

FOREST PEST SURVEYS ON MOUNT MANSFIELD

Sandra H. Wilmot
Thomas Simmons
Patricia Hanson
Dept. of Forests, Parks and Recreation

Cooperators:

H. Brenton Teillon and Cecilia Polansky, VT Dept. of Forests, Parks and Recreation; Bruce L. Parker, UVM Entomology Laboratory; Jon Turmel, VT Dept. of Agriculture.

Abstract:

Forest pests are monitored annually on Mount Mansfield to establish baseline information on populations existing at the site, to monitor trends in both populations and damage over time, and in combination with other information on forest stressors, to assess the impact of these agents on forest health.

A variety of potential forest stress agents are monitored, at multiple elevations. These include: forest tent caterpillar, spring and fall hemlock looper, spruce budworm, gypsy moth, maple leaf cutter, pear thrips, and ozone. Damage from other forest pests is detected both through site visits and aerial surveys.

Methodologies for each survey are described in the VMC Annual Report for 1991 and the VMC Work Plan for 1992. Highlights of pest activity for 1992 are as follows:

Spruce budworm adults were detected at all elevations monitored (1400, 2200 and 3800 foot elevations), although the lower elevations had the higher pheromone trap catches (Table 1).

A healthy gypsy moth population is present at lower elevations in a localized stand of poplars surrounded by a predominantly sugar maple forest.

Adult pear thrips were in abundance on sticky traps (over 300 adults trapped) in comparison to the 1991 total trap catch of 7 adults. Soil populations of this forest pest showed an increase in the fall 1992 samples over previous years, which follows the general trend observed in other parts of northern Vermont.

Light damage was observed on sugar maples at lower elevations from pear thrips and maple leaf cutter feeding activity.

Forest tent caterpillar and spring hemlock loopers were not detected in our traps at the three elevations monitored in 1992.

Ozone injury was detected late in the growing season (September) on one of the three species monitored. On September 21, 27% of the milkweed plants monitored showed light to moderate ozone damage to leaves. No symptoms of ozone damage were observed on black cherry or blackberry plants monitored.

Table 1. Survey results on six forest pests monitored on Mount Mansfield in 1992.

TARGET PEST	SURVEY TYPE	LOCATION	TOTAL NO. COLLECTED
Forest Tent Caterpillar	Pheromone traps	BR 1400'	0
		BR 2200'	0
		BR 3800'	0
Spring Hemlock Looper	Pheromone traps	BR 1400'	0
		BR 2200'	0
		BR 3800'	-
Fall Hemlock Looper	Pheromone traps	BR 1400'	325 total
		BR 2200'	521 total
		BR 3800'	-
Spruce Budworm	Pheromone traps	BR 1400'	87 total
		BR 2200'	10 total
		BR 3800'	7 total
Gypsy Moth	Burlap banded trees	BR 1400'	4 egg masses
Pear Thrips	Sticky traps	BR 1400'	313 total
Pear Thrips	Soil samples (1991)	BR 1400'	0.8 average per sample
Pear Thrips	Soil samples (1992)	BR 1400'	8.1 average per sample