

*It's in the bag.* That's a saying I'm reasonably sure that most people have heard or used at some time. When something is said to be in the bag, it implies that one is certain to achieve. It's as good as done. For example, a sports caster may announce it's in the bag before an athletic event ends. If so, he or she is implying that one team is so far ahead of the other that little or no time remains for the trailing team to catch up. The game is won before it has actually ended. It's in the bag is usually a good thing, especially for the projected winner.



Of late I've been using the saying, "It's in the bag," when conversing with certain homeowners. However, in this particular instance, in the bag has nothing to do with a projected achievement. Rather, I am using the saying to denote that it is literally in the bag. I'm actually discussing an insect pest that is currently plaguing many of the trees and shrubs in the Kearney area. Cedars, junipers, spruce and arborvitae seem to be the most frequently infected. The insect pest is called *Thyridopteryx ephemeraeformis* (Haworth), more commonly known as

bagworm.

This insect pest is most easily recognized by the bag that the worm forms around itself as it feeds on the host plant. The bag is made of silk and bits of host foliage. These materials are interwoven to disguise and add strength to the bag. To the untrained eye, the bag often appears to be a natural growth of the tree or shrub.

Now that September has arrived, most bagworm populations have reached adulthood. The adult female is worm-like. She lacks eyes, wings, functional legs and mouthparts. She never leaves the bag that she constructed as a larva. The adult male is a sooty black moth with transparent wings. When the female caterpillar reaches adulthood, her bag is about one and one-half inches in length. Both male and female bagworms by now have stopped feeding and are preparing for mating. The mature larvae loop strands of silk around a twig and become

firmly attached. After the top of the bag is closed, the larvae reverse their position in the bags with their heads facing downward. They undergo the pupal (resting) stage and remain in this life stage for about four weeks. During September and early October, the males leave their cases and fly to bags containing females where mating takes place. Each mated female deposits a mass of eggs (five hundred to one thousand) inside her bag. She then crawls out of the bag, drops to the ground, and dies.

The spread of the bagworm is slow. Their dispersal over wide areas most often occurs by ballooning (wind dispersal) of small bagworm larvae after hatching in late May and early June. Upon hatching, the tiny bagworms build cone-shaped bags which grow with the caterpillars as they feed on the host plants. Unfortunately, bagworm larvae can cause severe injury to the plants as they feed.

Newly hatched bagworms attached to the leaves or needles are difficult to see. Because of their ability to grow in disguise, early detection of a bagworm infestation requires careful examination.

Currently, bagworms have moved into the pupal phase and have retreated into their bags. Their bag protects them from insecticide applications. Bags, now permanently attached to the branches of smaller shrubs and trees, can best be removed by hand. This will eliminate eggs hatching next spring. Large trees with serious infestations should be sprayed next year in late May to mid-June when the next generation of bagworms hatch.

Several registered insecticide formulations including Permethrin, Cyfluthrin, Deltamethrin, Malathion and Acephate are labeled for bagworm management. For these products to be most effective, they should be applied from late May to mid-June while the larvae are small. Otherwise, as referred to earlier, insecticidal treatments applied now will prove relatively unsuccessful. As with any insecticide, always follow insecticide label directions.

As I began, *It's in the bag*. In this case its *Thyridopteryx ephemeraeformis* (Haworth), more commonly known as bagworm, and that's not good.