



FALL CANKERWORM

Alsophila pometaria

The fall cankerworm is a common native pest of hardwood trees in North America. Therefore it is not surprising that this insect is found in Pennsylvania's forests. This pest is in the insect family Geometridae. The larval stage of members in this family are called inchworms, loopers, or measuringworms. Common trees that this species prefers to feed on are ash, basswood, beech, black cherry, red maple, sugar maple, red oak, and white oak. It will also feed on the leaves of apple, birch, boxelder, dogwood, elm, hickory, and many other hardwoods. This pest gets its name because adults are active in late fall even though larvae feed in the spring. There is also a spring cankerworm, however, the adult stage of this species is active in early spring, and this insect is not as common as the fall cankerworm. Nearly every year, the fall cankerworm causes at least some small areas of defoliation in the forest. In Pennsylvania there have been four major outbreaks of this pest since 1932. The first was in 1953 in the southeastern part of the state. There was a statewide outbreak in 1959. An outbreak occurred from 1964 to 1967 in the northcentral part of the state and again from 1975 to 1977 in the same area.

DESCRIPTION

Mature larvae are about 25 mm long and can vary between light green and dark brownish-green (Fig. 1). The light green caterpillars have white lines running down their body from the head to the tip of the abdomen. The dark brownish-green caterpillars have a black stripe the length of their back. When more dark colored caterpillars are seen, it may be a sign of a heavy infestation. Larvae have three pairs of legs on their thorax and three pairs of prolegs on their abdomen. The first pair of prolegs, when looking back from the head, is much smaller than the last two pairs. The pupa can be found just beneath the surface of the ground and is wrapped in a silken cocoon. The male moths have a 25-35 mm wingspread with brown glossy forewings crossed with irregular white bands. The females are brownish-gray, wingless, and 10-12 mm long (Fig 2). Eggs resemble a vase and are less than 1 mm in diameter. They are dark grayish-brown with a dot and a ring on top.

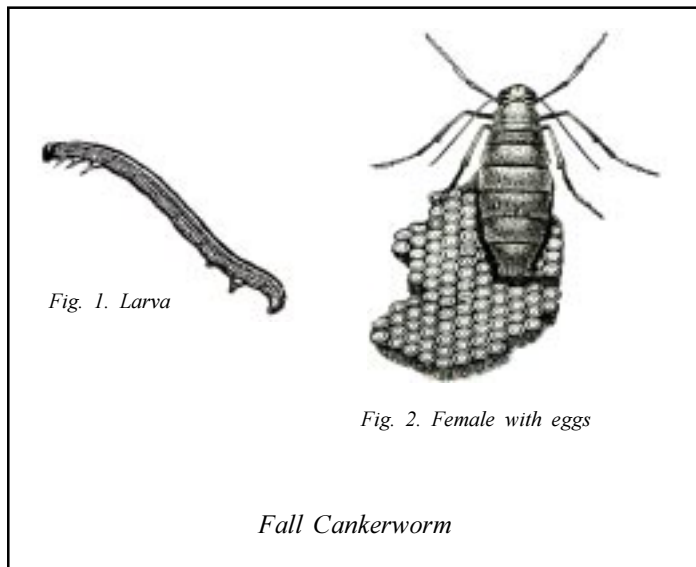


Fig. 1. Larva

Fig. 2. Female with eggs

Fall Cankerworm

LIFE HISTORY

This pest has one generation per year. Larvae hatch from late April to early May, that occurs the same time as leaves begin to emerge from the buds on host trees. During a major infestation, larvae can eat the leaves as fast as they grow. Larvae reach maturity in 5 to 6 weeks after hatching. Once mature, larvae lower themselves from the tree canopy on a silken thread. Once on the ground, they spin a cocoon made of silk and soil particles. The pupal stage is inside this cocoon. This species will remain in this stage until freezing temperatures occur from late October to early December. The wingless female simply climbs the nearest tree and mates with the male. Once mated, females lay about 100 eggs in compact rows in a single layer on smaller twigs and branches. This pest spends the winter in the egg stage.

DAMAGE

Young larvae begin feeding on the area in between small veins on the leaf. However, once larvae are mature, they consume the leaf entirely leaving only the midrib and major veins. This pest often defoliates an entire tree. If defoliation occurs two years in a row, the tree can die, especially if it has been stressed by drought or poor site conditions. Outbreaks normally occur for a period of one to two years. Infestations can

be a nuisance in public use areas, especially when the mature larvae are silking out of the tree. On windy days larvae can be blown onto people beneath the infested trees.

MANAGEMENT

Monitoring for this species should begin in early May when young larvae have started feeding. If there is a significant population, a registered insecticide may be applied according to label directions when small larvae are feeding. Weather is also a factor in regulating this pest. Cool, wet spring weather has an adverse effect on its populations. There are also some natural enemies of this species. One is the tiny wasp, *Telenomus alsophilae*, that is an egg parasitoid. Another is the ground beetle, *Calosoma frigidum*, that feeds on larvae. On shade trees it is possible to place a sticky band around the trunk in late fall in order to capture females before they lay their eggs. This method, however, does not always work, especially if there are unbanded infested trees nearby.

WARNING

Pesticides are poisonous. Read and follow directions and safety precautions on labels. Handle carefully and store in original labeled containers out of the reach of children, pets, and livestock. Dispose of empty containers right away, in a safe manner and place. Do not contaminate forage, streams, or ponds.

Gregory A. Hoover
Sr. Extension Associate
Dept. of Entomology
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Timothy R. Haydt
Undergraduate Student
Forest Science

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