Reviews

Third Annual Report of the Superintendent for Suppressing the Gipsy and Brown-tail Moths, by A. H. KIRKLAND, January, 1908, p. 1-228.

This report is a State document of more than ordinary interest, since it deals with two insect pests of national importance. The local authorities have concentrated their efforts upon keeping the insects in control in the residential sections, while agents of the Federal Bureau of Entomology have given special attention to trees along some 8,000 miles of streets and those overhanging railroads and other lines of travel. The special purpose of this latter line of work is to prevent further spread by means of automobiles. Mr. Kirkland reports a most hearty coöperation as a whole on the part of local officials and citizens. A feature of special interest to entomologists is the condensed data respecting the cost of spraying operations under varying conditions, together with observations upon the adaptability of various forms of spray outfits. The cost of application ranged from \$36.25 per acre or approximately 76.3 cents per tree in a woodland consisting of pine and hard wood ranging from 30 to 50 feet in height, and where it was necessary to climb 80% of the trees, down to \$2.46 per acre or 3 cents per tree in a woodland along a roadside, with the trees ranging from 20 to 60 feet in height. The first treatment was under adverse conditions, while in the second instance there were comparatively few hindrances. Obviously it will be necessary to continue extensive sprayings for several years at least, and an investigation of the best and most efficient methods is of utmost importance, particularly in woodlands. The report shows that woodlands present a serious problem owing to their low valuation and to the difficulties incidental to treatment. The desirability of more economical methods of fighting the pests in such situations is obvious to all familiar with the conditions. Some interesting data is given concerning the effect of spraying upon bird life, and also the danger to stock where large amounts of poison are applied, particularly with a coarse spray. The ability of the young gipsy moth caterpillars to live upon white pine has been the subject of careful investigations and the indications are that in woodlands where there is a considerable proportion of pine, important modifications in methods may be introduced and the insect controlled with a resultant large saving in the cost of control.

The importation of parasites has been vigorously pushed and a larger number and greater variety obtained than in any preceding year. Large numbers of parasitized individuals of both the gipsy moth and the brown-tail moth were received, the parasites reared and liberated under favorable conditions. This phase of the work has been aptly characterized by Mr. Lounsbury of South Africa as more important than any other feature. Fourteen species of Hymenoptera and twenty-four species of Diptera were bred from the material, several species being liberated in large numbers and some passing the winter of 1906-'07 in safety. Four species of predaceous beetles, two of *Calosoma* and two of *Carabus*, have been imported and one at least of the former has wintered in safety.

The most interesting portion of the report to American Entomologists is that part giving the conclusions of various specialists invited to inspect the

work of importing parasites. Representative entomologists, not only from America but from Europe, South Africa and even Australia, personally investigated the methods employed and all unanimously agreed in commending the work in all its phases most highly. There is, in all the reports, unqualified endorsement of the Superintendent for placing the execution of this work in the hands of Dr. L. O. Howard, Chief of the Bureau of Entomology. Furthermore, several have taken the pains to look into the proposition made several years ago by certain Western parties, and have unhesitatingly given a decision in favor of the work being conducted by the party now charged with its execution. Certain suggestions were made by various entomologists, such as further investigation of fungous diseases, the importance of the biological study of the various parasites, and in particular, the advisability of securing certain parasitic enemies of the gipsy moth known to exist in Japan. It is gratifying to state that the wisdom of most of these suggestions had been previously recognized and that steps have already been taken for the carrying out of some. This investigation by independent entomologists from widely separated localities should settle for all time any hostile criticism of the methods now employed. Ample funds should be made available for the work with parasites, because if it is worth doing at all it is worth doing thoroughly. No stone should be left unturned in the search for efficient enemies of these two destructive insects.

The report as a whole is most commendable, presenting a maximum of information in a minimum of space, and in a most accessible form. There seems to be but one omission, namely, some statement as to the territory now occupied by the brown-tail moth.

E. P. F.

Seventh Report of the State Entomologist, by W. E. BRITTON. Report of the Connecticut Agricultural Experiment Station, 1907, Part 5, p. 265-338.

This report contains several valuable contributions. One on various gases for fumigating nursery trees, a summary of which was given before the Chicago meeting of the Economic Entomologists and is published on p. 110-12. The results of experiments with different brands of soluble or miscible oils are given, showing an efficiency varying from 95.7 to 100 per cent. There is a detailed, well illustrated account of the new peach sawfly, *Pamphilius persicum* MacG., an insect which may prove of considerable economic importance. The work of exterminating a small colony of gipsy moths is described in detail. Indications are that it will be successfully accomplished within the next two or three years. The recent enactment concerning this pest is also included. Chemical analyses of lead arsenate and Paris green, previously published as a bulletin, form a part of the report. Observations are also given on a number of species injurious during the year.

E. P. F.

The So-Called Grain Bug and Other Grain Aphids in Minnesota in 1907, by F. L. WASHBURN. Special Report of the State Entomologist of Minnesota, March, 1908, p. 1-21.

This special report gives a summarized account of the grain aphid, *Toxoptera graminum*. The differences between the various species are well brought

out by illustration as well as description. The author is to be congratulated upon having produced a most admirable account of this insect and its allies, the typography and illustrations being most excellent.

E. P. F.

Gipsy and Brown-tail Moths, by E. DWIGHT SANDERSON, N. H. Agricultural Experiment Station, Bull. 136, 1908, p. 93-156.

This bulletin gives the distribution of both species in New Hampshire. The gipsy moth occupies the southeastern corner of the State, while the brown-tail moth may be found over most of the southern third, having greatly extended its range. Excellent general accounts, with a number of original illustrations, are given of both species, together with the recently enacted law.

E. P. F.

Current Notes

Conducted by the Associate Editor

Mr. Z. P. Metcalf, Assistant Entomologist to the Michigan Agricultural Experiment Station, has been appointed Assistant Entomologist to the North Carolina State Board of Agriculture, and will enter upon his new duties June 20.

Mr. S. C. Clapp has been appointed Inspector of Nurseries and Orchards for the Division of Entomology of the North Carolina Department of Agriculture, to succeed Mr. L. M. Smith, resigned. Mr. Clapp is a native of North Carolina and has had considerable experience in general nursery and insecticide work.

Mr. Ed. Kinney has begun work as Assistant in Entomology and Botany at the Kentucky Agricultural Experiment Station. Mr. Kinney has been a student at the Ohio State University and will take the degree of Bachelor of Scientific Agriculture at the end of the present year.

Mr. C. F. Jackson, A. M., Assistant in Zoölogy and Entomology at the Ohio State University, has been elected Assistant to the Entomologist in the New Hampshire Agricultural Experiment Station.

Mr. N. E. Shaw, a graduate of the Ohio State University, who has previously been employed as an Assistant Inspector by the Ohio State Board of Agriculture, was elected Chief of the Division of Nursery and Orchard Inspection, and assumed his duties April 1. Mr. W. E. Evans, a graduate of the same institution, has been retained as first Assistant Inspector.

Mr. J. B. Parker, A. M., Ohio State University, has been elected Assistant Entomologist in the Kansas Agricultural Experiment Station, and took up the work May 1.

The summer session of the Lake Laboratory of the Ohio State Uni-

Felt, Ephraim Porter. 1908. "Reviews." *Journal of economic entomology* 1(3), 229–231. <https://doi.org/10.1093/jee/1.3.229>.

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