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BAGWORMS - *Thyridopteryx ephemeraeformis*

Bagworms are not usually a problem. They are a "sometime" problem. Bagworms are usually found on arborvitae and juniper, but also will feed on maple, box elder, eucalyptus, sycamore, willow, black locust, elm, basswood, poplar, oak, apple, cypress, wild cherry, sassafras, persimmon and cedar.

LIFE CYCLE: Throughout the U.S., the common bagworm has one generation per year and overwinters in the egg stage inside the female's pupal case. Other bagworm species may spend the winter as partially developed caterpillars. Common bagworm larvae hatch in late spring and early summer and may disperse with the wind via silken threads; if there is sufficient food, others may remain on the same host plant as their mother (Rhains and Sadof 2008). Distribution of this insect from one plant to another is primarily dependent upon movement of the caterpillar. Because of the bagworm's feeding behavior and

limitations in movement, a lone host plant may harbor a huge population in a single season. This is when damage occurs.

Throughout the larval instars, the caterpillar increases the size of its bag as it grows and can survive long periods without food, especially during the later stages of development (Rhains et al. 2009). Once the larva has consumed enough food during the last instar, it attaches its bag securely with a thick silken strand to its host plant or disperses to another structure. Prior to molting and pupation, the bagworm will seal the anterior portion of the bag (Leonhardt et al. 1983).

The female bagworm never leaves her bag. She is caterpillar-like in appearance, has no wings or eyes and has no functional legs, antennae or mouth parts. The bagworms head may be seen protruding out from the bag as it moves. The male moth emerges from his bag and flies to the female, mates and dies in a few days. After mating the female produces 500-1000 eggs in a single mass within the bag. The egg is the over-wintering stage, however in Florida there is no dormant period. After hatching, the larvae immediately begin to feed and construct their protective cases.

The bag is made of silk and bits of twigs or leaves of the host plant, interwoven to disguise and strengthen the case. When the larva is small it feeds on the upper side of the leaf with the bag pointing upward. This feeding results in a brown spot on the leaf. Later, if feeding on a broadleaved host, the larvae moves to the lower surface and eats all the leaf except for the larger veins. As the larva grows it enlarges its bag. When fully grown the bag may be up to 3 inches long.

CONTROL: If few in number and easily reached, the bags may be picked off and squashed or drowned. Be sure to cut the silk band that is attached to the plant. *Bacillus thuringiensis* (Dipel, Thuricide) is a bacterial insecticide shown to be effective in controlling bagworms. If the above two strategies do not provide sufficient control, a stomach insecticide can be used. These insecticides include acephate, bendiocarb, bifenthrin, carbaryl, chlorpyrifos, cyfluthrin, dimethoate, malathion plus others (look at the active ingredient on the label to identify). Always use the chemical that is least toxic to you and avoid killing bees by spraying just before dark after bees have returned to their hive. Insecticides are more effective on the young larvae rather than more mature larvae. Plant foliage must be thoroughly covered by the insecticide. Stomach insecticides should only be used as a last resort.