

The University of Vermont

VERMONT AGRICULTURAL EXPERIMENT STATION
ENTOMOLOGY RESEARCH LABORATORY
655 SPEAR ST.
SOUTH BURLINGTON, VERMONT 05401



Protocol GYPSY MOTH SURVEY

Survey Areas: Use only sites historically known to be focal areas or indicator sites.

Plot Location: If you have a gradient - locate plots at both the top and the lower levels. Select the area to sample on the basis of gypsy moth host preference. They prefer such species as chestnut, white, and red oaks, gray birch and poplar. Shagbark hickory trees are not good for surveying. If you have a plot location that you have successfully used in past years then use it again.... There should be a minimum of 6 living trees with a dbh >7.5 cm within the 15 meter diameter plot. If you do not have the minimum number of trees within - relocate it so you meet this criterion. (Conversion: 7.5 cm = 2.95 inches)

Number of Plots to Survey: 3

Distance between Plots: A minimum of 50 meters.

Size of each Plot: Circular plots - 15 meters in diameter. (Conversion: 15 meters = 49.2 feet). Please remember - we are requiring a 15 meter diameter plot.

Plot Preparation: Number each living tree with a permanent metal tag. ID Number as follows: B (Barrows) - A (your code letter to location) - 1 (Plot 1) - 1 (Tree number 1). B-A-1-1.

Prior to the appearance of 4th instar larvae band each numbered tree with burlap. The burlap is 12 inches wide. Fold it in half and wrap it around the tree at dbh. (Fold is on the top side of the wrap.) Staple it near the fold where you have a lap (which should not exceed an inch) and also at the opposite side. To facilitate inspection beneath and between the folds of the burlap cut several slits from the bottom to an inch from the fold. These should produce flaps of 5 - 6 inches therefore, on most sample trees a single cut of the burlap is all you need.

Data Collection: Data sheets will be provided and mailed to you before counts are made. Three separate counts should be done at weekly intervals beginning at mid 4th instar of the insect. Do the counts at noon on the second day of two consecutively rainless days. Count all larvae beneath and between the bands and within 1 meter of the band on the bole of the tree. Record number of larvae by instar, and pupae, per tree. If anything unusual such as parasitism, predation or disease is seen be sure to record it.

Head capsule guides will be furnished to help you determine larval instars.

At the end of the season data sheets should be photocopied and one copy sent to the Entomology Research Laboratory, 655 Spear Street, South Burlington, VT 05401. We will take responsibility for compiling this information.

GYPSY MOTH - BURLAP BAND SURVEY

Objective: To detect changes in low level populations.

Time of Year: Bands in place by May 1.
Peak 5th instar counts in late June.

Equipment Needed: To establish plot:
Burlap
Stapler
Scissors
Tags
Measuring Tape (25' minimum)

To count larvae:
Head Capsule "Dealie"

Data Sheets Needed: Vermont Gypsy Moth Focal Area Survey
Larval Density Data

Procedure: See "Protocol; Gypsy Moth Survey"
We are currently doing 2 "focal area" plots and 2
"resistant area" plots per site
We are currently doing only one count at peak 5th instar