

Mimosa Webworm

Insect Pest of Honey Locust and Mimosa Trees

Mimosa webworm, *Homadaula anisocentra*, is an insect pest of honey locust, *Gleditsia triacanthos*, and mimosa or silk, *Albizia julibrissin*, trees. Mimosa webworm is a native of Asia and was first reported in the United States in 1940. This publication discusses the biology, damage, and management of mimosa webworm.

Biology

The mimosa webworm life cycle includes an egg, larva (caterpillar), pupa, and adult. Adults are approximately $\frac{3}{8}$ of an inch (1.0 centimeter) in length, silver gray, with black spots on the wings (Figure 1). Mated females are present from spring to summer and lay approximately 70 eggs in four days on new leaves. Young caterpillars that emerge (eclose) from eggs are green brown, feed on new leaves (Figure 2), and web leaves together at the ends of branches (Figure 3). Caterpillars are protected within the webbed leaves from beneficial insects and insecticide spray applications. Older caterpillars are about $\frac{1}{2}$ of an inch (12.7 millimeters) long, gray to brown, with five white stripes that extend the length of the body (Figure 4).



Figure 1. Mimosa webworm adult (SteveWalterNature via iNaturalist CC BY NC 4.0).

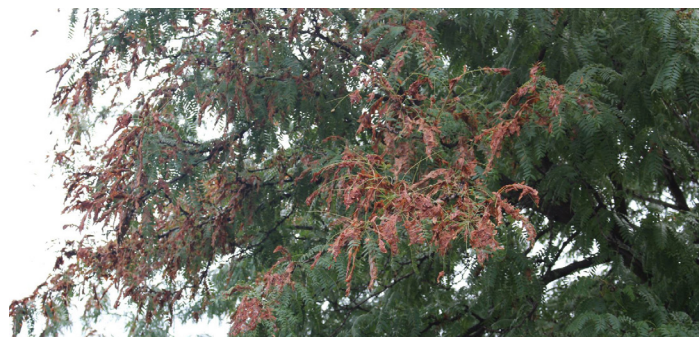


Figure 3. Mimosa webworm webs on the ends of branches of a honey locust tree (Photo: Raymond Cloyd).

There are two generations of mimosa webworm per year in Kansas. First-generation caterpillars pupate in the webbed leaves. Adults emerge (eclose) in mid to late summer and lay eggs on leaves to start the second generation. Second-generation caterpillars feed on leaves and then disperse from the nest using a silken thread that allows them to reach the soil surface and find a location to pupate. Mimosa webworm overwinters as a pupa in a cocoon located in a crevice under the bark on the trunk of a tree, in plant debris underneath a tree, or on the side of a building.

Damage

Mimosa webworm caterpillar feeding causes leaves to appear skeletonized, with leaves eventually turning brown and dying (Figure 5). Fecal material or frass is present inside the webbing (Figure 6). Abundant populations of mimosa webworm caterpillars can defoliate a tree in the fall, or a tree will be completely covered with webbing and brown leaves (Figure 7). Most plant damage is caused by the second-generation caterpillars from summer to fall, with trees having a scorched appearance. Depending on

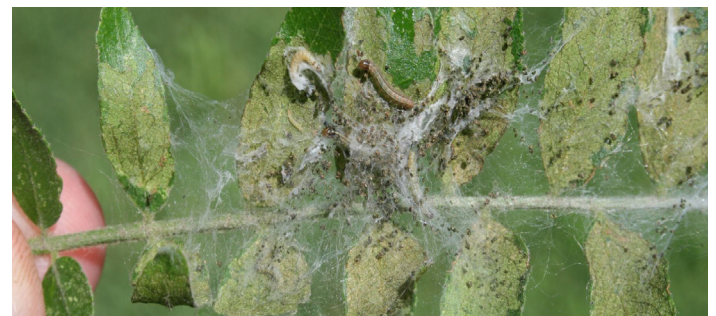


Figure 2. Mimosa webworm caterpillar feeding on leaves of honey locust (Photo: Raymond Cloyd).



Figure 4. Older mimosa webworm caterpillar.

the age of the tree, successive years of caterpillar feeding may cause long-term damage by predisposing a tree to attack by wood-boring insects, or feeding may kill a tree.

Honey locust cultivars differ in their susceptibility to mimosa webworm. For example, the thornless honey locust cultivar 'Sunburst' is more susceptible to mimosa webworm caterpillar feeding than the cultivars 'Moraine', 'Shademaster', 'Skyline', and 'Imperial'.

Management

Managing mimosa webworm caterpillars below plant damaging levels involves scouting honey locust trees, pruning out localized or isolated infestations, and applying insecticides.

Scouting

Check honey locust trees in spring for mimosa webworm caterpillars. Shake leaves over an 8½ × 11 inch (21½ × 27 centimeter) white sheet of paper attached to a clipboard. Look for mimosa webworm caterpillars moving on the white sheet of paper.

Pruning

Remove mimosa webworm nests by selective pruning, which eliminates localized or isolated infestations of mimosa webworm caterpillars. After pruning, dispose of all plant material.



Figure 5. Mimosa webworm caterpillar feeding damage on honey locust leaves (Photo: Raymond Cloyd).

Insecticides

Insecticides can be used to keep mimosa webworm caterpillar populations below plant damaging levels. However, the timing of insecticide applications is important. Apply insecticides when young mimosa webworm caterpillars are present and before caterpillars build webs. Once webs are present, insecticide applications will not effectively keep mimosa webworm caterpillar populations below plant damaging levels. In addition, do not apply insecticides later in the growing season when leaves are brown. Read the label of insecticide products to ensure that webworms are listed.



Figure 6. Fecal material or frass inside web associated with mimosa webworm caterpillar feeding (Photo: Raymond Cloyd).



Figure 7. Honey locust tree with mimosa webworm caterpillar webs and brown leaves (Photo: Raymond Cloyd).

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