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Bagworm

Bagworm caterpillars are the larval stage of a moth that is native to North America. It is reported to feed on over 100 different species of plants. It is unusual in that the caterpillar sticks small pieces of whatever plant it is feeding upon on its body to make the characteristic “bags.” The caterpillar carries the bag with it as it feeds, enlarging it as it grows. The caterpillar can retreat inside the bag if threatened.

A few bagworm caterpillars do not pose much of a threat, but populations can rapidly grow over the course of several years. Bagworm infestations often go unnoticed until large numbers have developed and their feeding caused significant defoliation.

Hosts

Bagworms feed on both deciduous and evergreen trees and shrubs. The injury is more damaging to evergreens such as arborvitae, juniper, hemlock, spruce, and pine. Among deciduous hosts, honeylocust, sycamore and sweetgum are commonly attacked. Do remember, however, bagworms can be found on many additional species.

Life Cycle

Bagworms overwinter in the egg stage. Eggs are found only in the bags of female insects. The bags containing the eggs persist through the winter. Hundreds of eggs (up to 1,000) are possible in each female bag. The bags that contained the male insects have no eggs inside.

The eggs begin to hatch in early summer. The small caterpillars begin to feed on the plants where the bags were attached. Some of the caterpillars let out a strand of silk that can act like a sail. These caterpillars can be picked up by the wind and carried to nearby plants. This is one method that this insect uses to spread from place to place.

As they begin to feed, the caterpillars use silk to weave pieces of plant material over their bodies. They are very small at first, only about ¼ inch long. Not much foliage is consumed and large numbers can be present without anybody noticing. The caterpillars grow rapidly, however, and by late summer the bags can be 1-2 inches long. If numerous, these large caterpillars can consume a great deal of foliage over a period of just a few days. Because the caterpillars are moving as they feed, large numbers of jittering bags can give the illusion of the entire plant being in motion when viewed from a distance.

In late summer, the caterpillars cease feeding and attach their bag to their host plant. Sometimes, the caterpillars crawl off the host plant, and bags can be found hanging on road signs, posts, or any other nearby structures. Once the bag has been attached, no further feeding occurs.

The caterpillars pupate inside the bag after feeding ceases. The adult male bagworm emerges from its bag during the fall as a moth which can fly. The adult female bagworm doesn't have wings and never leaves her bag. She releases



Left: A bagworm bag on an evergreen tree;
Center: A bagworm bag on a deciduous tree;
Right: A large number of bagworm bags is a sign of an infestation.

a chemical into the air that attracts the male to her. After mating, the female lays her eggs and dies without ever leaving the safety of her bag. There is only one generation each season.

Management Options

Mechanical: If only a few bags are present and they can be reached from the ground, they can be picked off by hand during the fall, winter, or spring. Removing the bags removes the eggs contained within them. This may not be practical if the bags are numerous or out of reach.

Biological: Because bagworm is native to North America, it has numerous insect parasites that attack it. Unfortunately, they cannot often be relied upon to control a heavy population.

Chemical: Chemical treatments for bagworm are available for populations that are causing, or are likely to cause, serious damage. Small caterpillars can be controlled before they reach the size where serious injury occurs. Biorational pesticides tend to be more effective against small caterpillars than large. The thick bag of large caterpillars helps protect them from harm. Some treatments are available using soil or trunk application if traditional spraying is not possible.

Summary

Managing bagworms is not difficult if the infestation is identified when populations are low and/or the caterpillars are small. Problems arise when high numbers of large caterpillars are allowed to reach maturity. Catching the problem early is the key to success.

Contact your certified arborist at The Care of Trees today to help your trees and shrubs against bagworms.

Bagworm Quick Facts:

- Bagworm is a species of moth native to North America
- Bagworm caterpillars can feed on over 100 different species of plants
- The caterpillars construct a protective bag out of silk and pieces of the host plant
- Hand removal and parasites can control small populations
- Chemical control of the caterpillars is most effective when they are small

If you have any additional questions or concerns, please do not hesitate to contact your local office for further details.



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