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State of Rhode Island and Providence Plantations

PRESENT STATUS OF THE GIPSY MOTH IN RHODE ISLAND

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Entomological Department, R. I. State Board of Agriculture



Fig. 1.—Spraying Large Trees on Mendon Road, Cumberland, June 23, 1919

ISSUED BY
R. I. STATE BOARD OF AGRICULTURE
JOHN J. DUNN, Secretary

PRESENT STATUS OF GIPSY MOTH IN RHODE ISLAND.*

HARRY HOROVITZ.

Introductory.

It is now about twenty years since the Gipsy Moth was first discovered in Rhode Island and about thirty-two years since it became numerous enough at its original place of infestation in Massachusetts to attract public attention by its depredations.

Since its discovery in this country millions of dollars have been spent, first in an attempt to exterminate the pest and later in an effort to prevent damage from it so far as possible. Rhode Island has spent comparatively less than any other section of the country similar in size, owing partly to favorable location with regard to wind spread, and consequently slower spread and partly because we have had no radical change in policies pursued and only one year's let up on the work since it began in 1906. Many towns in Massachusetts, for instance, have spent more money per annum in combating the insect than has been spent by the entire State of Rhode Island.

*NOTE: This bulletin has been prepared in order to present to the people of Rhode Island a very brief summary of the present Gipsy Moth situation in the State. No attempt has been made to furnish a description of the Gipsy Moth or information regarding its life history. Neither has any data been given on the progress of work being done to suppress the pest in other states. To those who wish to learn more of this insect we would refer to the earlier reports of this department, especially those of 1906, 1907, and 1908, and to the bulletins of the Bureau of Entomology, U. S. Department of Agriculture.

The pictures used in making cuts for this bulletin were taken by Mr. R. A. Sheals, Superintendent, Pine Blister Rust Work.

A. E. STENE,
State Entomologist

PRESENT DISTRIBUTION OF GYPSY MOTH IN RHODE ISLAND.

In no state has there been sufficient money appropriated to exterminate the pest. The nearest approach to such a purpose was achieved by Massachusetts during its first Gipsy Moth campaign

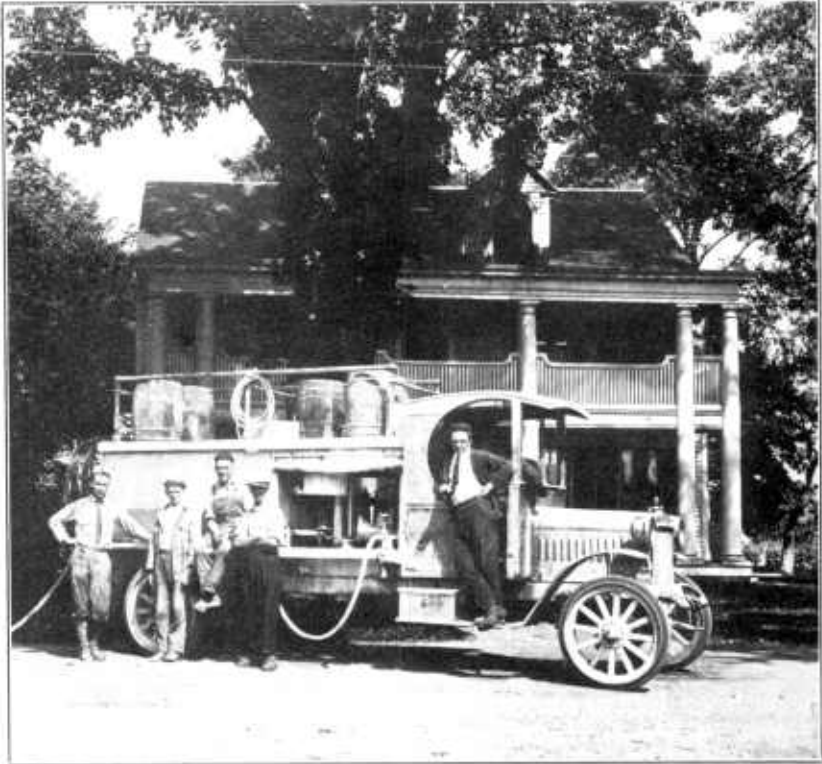


FIG. 3.—High Power Truck Sprayer, Purchased 1919.

when the insect had been reduced to such small numbers that the Board of Agriculture could not convince the legislature that it was necessary to continue the work. The result has been that while in our own state, for instance, there has seldom been enough of the insect in any one place to cause defoliation, it has nevertheless been impossible to wholly prevent spread from infested places both in and

out of the state particularly by the wind and perhaps also on vehicles and through the transportation of wood and lumber. Rhode Island is, therefore, now completely infested, and the insect is found in every town in the state. In all cases, however, except in the town of Cumberland it has been possible to suppress the insect sufficiently so that no damage has been done and so that scarcely any defoliation has resulted.

In this last mentioned town we now have in the woodlands of the northeastern corner sufficiently heavy infestation so that extensive defoliation has occurred. In a few other places in this town and in Lincoln there are vigorous colonies which are now receiving attention from the Gipsy Moth workers of the State Board of Agriculture.

METHOD OF CONTROL AND DIFFICULTIES ENCOUNTERED.

At the beginning of our Gipsy Moth work when extermination of the insect was hoped for, several methods of destroying it were pursued. For the purpose of suppression, which is now the only practical plan, these have been reduced to two, namely spraying for the caterpillars in the summer and creosoting the egg clusters in the winter. It should be remembered in this connection that the cost of the work increases rapidly with the thoroughness with which it is conducted. The heavy expense of burlapping and other costly methods for getting the last caterpillar in every locality was justifiable so long as we were attempting to exterminate the insect. Inasmuch, however, as an exterminative policy is no longer regarded as feasible we are now relying only on the methods which have been found most economical in preventing damage and spread so far as possible.

In settled places where trees are comparatively few in number and used largely for shade or ornamental planting and where they can be readily gotten at with our sprayers the methods now used will absolutely prevent any damage from the insect. In woodlands, however, where trees are abundant and especially in places difficult

of access with the heavy spray apparatus required, even the work of suppression becomes very expensive and sometimes almost impossible.



FIG. 4.—Creosoting Egg Clusters of Gypsy Moth, on Large Trees, Lonsdale, R. I.

This condition prevails in the town of Cumberland at the present time and it presents a case where we must allow some defoliation to take place or else expend much larger sums of money than are now

available or even justifiable considering the value of the land and of the forest crop. The chief objection to a reduction of work in such cases is that such woodlands become centers of spread and the tendency to spread increases in proportion as the available food decreases with the increase of the insect.



FIG. 5.—Defoliated Woodland, Pawtucket Water Works, Cumberland, R. I., June 23, 1919.

Another problem which we meet with is the getting and holding of reliable men. The wages which the Board has felt justified in paying have not been any higher than in other lines of manual labor. The work requires considerable skill and above all absolute faithfulness and honesty; it is necessary to work at times in inclement weather and the creosoting work which requires climbing of trees is always hard and at times dangerous. The nature of our work also prevents economic utilization of the men throughout the year so that we have

to lay them off from two to four months a year. The result is that we frequently lose some of our best men because they find work with better pay or more continuous employment.

Ever since the hope of extermination was given up, the Bureau of Entomology, U. S. Department of Agriculture, has been at work in an attempt to introduce predaceous and parasitic enemies of the Gipsy Moth, also to encourage the development of certain diseases. Excellent progress has been made, but the work has not yet reached a point where these insect and disease checks will control the pest. It took nearly twenty years for the Gipsy Moth to become acclimated and to firmly establish itself and it may take quite a while to thoroughly establish its enemies. In any case it is safe to assume that even though these checks may develop into full efficiency they will hardly be able to control the insect any better than they do in its native country or than similar enemies control our native injurious insects, such as the Apple Tent Caterpillar, Fall Web Worm, and the Army Worm.

For a few years to come, therefore, we must still depend on control and suppression by artificial methods, and even when natural checks have been established we will probably have to depend on artificial measures to a greater extent than with any of our native insects because of the fact that the Gipsy Moth is more omniverous in its habits and, therefore, less likely to be weakened by lack of food material.

It is also probable that experience in the control of insect pests will establish to a greater degree than is now recognized that injurious insects of general distribution and feeding habits which enables them to live on almost all kinds of trees and shrubs can be most economically controlled through the work of men definitely trained for the purpose and under state direction. Leaving such work wholly to private initiative or even to local public control is likely to result here, as in other states, in effective work in some places and neglect in others. This, of course, is a very undesirable situation because the good work in one town for instance will be quickly offset by the spread of the pest from neighboring neglected territories.