

There is no possibility of the scale spreading until some time after the 1st of June. The young begin to appear in the vicinity of Washington, D.C., June 10 to 15 [in 1900 young were seen by the writer crawling June 3 near Washington], and the insect continues to breed until very cold weather. We have seen young, just born, on trees as late as December 19. When a twig is cut off between, say, December 20 and May 15, there is no possible danger of the scale spreading from it. It is not possible to transfer one of these insects from one twig to another after it is "set" and formed a scale over its back, and all of them die as soon as the sap is dried out of a cut twig or branch. Badly infested trees of no commercial value should be cut down as soon as possible, before the buds open, and the brush piled. Do not leave the stump standing, as it may prove a veritable breeding place during the summer. If you are so unfortunate as to have this scale, remember that eternal vigilance must be the order of the day, and you will find before you are through with it that it is no trifling matter.

The orchard in question was not destroyed by burning, as first suggested, but the trees were pruned and the cuttings saved. In May, 1900, the writer had a large quantity of the branches from this orchard carefully packed and sent to Mr. W. W. Cobey, Grayson, Charles County; to Capt. R. S. Emory, Chestertown, Kent County, and to Hon. Charles G. Biggs, Sharpsburg, Washington County. Instructions were sent to place the infested branches in grape baskets and hang them about the orchard where the scale was most abundant. In this manner we will establish *Aphelinus fuscipennis* in the various counties and under different conditions. We have every reason to believe that the experiment will prove successful.

In this case the study of parasitism has given us a valuable suggestion for the treatment of scale infested orchards, namely, never burn a twig or tree cut late in the fall, winter, or early spring. A positive remedy one day may be wrong the next day, just as we are able to unravel nature's secrets and interpret them for our own good.

Since the above was read the writer has tested a lot of twigs from the Charles County orchard and has bred numerous specimens of *A. fuscipennis*, thus proving that a parasite is thoroughly established there.

Mr. A. H. Kirkland read a paper on "the Brown-tail Moth in Massachusetts," in which he gave an account of the natural spread of this injurious insect throughout the State. The infested area in 1896 was only 29 square miles; in 1899 this had increased to 928 square miles.

The next paper was by Mr. C. P. Gillette, who gave a series of interesting notes on some of the most important insects of Colorado. Mr. Johnson followed with "Notes on insects of economic importance in Maryland during 1900," and Prof. Webster with an account of the "Insects of the year in Ohio." Foremost among these he placed the Hessian fly, regarding which he said: "In point of destruction the Hessian fly outranks every other insect, when considered in connection with the wheat crop of 1900. It is doubtful if there will be over 20 per cent of an average crop in Ohio; the remaining 80 per cent may be largely charged up to the ravages of this pest. As an average crop in Ohio amounts to, approximately, 40,000,000 bushels, the loss may be computed at 32,000,000 bushels, which at the ruling market price would mean a loss of \$22,400,000, at least three-fourths of which, or \$16,800,000 can be justly charged up to the ravages of the Hessian fly. More extended studies of this outbreak and some of the meteorological phenomena connected therewith are given in another paper. The unprecedented abundance of the pest this year may be attributed largely to the almost total lack of parasites, the retardation of the fall brood over the northern half of the State, and the extremely favorable weather during the autumn of 1899, which enabled all but the very latest deposited eggs to hatch and the larvae develop to the "flaxseeds" and thereby defy the adverse influences of winter. In many localities the later sown wheat escaped fall attack and up to May 1, 1900, was uninjured, but the flies developing in the earlier sown fields seemed to have migrated *en masse* and settled down on those sown later, and the result is that in many cases the destruction is as complete in the one as in the other."

Mr. Woodworth gave a short account of the Entomological situation in the State of California, referring especially to Scale insects, the Colling moth, peach and grape insects. The last paper read was by Dr. Fletcher of Ottawa, who gave an account of the most noticeable insect attacks of the year in Canada, mentioning those affecting fruit trees, roots and vegetables, cereals, fodder-plants, and trees and shrubs.

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