

Winter Moth

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The winter moth (*Operophtera brumata*) was introduced to North America from Europe. Winter moth has been noted as a pest for years in Eastern and Western Canada and the Pacific Northwest region of the United States. Since winter moth is an introduced pest, it has few natural parasites capable of suppressing populations. As a result, winter moth continues to spread and has become a serious pest in parts of New England, especially along coastal areas of Massachusetts.

Damage

Winter moth is primarily a pest of deciduous plants. Common hosts include, but are not limited to oak, maple, basswood, ash, apple, and crabapple. Winter moth causes injury to trees when larvae (caterpillars) tunnel into buds to feed. Larvae continue feeding as they move from bud to bud. Defoliation occurs as older larvae feed in the expanding leaf clusters. Delayed leaf expansion due to cool springs can increase injury.

Description

Moths (adult stage) emerge from the soil in November. Moth activity generally extends into January and they may be seen flying around outside lights. After mating, females deposit eggs in bark crevices, under bark scales, under lichen, etc. Egg hatch occurs in spring when temperatures

average approximately 55° F or when 20-50 Growing Degree Days have accumulated.

Winter moth larvae are pale green caterpillars often referred to as loopers or inchworms with white longitudinal stripes that extend down each side of the body (Figure 1). After egg hatch, larvae crawl up tree trunks and begin to penetrate leaf buds where they begin to feed. Larvae feed through mid-June when they migrate to the soil for pupation and overwintering.

Control

Winter moth will continue to be a serious pest in New England. An effective pest management program that consists of cultural and product treatments is necessary to promote tree vigor while suppressing populations of the insect. Trees exposed to good cultural practices are better able to withstand winter moth outbreaks. Appropriate mulching, fertilization according to soil analysis, as well as irrigation during drought are all excellent cultural treatments that improve tree health. Tree banding has also shown to increase management success. Properly timed treatment applications are highly effective for controlling large outbreaks of winter moth.

Figure 1: Winter moth caterpillar

