

# FOCUS ON FOREST HEALTH

## INVASIVE SPECIES: SPONGY MOTH (FORMALY GYPSY MOTH)

### Background

Spongy moth (*Lymantria dispar*) is an invasive moth species that was accidentally introduced from Europe into a Massachusetts neighborhood in 1869. Spongy moth has spread south and west since its introduction, reaching Wisconsin in the mid-1970s. Spongy moths can now be found across the state of Wisconsin. Spongy moth is one of the most important insect pests in the eastern U.S.

### Description

Like other moths, Spongy moths go through four life stages: egg, larva (caterpillar), pupa and adult (moth). Adult females may lay more than 1000 eggs in a tear-drop shaped mass in late summer. Egg masses may be found on houses, picnic tables, vehicles and firewood piles in addition to trees. Caterpillars hatch from egg masses in May and June and start feeding. Caterpillars molt (shed their exoskeleton) 5 or 6 times as they grow. The spongy moth caterpillar is the destructive life stage; the adult moths do not eat. When the caterpillars get large enough (June-July) they pupate and transform into moths.

*Adult* – The female moth is white with small V-shaped markings on her wings. Although she has wings she cannot fly. The male spongy moth is smaller than the female, brown with large, feathery antennae.

*Egg mass* – New egg masses are firm to the touch, covered with light tan to golden yellow hairs.

*Larva* – Caterpillars are bristly with two rows of colored “warts” running the length of its back. There are blue warts near the head and red warts toward the rear. The head is yellow with two vertical black stripes.

### Signs and Symptoms

- Spongy moth life stages:
  - Adult males flying erratically during the day
  - Adult females laying eggs
  - Caterpillars eating leaves or hiding in groups on trees
  - Egg masses on trees or other objects
- Defoliated trees from May – July



Photos from left to right: An adult female spongy moth laying an egg mass; a young caterpillar; a fully grown caterpillar.

### Habitat and Current Distribution

Spongy moth caterpillars will feed on more than 200 species of trees, both deciduous and evergreen. Preferred hosts include aspen, birch, crabapple, hawthorn, linden, mountain ash, oak, sweet gum, and willow. This diverse diet allows spongy moth to survive in many of Wisconsin's forest types and in all parts of the state.

Spongy moth is already well established in Wisconsin and is now a permanent pest in our forests. For a current map of counties quarantined for spongy moth and where outbreaks are occurring visit <http://gypsymoth.wi.gov/>.

### Impact and Management

When spongy moth populations reach outbreak levels about every 10 years they have the ability to eat the leaves off of (defoliate) entire trees or forests. Healthy trees will typically recover from defoliation but trees that are weak from drought, previous defoliation, age or other stressors may not survive unless they are protected from spongy moth. Repeated defoliation often weakens trees resulting in greater susceptibility to disease and other insect pests. Spongy moth caterpillars can also be annoyance when they aggregate on the sides of buildings and homes. Some people have allergies to the hairs on the caterpillars.

- Ecological – Spongy moth caterpillars feed on many of the most important and common tree species in Wisconsin. Damage has the potential to impact many of the wildlife species that rely on affected trees for food and shelter.
- Economic – Many of the tree species spongy moth impacts are economically important in Wisconsin for timber for lumber, furniture, veneer, paneling, flooring and firewood.
- Social/recreational – The trees spongy moth feeds on provide a variety of recreation opportunities for Wisconsin's residents and tourists including biking, hiking, camping and wildlife viewing. Many of the affected species are planted in our parks and yards to provide shade and help cool our homes in summer, slow rain water to prevent flooding and absorb air pollution.



*Photos from left to right: A large area defoliated by spongy moth; trees impacted by spongy moth feeding; hundreds of spongy moth caterpillars on a tree.*

Help protect your trees from damaging levels of spongy moth defoliation by:

- Get firewood within 10 miles of where you will use it. Many parks offer aged or certified firewood for sale to campers at reasonable prices. Firewood is also often available from private sellers just outside the parks.
- Follow spongy moth quarantine laws and best management practices (see the links below).
  - Do not move spongy moth from quarantined to non-quarantined counties.
  - Recognize spongy moth life stages.
  - Inspect items stored outside before moving them.
- Be on the lookout for this pest! Be familiar with the signs and symptoms of spongy moth and learn how to manage them. Learn the difference between spongy moth and other similar defoliators.

Successful management of spongy moth requires an integrated approach that includes:

- Aerial applications of biological insecticides such as *Bacillus thuringiensis* (Bt) or Gypchek when caterpillar populations are high.
- Promote natural enemies such as predatory wasps, birds and disease organisms that kill spongy moths.
- Homeowners should remove and destroy egg masses in the fall and winter. In spring, wrap bands covered in sticky material around the trunks of trees to entangle climbing caterpillars. Older larvae can be collected and destroyed daily from under burlap skirts placed around tree trunks.

### For more information

- <http://gypsymoth.wi.gov/>

LEAF Forest Health Kit: [www.leafprogram.org](http://www.leafprogram.org)



*Photo: Aerial application of biological insecticides.*

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- <http://dnr.wi.gov/> Search “spongy moth”
- <http://fyi.uwex.edu/gypsymothinwisconsin/>

A new common name for *Lymantria dispar*, spongy moth, replaced the prior name of this insect, gypsy moth, in 2022. This change was necessary because the word ‘gypsy’ is an ethnic slur and the former common name equated people with insects. For more information, visit the [Entomological Society of America website \[exit DNR\]](#).