



# ! Flighted Spongy Moth Complex

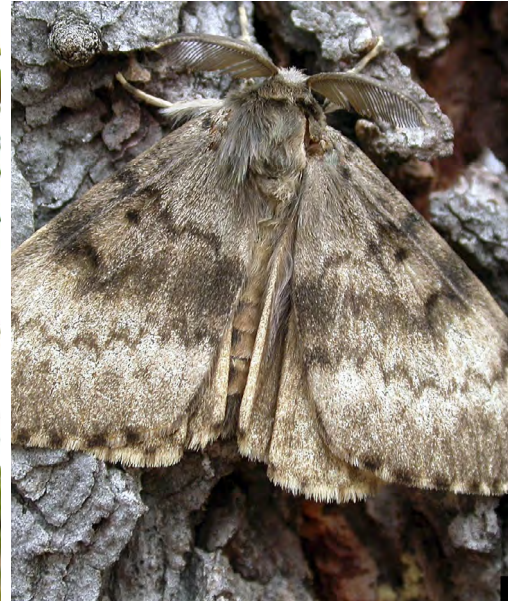
(*Lymantria dispar asiatica*, *L. d. japonica*, *L. albescens*, *L. umbrosa*, *L. postalba*)



Larva (top) and eggs (bottom)



Adult female



Adult male

The flighted spongy moth complex (FSMC) includes five species: *Lymantria dispar asiatica*, *Lymantria dispar japonica*, *Lymantria albescens*, *Lymantria umbrosa*, and *Lymantria postalba*. These pests are not currently found in the United States. Like the spongy moth (formerly gypsy moth), FSMC caterpillars feed on a wide variety of plants—more than 100 plant families. This broad host range, combined with the female moth's ability to fly long distances, means FSMC could spread quickly if introduced. Large infestations can completely defoliate trees, leaving them weak and vulnerable to disease or other pests. Repeated defoliation over two or more years can kill large sections of forests, orchards, and landscaping. Any introduction of FSMC

would pose a serious threat to U.S. forests and landscapes.

## Preventive Measures

Since 2009, the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS) partners with Canada, China, Japan, South Korea, and Russia to monitor FSMC populations and inspect ships before they leave infested areas to ensure they are free of FSMC life stages. U.S. Customs and Border Protection also inspects ships arriving at U.S. ports. APHIS also carries out robust surveys near ports to help detect infestations early, when eradication is most effective and least costly. These measures are highly effective, but occasional introductions still occur.

When FSMC is detected, APHIS works with Federal and State agencies to contain and eliminate any infestation.

## Background

FSMC was first identified in North America in 1991 near the Port of Vancouver in British Columbia, Canada. Shortly afterward, moths were found in Washington and Oregon. Scientists believe the pest arrived from eastern Russia on ships carrying egg masses. While docked, larvae likely hatched and were blown ashore. USDA and State officials eradicated these infestations through trapping and treatment.

In 1993, another infestation occurred in North Carolina after moths emerged from a ship carrying infested cargo

*Photos by John Ghent, USDA Forest Service, Bugwood.org*



A USDA inspector spots FSMC egg masses on a ship. *Photo by USDA.*

from Germany. Tracebacks revealed FSMC populations in Europe. Between 1991 and 2025, FSMC was detected and eradicated at least 45 times across the United States. The most recent detection occurred in 2024 when a male moth was found in California during a routine survey. Ongoing national surveys will determine whether new populations are present and what follow-up actions are needed.

### Potential Impact

If FSMC becomes established in the United States, the damage could be severe. Each female can lay hundreds of eggs in fuzzy masses, producing hundreds of caterpillars that feed on hundreds of tree and shrub species. Caterpillars can defoliate plants rapidly, weakening or killing trees and shrubs and destroying habitats for wildlife. Infestations also create nuisances in homes, yards, and parks with silk strands, droppings, and dead moths.

### Comparison to Spongy Moth

FSMC is similar to the spongy moth found in the northeastern United States and southeastern Canada, but it poses an even greater risk. While spongy moths defoliate an average of 700,000 acres annually, FSMC has a broader host range and females can fly, unlike flightless spongy moth females. This ability to fly means FSMC could spread across the country much faster than the spongy moth, which took more than 150 years to spread from the Northeast to other regions.

### Life Cycle

FSMC develops through four stages: egg, caterpillar, pupa, and moth. Egg masses, often covered in yellowish fuzz, can contain hundreds to more than 1,000 eggs and may be found on trees, stones, walls, logs, and outdoor furniture. Eggs hatch in spring, and caterpillars cause all the feeding damage during this stage. Pupation typically begins in June or July, and adult moths emerge in 10 to 14 days. Males are grayish-brown

with a wingspan of about 1½ inches, while females are white and larger, with wingspans of 3½ inches or more. Adults do not feed; they only mate and lay eggs between June and September. Eggs remain dormant through winter and hatch the following spring.

### How FSMC Spreads

FSMC spreads in several ways. Female moths can fly to new areas to lay eggs, and newly hatched caterpillars can be carried by the wind on silken threads. People can also inadvertently transport egg masses or pupae on logs, nursery stock, shipping containers, outdoor furniture, and ships. Egg masses tolerate extreme temperatures and moisture, making them highly mobile.

### What You Can Do

You can help prevent FSMC by:

- Reporting any findings of egg masses on trees, lawn furniture, fences, walls, or elsewhere to Federal or State agriculture officials.
- Cooperating with any restrictions in your local area that might be imposed because of an FSMC detection.
- Allowing authorized agricultural workers access to your property to place and inspect insect-monitoring traps.

For more information, contact:

- Local Extension Office: [extension.org/find-cooperative-extension-in-your-state/](https://www.nationalplantboard.org/find-cooperative-extension-in-your-state/)
- State Plant Regulatory Official: [www.nationalplantboard.org/members.html](https://www.nationalplantboard.org/members.html)
- USDA APHIS Office: [www.aphis.usda.gov/contact/plant-health](https://www.aphis.usda.gov/contact/plant-health)