

## Bagworms and Their Control

Bagworm (*Thyridopteryx ephemeraeformis* (Haworth)), is a serious insect pest of many ornamental shrubs and trees in the eastern half of the United States. Conifers, especially arborvitae, cedar, juniper, and pine are the most frequently damaged host plants. Deciduous trees such as sycamore, maple, locust, boxelder, and linden are also attacked but they are not seriously damaged.

### Appearance and Habits

Bagworms are actually the larval or caterpillar stages of moths. After hatching they immediately spin a cocoon-like bag to which are attached pieces of leaves from the plants they feed upon. At first the bags are only about 1/8 inch long. Bagworms move about freely to feed, and they carry their bags with them. The bags gradually enlarge during the summer to house the growing caterpillar.



Bagworms



Bagworm on Pine

### Life Cycle

In central Maryland, the eggs hatch about the first week in June. Bagworms complete their growth in August or early September. At this time, the 1-2 inch long bags are permanently attached to plant twigs by means of tough silken threads. In late summer they pupate inside the bags and then transform into moths, but only the males have wings. The males emerge from their bags in late summer and fly to the bags containing females. The males mate with the wingless females which remain in their bags. Then each female lays 200 to 1,000 eggs in its bag and dies. The eggs remain in the bags until hatching occurs the following spring.

### Damage

When populations are high, bagworms are serious defoliators of plants. Shrubs and trees that become heavily infested, particularly conifers, may be killed. Injury is not conspicuous early in the season because the caterpillars

and their bags are small. The bags are not easily seen at this time, unless large numbers are present. Bagworms often are not detected by the untrained observer until August after severe damage has been done.

## Control

### Mechanical Control

On landscape shrubs and small trees, a simple method of control is to pick off the bags during the winter and destroy them. This must be done before the eggs hatch in June. When too many plants are involved to make hand picking practical, sprays are in order.

### Biological Control

*Bacillus thuringiensis*, often called BT, is a type of bacteria that only kills certain insects and does not affect humans or animals. BT must be applied between mid June and mid July because it works well only on young bagworms. This biological control material is commercially available under the following common brand names: Dipel, Thuricide, and

others. Many of these brands are sold in local hardware stores and garden centers. The user need not buy special protective equipment to apply B.T. sprays.

### Chemical Control

If chemical control is absolutely necessary, a registered insecticide should provide control if applied thoroughly to all infested plant foliage after July 15.

Check the label on the pesticide to be sure bagworm and the type of plant you wish to spray are listed. CAREFULLY FOLLOW ALL LABEL DIRECTIONS WHEN MIXING AND APPLYING THE SPRAY.

USE INSECTICIDES WITH CARE. READ THE LABEL DIRECTIONS. FOLLOW ALL SAFETY PRECAUTIONS.

*Mention of trade names in this publication does not constitute an endorsement by the Maryland Extension.*

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