

Forest Pest Bulletin



SOUTH DAKOTA
DEPARTMENT OF AGRICULTURE
DIVISION OF RESOURCE
CONSERVATION & FORESTRY



BULLETIN NUMBER 24

Revised: March 2018

PINE TIP MOTHS

CAUSAL AGENT

Rhyacionia

HOSTS

Austrian (*Pinus nigra*), Scotch (*Pinus sylvestris*), Mugo (*Pinus mugo*), and Red pines (*Pinus resinosa*) are preferred. Ponderosa pine (*Pinus ponderosa*) is also attacked.

SYMPTOMS

The larvae of Tip moths will line the needles, buds, and shoots. The terminal and lateral tips are killed because of the insect boring. New shoots fail to expand, and needles are killed in the spring because the young larvae of the Pine tip moth have killed the buds. Heavy infestations will result in the shoot tips turning brown and bending over as a shepherd's crook. The larvae also feed on larger growth and branches in the spring, causing them to turn brown and wilt. Shoots that survive larval feeding will have a curled shape (Fig. 1). Heavy infestations often cause the tree to appear rounded and stunted. In late summer or early fall, look for larvae under build-ups of resinous material. In the spring, look for dead or dying buds and shoots to signify an infestation.

LIFE CYCLE

Adult Tip moths are a mottled reddish-brown and gray color (Fig. 2). The fore wings are marked with silvery cross lines. The moths are about 3/8 of an inch long. Male moths emerge in mid-June to July. Females emerge shortly after the male moths. The moths



Figure 1. Curled, damaged shoot
David McComb, USDA Forest Service,
www.forestryimages.org



Figure 2. Adult European
pine shoot moth.
Cheryl Moorehead,
Individual,
www.forestryimages.org

themselves do no damage to the trees. Female moths lay up to 50 eggs, in groups or singly, for several weeks on needles or buds. The grayish eggs hatch in about 10 days, and the larvae emerge.

The larvae are brown with black heads and can grow until they reach 3/4 of an inch long (Fig. 3). After hatching, the larvae construct webbing between needle sheaths and current year stems, and then begin to bore into the needles. About midsummer they start feeding on the buds. They stop feeding in August and overwinter as pupae on or in the ground. Moths appear in spring but there are between 1 and 3 generations so there are multiple flights of moths.



Figure 3. European pine shoot moth larvae.

Fabio Stergulc, University of Udine,
www.forestryimages.org

MANAGEMENT

Because eggs are laid before July, pruning during mid-July reduces the number of eggs present in a tree. Dry weather is known to increase the presence of this pest, so properly watered trees are essential for control on this pine shoot moth. Cutting and burning of infested shoots is recommended for control. This should be performed in mid-May.

Treat trees chemically with Acephate, Cyhalothrin, Imidacloprid or Permethrin, Spinosad, or Tebufenozide just as needles begin to expand in May. Additional treatments may be needed in late June and July.

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.

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.

The South Dakota Resource Conservation and Forestry Division is an equal opportunity service provider. Services are provided to all persons without regard to race, color, religion, gender, age, disability, national origin, or political beliefs. To file a complaint of discrimination, contact the Director, South Dakota Human Rights Division, 118 West Capitol Ave, Pierre, South Dakota 57501 or call (605)773-4493 (voice or TDD). The division is a recipient of Federal funds.