BUREAU OF FORESTRY
FOREST HEALTH PROGRAM
ANNUAL REPORT, FISCAL YEAR 2002
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SUMMARY OF INSECT ACTIVITY

AERIAL SURVEY: The annual aerial survey was conducted as required by our agreement with the USDA Forest Service. A summary of this survey can be found elsewhere in this report.

GYPSY MOTH defoliation has been drastically reduced this year. This decrease is the result of two diseases present in the population, specifically Wilt Disease and the fungal pathogen *Entomophaga maimaiga*.

HEMLOCK WOOLLY ADELGID continues to spread with 39 new communities being confirmed has having this insect. The communities are: Hopkinton, Ashland, Holliston, Hudson, Marlboro, Watertown, Belmont, Medford, Somerville, Lexington, Winchester, Burlington, Marblehead, Danvers, Easthampton, Whately, East Longmeadow, Granby, Wendell, Braintree, Amesbury, Milford, Hanson, Hamilton, Egremont, Sheffield, Harvard, North Andover, North Reading, Georgetown, Uxbridge, Haverhill, Lancaster, Reading, Stockbridge, East Brookfield, Falmouth, Conway and Monson. We continued to make releases of the predatory lady bird beetle *Pseudoscymnus tsugae*. This year's releases were in Boston, Sturbridge, Stoneham and Concord. All previous release sites are monitored following the protocol developed by the US Forest Service who supplied the beetles for release. To date no *Pseudoscymnus tsugae* have been recovered. .

DROUGHT conditions experienced over the past several years continue to be observed. Many higher elevations stands are showing signs of decline. Trees growing in the urban environment especially those along roads where salt is used as a deicing agent are especially hard hit.

HEMLOCK LOOPER population in the Tolland/Otis area appears to have crashed. Many of the eastern hemlock have thin crowns from prior years feeding, but no additional defoliation occurred this growing season.

BEECH BARK/NECTRIA CANKER COMPLEX continues to be a major decline factor in Berkshire County. The past several years of drought have stressed the trees further and more mortality has been notice especially in the higher elevations.

TAR SPOT OF MAPLE on Norway maple in northern Berkshire County has been observed.

BORER activity has been found to be increasing in pine stands especially those stands growing on shallow soils. This increase in activity can be attributed to the previous season's drought.

NEEDLE CAST ON PINE has been observed throughout Worcester County. A combination of hot spring weather followed by a cold wet period created ideal conditions for these fungal pathogens to develop. The most severely impacted pines are those growing along roadsides that are already suffering from drought and the use of salt to deice roads.

ANTHRACNOSE infected many species of deciduous trees. Especially hard hit are the oaks. Most healthy trees have refoliated however trees suffering from other stress factors may not survive.

CANKERWORM infestations continue to expand in coastal areas particularly hard hit was the towns of Manchester and Gloucester.

FALL WEBWORM appears to be on the decline statewide.

LOCUST LEAFMINER does not appear to be as severe as in past years.

FROST A late season frost especially north of Rt. 2 and in low lying areas caused severe injury to the oaks which were just starting to develop leaves. Those trees that had leaves further developed were not impacted by this weather event.

SPECIAL PROJECTS

TREE PLANTINGS in several recreation areas were completed. Many of the trees used in this landscaping project were received from the tree nursery maintained by the Forest Health Staff in Region 5.

RESEARCH ASSISTANCE TO UMASS on the effects of decay on tree strength was completed. Working at an abandon site at Belchertown State School trees were mechanically stressed to determine how much force was required to cause structural failure.

PILGRAM MEMORIAL STATE PARK trees are severely stressed do to years of soil compaction and lack of proper maintenance. Many of the trees were safety pruned and trees in one section were deep root fed using a water soluble fertilizer. It is hoped that if funds are available this work will continue in other sections of the park.

HEMLOCK WOOLLY ADELGID RESEARCH: We continue to monitor for mortality the seedlings planted from various seed sources that have become infested by hemlock woolly adelgid. A cooperative research project with the University of Vermont continued in our effort to determine the effectiveness of a fungal pathogen to control the hemlock woolly adelgid.

ASIAN LONGHORNED BEETLE RESEARCH: Each week striped and red maple brush is cut and supplied to the USDA APHIS Methods Development Center on Cape Cod. This brush is used as a food source for their research colony. We also cooperated with this federal agency by removing trees which had been injected with insecticide by various means in an attempt to determine which injection method was least harmful to the trees structure.

URBAN FORET HEATLH MONITORING: A special grant was received from the US Forest Service to monitor the health of street trees. Three hundred fifty sites were pre-selected by the Forest Service. Each site was visited during the growing season and data collected on the health of the trees. This research will continue for a number of years to document the possible decline of our urban forest.

PERSONNEL

Allison Wright District Supervisor in Region 4 left to accept a service forester position also in Region 4. Michael Geryk was promoted from the tree crew foreman in Region 4 to replace Ms. Wright

Alan Snow was hired to file the vacant District Supervisors position in Region 3

STATISTICAL SUMMARY OF ACTIVITIES

District Supervisor

Training Workshops Attended	20
Training Workshops Conducted	27
Number of Attendees	1,507
Municipal Contacts	89
Grant Inspections	40
Landowner Assistance	93
Requests for Information Answered	596

Tree Crew Activities

Out of State Fire Control	14 Man Days
Poison Ivy Control and Hemlock Woolly Adelgid Control	62 Man Days
Assistance to Other DEM Programs	98 Man Days
Recreation Areas Assisted with Tree Work	55
Number of Trees Removed	767
Number of Trees Pruned	1,293
Number of Stumps Removed	20

AERIAL SURVEY RESULTS

Black Turpentine Beetle	93 Acres
Looper (unknown species)	29 Acres
Fall Cankerworm	5,262 Acres
Oak Skeletonizer	176 Acres
Gypsy Moth	4,744 Acres
Locust Leafminer	451 Acres
Hemlock Woolly Adelgid Mortality	114 Acres
Spruce Aphid	57 Acres
Red Pine Scale	172 Acres
Nantucket Pine Tip Moth	50 Acres
Armillaria Root Disease	48 Acres
Beech Bark Disease/Nectria Complex	1,715 Acres
Anthracnose	630 Acres
Diplodia Blight	180 Acres
Oak Leaf Blister	234 Acres
Abiotic Damage	292 Acres
Drought	2,612 Acres
Flooding	119 Acres
Fire	341 Acres
Logging Damage	606 Acres
Suppression	41 Acres
Harvest	47 Acres
Broken Tops	13 Acres