



SNAILCASE BAGWORM

The snailcase bagworm, *Apterona helix*, is causing serious problems in certain Washington agricultural situations. A pest of increasing importance, it was first introduced into the United States from Europe around 1940. This insect can escape detection for many years because it is small and resembles a piece of soil. The bagworm is only noticed when it starts feeding on crops or forage. The insects also create a nuisance when they attach themselves in large numbers to house siding, automobiles, trees, or fence posts. They are very difficult to remove.

The snailcase bagworm has the potential to become a serious pest in Washington for several reasons; 1) the insect feeds on many different types of plants; 2) it is parthenogenetic, which means a female can reproduce without fertilization by the male; and, 3) the insect easily can be carried long distances by mammals, birds, or humans.

Damage

Larvae feed on plant tissues and mine circular areas beneath the surface layer (Figs. 1 and 2). Large numbers of snailcase bagworms contaminate crops by attaching themselves to plant surfaces (Fig. 3). This insect may become a pest of nursery products. Baby's breath, used in floral arrangements, is especially prone to attack by the bagworm, and must be inspected closely before it is sold. The bagworm attaches its case so tightly to houses and cars that you may remove the paint in an attempt to dislodge them.



Fig. 1. Larvae feed on plant tissue, mining circular areas beneath the leaf surface.



Fig. 2. Leaf riddled by snailcase bagworm.



Fig. 3. Bagworms attach themselves to crops and nursery plants, contaminating the products.

Description and Life Cycle

The snailcase bagworm is a member of the moth family Psychidae, the bagworms. Each larva produces a protective bag by cementing small particles of soil into place. It lives inside this bag for virtually its entire life cycle. As the larva feeds, it enlarges the bag, which eventually measures approximately 1/4 inch across. The bag resembles a coiled snail shell, giving the insect its common name, snailcase bagworm (Fig. 4). Surrounded by this dirt shell, the larva is difficult to recognize as an insect.

The snailcase bagworm overwinters as a partially grown LARVA (Fig. 5), and begins feeding early in the spring, usually in March. After completing larval development, these insects may cluster in protected areas at the base of trees, or around house foundations, where they form PUPAE, normally during May and June (Fig. 6).

Within a couple of weeks the ADULT female appears, looking more like an amorphous sack than a typical moth. She stays inside the protective enclosure of the bag to lay EGGS. These hatch in about 2 weeks, and the newly emerged larvae remain within the case in an inactive state. Larvae stay within the protective female case throughout the winter, and emerge the following spring.



Fig. 4. Larva, at leaf center, enlarges its protective bag in coils as it feeds, until it resembles a snail shell.



Fig. 5. Larva protruding from protective case.



Fig. 6. Snailcase bagworms cluster on side of houses.

Hosts

Snailcase bagworms often attach themselves to concrete foundations, presumably to feed on algae and fungi. They also will eat nearly any plant material. Table 1 shows how wide ranging their food preferences can be.

Table 1. Host plants selected by snailcase bagworm

alfalfa	knapweed	radish
almond	marigold	raspberry
apple	mustard	rhubarb
baby's breath (<i>Gypsophila</i>)	oat	rose
bean	pea	squash
broccoli	pear	tomato
cabbage	plantain	turnip
clover	ponderosa pine	vetch

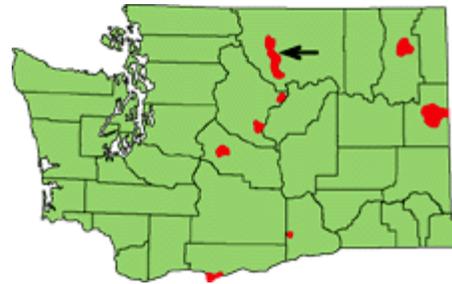
Distribution

The highest concentration of bagworms in Washington exists in the Methow Valley, but they are found in other areas of the state. If you know of other localities where bagworms exist, contact your county Extension agent or Extension specialist.

Originally, the snailcase bagworm was restricted to drier, rangeland areas, but gradually it is adapting, and moving into moister, residential portions of the state.

It only takes one bagworm to start a new infestation, so if you find these insects, collect the plants on which they are feeding and burn them to destroy any insects and their eggs.

Snailcase bagworms are found in several areas of the state. Heaviest concentrations are in the Methow Valley of Okanogan County.



Control

Many serious agricultural pests are not native to this country, and often made their way here without natural predators and parasites. Few, if any, natural controls can be counted upon to help reduce populations of the snailcase bagworm. The cryptic coloration of their bags also hides this insect pest from any potential large predators, including humans.

Various insecticides will give good control, but only if they are applied when larvae are actively feeding. Use the bacterium *Bacillus thuringiensis* (B.t., Dipel), diazinon (Spectracide), or carbaryl (Sevin) to control the bagworm on crops grown for human consumption. In addition, acephate (Orthene) or dimethoate (Cygon) can be applied to sites such as ornamental trees and shrubs. **TO AVOID KILLING POLLINATORS, DO NOT APPLY ANY INSECTICIDE (except B.t.) TO PLANTS THAT ARE FLOWERING.** Be sure the crop is on the label of any insecticide you choose to apply.

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Warning

The law requires that pesticides be used as the label directs. Uses against pests not

named on the label and low application rates are permissible exceptions. If there is any apparent conflict between label directions and the pesticide uses suggested in this publication, consult your county Extension agent.

Use pesticides with care. Apply them only to plants, animals, or sites listed on the label. When mixing and applying pesticides, follow all label precautions to protect yourself and others around you. It is a violation of the law to disregard label directions. If pesticides are spilled on skin or clothing, remove clothing and wash skin thoroughly. Store pesticides in their original containers and keep them out of the reach of children, pets, and livestock.

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