

Adult female spongy moth with egg mass

A native of Europe, the spongy moth (*Lymantria dispar*) was accidentally released in Massachusetts in 1869. Infestations of the pest have gradually spread, leaving behind millions of acres of defoliated trees. Since 1980, the spongy moth has defoliated more than one million acres in Maryland. During this period, the Spongy Moth Cooperative Suppression Program sprayed the trees with carefully selected insecticides on another 1.8 million acres statewide. The suppression spray program has protected the trees from severe leaf loss on an average of over 97 percent of the acreage treated each year.

From the early 1980s to the early 1990's, severe infestations of spongy moth caterpillars and the resultant defoliation occurred primarily in Allegany, Anne Arundel, Baltimore, Carroll, Cecil, Frederick, Garrett, Harford, Howard, Kent, Montgomery, Prince George's, and Washington counties. Most of the Maryland Department of Agriculture's (MDA) spongy moth suppression activities were conducted in these counties. By 1994, the northern infestations had collapsed, but on the Eastern Shore and in Southern Maryland, the caterpillars were very active and the suppression spraying was conducted largely in those areas. Although spongy moth caterpillar populations were low between 1996 and 1999, MDA's annual fall survey program detected several increasing populations throughout the state.

Spongy moth caterpillar populations rebounded significantly in the spring of 2000 – defoliating 22,824 acres – and again in 2001 – defoliating 46,183 acres. In 2000, the MDA's Spongy Moth Suppression Program sprayed the trees on 16,971 acres. In 2001, the Suppression Program sprayed the trees on 48,588 acres.

In 2002, MDA sprayed 39,134 acres of trees statewide and only 112 acres of trees (untreated) were defoliated. As populations again began to collapse, spray acreage was reduced to 14,053 acres in 2003 and to 660 acres in 2004. There was no suppression spraying in 2005.

In 2006 and 2007, conditions seem to have been especially favorable for spongy moth larvae. The large, healthy caterpillar populations fed voraciously on the oaks and other hardwoods in Maryland, defoliating the trees on 15,793 acres in the spring of 2006 and on 68,460 acres in the spring of 2007.

In 2006, in response to population data gathered in the fall of 2005, the MDA's Spongy Moth Suppression Program sprayed the trees on 25,456 acres statewide. In 2007, the Suppression Program sprayed the trees on 50,173 acres statewide.

Responding to the defoliation in 2007 and to population predictions from the 2007 fall egg mass survey program, MDA's Spongy Moth Suppression Program sprayed 99,222 acres in the spring of 2008. Statewide that year, the caterpillars defoliated the trees on 19,279 acres. In the ensuing years the population has continued to cycle up and down. The year 2009 brought a need to treat 32,543 acres, while in 2010 only 144 acres were treated, and no areas needed treatment in 2011. Acres treated rebounded to 2,303 in 2012, increased to 11,996 acres in 2013, and 5,164 acres in 2014. Spongy moth populations go through cycles, but are heavily influenced by seasonal weather conditions, and can fluctuate from a low to a high potentially damaging level in as little as two years.



Suburban yard in late June - trees were defoliated by spongy moth caterpillars.



Spongy moth egg mass

Spongy moth caterpillars do all the harm. They hatch in large numbers - an egg mass can contain more than 1000 eggs - and the caterpillars feed ravenously on leaves.

Additionally, because they are not native to North America, they have few natural enemies and feed and reproduce in relative safety. Where populations are high and no control measures are taken, trees can be heavily defoliated.

Trees that lose more than 60 percent of their leaves often refoliate depleting their energy reserves and leaving them under severe stress and vulnerable to attack by diseases and damaging insects. The combination of defoliation, refoliation, and disease or insect activity, complicated by other factors such as drought or soil compaction, may kill the tree in one to three years. To protect valuable forest and shade trees, the Maryland Department of Agriculture maintains a monitoring and control program to manage the pest. Each fall MDA personnel survey all qualifying areas for spongy moth egg masses to determine where populations of the pest might be growing. Natural enemies have been introduced statewide, but the most effective suppression results from spraying trees in infested areas with carefully selected insecticides to destroy the caterpillars early in their development.

In the more than 100 years since the spongy moth was introduced into North America, it has steadily spread in spite of man's best efforts to control it. No one agency can hope to eliminate it, but by combining efforts and employing a variety of controls, property owners, neighborhood organizations, businesses, and government agencies can hope to limit its effects.

Trees preferred by spongy moth

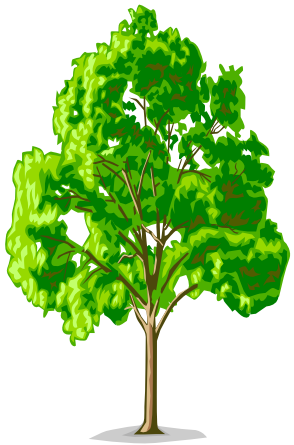
All oaks

Apple

American Beech

Birch

Sweetgum



Linden

Willow

Hawthorn

Trees not preferred by spongy moth

American

Catalpa

Red Spruce

Sycamore



Holly

Tulip Poplar

Locust

Note: there are many trees, such as maple, elm, cherry, hickory, blue spruce and white pine, as well as several shrubs and ornamental plants that are less desirable to spongy moth but are still attacked and often defoliated.

Maryland Department of Agriculture
Forest Pest Management Regional Offices

Northeast Office
3525 Conowingo Road, Suite 400
Street, Maryland 21154
410-879-8034
northeastfpm@gmail.com
Baltimore City, Baltimore, Cecil, Harford,
Kent counties

Eastern Shore Office
28577 Mary's Ct., Suite 4
Easton, MD 21601
heather.disque@maryland.gov
410-822-8234
Caroline, Dorchester, Queen Anne's, Talbot,
Wicomico, Worcester counties

Central Office
92 Thomas Johnson Dr., Suite 160
Frederick, Maryland 21702
301-662-2074
central.fpm@maryland.gov
Carroll, Frederick, Howard, Montgomery,
Eastern Washington counties

Southern Office
50 Harry S. Truman Parkway
Annapolis, MD 21401
Grace.nagel@maryland.gov
410-841-5931
Anne Arundel, Calvert, Charles,
Prince George's, St. Mary's counties

Western Office
3 Pershing Street, Room 110
Cumberland, Maryland 21502
301-777-3601
mdafpmwestern@gmail.com
Allegany, Garrett, Western Washington counties

MDA 14-006-08

SPONGY MOTH IN MARYLAND



Late instar spongy moth caterpillar.

Maryland Department of Agriculture
Forest Pest Management Section
50 Harry S. Truman Parkway
Annapolis, Maryland 21401
www.mda.maryland.gov