Gypsy Moth Control Options

Gypsy Moth

The gypsy moth, *Lymantria dispar* (L.), gets its name from a behavior of its larger caterpillars, which generally migrate each day from the leaves and down the branches and trunk to rest in shaded spots on the tree or objects on the ground. Caterpillars are dark and have dark hairs, but they are not so hairy that one cannot see the five pairs of dark blue spots and six pairs of brick red spots along the back. Most caterpillars attain full-size in early summer and transform to the pupal stage. The pupae stage lasts about ten days to two weeks. Adults emerge in late June or in July. Females' wings are white with black lines, but they are too heavy to fly. Male moths are mostly brown and do fly. Females lay 300-1,000 eggs in a single group, mingled with light brown hairs from the female's abdomen. Adults soon die, but the eggs survive over winter. Caterpillars hatch the next spring.

It is fairly easy to identify gypsy moth because colors of caterpillars, adults, and egg masses are so distinct. Also, egg masses are large compared to those laid by most insects. Therefore, it is possible to predict defoliation for the following spring and prepare a suppression program to reduce the numbers of caterpillars.


Female moth depositing egg mass


Egg mass hatching in early spring


Male (right) and female pupae


Larva

Caterpillars favor oak but will feed on the foliage of many tree species, including some conifers. However, there are some trees such as ash, tulip poplar, dogwood, and black locust on which they will not feed. Defoliation by

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caterpillars of gypsy moth weakens trees, because without leaves the trees are not able to manufacture food. Weakened trees are susceptible to bark beetles and root diseases that can kill them.

Control choices

No Control

Allow natural biological controls to function in the forest. Outbreak populations may be brought back to non-damaging levels by natural processes before causing social or economic damage.

Cultural Control

These include planting trees that Gypsy Moths do not prefer as a food source, improving the health of trees through watering and fertilization so that trees can better withstand a Gypsy Moth attack.

Mechanical or Manual Control

Mechanical practices that change the Gypsy Moth's access to food and ability to reproduce. Traps catch male moths so that they can't mate. Areas have been saturated with artificial pheromones mimicking female gypsy moths in an attempt to confuse males and reduce their chances of mating success. Picking egg masses from trees and dunking them in soapy water, plus using sticky barriers to prevent caterpillars from crawling up tree trunks to reach a food source are included.

Biological Control

Introducing natural enemies (parasites, predators, and disease organisms) to maintain Gypsy Moth population at non-damaging levels. Practices that encourage wasps, flies and beetles that attack Gypsy Moth larvae as well as disease organisms such as Nuclear Polyhidrosis Virus (NPV) and *Bacillus thuringiensis* (Bt) that kill Gypsy Moth larvae when ingested. However, Bt will kill other butterfly and moth larvae that ingest it.

Regulatory Control

Quarantines attempt to keep moths from spreading. Inspections of household goods and camping equipment that are being moved out of an infected area might be involved.

Chemical control

Broad –spectrum synthetic chemicals that are poisonous to many insects and other organism may be attempted. Sprays derived from natural products that are generally restricted to killing invertebrates may also be available.