generation generally occurs per year.

**Control**
Damage from fall webworm is mostly aesthetic, and control may not be necessary. Cultural control: Small webs may be pruned out when they appear, or the webs and caterpillars may be stripped off by hand. Chemical control: An insecticide can be sprayed within the webs for best control. The entire crown does not need to be sprayed. See back panel of this brochure for a list of insecticides.