Subject: New England Grape Notes, May 5, 2017 Gypsy Moth Alert and meeting notice
From: Sonia Schloemann <umassfruit@umass.edu>
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New England Grape Notes – May 5, 2017

UMass Extension
CENTER FOR AGRICULTURE

Spring Grape Meeting at Newport Vineyards

Peggy Siligato, Univ. of Rhode Island

When: Tuesday May 9th 10:am - 1:30pm
Where: Newport Vineyards, 909 East Main Rd., Middletown, RI

Wine grape producers 2017 Update will include:

- Trunk Diseases - Dr. Elsa Petit, UMass
- Exotic Insects - Dr. Lisa Tewksbury, URI
- Risk Management Update, Paul Russell, UMass
- Worker Protection Update - Peggy Siligato, URI

2 Pesticide Recertification credits awarded

RSVP to siligato@uri.edu or by calling 401-640-0484

Gypsy Moth

Heather Faubert, Univ. of Rhode Island Extension

Gypsy moth egg masses started hatching on April 27th. Eggs were still hatching as of May 1st. I expect it takes at least a week for all eggs to hatch. Once eggs hatch, caterpillars may remain on the mass several days before dispersing. Gypsy moth caterpillars disperse by ballooning - sending out a silken thread and then carried by a breeze. It may take several days for caterpillars to find a suitable host. Small caterpillars will feed on oaks, aspen, apple, blueberry, speckled alder, basswood, gray and river birch, and willow. Less desired but still attacked are maple; black, yellow, and paper birch; cherry; cottonwood; elm; black gum; hickory; hornbeam; larch and sassafras. This list of plants is from the excellent new **RI DEM gypsy moth website**

Once caterpillars are over an inch long, they can feed on pines, spruce and hemlock.

FIGURE 1: hatching Gypsy moths

If you intend to spray for gypsy moths we recommend using a Bt insecticide such as DiPel or Thuricide applied

after eggs hatch and caterpillars disperse, but before caterpillars develop into large caterpillars. The best time frame for this application is probably the second through third week of May. The fourth week of May might also be fine as long as caterpillars haven't grown larger than 1 inch long by then.

Many people have asked about setting up tree wraps to capture gypsy moth caterpillars. This might help if tree wraps are set up on a sprayed tree after spraying. This might prevent large caterpillars from marching up your sprayed tree once caterpillars have defoliated whichever tree they were feeding on. Gypsy moth caterpillars do not tend to climb up and down trees each day when there is a large population of gypsy moths. When the population is large, most caterpillars stay up in the trees eating 24/7. (***Source:*** *URI Caterpillar Update, 5/3/17*)

Gypsy Moth Update

Tawny Simisky, UMass Extension

Gypsy Moth: *Lymantria dispar* overwintered egg masses laid by female moths in 2016 can be seen at this time **and egg hatch is just beginning in some locations of the state**. **Gypsy moth egg hatch was observed in Massachusetts on 4/26/17 at a location in Belchertown and on 4/27/17 at a location in Hingham. As of 4/26/17, scouts monitoring egg masses at locations in Acton, Boston, Boylston, Cape Cod, and Hanson report that hatch has not yet occurred in those areas. For more information about gypsy moth egg hatch, please visit:** https://ag.umass.edu/landscape/news/gypsy-moth-egg-hatch-has-begun-in-massachusetts. At this point in time, it is too early to treat individual, landscape ornamental and shade trees using the active ingredient Btk (*Bacillus thuringiensis* Kurstaki) for gypsy moth. These applications should be made when very young caterpillars (roughly ¼-¾ inch in length) are actively feeding on host plant leaves, as it must be ingested to be effective. Gypsy moth caterpillars are tiny and resting on top of their egg masses at this time, at locations where egg hatch has begun. Btk would not be effective on these very newly hatched caterpillars as they are not yet feeding.

Egg masses are "fuzzy" or hairy and brownish-tan in color. Each egg mass can hold up to 500-1000 eggs. Gypsy moth egg hatch typically occurs between 90-100 growing degree-days, using a base of 50°F, average temperatures, and a March 1st start date. This is usually around the first week in May in Massachusetts, but variations in temperature may lead to early egg hatch in the last week in April as has been observed this year in certain areas. This can also coincide with serviceberry (*Amelanchier*) bloom. *Amelanchier* bloom has begun or is in full activity in certain portions of the state.

These masses may be found on host plant trunks and branches such as oak (favored), maple, birch, poplar, and many others, but are also laid on inanimate objects including the surfaces of homes, outdoor furniture, camping equipment, firewood piles, etc. This may make the accidental movement of gypsy moth egg masses possible. (Note: winter moth and gypsy moth share some common host plants. Therefore, where populations of these two insects overlap in Massachusetts, the same tree may be defoliated by winter moth and then again by gypsy moth following in the same season.) After egg hatch occurs, groups of tiny gypsy moth caterpillars may remain on their egg mass (as seen in the photos included in the above link) just before crawling to the canopy of their host plant, where they can disperse using a technique known as "ballooning". Ballooning occurs when very young caterpillars spin a silken thread and catch the wind to blow onto a new host plant once the thread breaks. This method of dispersal can lead to host plants becoming defoliated that previously did not have egg masses directly on them, however egg masses may be present on nearby oaks, for example, and provide a local population of caterpillars.

Patchy areas across mostly central and eastern Massachusetts experienced elevated populations of gypsy moth

and significant amounts of defoliation in 2016 (see the Insects section of the archived 2016 Landscape Messages between April 29 and July 29). The Massachusetts Department of Conservation and Recreation aerially mapped approximately 350,000 acres of defoliation across Massachusetts last year, attributed to gypsy moth. State officials warn the public about another year of defoliation from gypsy moth as predicted for 2017: http://www.mass.gov/eea/agencies/dcr/pr-2017/another-year-of-defoliation-from-gypsy-moth-in-2017.html. That web page also links to a map of the 2016 defoliation from gypsy moth, which may provide a reference regarding areas that may be impacted by this insect again in 2017. To prepare for this insect, now is a great time to scout the landscape and count the number of gypsy moth egg masses present not only on valuable landscape specimens that are hosts for this insect, but on nearby forested hosts such as oak which might provide sources of ballooning caterpillars. At this time, check to see if a few of the egg masses have begun to hatch. Tiny, hairy caterpillars may be seen resting on top of the mass. Egg mass counts can help us make decisions regarding whether or not to manage for this insect. Some individuals also use this opportunity to scrape egg masses into a container of soapy water, although this is time consuming and some egg masses will be missed. Once eggs have completely hatched, scraping them into a container of soapy water is no longer effective (the caterpillars have left the eggs).

We can hope for elevated rainfall in the months of May and June, which helps facilitate the successful infection of younger gypsy moth caterpillars with the insect-killing fungus *Entomophaga maimaiga*. This fungus overwinters in the soil litter in tough, protected asexual resting spores, which can survive in this state for years. Having lacked much precipitation most recently during the springs of 2015 and 2016, it is thought that our current expanding populations of gypsy moth are at least in part a result of a lack of infection in the caterpillar population by this fungus. Hopefully Massachusetts will see more normal rainfall amounts this season. Only time will tell.

We can also hope areas in Massachusetts that do not have large numbers of gypsy moth egg masses present at this time and did not experience much gypsy moth defoliation last year (areas such as most of Berkshire County) will be *mostly* spared in 2017 in comparison to those areas who suffered last year in central and eastern Massachusetts. At this time, monitoring susceptible hosts for hatching gypsy moth egg masses and educating and reminding ourselves about this invasive insect that has a long history in the state is the best way to plan for management this season. For more information about gypsy moth, please visit: http://ag.umass.edu/landscape/fact-sheets/gypsy-moth and return to the Landscape Message for timely updates about this pest and others throughout the season. An excellent article written by Dr. Joseph Elkinton and Jeff Boettner of the University of Massachusetts about the 2016 outbreak and the history of this insect in Massachusetts may be found here: http://www.mass.gov/eea/agencies/dfg/dfw/publications/gypsy-moth-outbreak-of-2016.html . (***Source:*** *UMass Landscape Message, No. 6, April 28, 2017).*

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