# *The Connecticut Agricultural Experiment Station*

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**PRESS RELEASE**

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## GYPSY MOTH 2015 OUTBREAK

**New Haven, CT** – The Connecticut Agricultural Experiment Station (CAES) announced today that there has been widespread gypsy moth, *Lymantria dispar*, activity and some tree defoliation this summer across areas of Connecticut. Reports of activity have been most notable in New Haven, Middlesex, and parts of Hartford and New London counties. In 2014, aerial surveys in late summer and early fall by CAES found relatively little gypsy moth defoliation; 1,337 acres, mostly in New Haven County. Unfortunately, with a very dry spring in 2015, there was no early control of the gypsy moth by the gypsy moth fungus *Entomophaga maimagia*. Moisture is required for the fungus to infect the gypsy moth larvae (caterpillars) and little or no precipitation was available for the fungus to provide control of young caterpillars. With current rains, however, we are now seeing caterpillar mortality from the fungus. "It is likely that this pathogen will knock back the gypsy moth population and help prevent a possible large outbreak in 2016" said State Entomologist Dr. Kirby Stafford. The impact of the fungus on any gypsy moths in 2016 will be dependent on weather conditions in May and early June of next year. Observed tree defoliation in southern New London County, however, is likely due to a different forest pest, the winter moth, *Operophtera brumata*, which also damaged trees in the southeastern part of the state in 2014.

The gypsy moth was first detected in Connecticut in Stonington in 1905. The high level gypsy moth activity this year shouldn't mark a return to multiple years of widespread gypsy moth defoliation and the tree mortality experienced in the early 1980s. In 1981, 1.5 million acres were defoliated in Connecticut. Christopher Martin, Director of Forestry at the Connecticut Department of Energy and Environmental Protection, noted that in general, "partial or even complete defoliation of a tree in any one

year does not mean the death of the tree. Healthy trees can tolerate some defoliation". During a large outbreak in 1989, scientists at CAES discovered the entomopathogenic fungus *Entomophaga maimagia* was killing the caterpillars. This fungus has been the major agent suppressing gypsy moth activity since then. However, the fungus is not expected to prevent all outbreaks and occasional high activity and outbreaks can continue to occur, particularly in years with little rainfall during the spring and early summer. The last outbreak of gypsy moth activity in Connecticut was in 2005 and 2006. In 2005, gypsy moth caterpillars caused 64,273 acres of defoliation, mainly in Middlesex County. A more widespread outbreak in 2006 caused 251,946 acres of defoliation, largely in Middlesex, New Haven, and New London counties. It was eventually brought under control by the fungus and the arrival of early summer rains; a pattern similar to this year. There was substantially less gypsy moth activity in 2007 with defoliation of only 3,203 acres.

There is only one generation of the gypsy moth each year. Caterpillars hatch from the buff-colored egg masses in late April or early May. An egg mass may contain 100 to more than 1000 eggs laid in several layers. A few days after hatching, the ¼ inch long caterpillars will ascend the tree and begin to feed on new leaves. These young caterpillars deposit silk trails as they crawl and, as they drop from branches on these threads, may be distributed on the wind. Larger caterpillars generally crawl up and down tree trunks and feed mainly at night. They seek cool, shaded protective sights during the day. However, under outbreak conditions with dense populations of caterpillars, they may feed continuously day and night and crawl at any time. The caterpillars generally complete their feeding sometime around the end of June and the first of July and seek a protected place to pupate and transform into an adult moth in about 10 to 14 days. Male moths are brown and can fly. The female moths are white and cannot fly. The female moth will lay a single egg mass and die. These eggs will pass through the winter and larvae will hatch the following late April or early May.

It is past time for management or treatment options to control the gypsy moth this year. This fall, one control measure would be to remove and destroy egg masses, if any, found on tree trunks, decks, vehicles, outdoor furniture and other locations around the property before the larvae hatch next spring. The difficulty is that many egg masses may be located in inaccessible areas (i.e., high in the trees). While there are a number of insecticides labeled for the control of gypsy moth on ornamental trees and shrubs, they need to be applied early in the season and thorough coverage of the treated trees by a licensed arborist is necessary for good control.

Questions can be addressed to Dr. Kirby Stafford at (203) 974-8485, Dr. Victoria Smith at (203) 974-8474 or to Dr. Gale Ridge in our insect information office at (203) 974-8600.

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Figure 1. Gypsy moth caterpillars on an oak tree in Bethany (Photo by Dr. Gale Ridge, CAES).

Figure 2. Close-up of gypsy moth caterpillars with many dying or dead from the fungus, *Entomophaga maimagia* (Photo by Dr. Gale Ridge, CAES).

Larger resolution images are available.

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