ANNUAL REPORT

FISCAL YEAR 1978

BUREAU OF INSECT PEST CONTROL

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Two major problems confronted the Bureau in Fiscal 1978 - gypsy moth and the oak leaf tier complex. Together they were responsible for severe defoliation on 233,899 acres of primarily oak forests. One, the gypsy moth, belongs to that family of insects named Lymantriidae or tussock moths. The other, oak leaf tier and associated species, belongs to the family Tortricidae, or leaf rollers. For full details refer to report by D.V. Trefry included. Both are moths whose young, or larvae, feed on the foliage of trees. Although preferring oak foliage the gypsy moth is somewhat a general feeder even attacking evergreens when the larvae are more than one half grown. On the other hand the oak leaf tier attacks only red oak growing on good sites. Both will be reported in more detail further on in the report.

Problems of another sort also confronted the Bureau during the year. The Bureau found itself faced with maintaining four vacancies attained through attrition. As it happened, these vacancies were all in tree climbing positions. The absence of men in these positions somewhat curtailed the ability of the Bureau to render assistance to those communities having earned the assistance.

Personnel problems of another sort resulted from the retirement, after many years of service, of Al Genest. Al was District Supervisor of Berkshire County and had a good grasp of the insect and disease problems in his area. He had also developed a good working relationship with the city and town officials with whom he had maintained close contact. Al's former position in Berkshire County has been filled by Fred Hayward, a tree climber from the Foxboro crew.

The untimely death of Larry Laverdure created a vacancy in a particularly critical spot, District Supervisor for Bristol-Norfolk Counties. Critical due to

the gypsy moth situation in that area of the State. Larry had been instrumental in coordinating the activities of the effected communities in their determinations of gypsy moth population extent and intensity. From these determinations local officials based their decision as to whether control should or should not be recommended in their communities. Larry will be missed by those of us who knew him and worked with him. His vacant position was filled by Paul Perodeau formerly foreman of the Stow tree crew.

Dutch Elm Disease

During the course of the year Bureau personnel assisted 93 communities in the removal of 1760 Dutch Elm diseased trees. They assisted 76 communities in the sampling of elm trees suspected of having the disease, reaching a total of 1461 trees sampled. A total of 1743 man days were spent by Bureau personnel in this assistance work.

This remains a very important program despite the annual losses. The American elm is still the dominant tree in many communities and will remain so where concern for the tree results in an effort to promptly remove and destroy the diseased trees.

Therapeutic injections of certain fungicides are becoming more and more popular in the fight to save the elms. This is the method in which a liquid fungicide is forced into the tree either by pressure or gravity. Results have been mixed. Recent study shows that injection into the roots is a much better means of getting the material to that part of the tree where it will do the most good than injection through the trunk.

Gypsy Moth

The annual aerial survey conducted in July of 1977 indicated a total of 133,234 acres of visible defoliation as a result of feeding by the gypsy moth. (See accompanying map). This was an increase of 101,514 acres over that recorded in the 1976 survey. The major portion of this gypsy moth activity was in Bristol and Norfolk Counties. The problem was compounded by the fact that much of this area is highly residential.

Although gypsy moth has the potential to cause damage in the forest the biggest outcry comes from its close proximity to homes, camp grounds, and recreation areas. In an area where oak is the predominant species and the gypsy moth is in an outbreak condition the size and number of caterpillars becomes overwhelming. The demand for something to be done soon reaches local officials. They in turn look to the Bureau for technical assistance and advice. Included in this report is the Bureau gypsy moth policy for 1978. As has been the practice, Bureau personnel upon request made determinations as to the potential gypsy moth problem facing various communities. Having determined this the next step involves decision making at the local level concerning such things as - Should there be a control program? What areas in the community should be sprayed? What insecticide should be used?

In the Bristol-Norfolk County area there were 23 communities infested with gypsy moth. Of these 23 communities, officials in 14 were contemplating aerial control projects. It was suggested by the Bureau that the communities participate in a cooperative project. The reasons for this include better timing of the application, one contractor responsible thus eliminating chance of overlap, and the maintaining of proper dosage throughout the project.

For one reason or another only six communities finally participated in the cooperative program. These included Attleboro, No. Attleboro, Easton, Medfield, Plainville, and Wrentham for a total of 15,070 acres. The material used was Sevin 4 Oil at the rate of one pound of active ingredient in one quart per acre. The cost was $3.32 per acre. Walpole chose to use Bacillus thuringiensis which required two applications at a total cost of $13.70 per acre. A total of 480 acres were treated.

Parasite release work continued in Fiscal 1978. Details on this are included in the following report submitted by Doug Trefry who has been assigned, among other things, the survey and detection aspects of the annual work of the Bureau.

REPORTS FROM THE DISTRICTS

District #1, Plymouth, Barnstable, Dukes & Nantucket Counties

Brown Tail Moth

Nests found in Dennis, Quite heavy in Provincetown, Truro and the National Seashore Park.

Fall Webworm

Noted over the entire district. Heaviest in Plymouth County.

Pine Looper

Spotted on Marthas Vineyard during the aerial survey. Ground survey at a later date confirmed the sighting.

American Dog Tick

Very heavy this year over the entire district.

Nantucket Pine Tip Moth

This has progressed off the Cape this past year. Last year it was spotty over the Cape but generally down from previous years.

Fall Cankerworm

A problem last year in the town of Scituate and Hanover this year is very light. Apparently parasites and/or disease caused a collapse of the outbreak.

District #2, Bristol and Norfolk Counties

Eastern Tent Caterpillar

Almost anywhere that wild cherry grows one could find this roadside pest.

Elm Span Worm

This insect is being found in considerable numbers throughout the district.

District #3, Essex County

Hemlock Looper

The outbreak evident for the past few years in the area of Beverly, Manchester, Gloucester and Essex now appears to be on the decline.

Fall Webworm and Eastern Tent Caterpillar

Both of these roadside and ornamental pests were heavy this year throughout this district.

Oak Leaf Skeletonizer

This insect is down in population from what it has been in the past.

District #4, Middlesex County

Fall Webworm

This insect does not seem as heavy in this district as it has in the past few years.

Forest Tent Caterpillar

This cyclic insect appears to be on the increase in the Weston-Wayland area.

District #5, Southern Worcester County

Fall Webworm

Still remaining medium to heavy throughout this district.

Japanese Beetles

Heavy populations in this district creating an unforseen problem. The adult beetles seem to have an affinity for swimming pools resulting in clogged filters.

American Dog Tick

Very severe population in the towns of Dudley, Webster and Southbridge.

District #6 - 6A, Northern Worcester County and Franklin County

Forest Tent Caterpillar

This insect was building in population during this year. The larval stage was found in most of the forested area in this district.

Fall Webworm

Very heavy in certain areas in the district. The city of Gardner sprayed the pest with Bacillus thuringiensis with very good results.

Maple Decline

Many communities continue to lose their maples to this, as yet, undetermined cause.

District #7, Hamden and Hampshire Counties

Pine Spittle Bug

Noted throughout the district. Does not seem to be permanently damaging the pines.

Forest Tent Caterpillar

This insect appears to be on the rise this year. Many caterpillars were noted in the woods.

District #8, Berkshire County

Eastern Tent Caterpillar

The towns of Cheshire , North Adams, Tyringham and Otis had unusually widespread infestations of this roadside pest which limits its activity to wild cherry.

Scleroderris Canker

This disease of conifers is being included in this report due to its serious potential. A virulent strain has been discovered in New York as well as in Vermont. Red and Scotch Pine seem to be most susceptible. It has not reached Massachusetts. In an effort to be prepared, however, Charles Burnham was sent to a training session last summer in New York in order to become acquainted with the symptoms and to train others in the Bureau.

State Park Assistance

A total of 776 man days were given by the Bureau in an effort to assist the Regionals with certain problems that Bureau personnel with special talent and equipment could handle. Forty one parks were assisted during this fiscal year and the assistance took many forms.

Tree pruning and the removal of dangerous trees accounted for much of the time devoted to recreation areas. Storm damaged trees were particularly abundant this year across the State. Some of the areas were hit so badly that the scheduled opening of certain camping and picnicking areas would have had to have been delayed had not Bureau equipment and manpower been utilized.

Some of the other special projects included such things as dam repair, moving large timbers from Lowell Heritage State Park, cutting and loading Christmas trees for the Statehouse and moving large steel control gates. Bureau personnel also assisted in the moving of old bleachers and the placement of new ones, the moving of artifacts at Moore State Park, transporting a large tumbler to Moore State Park, line clearance, and hornet control.

It has been the policy of the Bureau to also assist other State agencies when difficult tree removal situations present themselves. Twelve State hospitals and State schools were aided in the removal of Dutch elm diseased trees during the course of the year.

Bureau personnel attended various professional meetings during the year. Included among these meetings and conferences were the Annual Tree Wardens and Foresters Association Meeting, the Annual Tree Wardens, Arborists, and Utilities Conference, the Northeastern Forest Pest Council, both summer and winter meetings, monthly meetings of the regional Tree Wardens and Foresters Association and various meetings with U.S. Forest personnel in Portsmouth, NH and Hampden, CT. Two members of the Bureau attended the Annual Gypsy Moth Review Meeting in Cherry Hill, NJ.

Bureau personnel assisted in the Arbor Day festivities and tree planting at Lowell Heritage State Park. Five hundred seedling black walnuts were distributed to fourth and fifth grade school children.