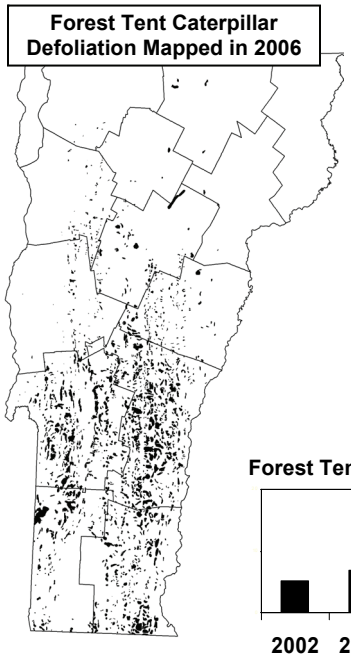
Update on Forest Tent Caterpillar Aerial Spraying and Other Sugar Maple Health Issues

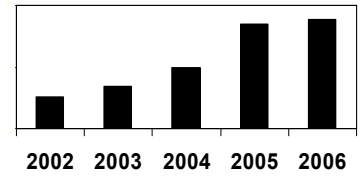
Reported by the State of Vermont Department of Forests, Parks, and Recreation, December, 2006

Vermont sugarbush owners who may be interested in the Forest Tent Caterpillar Aerial Spray Program and/or an Egg Mass Survey should contact the Department of Forests, Parks & Recreation promptly. The deadline to sign up is February 15, 2007.



Forest Tent Caterpillar populations increased in 2006, with 343,000 acres of defoliation mapped by aerial survey. The damage generally increased from 2005 in southern Vermont and in the central Green Mountains, and decreased in the Champlain Valley.

Large numbers of caterpillars died from disease. Many others died in cocoons thanks to parasites, such as the native "friendly flies" that were so common in early summer. Still, the outbreak may continue in 2007. Forest tent caterpillar moth counts are about the same as they were in 2005.

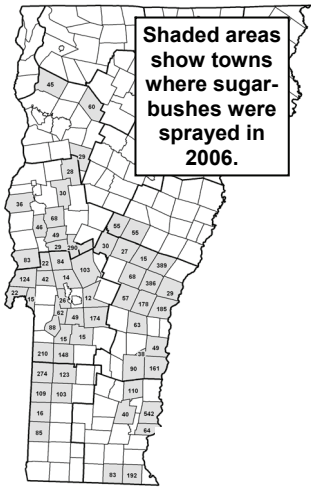


In winter 2005-06, 209 sugarbushes were surveyed for forest tent caterpillar egg masses. Defoliation was predicted in two-thirds of them.

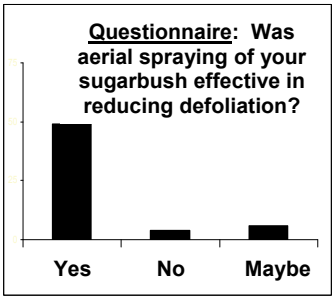
Saddled Prominent populations increased noticeably in the northern Vermont region which has not been affected by forest tent caterpillar. Defoliation was mapped on 1,340 acres in Essex, Orleans, and Caledonia Counties.

Saddled prominent caused a lot of sugar maple dieback in the early 1980s. It does most of its feeding in July. Sampling in the spring can help predict whether or not the insect may be a problem.

For more information:
www.na.fs.fed.us/spfo/pubs/fidls/saddled/fidl-sp.htm



A total of 5,488 acres, in 168 blocks, were aerially sprayed in late May with the biological insecticide, *B.t.* With 25% of the cost covered by the state and the US Forest Service, landowners paid $18.75 per acre. Because of rain delays, some defoliation had occurred prior to spraying, especially where egg mass numbers were very high. Nonetheless, caterpillars died in all the sprayed areas, and 83% of participants who responded to a questionnaire thought that spraying had reduced defoliation.



To get a preview of 2007 populations, the Department of Forests, Parks & Recreation will be conducting forest tent caterpillar egg mass surveys through mid-winter. If these surveys predict defoliation, we plan to coordinate another aerial spray program for sugarbush landowners who wish to participate. Landowners who prefer to make their own aerial spray arrangements need to obtain a site-specific permit from the Vermont Agency of Agriculture.

Although healthy maples can withstand several years of defoliation, some are declining in sugarbushes which have been defoliated two or three times. Dead trees are showing up in recently thinned sugarbushes, or on ridges, dry slopes or wet areas. Some unthinned trees on good sites have also died. Fortunately, the outbreak has coincided with ample rain…so far.

Management Strategies for Keeping Sugarbushes as Healthy as Possible during the Caterpillar Outbreaks

In selecting a sugarbush management strategy, consider both current tree condition and your ability to tolerate unpredictable future stresses (like drought) which could set decline in motion.

1. Evaluate factors which indicate the risk of tree decline when deciding how critical it is to adjust management practices. Some are listed on the right.

Higher Risk of Tree Decline

Acid soil
Ridgetop, rocky ledge, or wet area
Thinned within the past 4 years
Some defoliated trees have died
Defoliated branches didn't refoliate
Defoliated more than once
Trees have small or yellow leaves

Lower Risk of Tree Decline

Plenty of soil calcium
All tapholes close in 2 years
No increase in dead twigs
Full refoliation after defoliation
Low egg mass counts

2. Assess the likelihood of defoliation by looking for forest tent caterpillar egg masses or signs of saddled prominent. Request a survey or find out how to do it yourself.

3. If you decide the sugarbush can be tapped, minimize wounds by switching to 5/16" spouts while sticking to conservative tapping rates.

4. Be flexible when scheduling timber harvests. If trees have been defoliated, delay thinning 1-3 years to minimize stress and to see which trees remain healthiest.

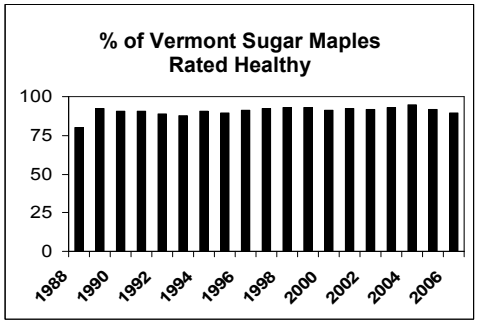
5. Consider aerial spraying in 2007. If you may be interested in participating in the state program, follow-up with the Vermont Department of Forests, Parks, and Recreation as soon as possible. The deadline to sign up is February 15th.

- The spray block must be actively tapped, at least 10 acres and more-or-less rectangular.
- The *B.t.* product, Foray, is a biological insecticide, but not certified organic at this time.
- The cost to landowners will be unknown until details are finalized. The expected range is $15-30/acre. We do not anticipate any cost share.
- Spray blocks need to conform to federal and state public safety and environmental requirements.
- Some defoliation will occur before spraying. Heavier defoliation will occur if spraying is delayed by weather or operational constraints.
- Some trees in the block may be missed by the spray plane.

Other Maple Health News…

Weather Conditions continued to be good for sugar maple in 2006: a mild winter, no late frosts, plenty of rain, and a warm fall. The rain had an upside…it helped trees recover from defoliation.

We continue to rate the **General Condition** of sugar maple by an annual evaluation of 2000 trees. Defoliation by the forest tent caterpillar has adversely affected tree health in some regions. For the first time in a decade, less than 90% of sugar maple trees were healthy on our survey plots.



The foliage of many sugar maple trees turned brown in September because they had been infected with the fungus disease, **Anthracnose**. Leaves were infected during earlier wet weather. Damage was worse on lower branches, near wetlands and low-lying areas. The impact on tree health shouldn't be serious, since the damage occurred so late in the season.

Most **Lecanium Scale** populations crashed. Scattered sugarbushes still had a lot of these insects in 2006, with their honeydew and associated sooty mold. Sugar maple tree recovery seems good in areas with a lot of scale in 2005.

To Contact the Vermont Department of Forests, Parks, and Recreation:

For more information, to request an insect survey, or to sign up for the forest tent caterpillar aerial spray program, get in touch with the Forestry Division's resource protection staff in your area.

Additional information and survey updates will be presented at January's maple schools and on our website, www.vtfpr.org/protection/idfrontpage.cfm.

Windsor & Windham Counties……	Springfield 802-885-8855
Bennington & Rutland Counties……	Rutland 802-786-3851
Addison, Chittenden & Grand Isle Counties..	Essex Junction 802-879-6565
Orange & Washington Counties……	Barre 802-476-0170
Lamoille & Washington Counties……	Morrisville 802-888-5733
Caledonia, Orleans & Essex Counties……..	St. Johnsbury 802-751-0110