



## Understand and Manage

# Gypsy Moth

**Gypsy moth** (*Lymantria dispar*) is one of the most significant exotic pests in the history of the United States. Introduced to Boston in the 1860s, it has continued to spread throughout the eastern United States. The gypsy moth larvae defoliate trees leaving them weakened and vulnerable to secondary fungal and insect invaders. Repeated defoliation of hardwoods can kill the tree directly and a single defoliation may cause severe dieback and decline on softwood species, like pine and spruce, especially when coupled with drought or other abiotic stress.

Gypsy moth will affect trees in natural settings, forest plantations, and urban environments often defoliating thousands of trees in a single outbreak.

### Biology

#### Life Cycle

- Eggs hatch in spring and larvae emerge.
- Young larvae begin to feed in April and May and continue through summer.
- Caterpillars pupate early to mid-summer.
- In summer, hair covered egg masses are laid in crevices, under picnic tables, and on vehicles.
- The insect spends the winter in these egg masses.
- Gypsy moth has one generation per year.

### Distinguishing from Look-Alikes

*Lymantria dispar* is the only tussock (furry) caterpillar with five pairs of blue spots and six pairs of red spots in rows across its back.

### Distribution

Found throughout the eastern United States including the entire New England area, DE, IN, IL, KY, MI, MN, NC, NJ, NY, OH, PA, SC, TN, VA, WI, and WV. Outbreaks have also been documented in CA, CO, NV, OR, UT, WA, and Canada.

Heaviest pest pressure remains in the eastern US.



*gypsy moth caterpillars have 5 pairs of blue spots and 6 pairs of red spots*



*cream colored females are flightless and larger than the brown colored males*

photos: USDA -FS

### Susceptible Hosts

Gypsy moth is known to feed on hundreds of woody plant species.

*Preferred species:* oak, aspen, willow, linden, hawthorn, apple, and alder.

*Less preferred species:* elm, maple, hickory, beech, hemlock, pine, spruce, cedar, and sassafras. Less preferred hosts are usually fed upon when gypsy moth populations are high and preferred species become scarce.

### Symptoms

- Shot holes in leaves beginning in spring resulting in partial or complete defoliation by midsummer.
- Crowns of trees will be thin initially and will be partially to completely defoliated under heavy pest pressure.

### Signs

- White, 1 ½ inches long, webby egg masses on trunks and limbs.
- Young caterpillars are black with orange spots on their backs.
- Mature caterpillars grow up to 2-inches long and have five pairs of blue spots and six pairs of red spots in rows across its back.
- Pupae are tear-drop shaped and brown.

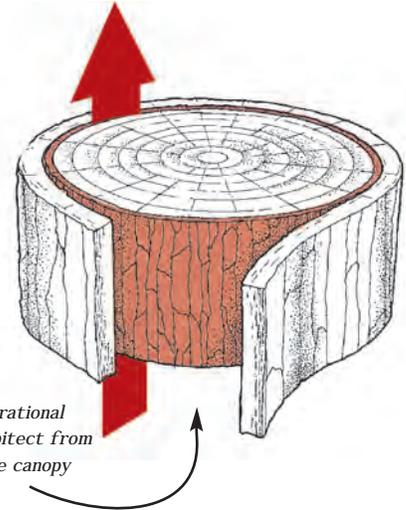
# Treatment: Gypsy Moth

## Management Strategy Summary

Heavy pressure from gypsy moth has the potential to cause mortalities on shade trees especially in stressful urban sites where gypsy moth feeding is coupled with stress from abiotic factors. Healthy trees can tolerate a single defoliation event, however, multiple defoliation events can cause dieback and decline even on healthy trees. Mortalities on stressed trees can occur after a single defoliation event.

Commercial insecticide treatments on individual high value shade trees are the only way to ensure predictable protection during high pest pressure. Threshold levels of gypsy moth are assessed by using egg mass counts in the winter months and can be used by arborists to help make decisions about treatment. Contact your local Department of Agriculture or local extension agent to find out the current status of the egg mass counts in your area. Gypsy moth populations will typically rise and fall. The rise continues over a 2-4 year period before reaching a peak which is followed by population decline.

# Lepitect™



*The tree's transpirational pull moves the Lepitect from the soil up into the canopy*

## Management Options

**Products:** Lepitect (*soil injection*), Conserve SC (*foliar spray*), Bisect (*foliar spray*), Lepitect Infusible (*tree injection*), Aracinate (*tree injection*)

**Timing:** Apply Lepitect annually at or just prior to full leaf emergence in the spring of the year. A second application 30 days later may provide additional control if larvae are still feeding.

Foliar sprays with Conserve and Bisect should begin at bud break to control young larvae, and repeat applications should be made through early June.

Lepitect Infusible and Aracinate should be applied at or just prior to full leaf emergence in the spring.



*treatment of trees with Lepitect is done via soil injection*

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