Forest Pest Bulletin

DEPARTMENT OF AGRICULTURE AND NATURAL RESOURCES
DIVISION OF RESOURCE CONSERVATION & FORESTRY

BULLETIN NUMBER 15 Revised: June 2021

BAGWORMS

CAUSAL AGENT
Thyridopteryx ephemeraeformis

HOSTS
Bagworms feed on over 120 different plant species but are only found in the southern edge of the state and are rarely a problem. The preferred hosts are conifers (*Pinophyta*), but other common trees include Maple (*Acer*), Boxelder (*Acer negundo*), Willow (*Salix*), Black locust (*Robinia pseudoacacia*), Elm (*Ulmus*), Linden (*Tilia*), Poplar (*Populus*), Oak (*Quercus*), Apple (*Malus*), and Wild cherry (*Prunus avium*).

SYMPTOMS
The indicators of Bagworms are the adult moths and the silken bags the larvae form (Fig. 1) along with feeding damage on needles and leaves of the host plant. The male moth is blackish in color, hairy and has four almost-clear wings (Fig. 2). The females are yellowish white in color and never look like moths as they lack eyes, wings, legs, antennae, and functional mouthparts. They never leave the bag that they create. Bagworm larvae (caterpillars) are dark brown to light black in color (Fig. 3) and are enclosed in bags made of silk, twigs, and leaves. These bags may reach two inches in length.

Figure 1. Bag formed by larvae. Eric R Day, VA Polytechnic Institute and State University, www.forestryimages.org

Figure 2. Newly emerged male moth.
Lacy L. Hyche, Auburn University, www.forestryimages.org

Figure 3. Bagworm larva.
Pennsylvania Dept of Conservation and Natural Resources, www.forestryimages.org

LIFE CYCLE

During August and September, male moths emerge from their bags, living long enough (1-2 days) to mate with the females. Female Bagworms, living 4 to 9 days, produce 500-1000 eggs in a single mass and all within the bag. The eggs overwinter in the bag and hatch in May and June. Once the small worms emerge from the female bag the worms will begin to construct individual bags in which they feed on tree and shrub foliage. Feeding continues until August when the mature larvae attach the bags to twigs and pupate, becoming adults in 7 to 28 days. Bagworms only have one generation per year.

MANAGEMENT

If only a few trees and shrubs are infested, the bags can be hand removed. This approach is most effective during fall, winter and early spring before the eggs have hatched. However, it's a good idea to remove Bagworm bags anytime a bag is seen. Destroy the bags by burning them.

Due to numerous pesticide labels and/or label changes, be sure the product label includes the intended use prior to purchase or use. Please read and follow all pesticide label instructions and wear the protective equipment required. Spraying pesticides overhead increases the risk of exposure to the applicator and increases the likelihood of drift to non-target areas. Consider the use of a commercial applicator when spraying large trees due to the added risk of exposure and equipment needs. The mention of a specific product name does not constitute endorsement of that product by the South Dakota Department of Agriculture and Natural Resources.

For further information contact your nearest South Dakota Division of Resource Conservation and Forestry office. Hot Springs 605-745-5820; Lead 605-584-2300; Mitchell 605-995-8189; Pierre 605-773-3623; Rapid City 605-394-2395; Sioux Falls 605-362-2830; Watertown 605-882-5367.