

# Quick! Check those bags!!

(kinda like at the airport!)

***May is an important month in the bagworm life cycle!***



***Smallest size bagworm, as they appear in May, the start of its life cycle***

Bagworms are caterpillar pests that construct a 1.5" to 2" long "bag" around their body using silk and materials from the plant they are feeding on to camouflage themselves.

While bagworms are commonly associated with evergreen plants such as juniper, arborvitae, spruce, and pine, they can also be found in deciduous hosts such as maple, oak, and locust trees.

Bagworms cause defoliation, which leads to thinning in the leaf canopy. Further, when they feed on evergreens, they can induce plant "bronzing."

Bagworm management is dependent on catching the infestation early (in May or June) and using biorational insecticides such as Bt (*Bacillus thuringiensis*), Neem, or Spinosad.

It should be noted that deciduous trees are not safe from bagworms. The larvae also can be found feeding on apple, birch, elm, locust, maple, oak, and willow trees.



*Each bag is a caterpillar that feeds on the leaf materials from their host. The head protrudes from the top of the bag so the caterpillar can feed.*

Feeding damage from bagworms tends to start at the top of the host plant. As feeding progresses, the canopy of the tree or shrub will become thinner. In evergreen hosts, the bagworm often induces “bronzing” a symptom where formerly green sections have become bronze/brown. These areas will likely never recover.



*Bagworm damage most often starts at the tops of affected trees, or shrubs. A bronze color may be noticed in areas of heavy feeding.*

The most seen characteristic of bagworms is the bag itself. They have been described as pinecone-like by some. When the caterpillar first emerges, the bag they construct is conical but, as they mature, the bag may become more diamond shaped in profile. Pupae are located inside of the bag and are deep brown. Males will emerge as winged moths which are small and brown with fuzzy antennae. On the other hand, females emerge as adults that resemble the caterpillar stage - they have no wings, reduced legs, and will never leave the bag.



*In late summer, the bagworms are nearing 2" in length.*

## Life Cycle in Oklahoma

Bagworm eggs begin to hatch in May across most of Oklahoma. Upon hatching, the newly emerged caterpillar will either stay and reinfest the tree they were born in, or they may “balloon” away to a new site. Ballooning involves releasing a small strand of silk and using that to ride wind currents before landing on a new host.

Once pupation is complete, the winged males emerge to mate with the females inside of their bags. The females produce a pheromone that recruits males to their bag for mating to occur. Male moths live for a brief period while females may live for 1-2 weeks as adults. Females lay their eggs in the remains of their pupal case, where those eggs will overwinter to emerge next year.

## Management

Bagworms can cause enough damage over successive years to seriously harm trees and shrubs. One management strategy is to go to infested plants in the winter and snip the bags out of the plant. Use sharp scissors, shears, or a knife to cut the loop holding the bag to the plant. Following this procedure will remove the female bags with eggs and hopefully prevent an infestation in the spring.

## Timing

If bagworms infestations are caught in May or June when the caterpillars are still small, biorational insecticides such as Bt (*Bacillus thuringiensis*), Neem, and Spinosad will manage populations. If the bagworms are not discovered until later in the season, then applications of pyrethroid insecticides (such as bifenthrin) or carbaryl may be needed to try and curtail the caterpillars. These likely will not eliminate the population but will help to limit damage. If the infestation is localized to one plant, then the physical removal method mentioned before is an option late in the summer as well. Any bagworm bags removed while the caterpillar is alive should be thrown into a bucket of soapy water to kill the insect. Do not remove the bags and throw them on the ground around the tree, they will simply return to feed more!

[For more information and more photos, click here.](#)