BAGWORMS

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The small, silk weaving that resembles a Christmas tree ornament on your favorite arborvitae is not there for decoration. Such woven bags protect the larvae and eggs of bagworms. Both broadleaf and coniferous trees and shrubs are attacked by this pest. Bagworms become exceedingly abundant every few years, but always present a persistent problem. Texas has several recorded species of bagworms, each possessing slightly different habits and life cycles. Infestations are not noticeable at first, but if left unchecked, can completely defoliate trees and shrubs. Control measures using insecticides must be timely to eliminate bagworm larvae.

Description

Bagworms build a tough, portable silken case to live in. These bags are the most easily seen and identifiable feature of the insect. Outside, the silken texture of the bag is somewhat concealed and strengthened by layers of leaves, twigs and fragments of bark arranged in a crosswise or shingle fashion. The bag has a small opening at the narrow, lower end through which the worm expells refuse. A wider opening at the top allows the worm to partially crawl out to feed and make repairs or enlarge its bag.

Newly hatched bagworms make low conical bags which they carry upright as they move. As the insect grows, its bag becomes more elongated. Most species, as they gain weight, carry the bag along twigs and foliage with their feet or by a thread of silk attached to the bag. The bags of full grown larvae range from 1 3/4 to 2 inches long and up to a 1/2 inch wide.

Newly-hatched larva.

Newly hatched larvae are about 1/8 of an inch long. At maturity they may be 3/4 to 1 inch in length. The adult female looks like a maggot, with no functional eyes, legs or antennae. Its body is soft yellowish-white and almost naked. The adult male, however, resembles a small moth. It has clear wings with a span of about 1 inch. It also has feathery antennae and is sooty black in color.

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**Biology and Habits**

The adult female deposits large numbers of eggs in her bag and then wiggles through the lower opening, drops to the ground and dies. As the larvae hatch, they let themselves down on single strands of silk thread and attach to adjacent limbs or plants, where they begin building their own silk bags.

At intervals in its larval life, the bagworm closes the upper opening of the bag. This is done before each of the four or more larval molts and before winter hibernation or final preparation for pupation.

After larval development and a subsequent pupal period, adults emerge. The males escape through the lower end of their bags. The wingless females only emerge halfway and await mating with the males.

The evergreen bagworm lives east of Central Texas, from Oklahoma to the Gulf Coast. Eggs are laid in the fall and hatch in the spring. The larvae complete their growth and pupate in August or September. By the end of September and October, the adult moths emerge. The females then deposit their eggs and die.

The live oak bagworm is abundant in the south central part of the state, along the Gulf Coast to the Louisiana border. Feeding larvae of all ages are found throughout the spring and summer. Most of the moths emerge in April and May, but some appear through October. The larvae frequently hibernate throughout the winter and reopen their bags in the spring to resume feeding before pupation. Hibernated eggs may hatch as early as February.

Three species of the desert bagworm are found from El Paso to the Alpine area and through much of the Trans-Pecos area. These bagworms usually pass the winter as large larvae. The larvae feed a little in the spring before pupating in April or May. They emerge as moths in April and throughout the summer. Their growth and other changes are influenced by rainfall and by the season.

**Plants Attacked**

Bagworms attack foliage of most trees and shrubs. This includes willow, cedar, cypress, white pine, box elder, locust, sycamore, maple, wild cherry, sumac, persimmon, arborvitae and other ornamental conifers. Live oak, salt cedar and many fruit, nut and ornamental plants also may be attacked.

**Control**

The bagworm has many natural enemies, including birds, insect parasites and predators. Outbreaks of bagworms often occur from year to year in different parts of the state. These population explosions stimulate intensive bird predation and insect parasitism, which largely accounts for the briefness of the outbreak. However, natural enemies seldom control large populations after extensive damage has occurred.

Handpicking the pest is the surest and cheapest means of control for small evergreen shrubs and trees in home plantings. It is useful at any time during the year. Be persistent and be sure to pick all of the bags and then to smash or burn them. If thrown on the ground, the eggs in the bags will still hatch in the spring and larvae may crawl back into the trees.

When there are too many bags to handpick or the trees and shrubs are too large to reach safely, then the infested plants can be sprayed. Apply insecticide soon after bagworm eggs have hatched or while the larvae are small and actively feeding. Bagworm control is difficult and not as effective as the larvae mature and close their bags. In most areas, insecticides applied in April, May and June are effective. Use insecticides containing carbaryl (Sevin®), chlorpyrifos (Dursban®), trichlorfon (Dylox®), diazinon, acephate (Orthene®), Bacillus thuringiensis and malathion. Be sure to use spray equipment that gives complete coverage of all foliage. Secure the services of a commercial applicator if you do not have adequate equipment.

Insecticide label clearances are subject to change and changes may have occurred since this publication was printed. The pesticide USER is always responsible for the effects of pesticides on his own plants or household goods as well as problems caused by drift from his property to other properties or plants. Always read and follow carefully the instructions on the container label.

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