



## Bagworm

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### Plants Attacked

Primarily found on juniper, arborvitae, other cedars, pine, hemlock, spruce, Chinese elm, and honeylocust. Also found on crabapple, maple, sycamore, box elder, willow, linden, poplar, and many others.

### Description of Damage

Defoliation of the host plant increases from June to late July and August. Stripping of leaves is usually most noticeable in the uppermost parts of trees and shrubbery. Defoliation is associated with the presence of many spindle or cone-shaped bags up to 1.5 inch (about 38 mm) in length from late summer to spring.

### Identification

Larvae are a mottled-brown to black in color. They are seldom seen, except for a head protruding from the bag. The bag is spun from silk strands with bits of leaves, needles, and twigs incorporated into the bag (Fig. 1). The bag protects the larvae as they consume foliage. During June the bags are difficult to see as they start less than 0.25" (about 6 mm) in length. By late summer they measure up to up to 1.5" (about 38 mm) long.



Figure 1. Bagworm attached to twig. (Eric Day, Virginia Tech)

Adult male moths can fly and are the only life stage found outside the bags. Female bagworms develop and pupate inside the bag, and lay their eggs there as an adult moth, never leaving the bag.

Lepidoptera: Psychidae, *Thyridopteryx ephemeraeformis* (Haworth)

### Life History

Overwintering eggs begin to hatch in early June. Each tiny larva immediately begins to construct a tiny silken bag around itself and initiates feeding. Larvae and bags remain small (less than 1/4" or 6 mm long) for a few weeks and are not easily discovered. Feeding and molting continues until August when pupation occurs. Adults are active in late August and September. Only males leave the bag to mate with females, which remain in their bags to lay overwintering eggs. Prior to molting and pupation, larvae attach the bag to twigs by silk strands and also close the opening, protecting the larva. The silk loop around the twig may eventually girdle the twig with time, long after the bagworm has died.

### Control

It is important to treat for bagworms during mid-June. Small larvae are more susceptible to insecticides, while larger larvae and molting larvae are not easily killed. Insecticides with some residual activity are preferred. Picking off and burning bags from fall until spring will reduce populations, but is tedious. The presence of bags during winter is a good indication of which particular plants need to be treated the following year. There is a single generation of bagworms each year.

### Remarks

Bagworm is a serious pest, capable of rapid buildup and extensive defoliation. However, completely

defoliated trees usually make a full recovery the next spring if they are otherwise healthy and were planted correctly. Inspecting plants in the landscape during the fall, winter, or early spring each year is an excellent method to detect any infested plants before serious damage occurs.

## Revised

Olivia C. McCraw, June 26, 2014; Theresa A. Dellinger, February 27, 2020.

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2020

2808-1008 (ENTO-351NP)