

**Providing Leadership in Environmental Entomology**

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## BAGWORMS

The bagworm, *Thyridopteryx ephemeraeformis*, is an interesting pest of ornamental shrubs and trees. The spindle-shaped bag that the larva carries around as it feeds characterizes this insect. The larva constructs the bag from silk and covers it with bits and pieces of leaves and twigs from the host plant. Therefore, the bag looks quite different when the worm is feeding on



Figure 1. A bagworm attached to a juniper twig.

juniper than on rose. The larva is dark brown with a yellow head and yellow and black spots on the body. Adult females are wingless and lack functional legs, eyes, and antennae. They are almost maggot-like, yellowish and seldom seen. Adult males are typical moths and are sooty black and densely hairy. The wings are nearly clear and have a span of 1 inch.

Bagworms often prefer juniper, arborvitae, and pines, but they are also found on many broadleaf shrubs and trees including rose, sycamore, maple, elm, and black locust.

Defoliation is the primary injury caused by the caterpillar. Heavy populations of bagworms kill many ornamental arborvitae and juniper.

Bagworm larvae hatch from overwintering eggs during May. The young larva spins a silken case that it carries about as the larva feeds. As the larva grows, it enlarges the bag and continues to add bits of foliage to the bag. When the larva is resting, it attaches the bag to a twig with silk. Pupation occurs in late summer. In 7-10 days the adult emerges. Males are free flying and leave the bag. They search out bags containing females, enter the bag, and mate. After mating, the female lays 500-1000 eggs in the bag and dies. Because the larval stage is the only mobile stage, one bush can have a high population and another one several feet away can be free of bagworms.

Bagworms are attacked by several parasites and birds and are killed by low winter temperatures. A very effective control is picking the bags off the host in winter or early spring to help prevent problems the coming season. The bags, and eggs inside can be destroyed or the bags can be placed in deep containers that allow any parasites to escape but keep the larvae in.

Young larvae are especially sensitive to the bacterium *Bacillus thuringiensis*. This bacterial insecticide is commercially available under the trade name DIPEL. The disease caused by the bacterium effects only the moth larvae and is safe to use. Always read and follow label directions before treatment. Best control is achieved when spraying is done in late afternoon or early evening. Small larvae are much easier to kill than mature larvae. Therefore, treating infestations in the spring when they are first noticed is important.

Additional information on other insecticides that are labeled for bagworm control may be obtained from you local County Extension Agent.

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