

2007 Forest Insect and Disease Conditions in Vermont





Man in red and black plaid shirt, sunglasses, and a yellow t-shirt.

Woman in a light blue zip-up hoodie.

Woman in a green patterned sweater over a pink collared shirt.

Woman in a green button-down shirt over a green t-shirt.

Man in a dark blue zip-up jacket and a grey baseball cap.

Man in a green long-sleeved shirt and glasses.

Woman in a purple long-sleeved shirt and sunglasses.

Man in a dark green zip-up jacket, sunglasses, and a green baseball cap.

Man kneeling in a teal jacket, glasses, and blue jeans.

Woman kneeling in a dark blue sweater over a white collared shirt and light blue jeans.

Woman kneeling in a brown patterned sweater, glasses, and blue jeans.

Woman kneeling in a white sweatshirt with a small floral design and blue pants.

Woman kneeling in a grey jacket over a purple t-shirt and blue jeans.

Woman kneeling in a denim jacket with maroon sleeves and blue jeans.

Man kneeling in a blue button-down shirt and blue jeans.

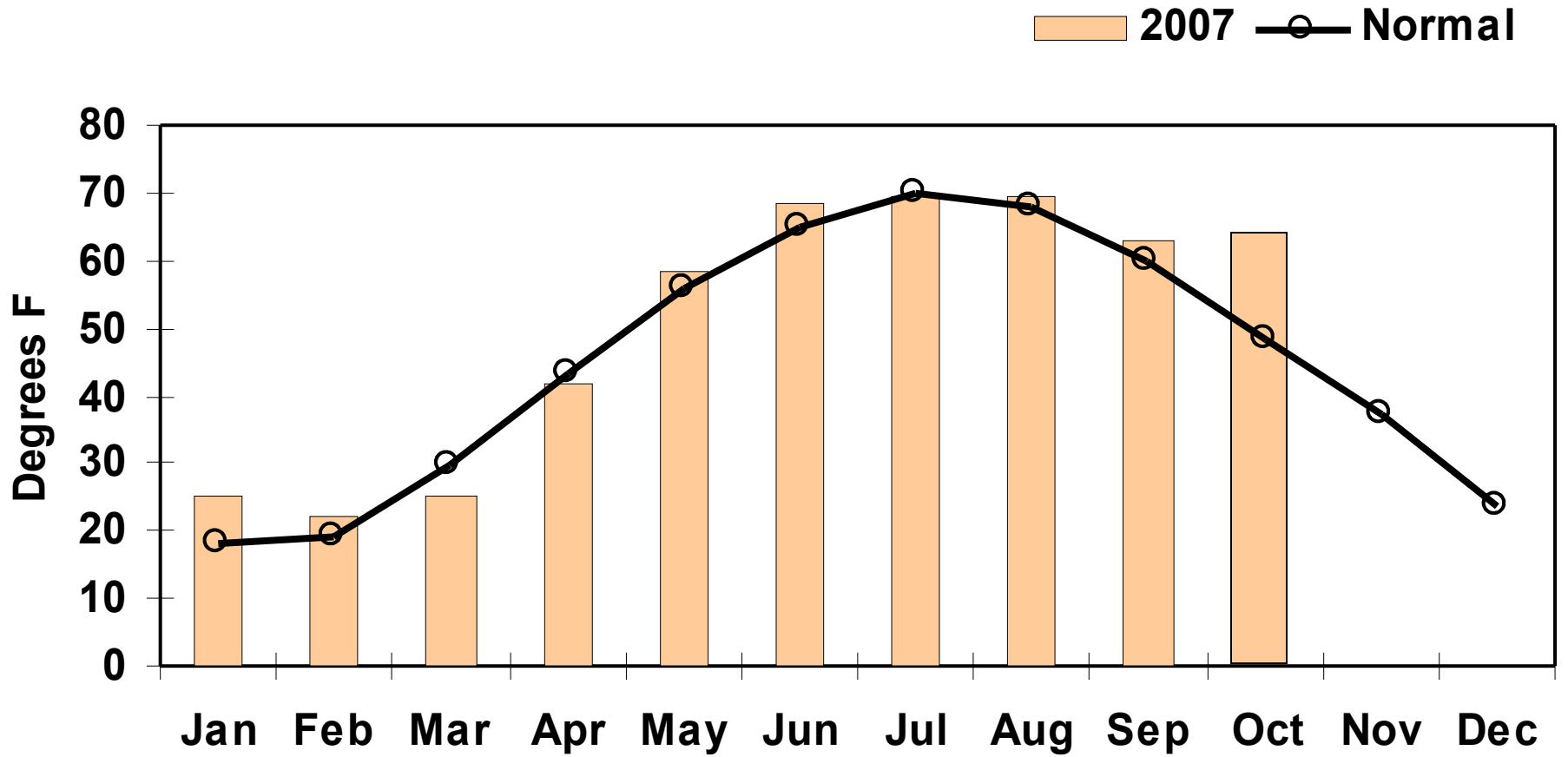






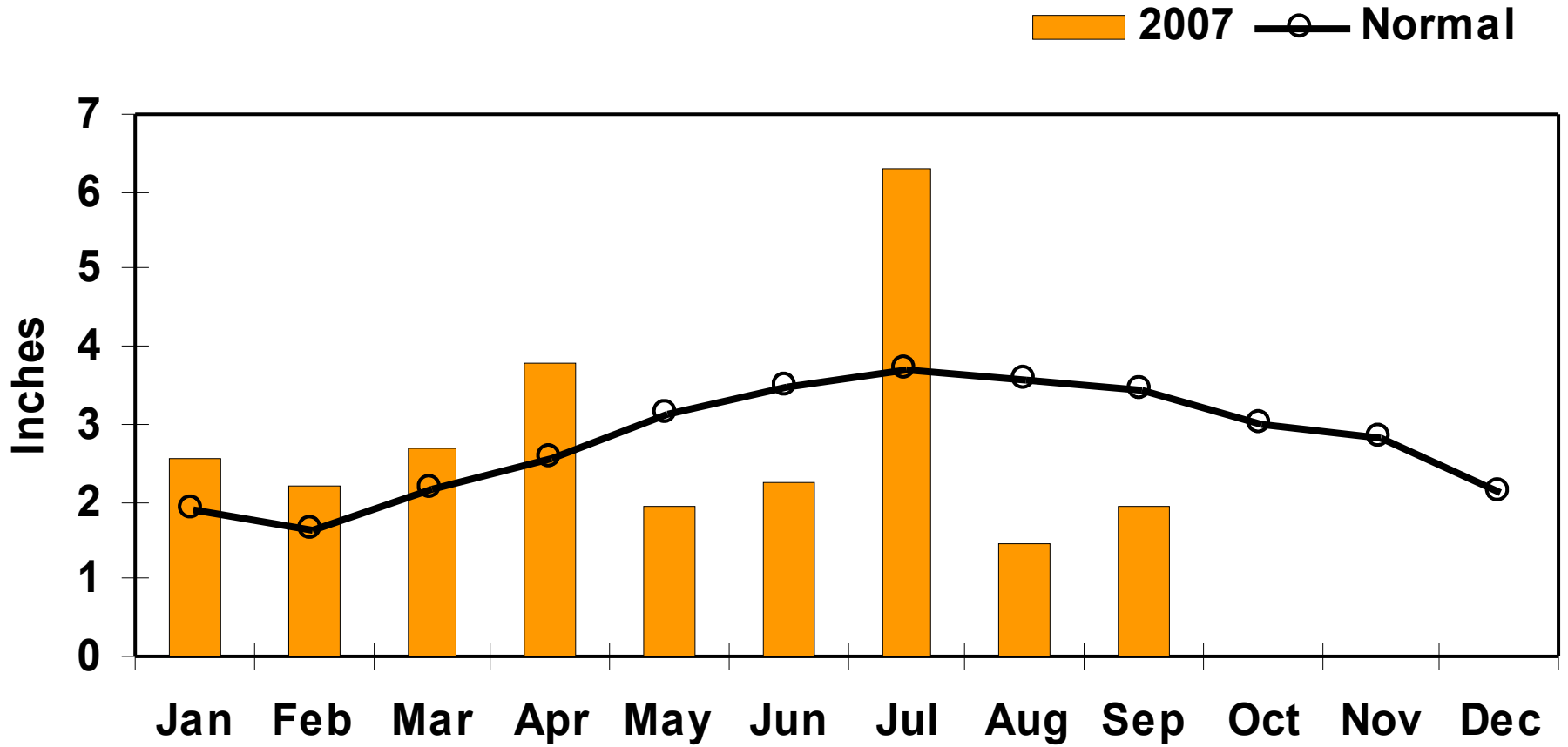
Photo: R. Kelley

2007 Temperature



Data from National Weather Service, Burlington

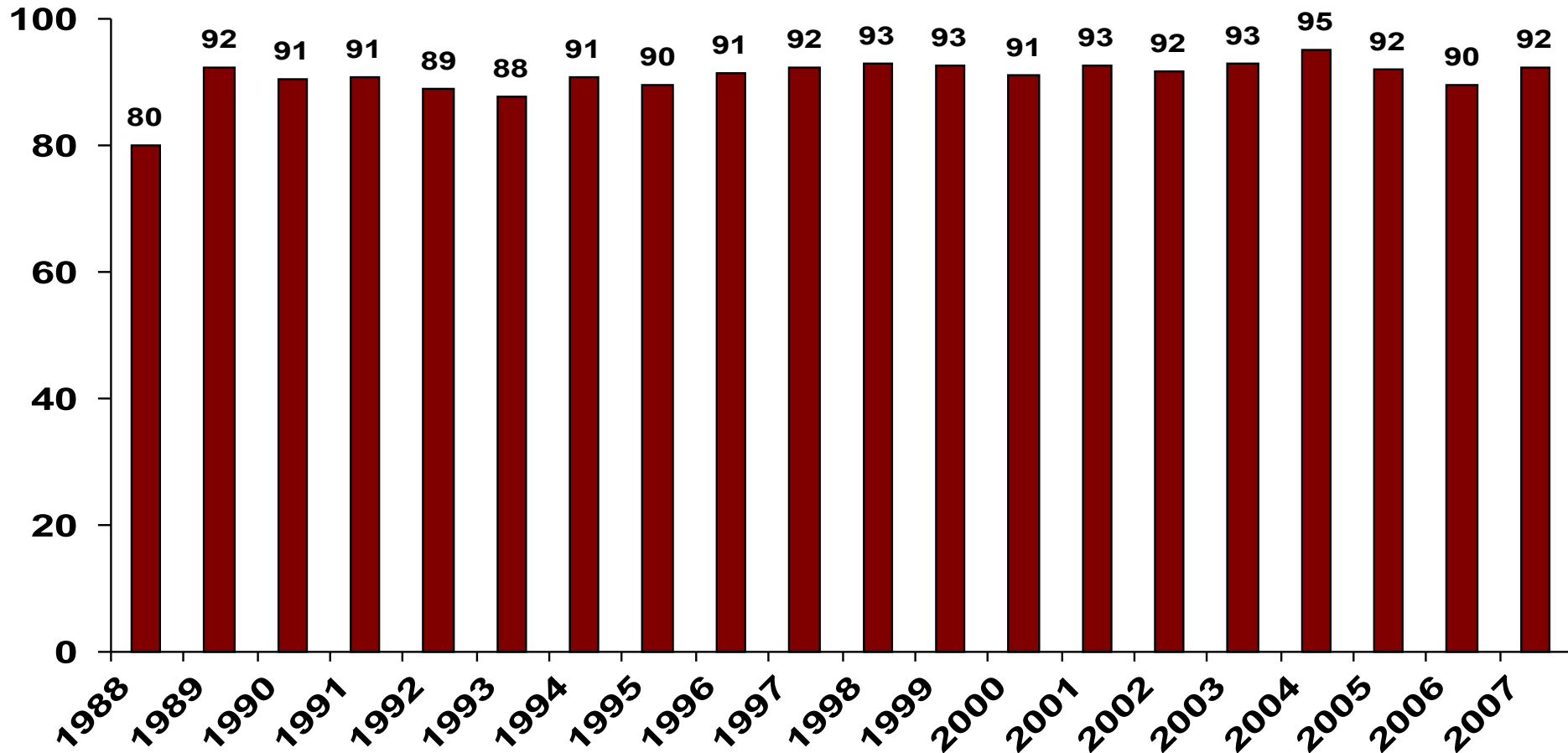
2007 Precipitation



Data from National Weather Service, Burlington

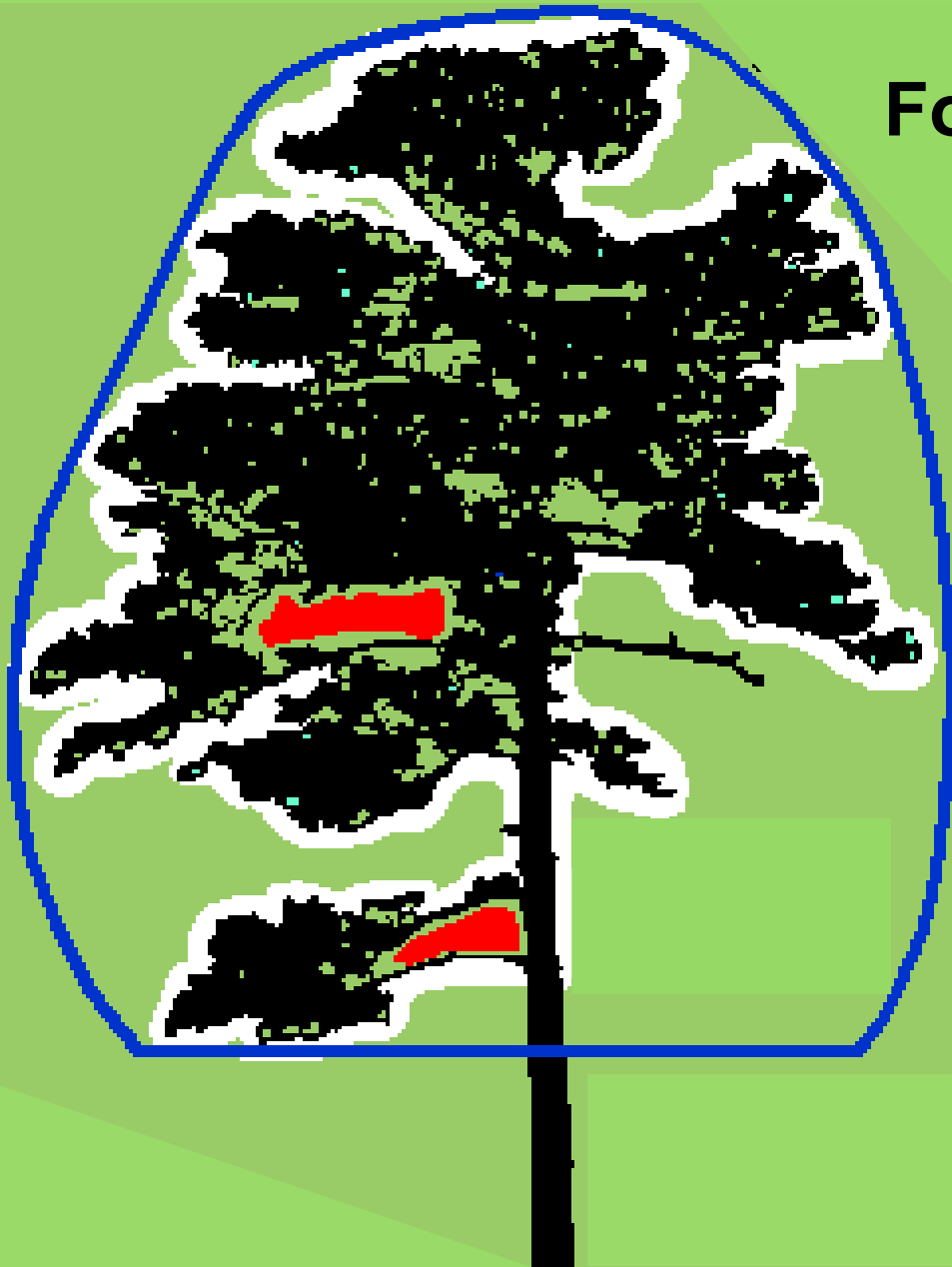
Sugar Maple Health on North American Maple Project Plots

Percent of Overstory Trees with $\leq 15\%$ Dieback



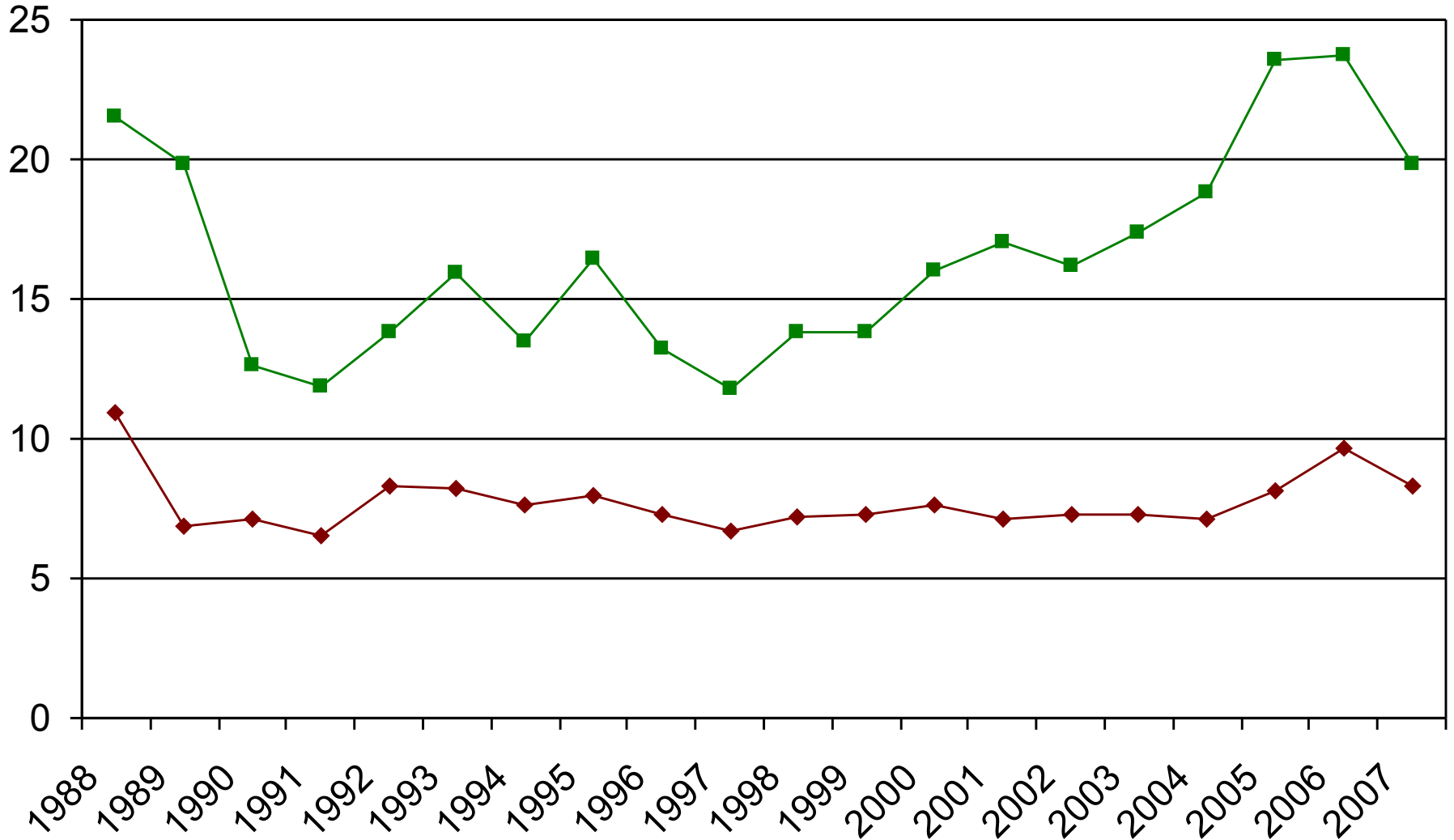


Foliage Transparency



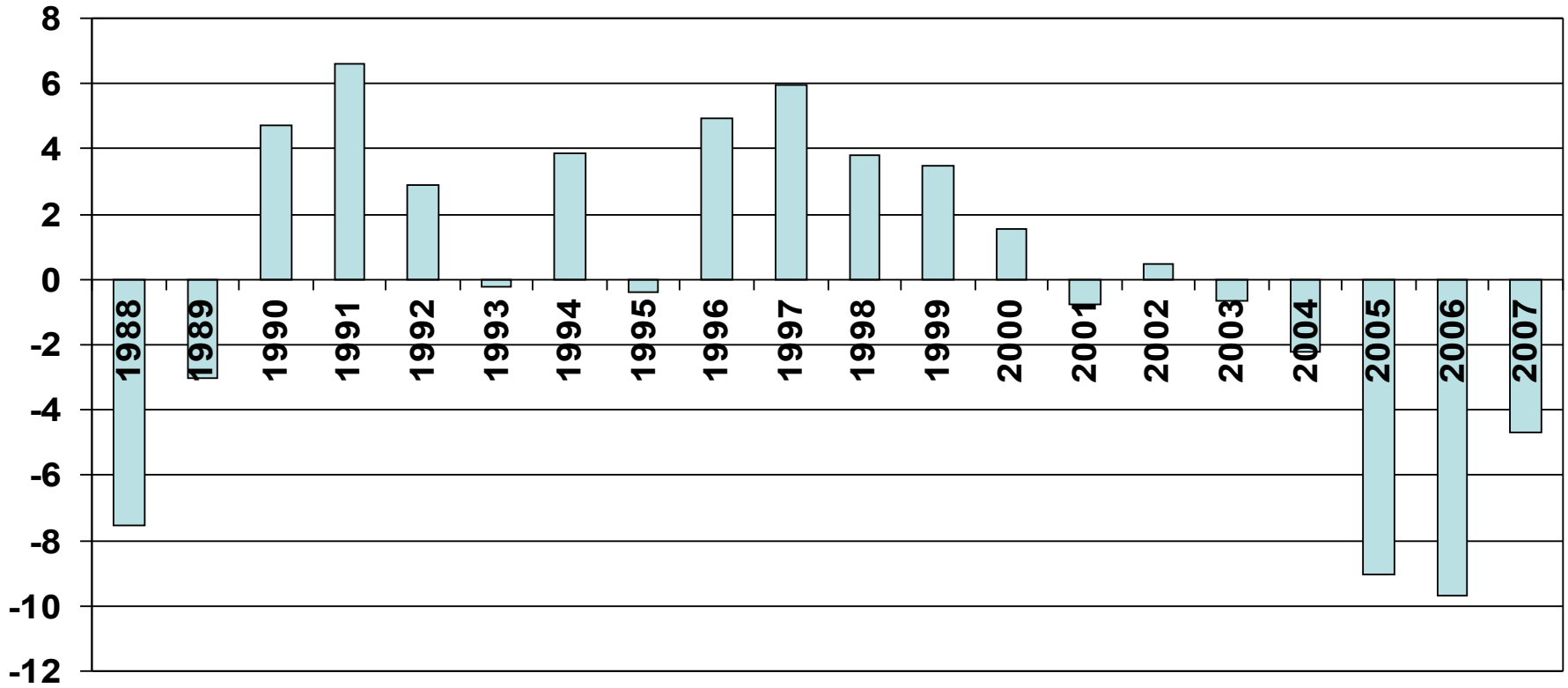
Sugar Maple Health Indicators

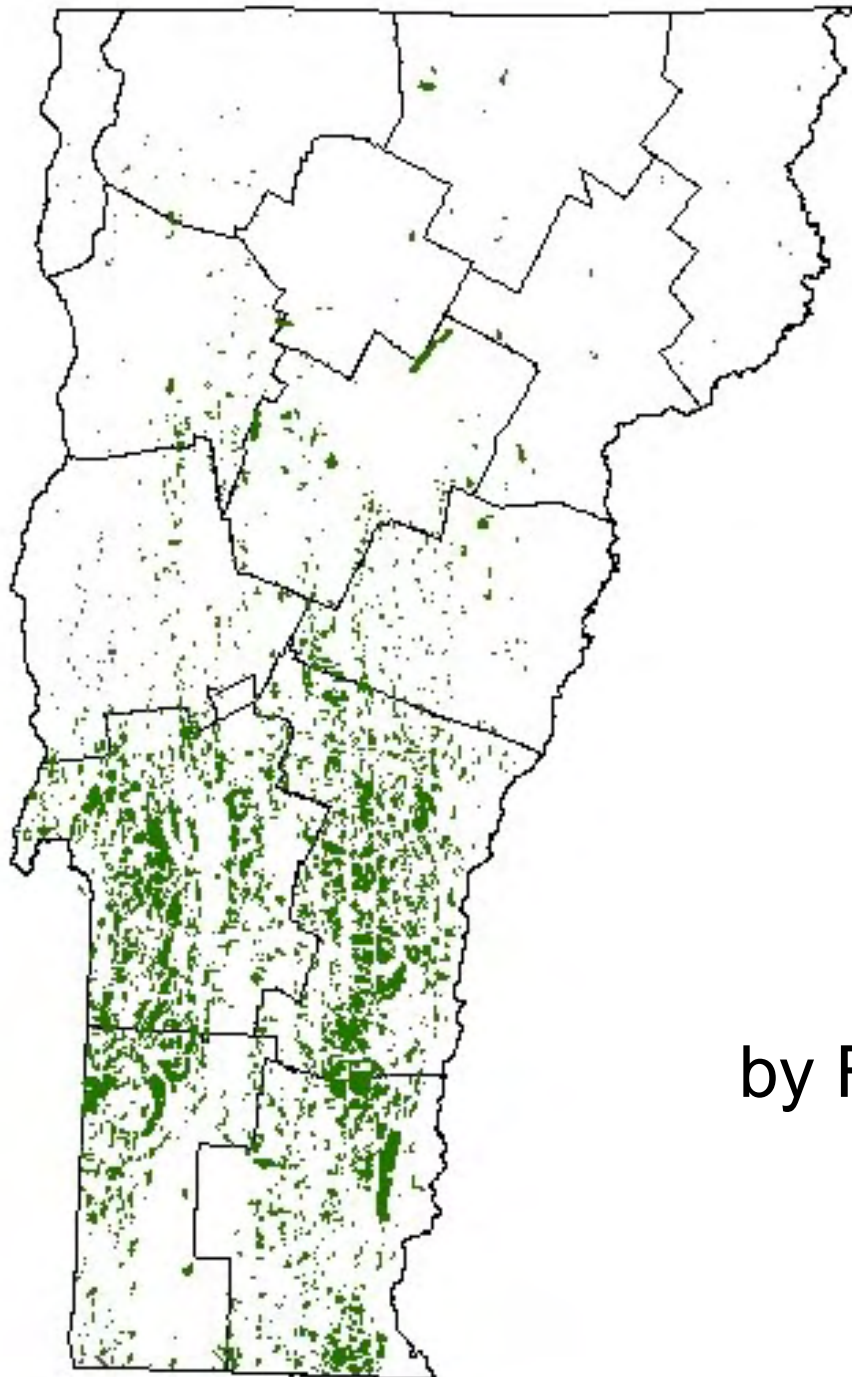
—◆— Dieback —■— Transparency



Crown Condition Index

Annual Departure from Average

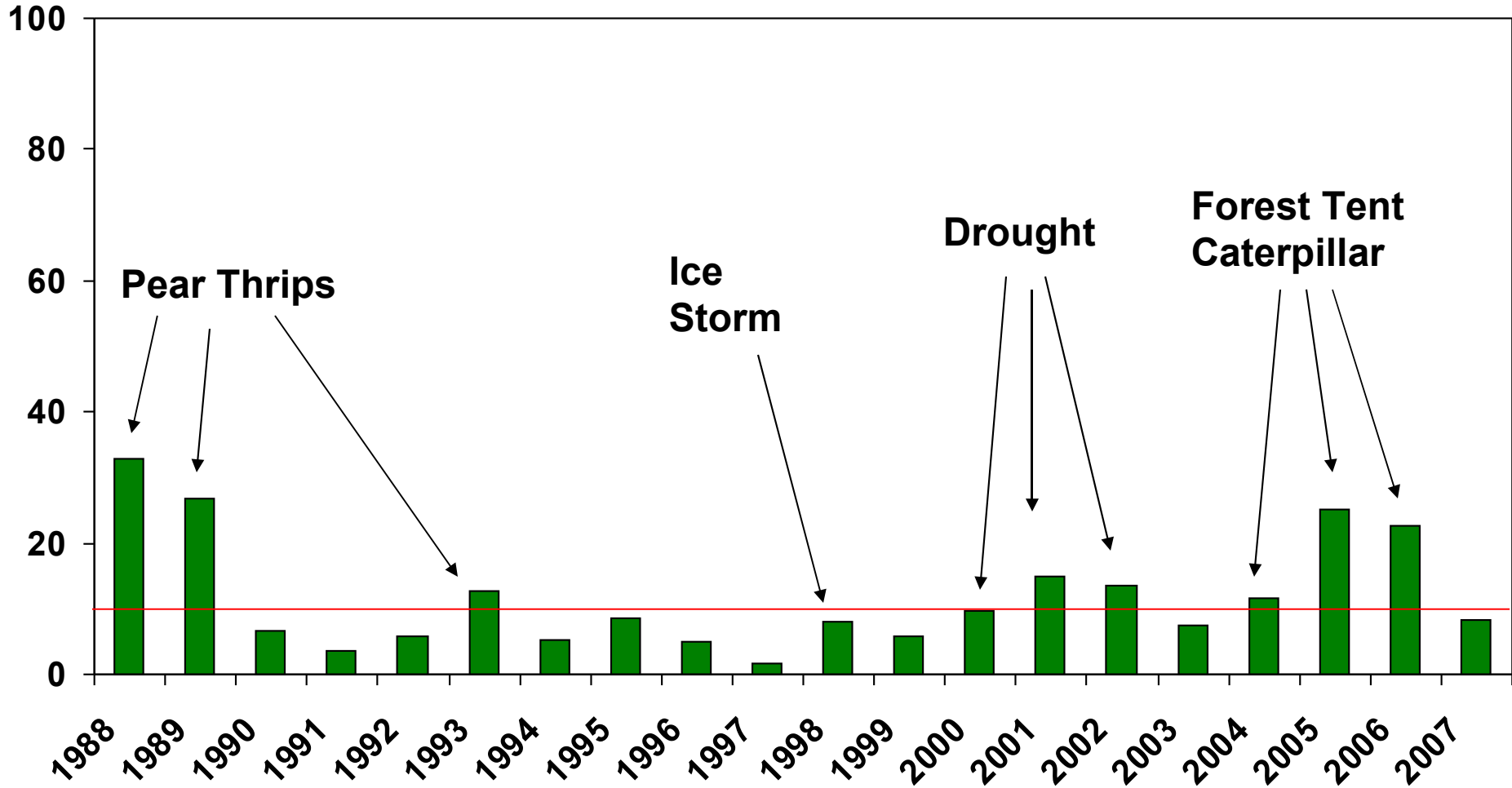




2006 Defoliation
by Forest Tent Caterpillar

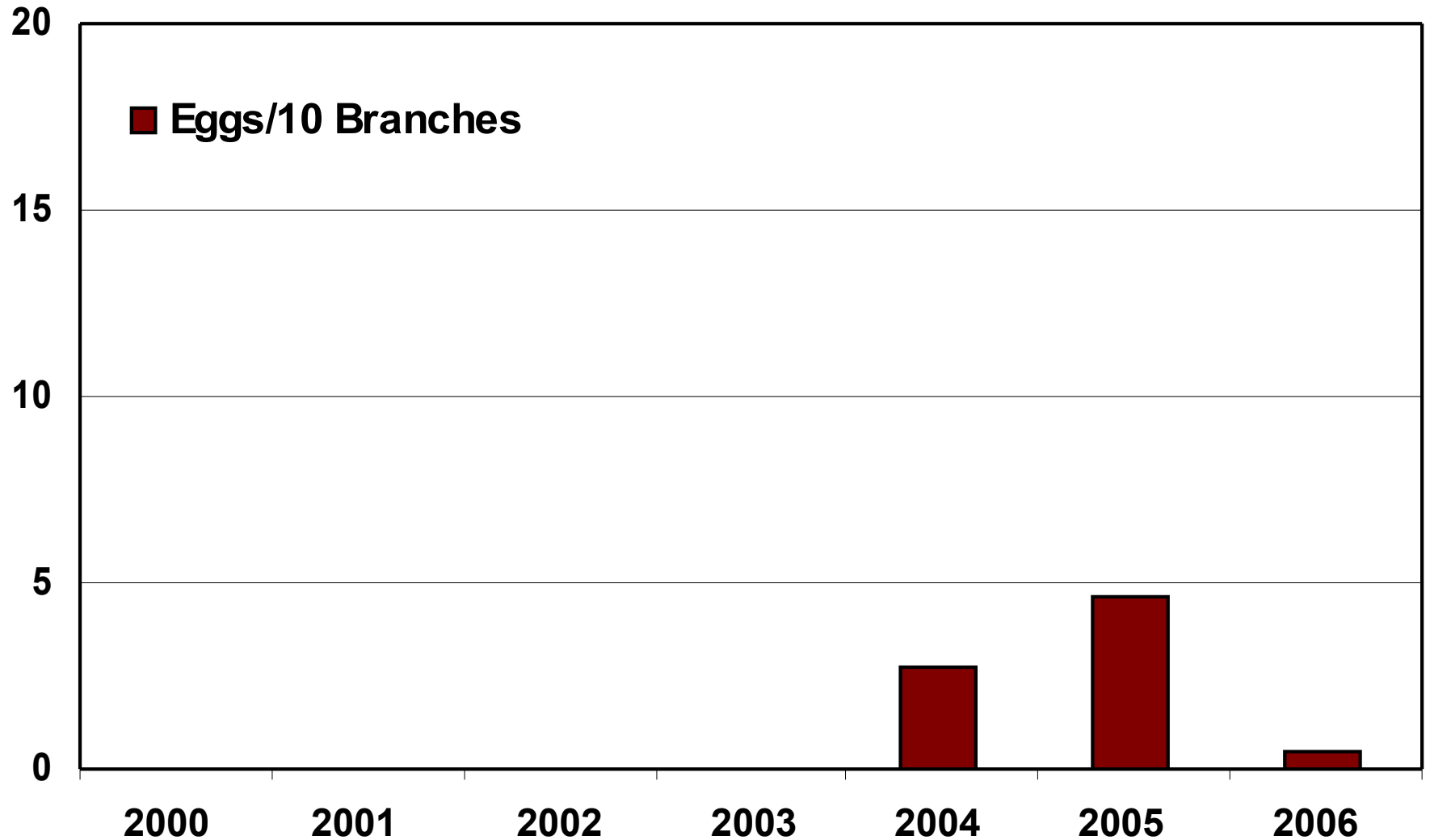
Sugar Maples with Thin Foliage

Percent of trees with transparency >25%



Graph: S. Wilmot

Forest Tent Caterpillar Counts











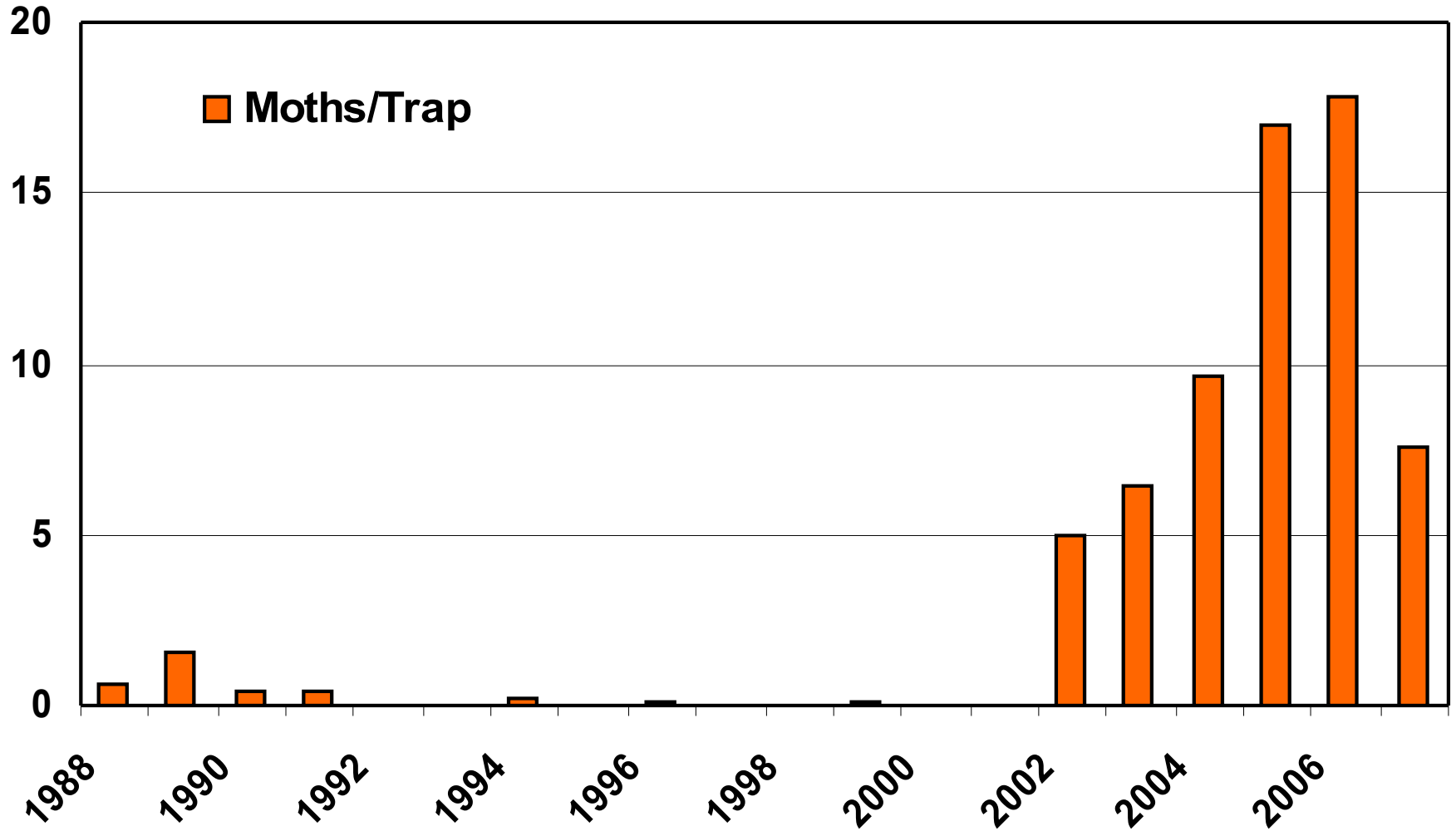


Forest Tent Caterpillar Pheromone Trap



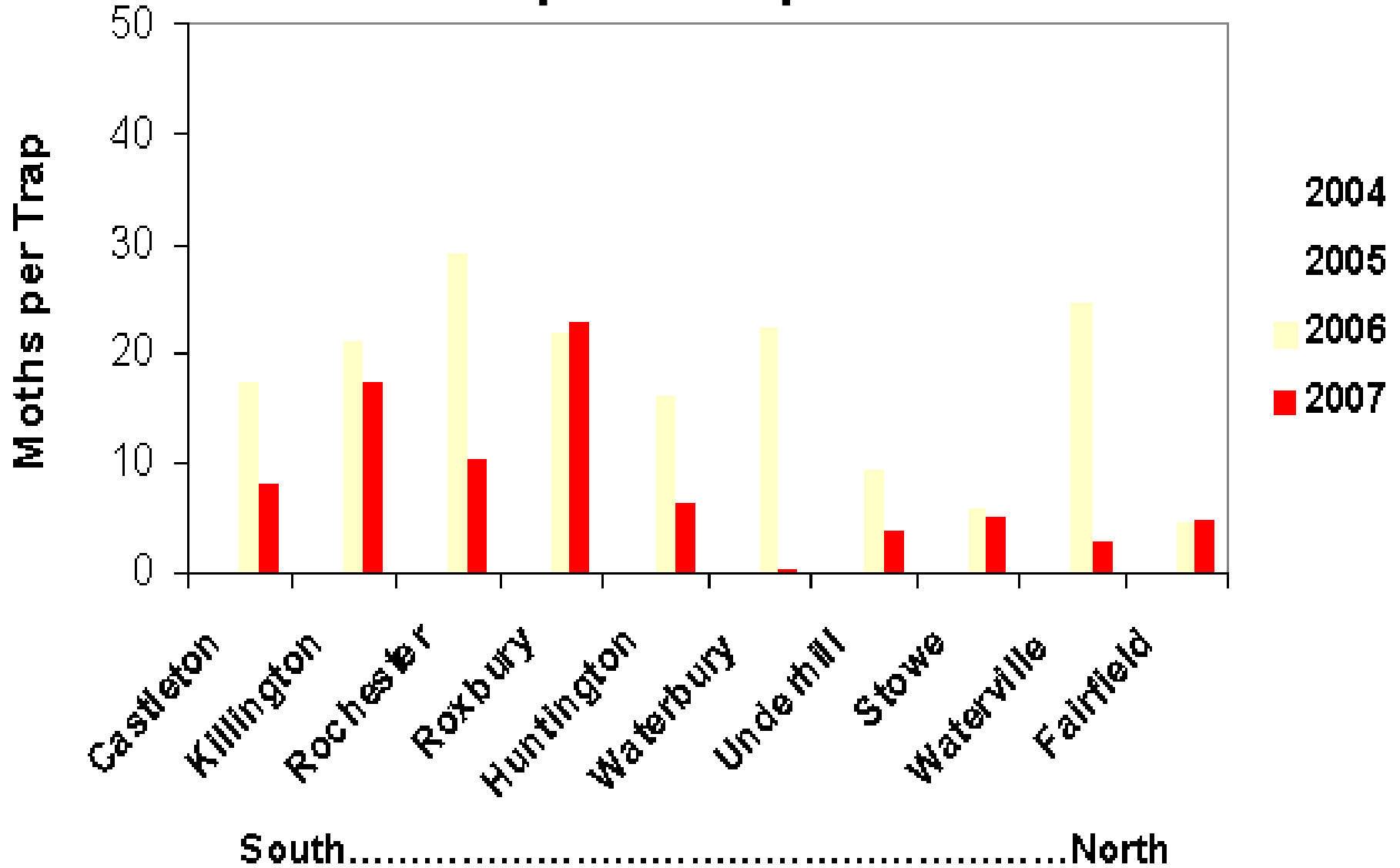
Photos: R. Kelley

Forest Tent Caterpillar Counts



Data: T. Hanson

Forest Tent Caterpillar Trap Catch: 2004-2007

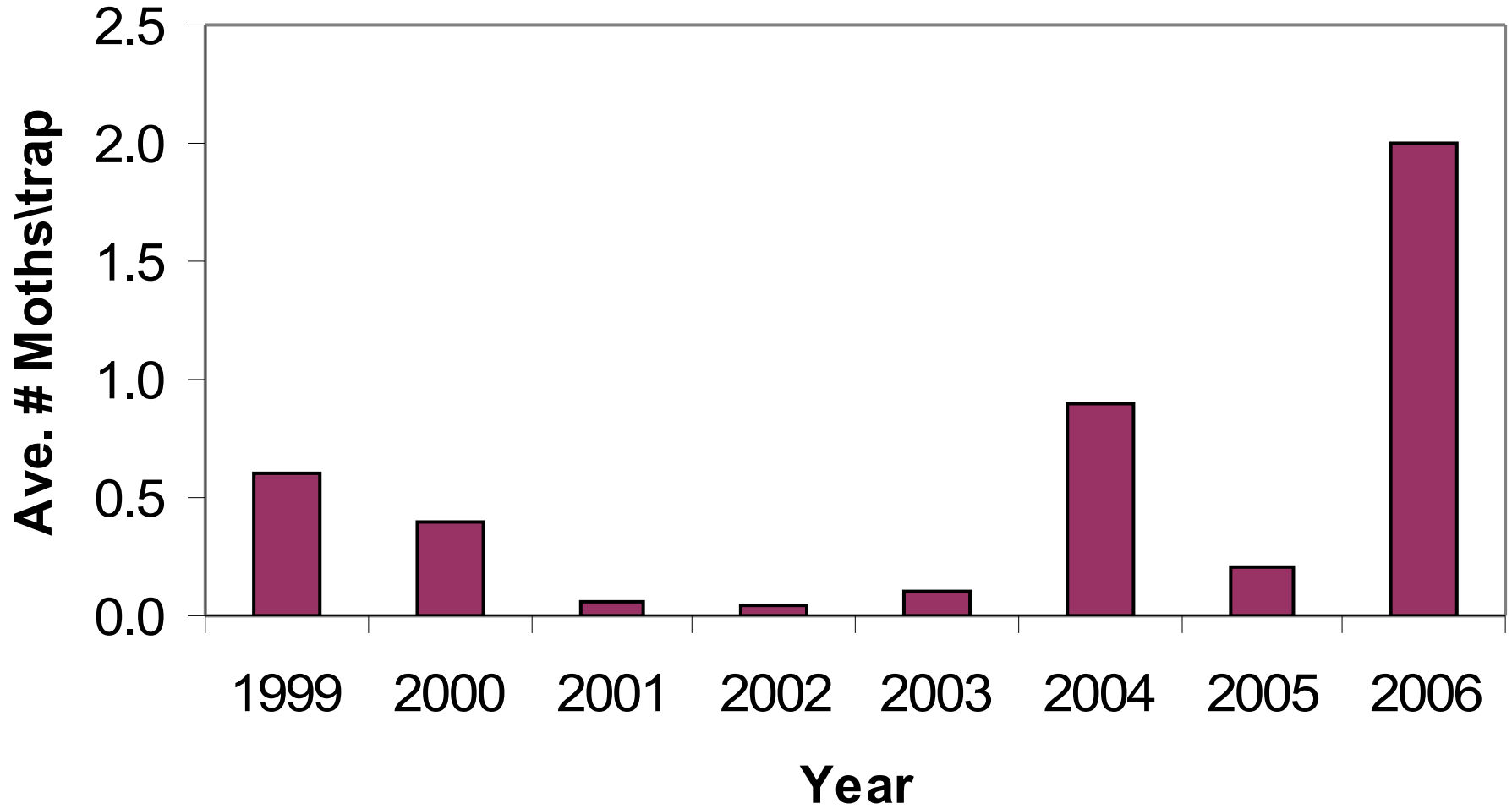


Saddled Prominent



Photo: R. Kelley

Saddled Prominent Pheromone Traps

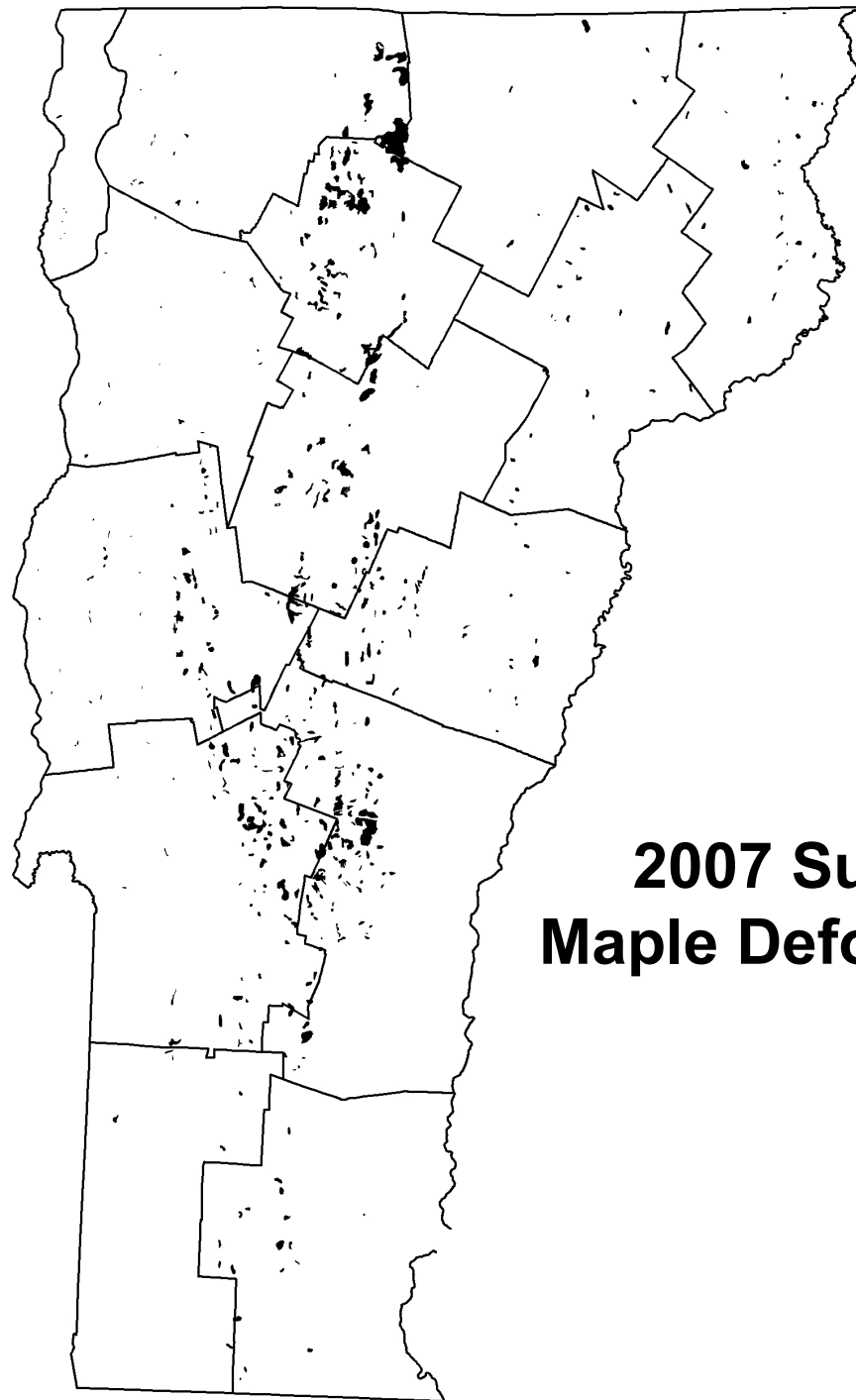


Data: T. Hanson









**2007 Sugar
Maple Defoliation**



Photo: R. Kelley

Maple Trumpet Skeletonzier



Photo: R. Kelley

Maple Trumpet Skeletonzier



Photo: R. Kelley



Pear Thrips



Photo: R. Kelley



Photo: University of Southern Maine Arboretum



Maple Anthracnose



Ash Anthracnose

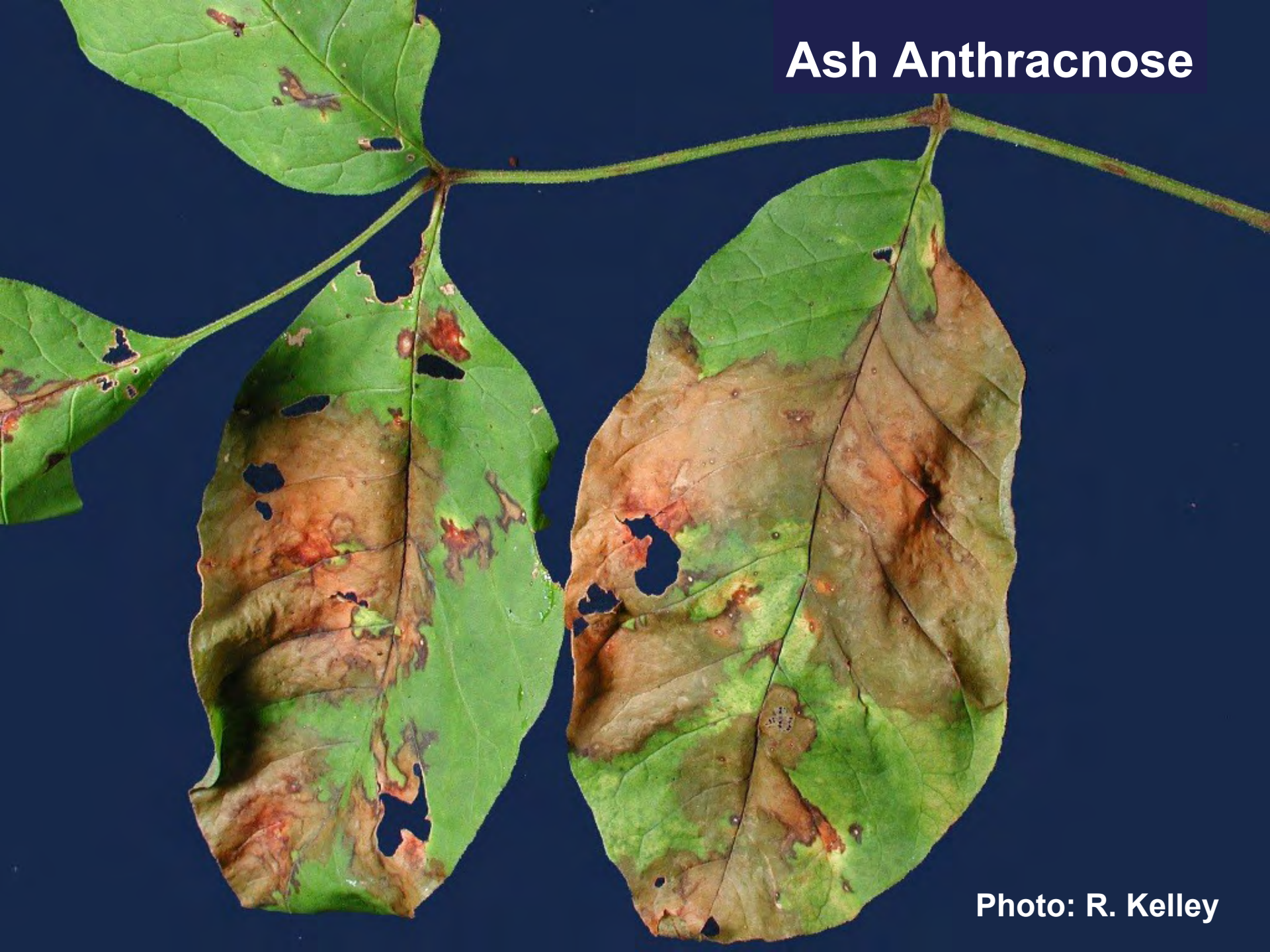
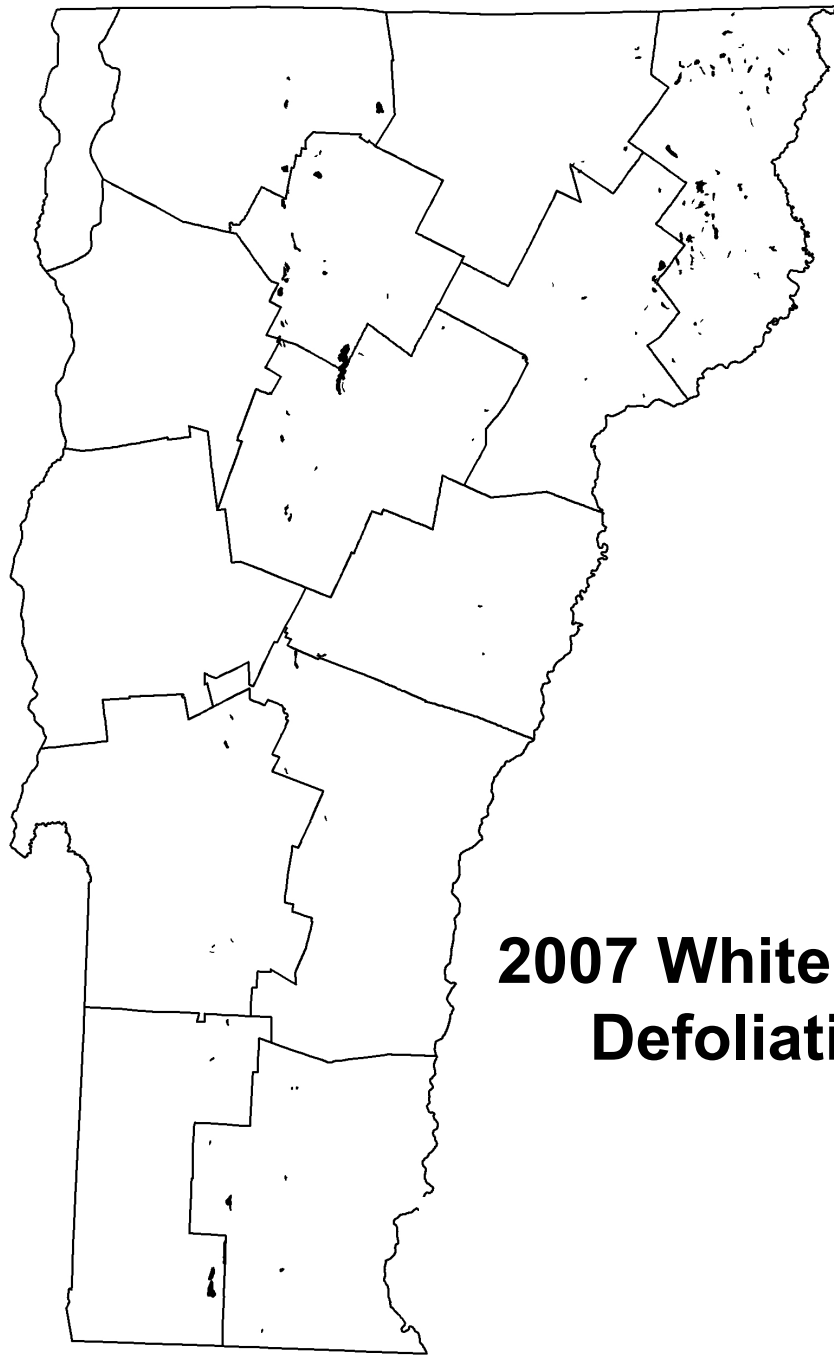


Photo: R. Kelley

Septoria Leaf Blight

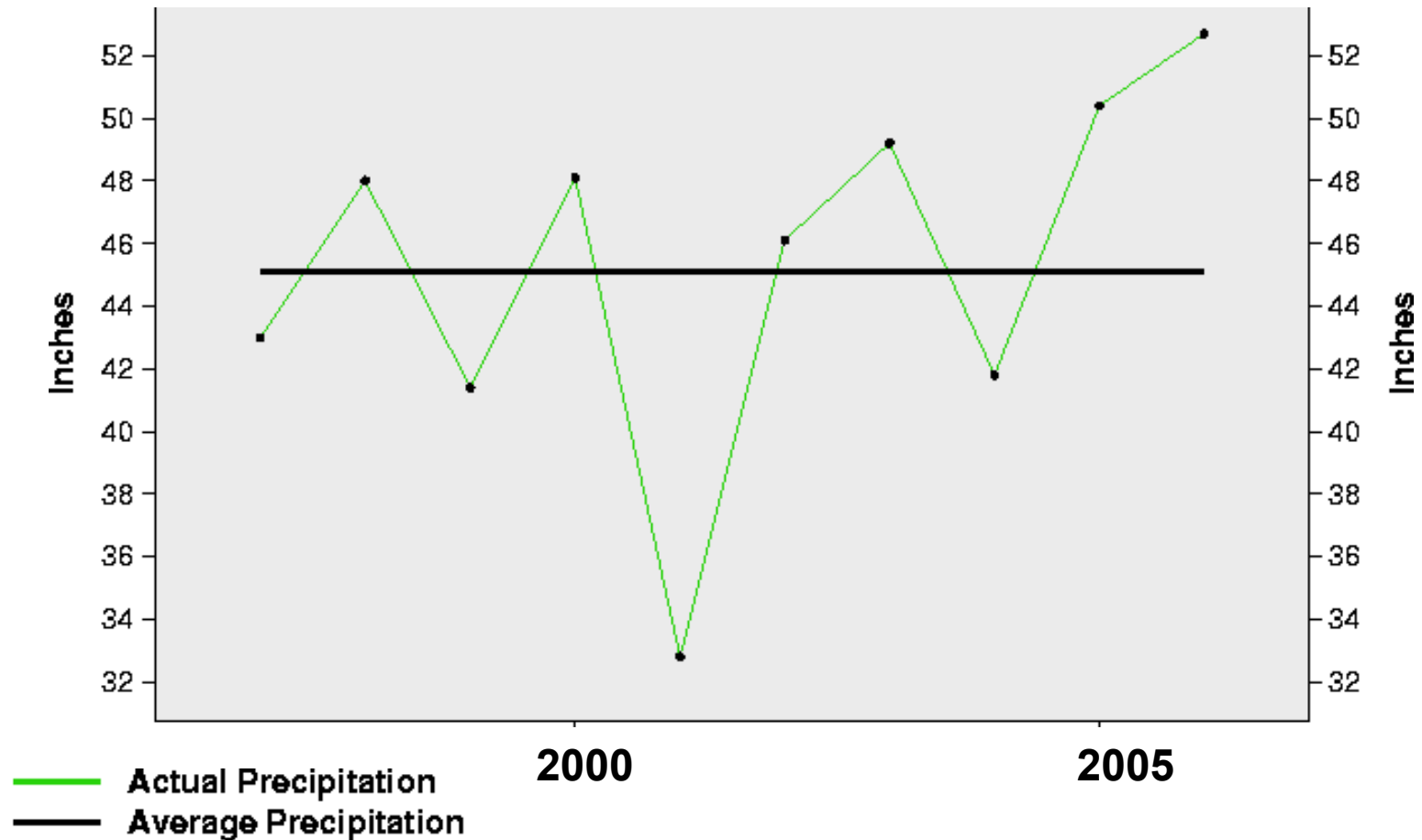


Photo: R. Kelley



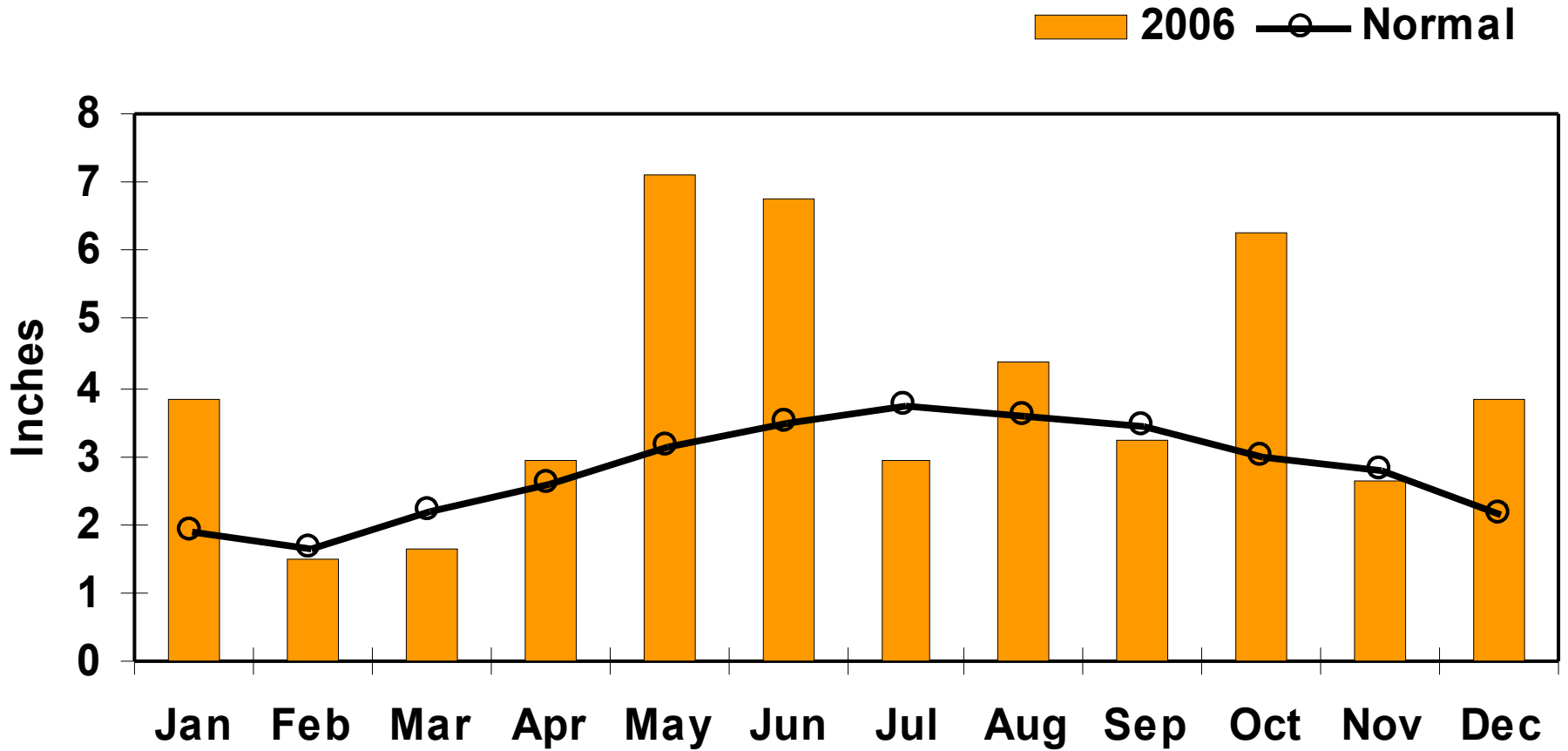
**2007 White Birch
Defoliation**

Average Annual Precipitation in Vermont Compared to Normal



From National Climate Center

2006 Precipitation



Data from National Weather Service, Burlington

Oak Anthracnose

A photograph of oak leaves showing signs of anthracnose. The leaves are green but have irregular, brown, necrotic spots and lesions, particularly along the edges and veins. The branches are dark and woody, and the background is a soft-focus green landscape under an overcast sky.

Photo: P. Renouf

Rhizosphaera Needlecast





Photo: R. Kelley

Brown Spot Needle Blight



Photo: K. Decker

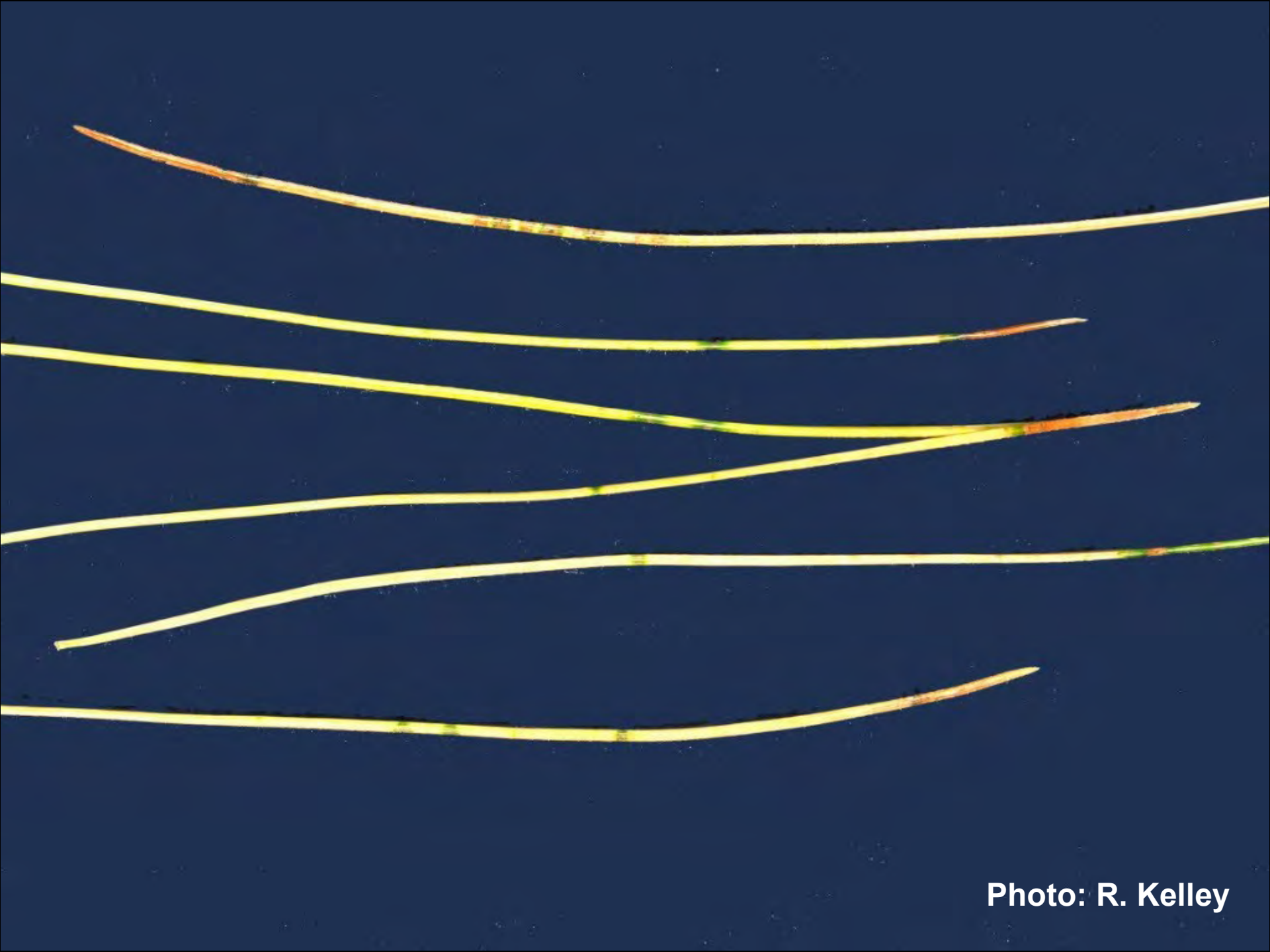


Photo: R. Kelley

Diplodia Shoot Blight



Photo: R. Kelley

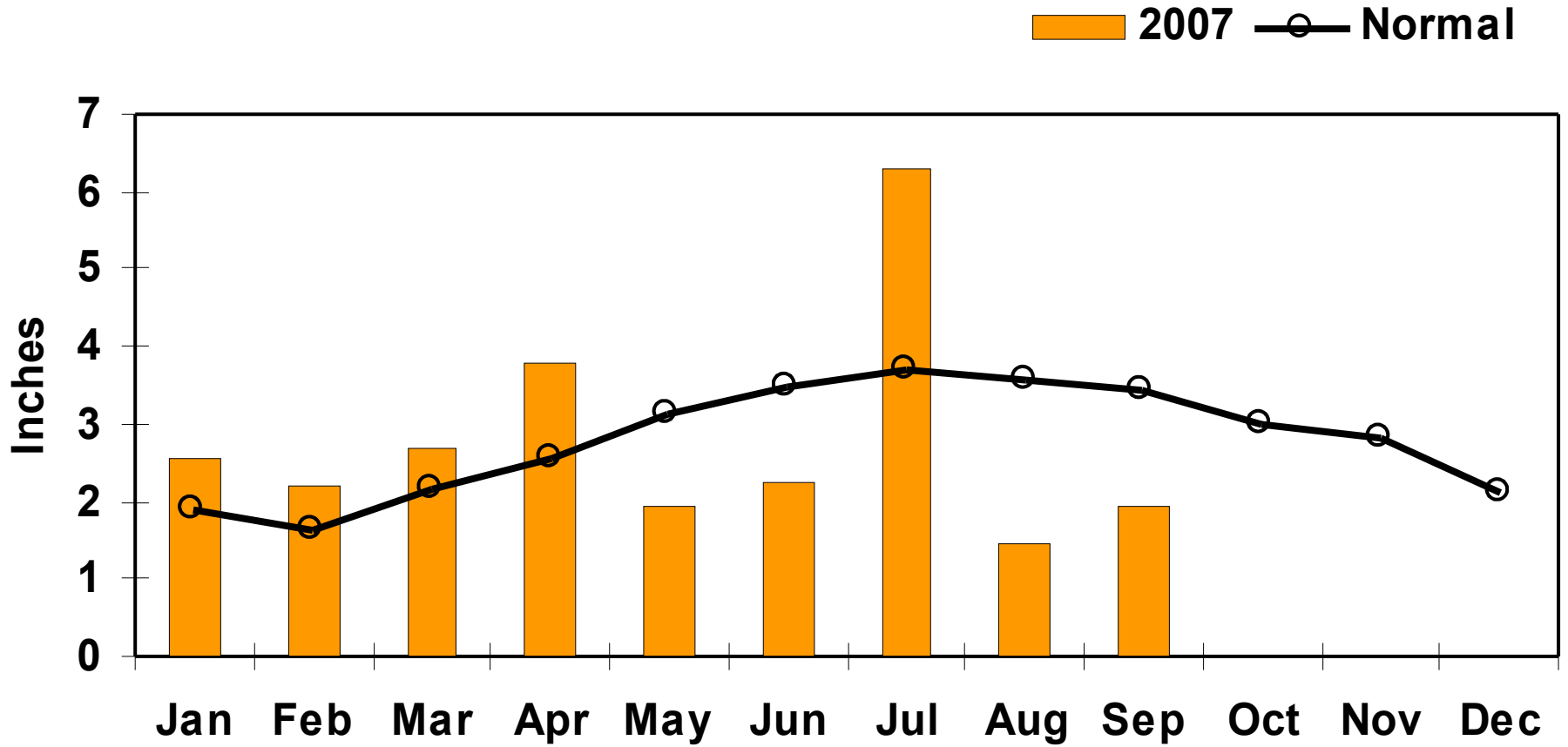


Pine Gall Weevil



Photo: R. Kelley

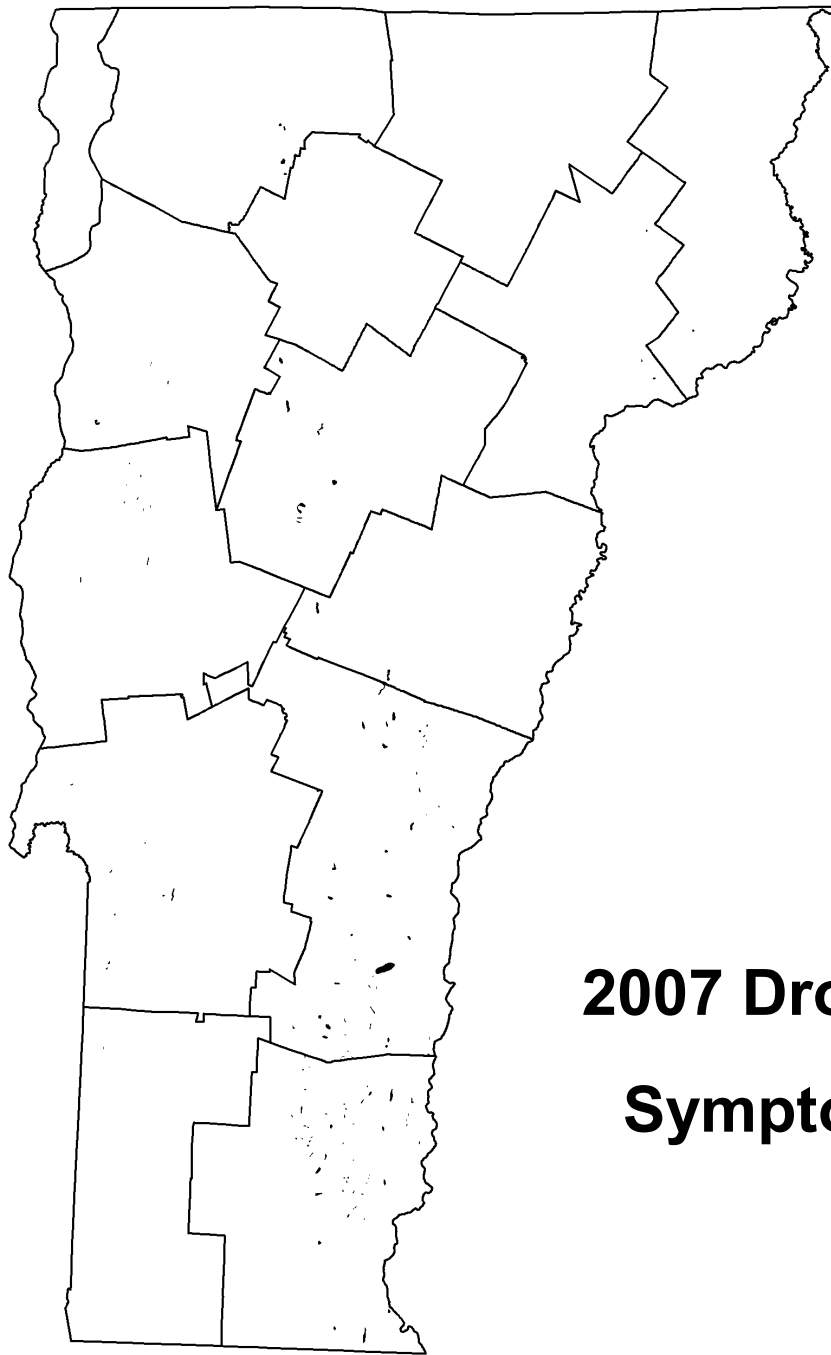
2007 Precipitation



Data from National Weather Service, Burlington



Photo: R. Kelley



**2007 Drought
Symptoms**

April 16 Storm



Photo: L. Lund



Photo: L. Lund



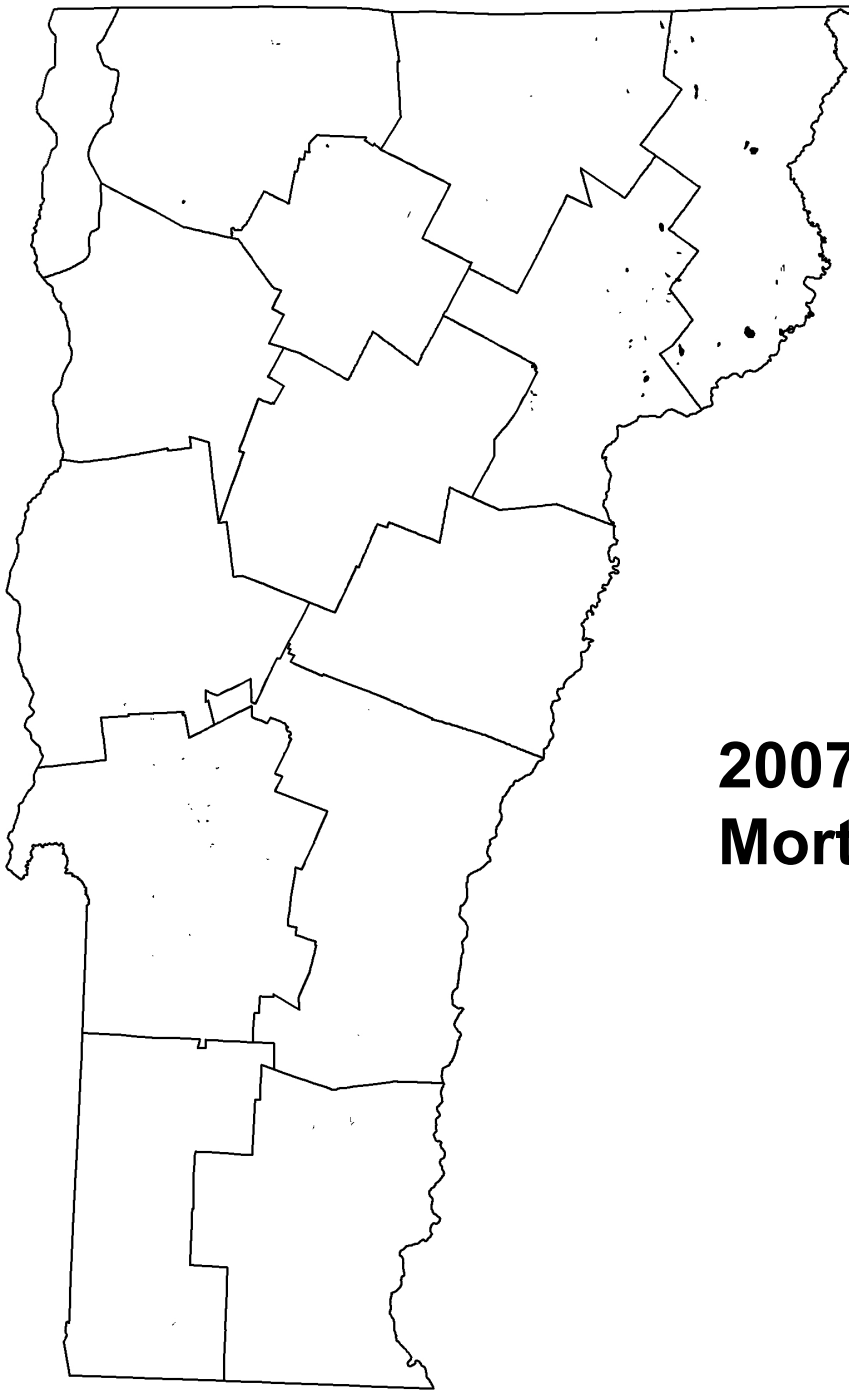
Photo: L. Lund



Photo: VELCO



Photo: VELCO

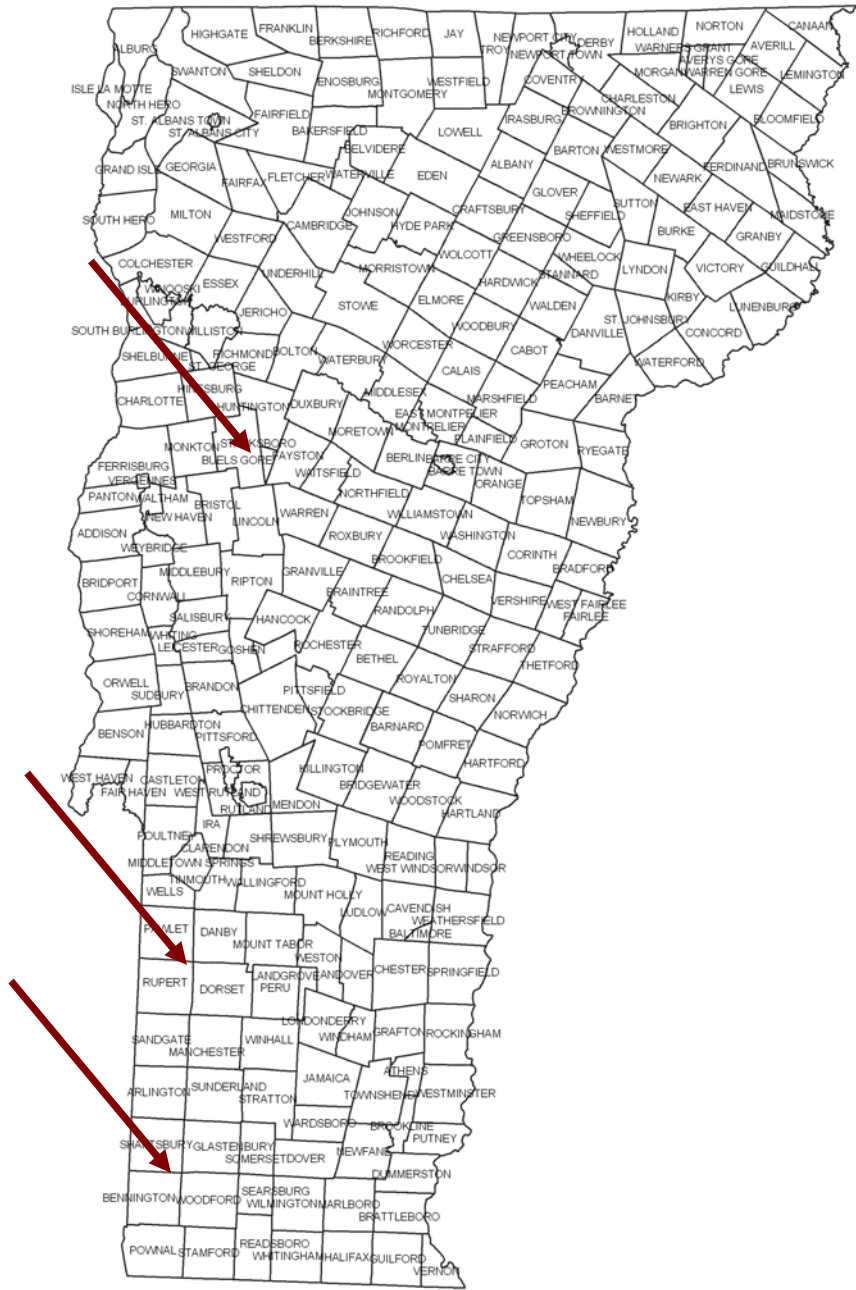


**2007 Breakage and
Mortality from Wind**

Spring Maple Leaf Scorch

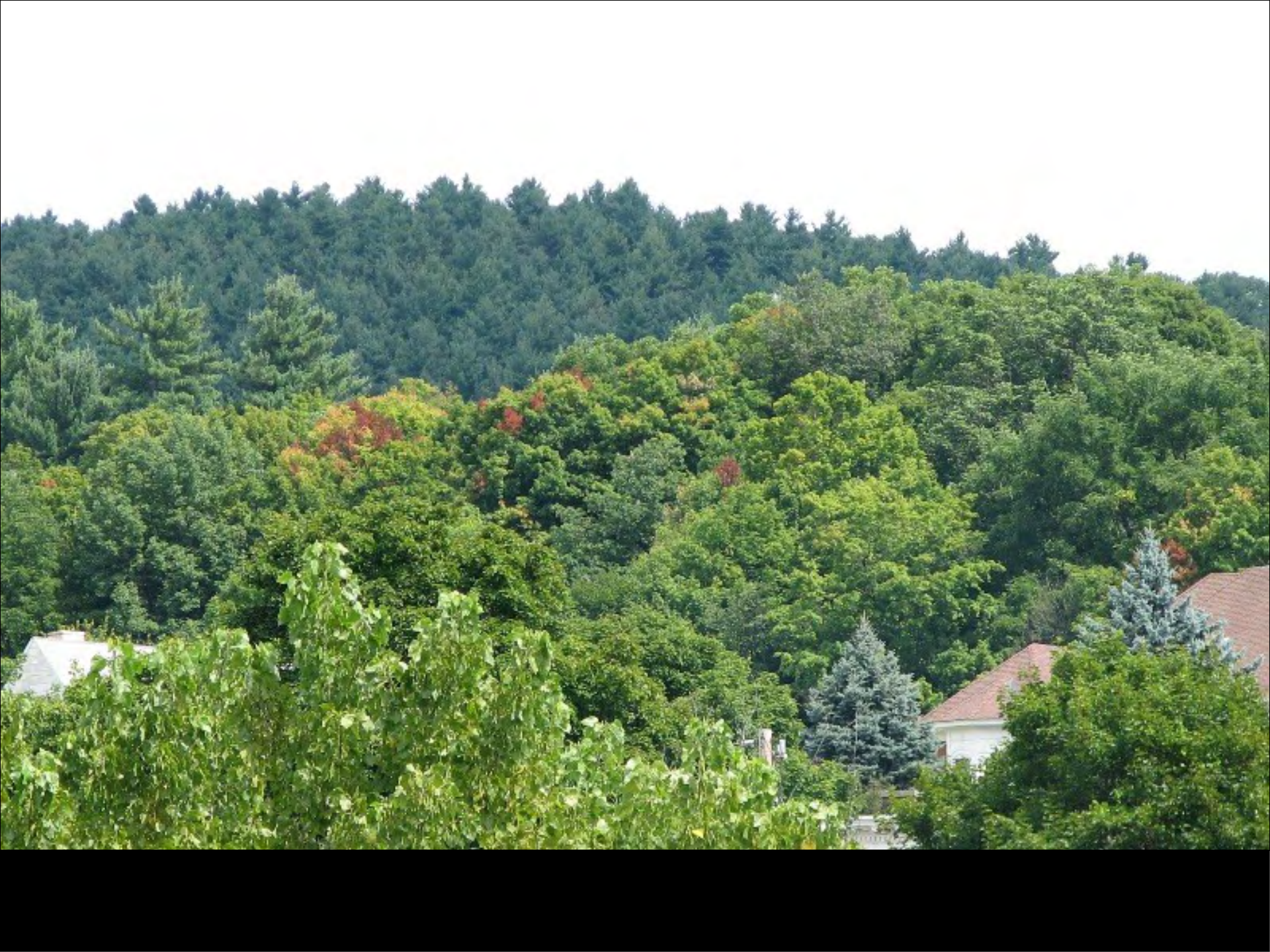






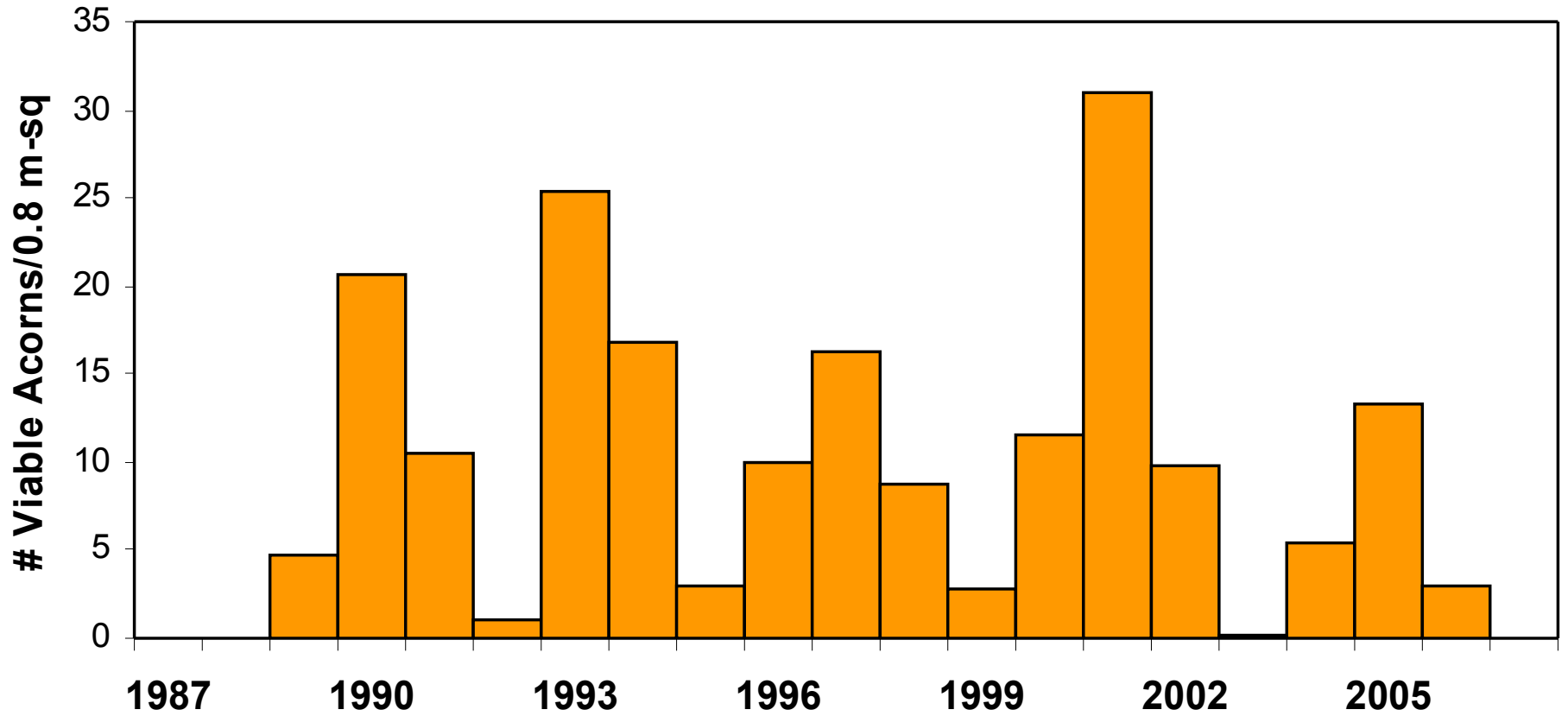
Hemlock Needle Drop







Vermont Acorn Counts



Average from 2-5 sites
Data: VT Dept of Fish and Wildlife

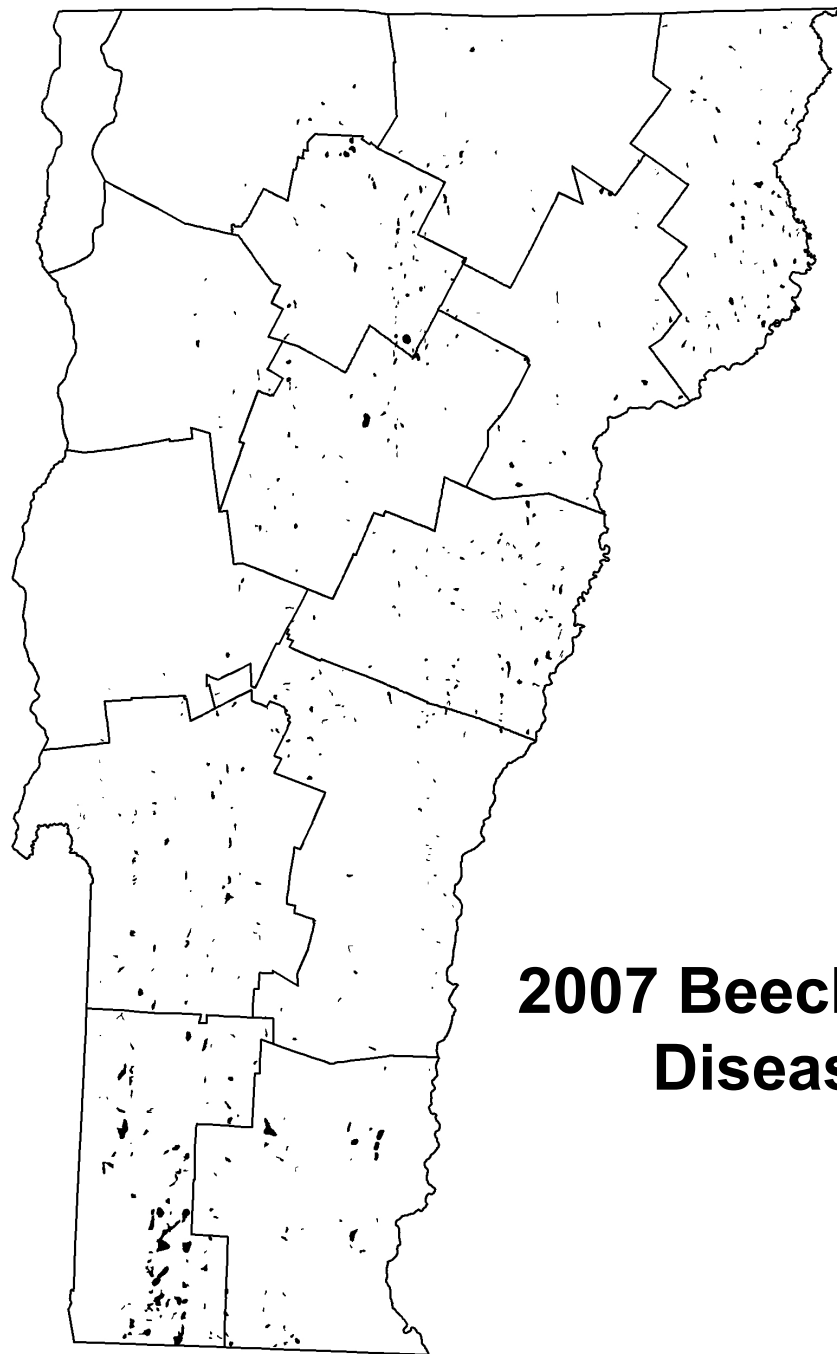


Beech Bark Disease



Photo: R. Kelley





**2007 Beech Bark
Disease**



Photo: R. Kelley

Balsam Woolly Adelgid





Emerald Ash Borer



Photo: R. Kelley

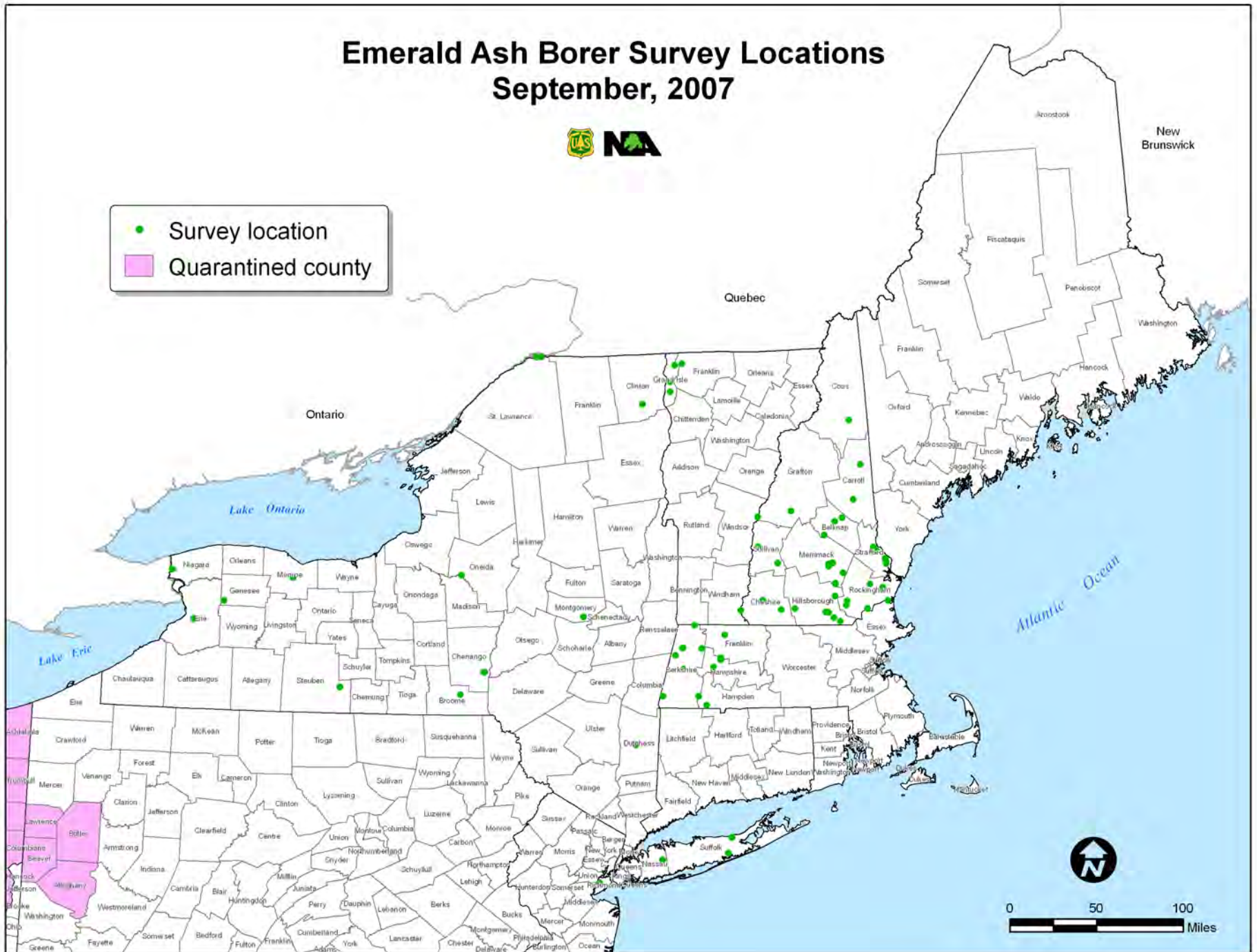


Photo: R. Kelley

Emerald Ash Borer Survey Locations September, 2007



- Survey location
- Quarantined county



Emerald Ash Borer Trap Tree



Used to survey for the presence of this
exotic invasive insect not yet found in
Vermont



**Vermont Department of
Forests, Parks and Recreation**

For more information, call 802-879-6565

Photo: R. Kelley



Photo: R. Kelley

FIREWOOD ALERT

KEEP EXOTIC INSECT PESTS AWAY FROM VERMONT TREES DON'T MOVE FIREWOOD!

Exotic insect pests like the Emerald Ash Borer are major threats to Vermont's trees.

Emerald Ash Borer, a non-native beetle discovered in Michigan, kills ash trees. It can easily be transported to uninfested areas through movement of infested ash firewood.

To help protect Vermont from the Emerald Ash Borer and other exotic insects:

- USE LOCAL SOURCES OF FIREWOOD - DO NOT BRING FIREWOOD FROM HOME.
- IF YOU HAVE ALREADY BROUGHT FIREWOOD FROM HOME,
DO NOT TAKE IT BACK HOME OR LEAVE IT HERE

BURN IT!

EMERALD ASH BORER



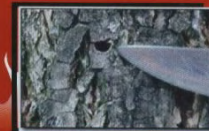
ADULT



LARVA



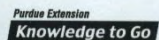
FEEDING TUNNELS



D-SHAPED EXIT HOLES

For more information on the Emerald Ash Borer:

- Contact the Vermont Agency of Agriculture, Food and Markets: 1-802-241-3544 or the Vermont Department of Forests, Parks and Recreation (Forest Protection Division): 1-802-241-3650.
- Visit the Vermont Agency of Agriculture, Food and Markets Plant Health Resources website at: www.vermontagriculture.com/CAPS/index.html



VISITOR PHOTOS

[>> SEE MORE](#)[>> ADD YOUR PHOTO!](#)

renewable energy technology and will provide universal access to basic sanitary services for citizens and travelers of all physical abilities.

Construction on the project just recently began and is scheduled to go through most of September. In an effort to create the least amount of impact as possible on the area commuters and the visiting public, the contractor, Kingsbury Construction, will not be working on the project during major holidays or on weekends. While the work is in progress, efforts will be made at all times to maintain as many parking spaces as possible and to minimize the conflicts with the thru-traffic. The 3.5 mile long VT Route 108 scenic highway is located between the Stowe Mountain and Smugglers' Notch resorts. The overall purpose of the project is to protect the unique natural and cultural resources of the area by providing new and improved transportation and recreational facilities, as well as educational information to the traveling public to ensure they have a safe and enjoyable recreational experience.

For more information please contact Bill Rossmassler at the Lamoille County Planning Commission, 999-7536 or bill@lcpvct.org.



Firewood Advisory: Please Don't Bring Out-of-State Firewood into Vermont State Parks

Invasive insects and diseases found in firewood are a threat to our forests! Before bringing firewood into a Vermont State Park this summer, please read the information below about a very real threat to forests in Vermont and all of North America:

Firewood may contain non-native insects and tree diseases that have found their way into the United States from other countries. Exotic pests like the Asian Long-horned Beetle and the Emerald Ash Borer are currently killing millions of trees in the mid-west and eastern U.S. Bringing firewood into the parks from other areas could accidentally allow these pests to become established in our forests. Management of trees infected with non-native pests involves drastic measures, such as the complete removal of all host trees in the immediate and surrounding area.

If you are visiting Vermont from out of state, please do not bring firewood from home. Firewood is available for purchase at most state parks or can be obtained in the local area.



2007 State Parks Photography Contest

This Vermont State Parks annual photography contest is designed to highlight the best in what the Vermont State Parks have to offer its many visitors each year. Anyone with a camera is invited, and encouraged, to submit photos that



Photo: R. Kelley

Sirex Woodwasp

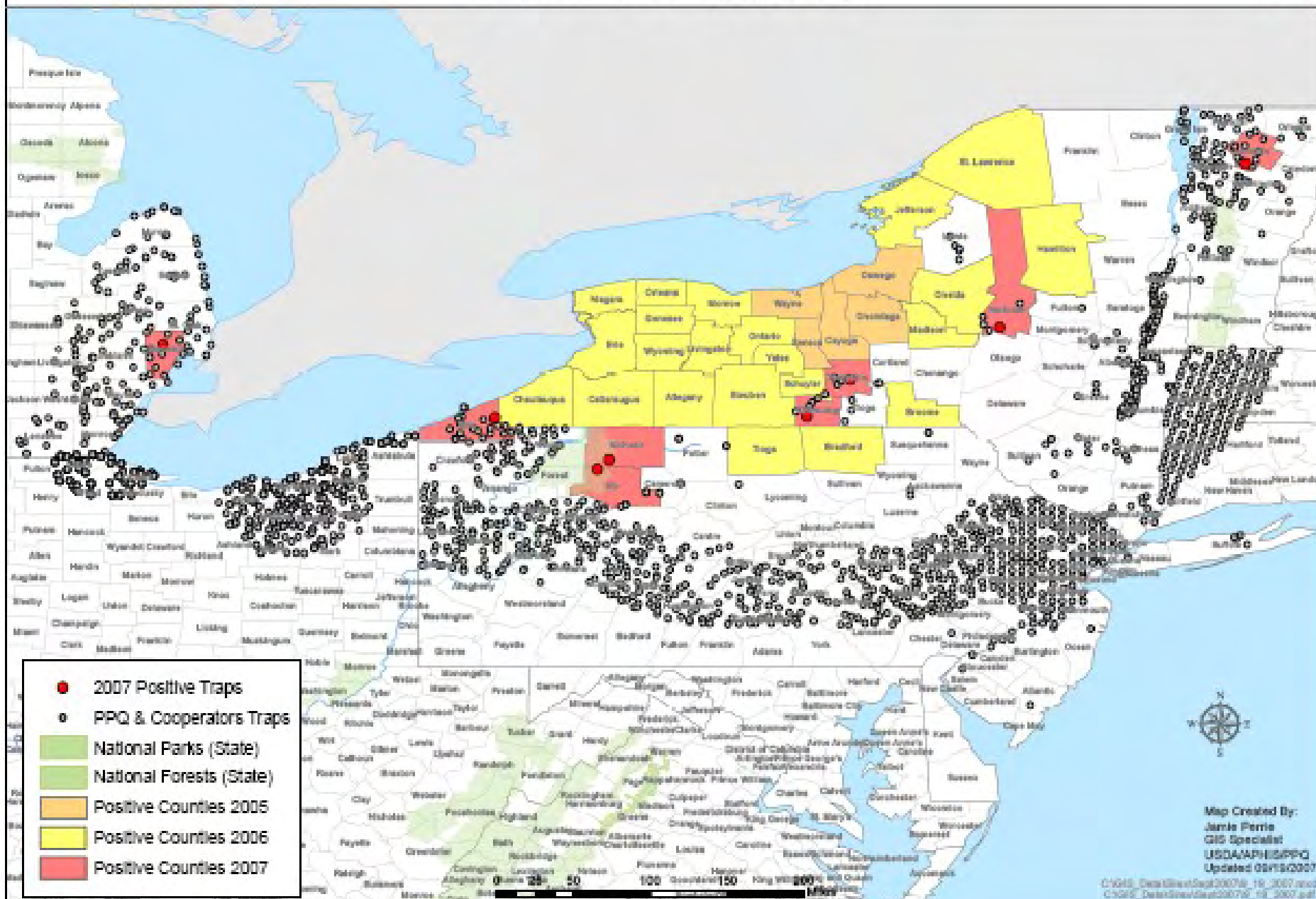


Photo: K. Dodds



Photo: R. Kelley

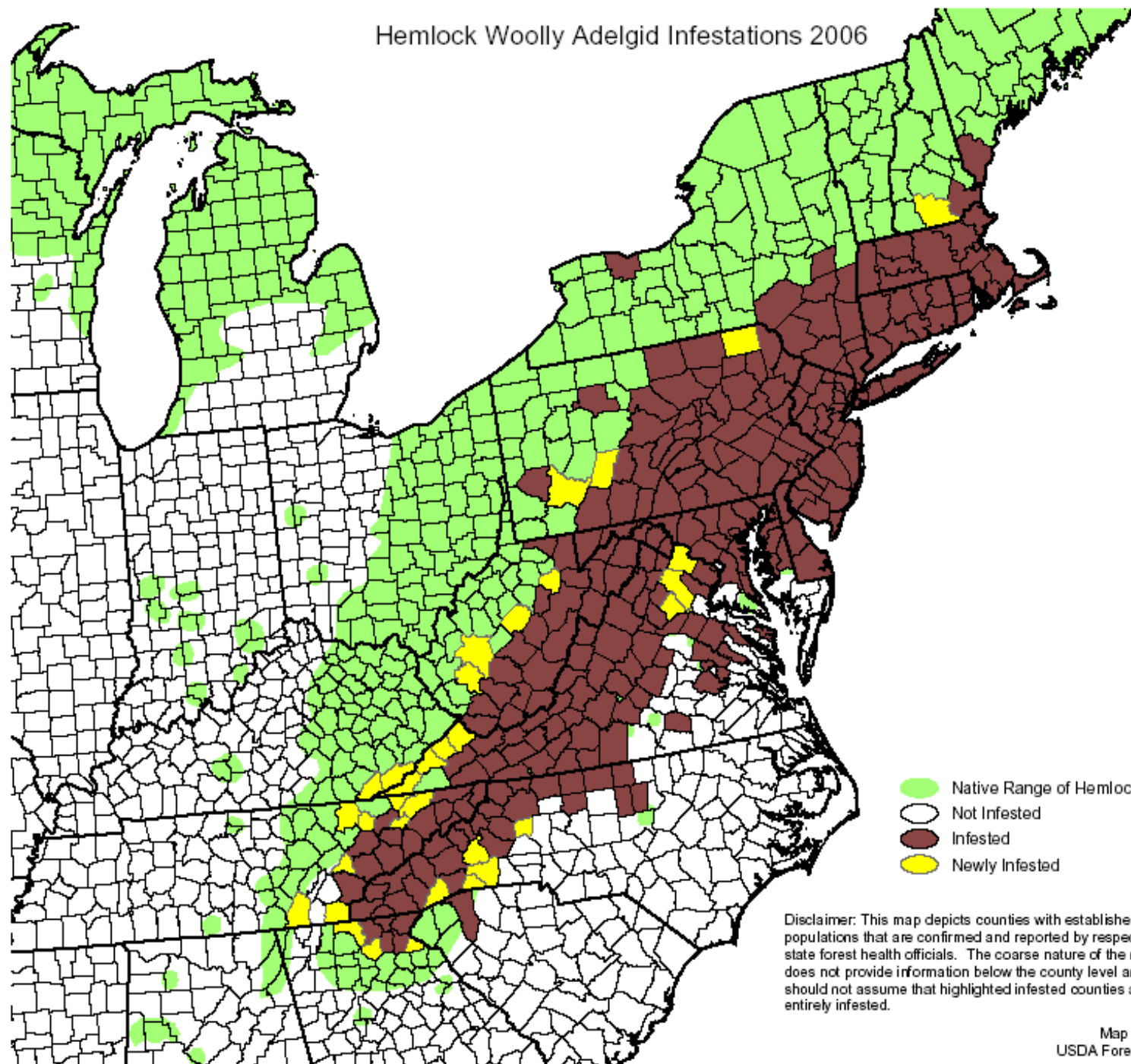
Sirex noctilio Delimiting Survey Eastern Region PPQ and Cooperators







Hemlock Woolly Adelgid



Hemlock Woolly Adelgid Infestations 2006

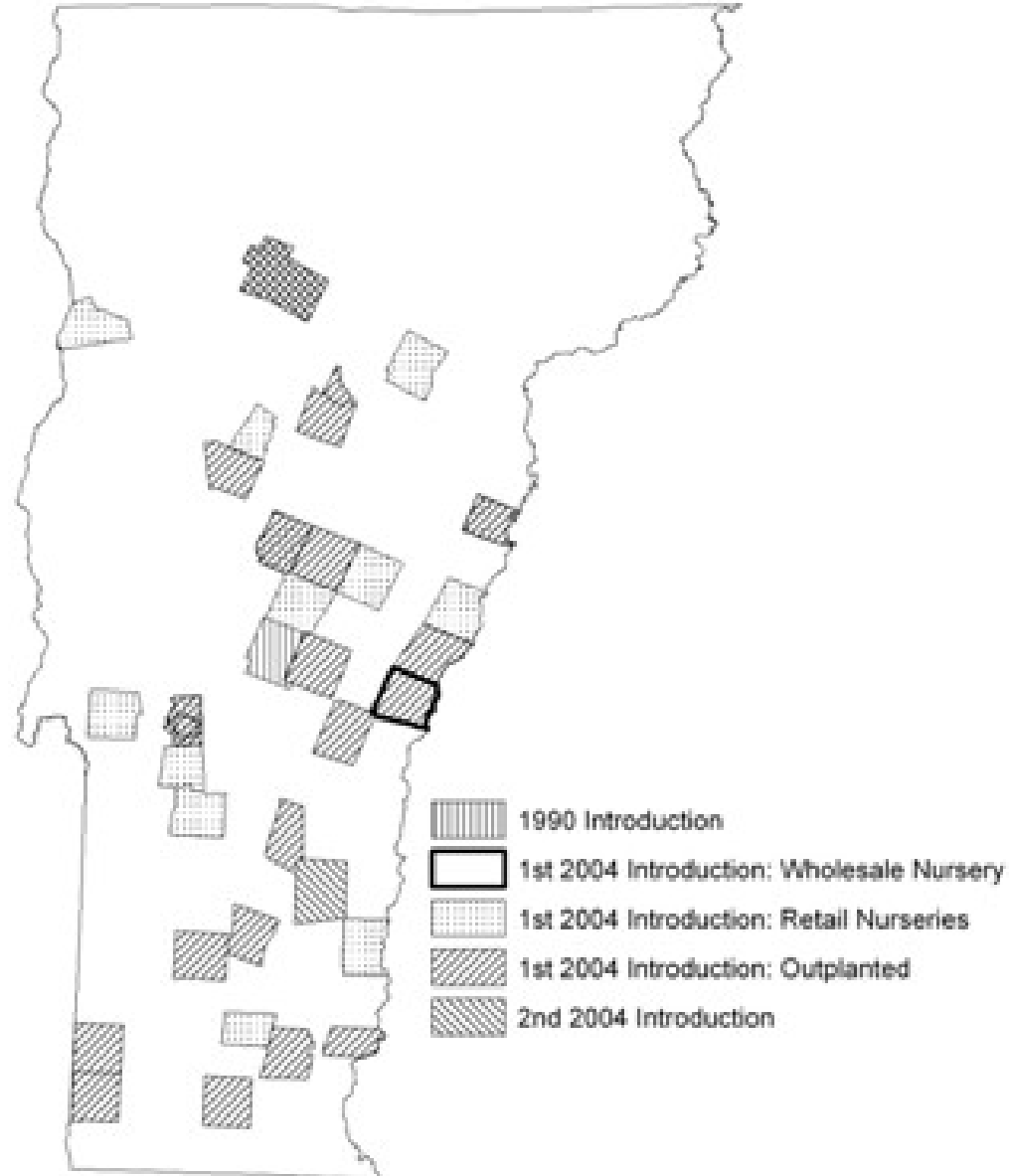


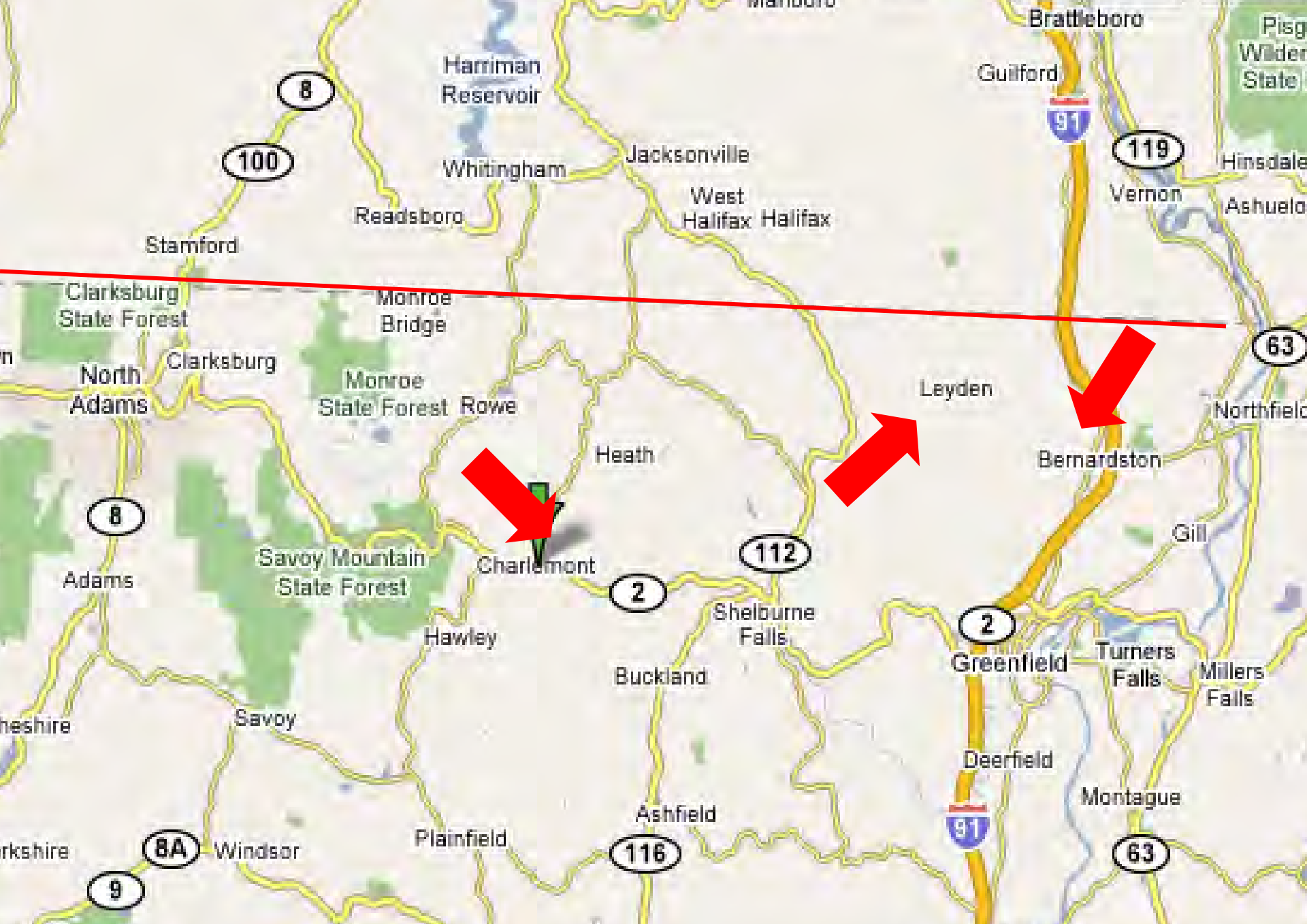
-  Native Range of Hemlock
-  Not Infested
-  Infested
-  Newly Infested

Disclaimer: This map depicts counties with established HWA populations that are confirmed and reported by respective state forest health officials. The coarse nature of the map does not provide information below the county level and users should not assume that highlighted infested counties are entirely infested.

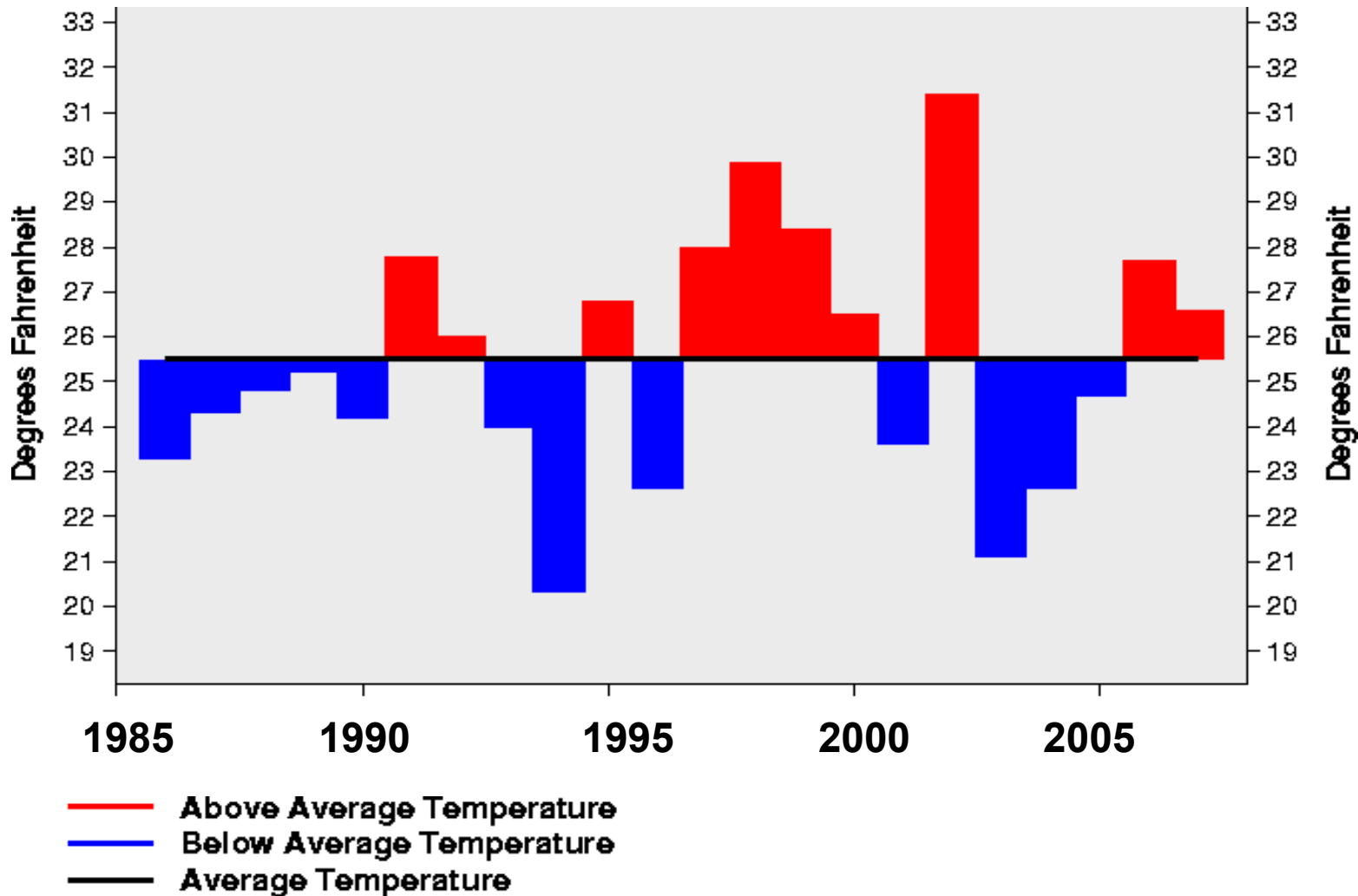


Known Introductions of Hemlock Woolly Adelgid

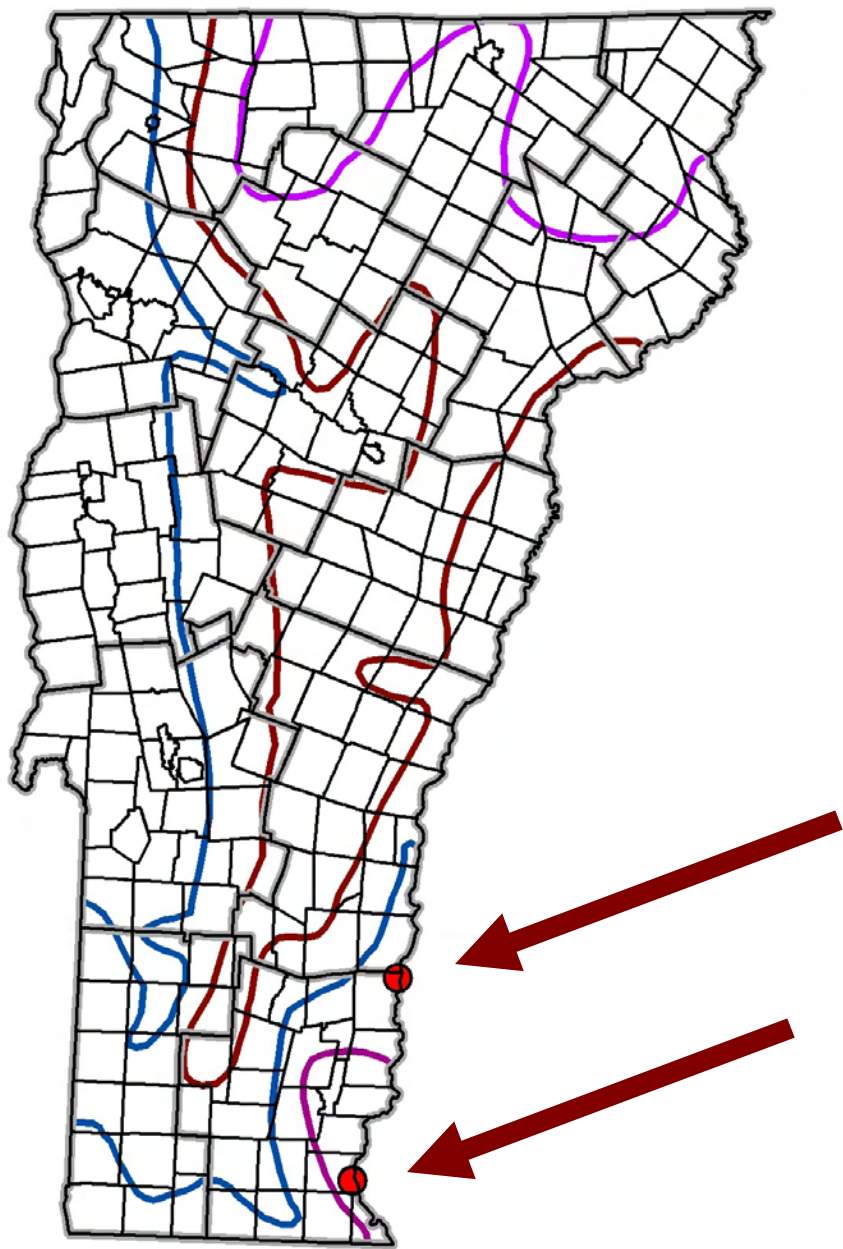




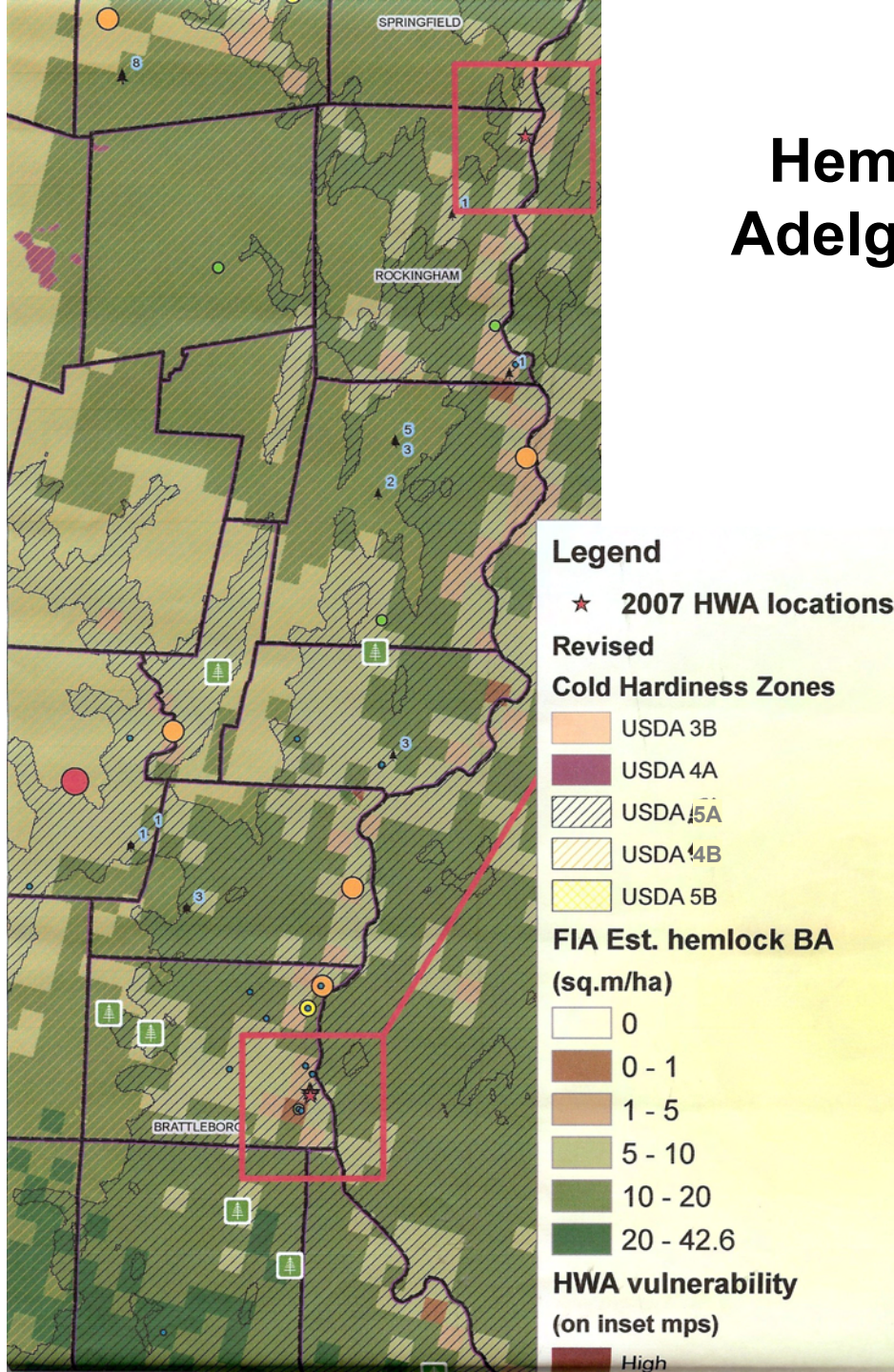
Average Winter Temperatures in the Northeast Compared to Normal



From National Climate Center



Hemlock Woolly Adelgid Risk Map



Draft Map: Redstart Forestry





Photo: B. Burns



Photo: B. Burns

Infested Tree







Photo: R. Kelley



Photo: R. Kelley



Photo: R. Kelley

2007 Hemlock Woolly Adelgid Site with 0.5 Mile Radius



1,300 650 0 1,300 Feet

-  Eagles
-  HWA
-  Landfill

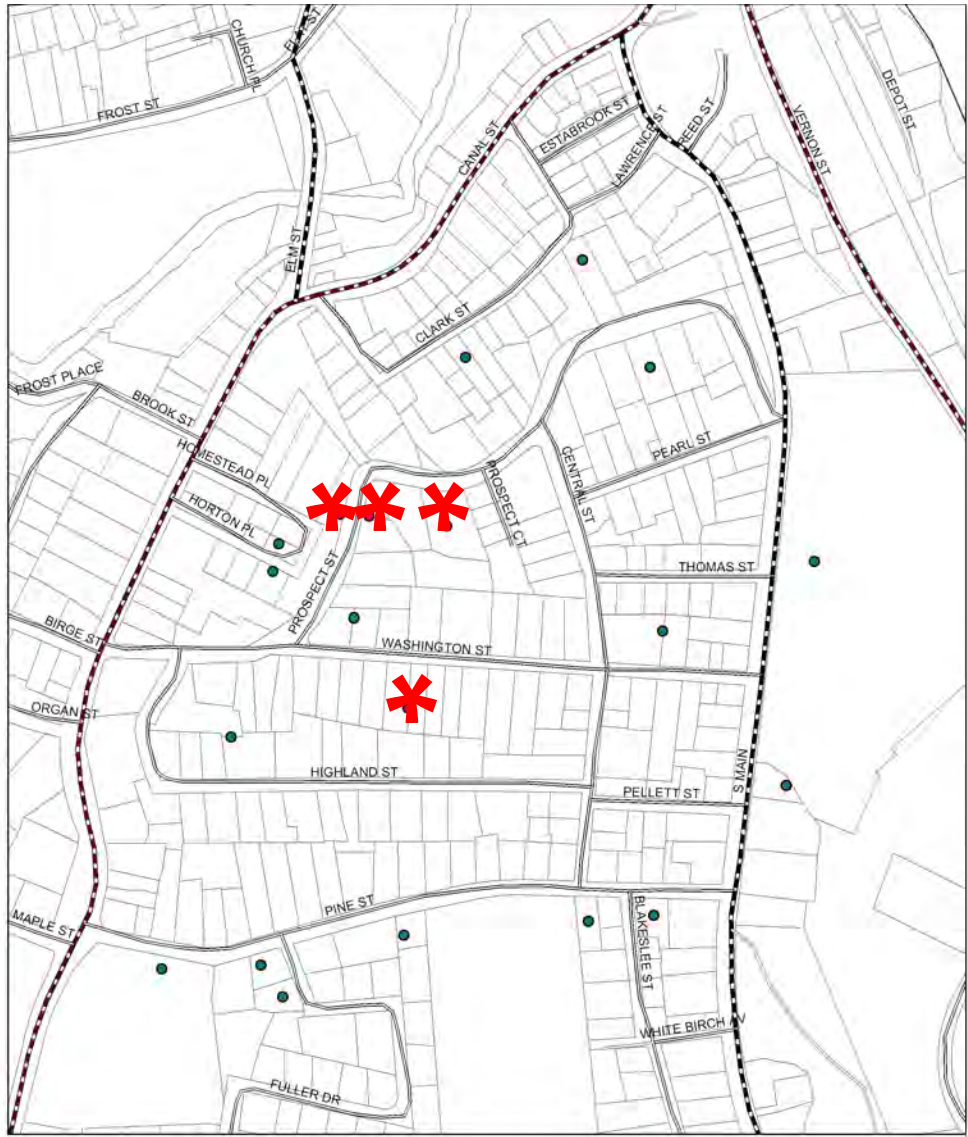
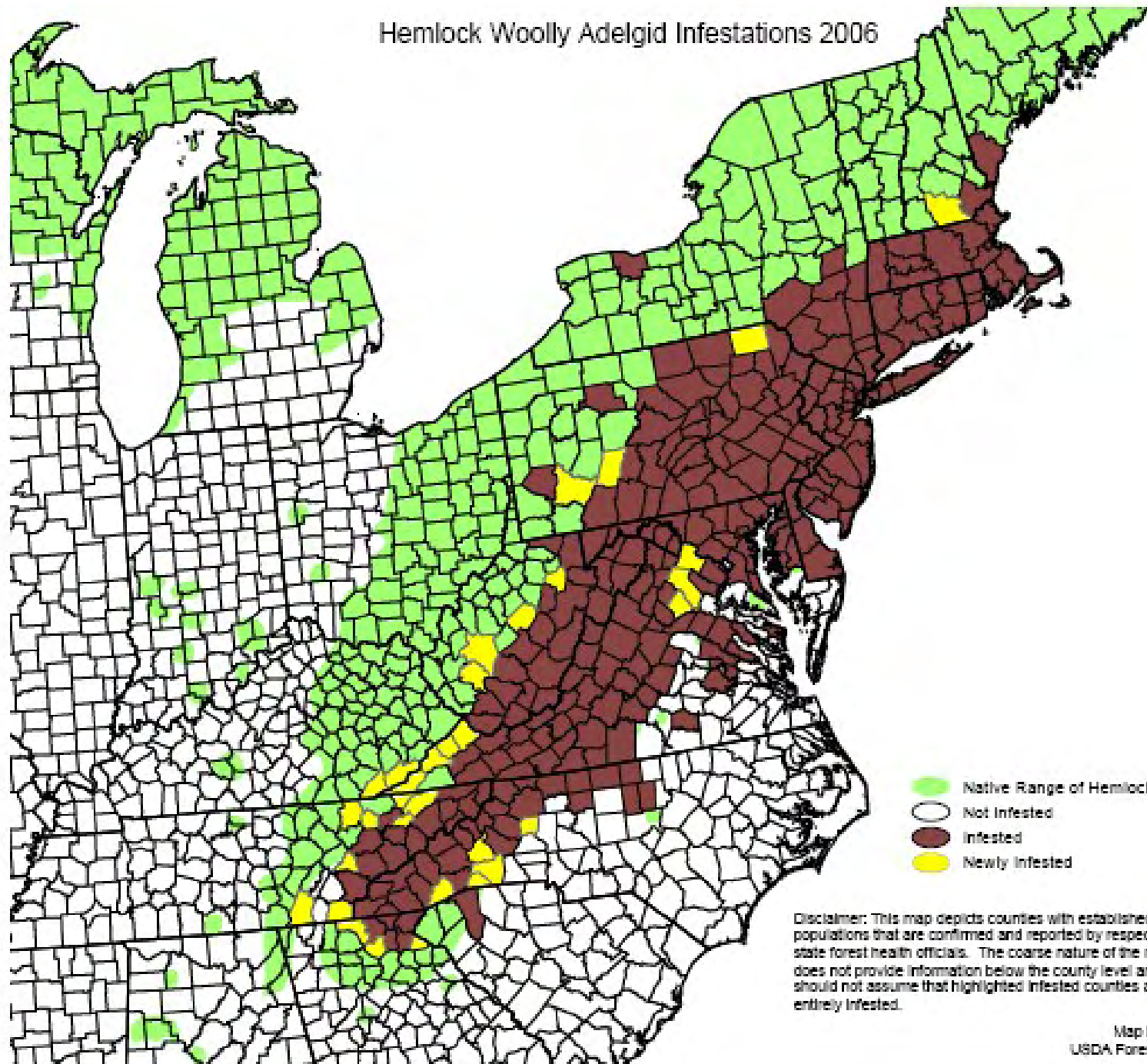






Photo: US Forest Service

Hemlock Woolly Adelgid Infestations 2006



- Native Range of Hemlock
- Not Infested
- Infested
- Newly Infested

Disclaimer: This map depicts counties with established HWA populations that are confirmed and reported by respective state forest health officials. The coarse nature of the map does not provide information below the county level and users should not assume that highlighted infested counties are entirely infested.



LESCO
Horticultural Oil Insecticide

KEEP OUT OF REACH OF CHILDREN
CAUTION
FIRST AID

SYMPTOM	TREATMENT
IF SWALLOWED: Do not induce vomiting. Give 2-4 glasses of water. If symptoms persist, call a doctor.	
IF ON SKIN: Wash with soap and water. If irritation occurs, call a doctor.	
IF IN EYES: Flush with water for 15 minutes. Call a doctor.	
IF INHALED: Move to fresh air. If symptoms persist, call a doctor.	

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Xytext 25

Stack of white paper bags, likely containing fertilizer or soil amendments.





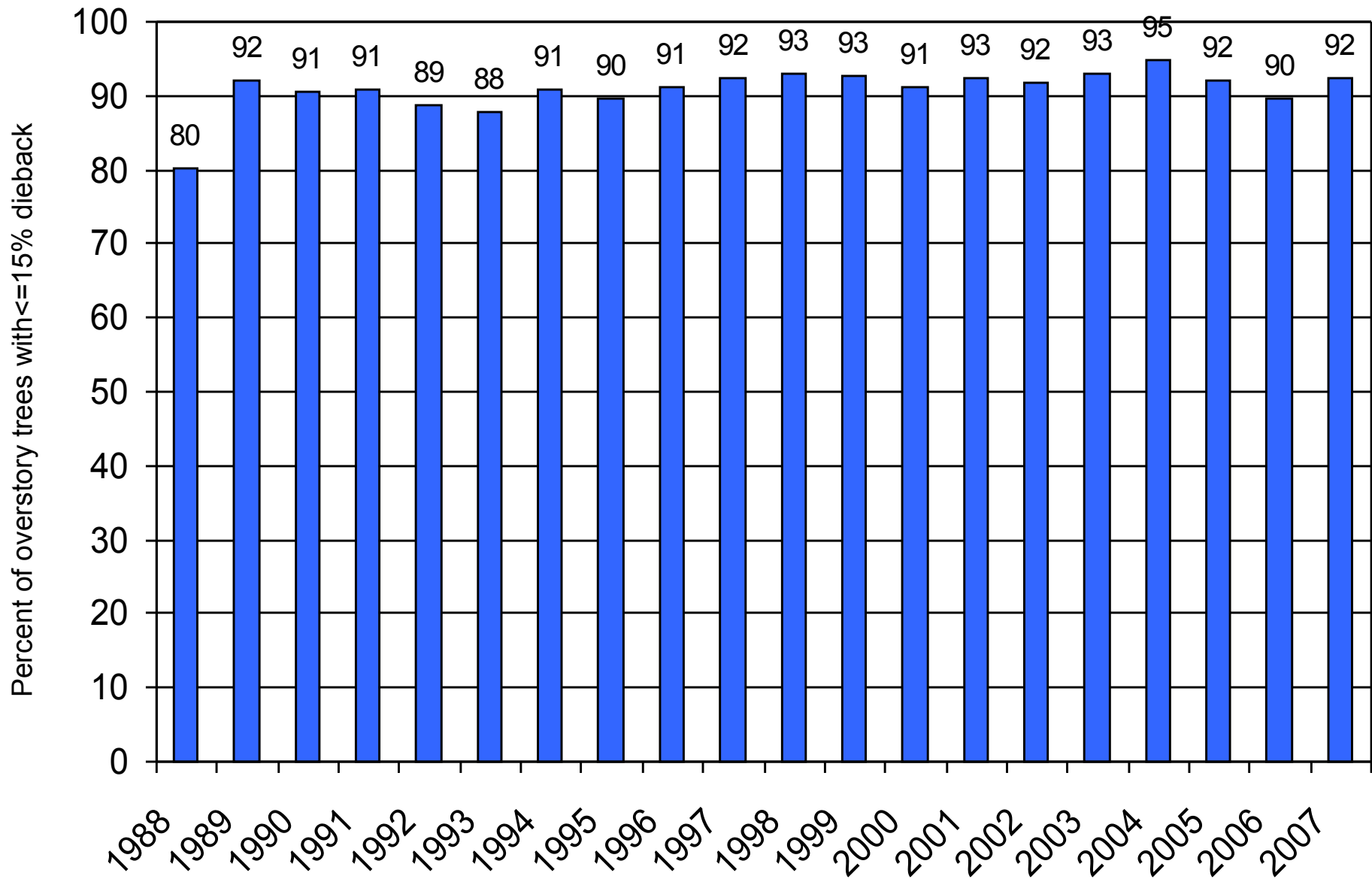
Photo: R. Kelley

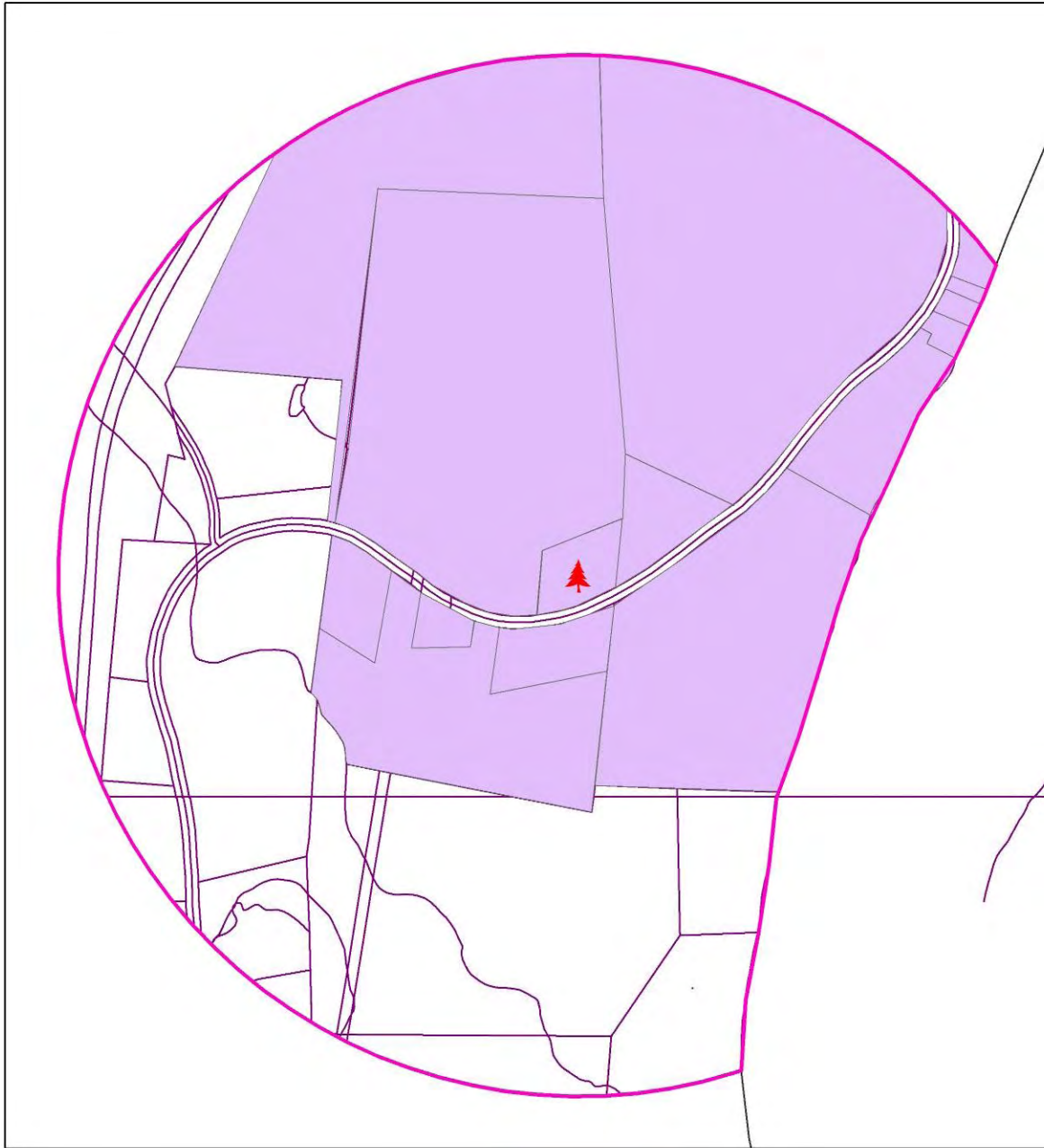




Photo: R. Kelley

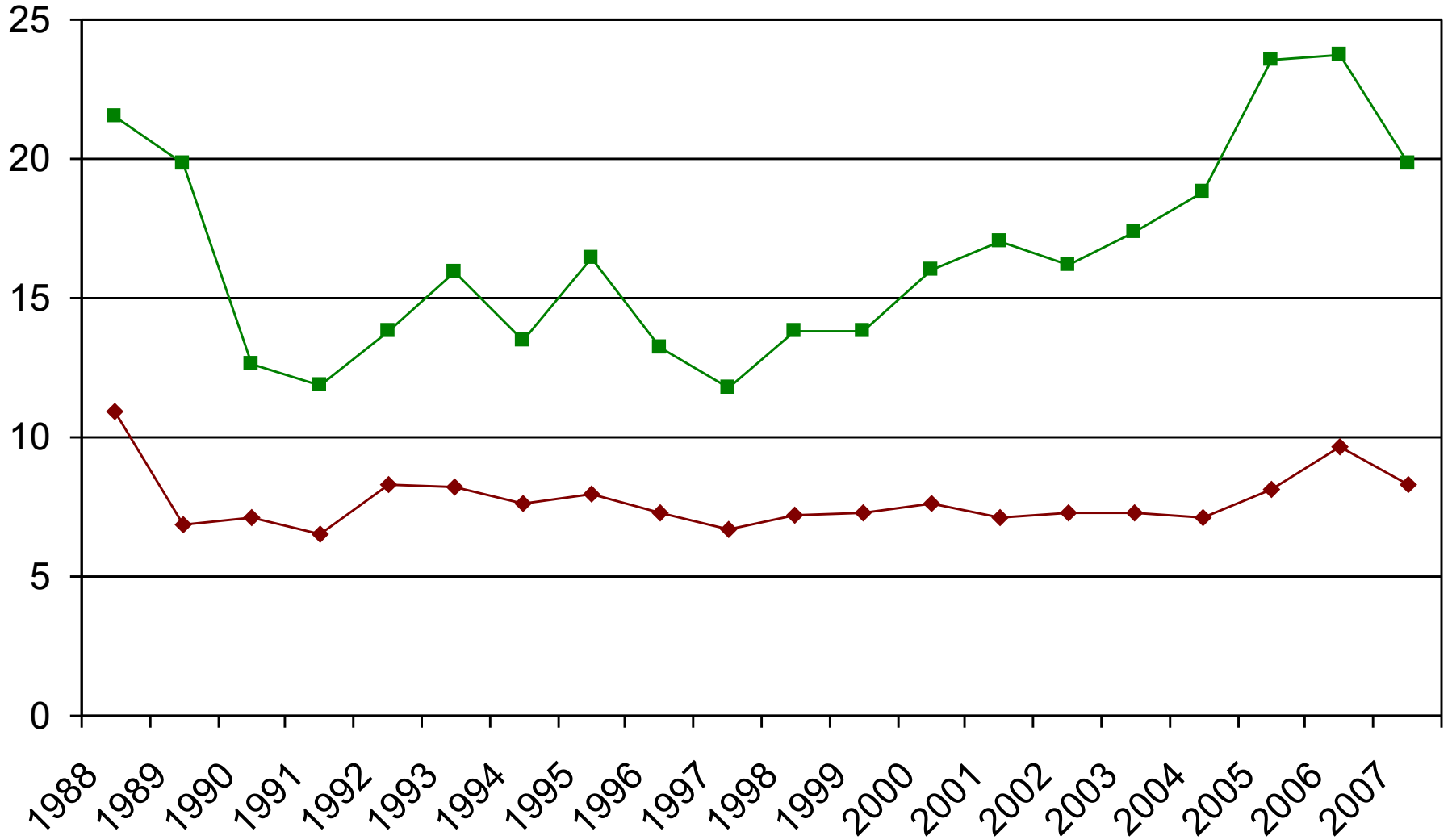
Healthy Sugar Maples on NAMP Plots





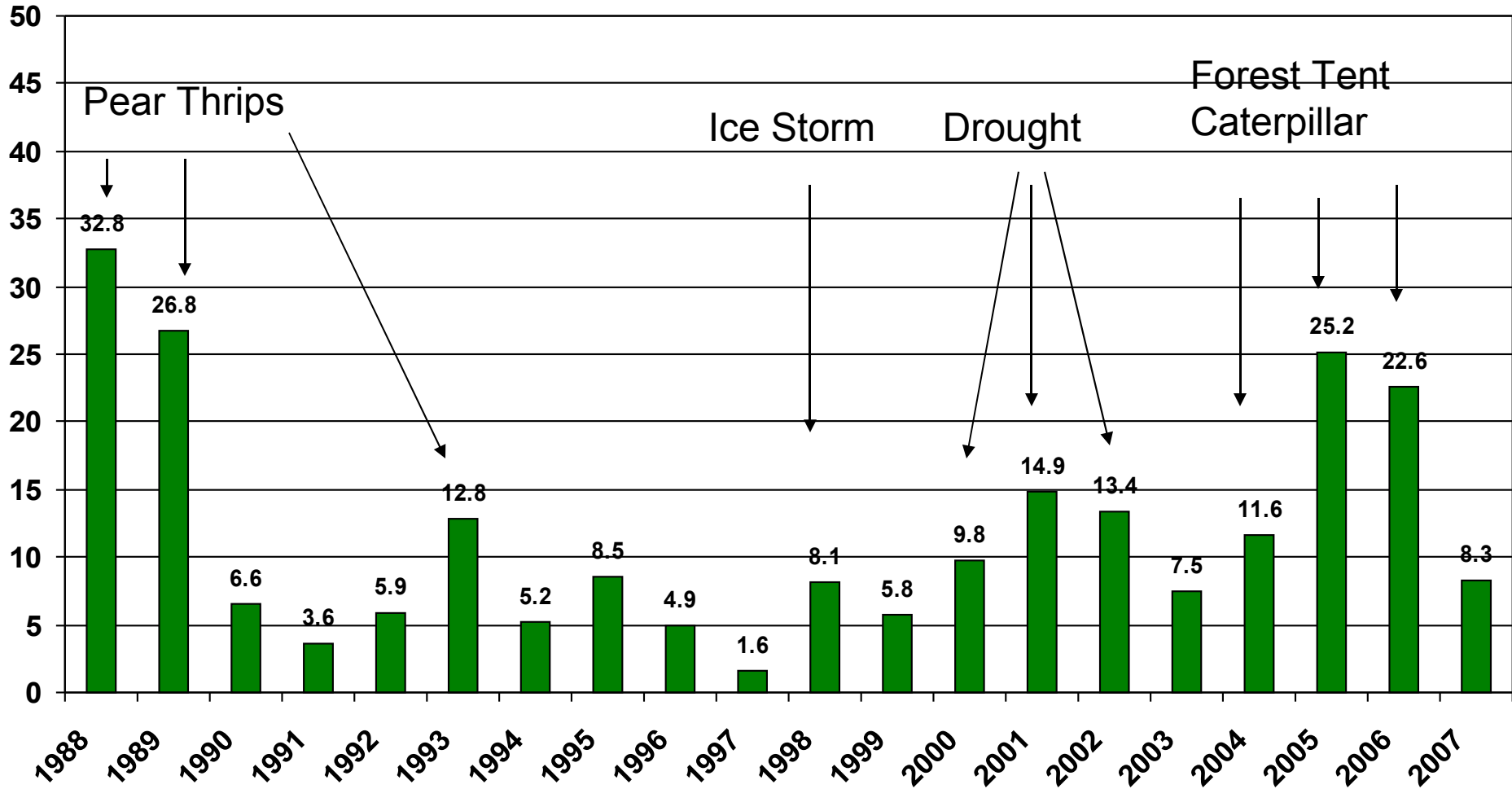
Sugar Maple Health Indicators

—◆— Dieback —■— Transparency



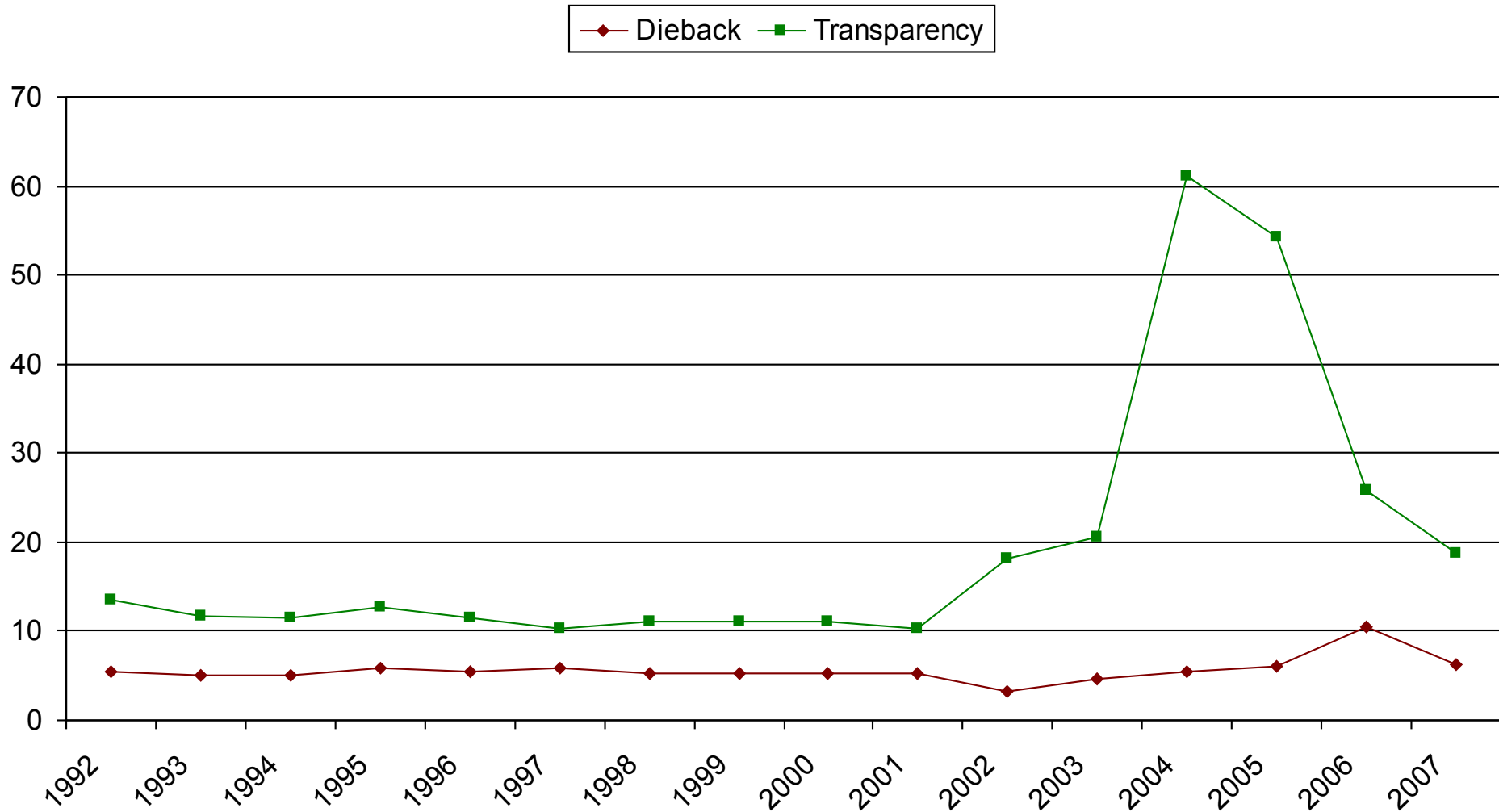
Sugar Maples with Thin Foliage (% of trees)

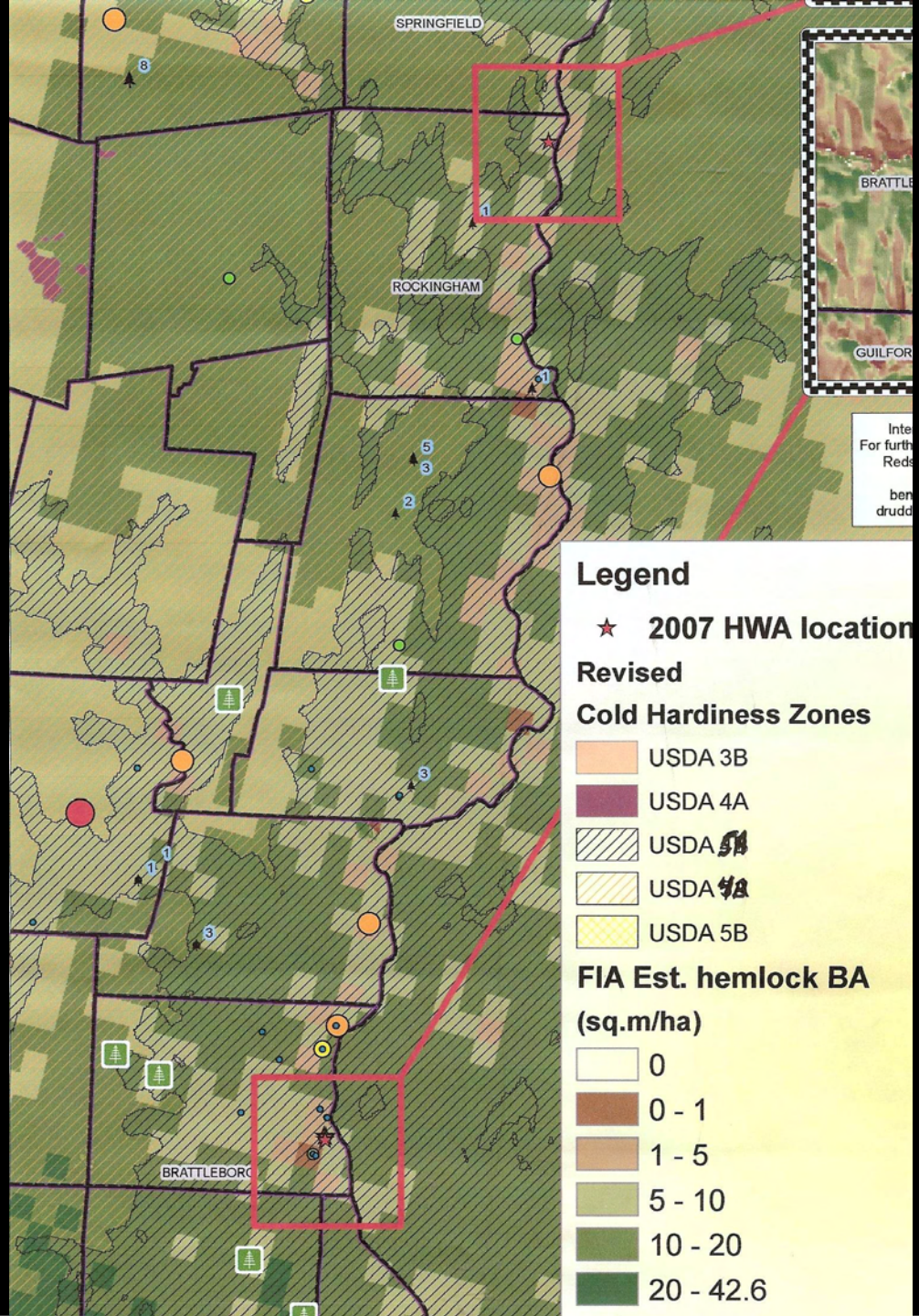
Percent of trees with transparency >25%



Recovery of Defoliated Sugar Maple Trees

Example of One NAMP Site





Legend

★ 2007 HWA location

Revised

Cold Hardiness Zones

- USDA 3B
- USDA 4A
- USDA 5A
- USDA 5B

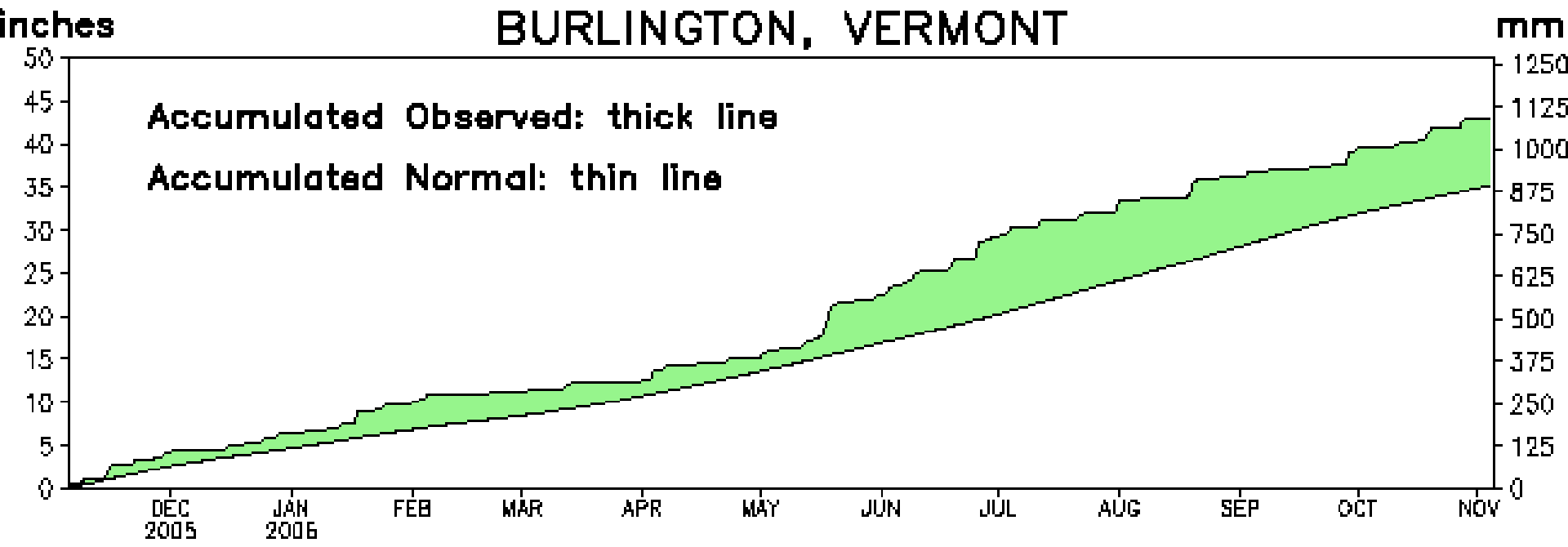
FIA Est. hemlock BA

(sq.m/ha)

- 0
- 0 - 1
- 1 - 5
- 5 - 10
- 10 - 20
- 20 - 42.6

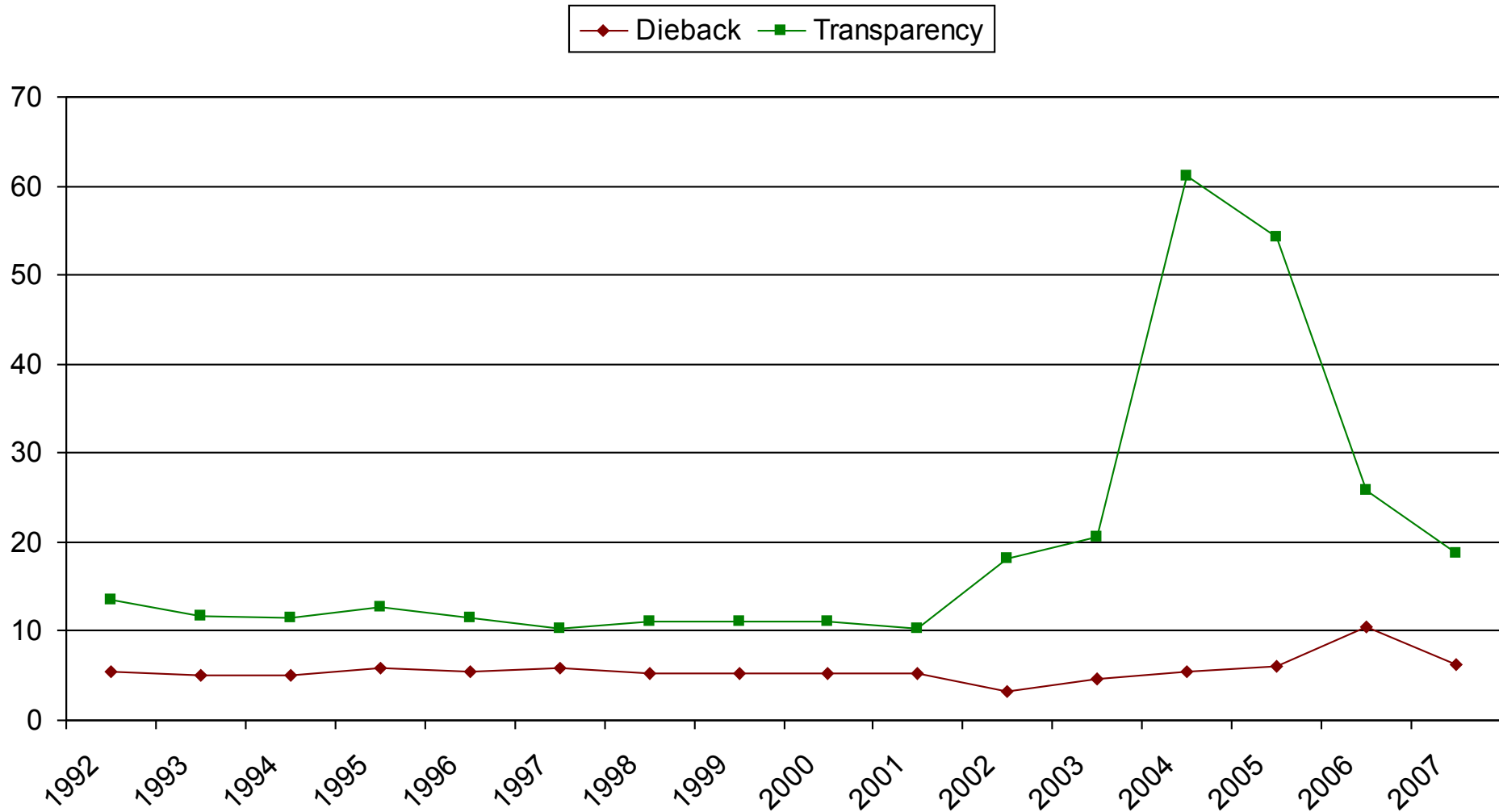
Draft Map from Redstart Forestry

Precipitation BURLINGTON, VERMONT



Recovery of Defoliated Sugar Maple Trees

Example of One NAMP Site



Sirex noctilio



- Native Range
- Introduced

Map: D. Haugen





Beech Leafhopper



Photo: J. Weidhass