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Meet the Gypsy Moth

Forest Service

U.S. Department
of Agriculture

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Agriculture
Information
Bulletin No. 399



The gypsy moth is probably the most important defoliating insect of hardwoods—especially the oak—in the northeastern United States. This insect is often confused with other forest insects of similar size, shape, and coloring. Much effort and money have been spent to control or to eliminate this pest from this continent. Yet it continues to spread southward along the Appalachians.

The objective of this brochure is to help land-owners and other interested individuals identify this forest pest and its life stages.



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If gypsy moth infestation is observed, information about a control program can be secured by contacting a county extension agent, a State forestry organization, a State agriculture department, or the Forest Service of the U.S. Department of Agriculture.

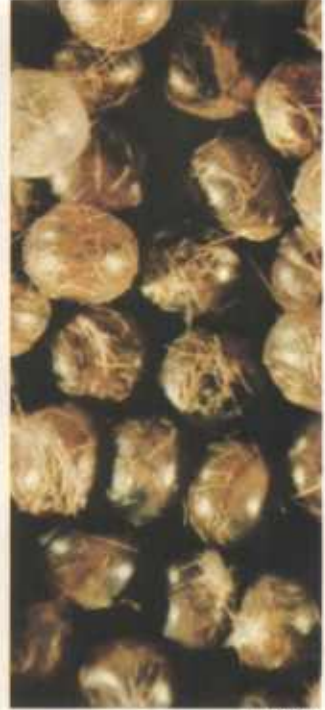
Egg Masses

In the Northeast, the gypsy moth has one generation per year, and overwinters in the egg stage. Egg masses, shown below (left), are deposited in late June and July on a variety of environmental surfaces: trees, rocks, stumps, and houses. The holes in these particular masses indicate activity by egg parasites.

Each egg mass contains 75 to 800 eggs. These eggs, shown below (right), are embedded in hairs from the female. These hairs insulate eggs from low winter temperatures.



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Larvae 1st Instar

In late April or early May, gypsy moth larvae emerge from the egg mass (left), and, in response to light, climb into the crowns of trees; (right) a first instar larva is shown. At this stage, larvae hang from and repeatedly re-ascend silken threads (opposite page) until dispersed by wind.



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Larvae 2nd, 3rd, and 4th Instar



Second Instar Larvae F-700020



Third Instar Larva F-700021

Larvae disperse to host plants for edible foliage, and soon begin feeding. Male larvae mature through five instars; females through six. Second and third instar larvae characteristically feed by daylight in tree crowns. As larvae mature, their feeding behavior changes. Fourth through sixth instar larvae climb down the trees during the day to resting places, and resume feeding at night.



Fourth Instar Larva

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Larvae 5th and 6th Instar



Fifth Instar Larva F-700023



Sixth Instar Larva F-700024

Larvae reach full size in late June or early July, cease feeding, and begin to pupate (enclose themselves in hardened cuticle) as shown below.



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Pupae and Adult Moths

Female pupae are characteristically much larger than male pupae (left). The pupal stage usually lasts about 2 weeks. The adult male moth (opposite page, left) emerges first, followed several days later by the adult female moth (opposite page, right).



Male and Female Pupae



Male Moth

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Female Moth

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Mating and Egg Laying

The female, which does not fly, attracts the male with a powerful sex lure. Mating occurs (below), and shortly thereafter females begin to deposit their eggs (opposite page).

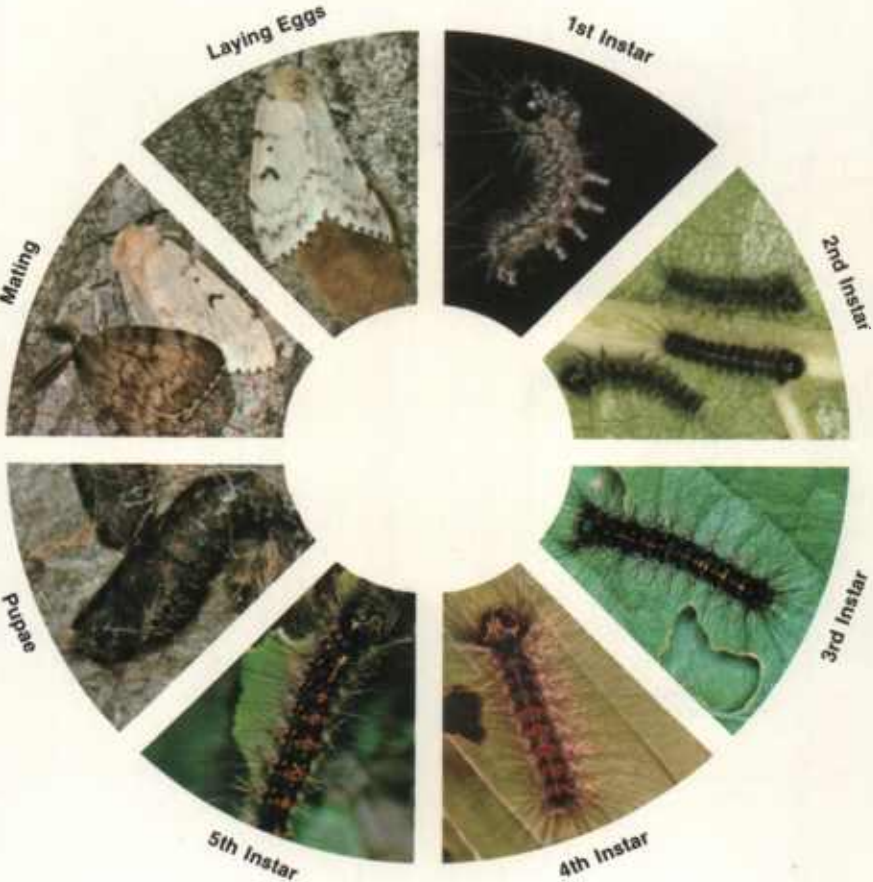


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Life Cycle



Death and Overwinter

Shortly after mating and the depositing of eggs by the female, both male and female adult moths die. The egg masses (below) overwinter, and begin again the life cycle of the gypsy moth.



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