

NOXIOUS INSECTS IN ENGLAND AND CANADA.

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In our last year's Report on Insects, I gave some extracts from Miss E. A. Ormerod's "Notes of Observations of Injurious Insects" in England during the preceding three years, noticing especially those that are familiar to us on this side of the Atlantic. Since the publication of our Report, Miss Ormerod (whose personal acquaintance I had the pleasure of making last summer) has issued her series of "Notes" for 1880, and has published an admirable "Manual of Injurious Insects and Methods of Prevention" illustrated volume of nearly 400 pages—that must prove of immense practical value to the farmers and gardeners of Great Britain. I have also recently received from her a copy of a Lecture on Injurious Insects, that she delivered in October last before the professors and students of the Royal Agricultural College at Cirencester. From all these materials supplied by our indefatigable and talented authoress, I propose to give this year an account of some of the most important of the insect enemies that trouble the fruit-growers alike in England and in this country, from which I hope that some useful lessons may be derived for our information and guidance here. Several of the woodcuts with which this paper is illustrated are reproductions of Miss Ormerod's own drawings in her "Manual of Injurious Insects."

1.—THE WOOLLY APHIS OF THE APPLE.

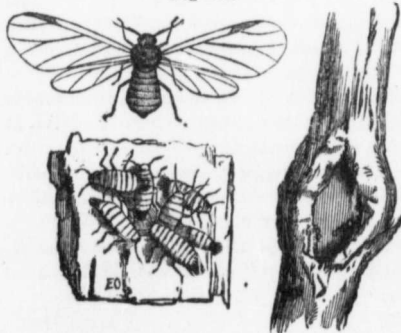
This insect is familiarly known in England by the name of the "American Blight," because it is believed to have been introduced from this continent in the year 1787. Much doubt has been expressed regarding the correctness of this opinion, and for a long time most of our entomologists considered that the European insect was quite a distinct species from the American, and accordingly described the latter under a separate name. The European insect was called *Eriosoma lanigera*, Hausm., and the American, *Eriosoma pyri*, Fitch; now it is agreed on almost all sides that the two insects are identical, though their habits differ very much, and that they should both be known as the Woolly Aphis of the Apple—*Schizoneura lanigera*, Hausm.

In England this creature attacks the branches and twigs of the apple tree, and may be at once "detected by the woolly or cottony growth on the insects, giving the appearance

of a white film growing at the bottom of the crevices where a few of them are lurking. Where there are many, the spot appears as if a knot of cotton-wool was sticking to the bough, or even hanging down in pieces several inches in length, ready to be wafted by the first gust of wind, with all the insects in it, to a neighbouring bough."

"The 'Blight' is chiefly to be found in neglected apple orchards. Its headquarters are in crevices in the bark, or in hollows where young bark is pressing forward over the surface where a bough has been cut off, or broken by accident so as to leave a shelter of the old dead bark outside; it may, however, be found on almost every part of the tree into which the Aphis can pierce with its sucker; and the harm caused by the attack is not only from the quantity of sap drawn away from the bark or young shoots, but also from the diseased growth which is thus set up. The bark is at first not much affected by the punctures, but the woody layers beneath become soft, pulpy and swollen. The cells and fibres divide and subdivide, and the bark splits open over the swelling, showing the tissue beneath, which is thus exposed for a fresh attack.

Fig. 42.



Winged Woolly Aphis, magnified; larvæ much magnified. Apple twig, with the same larvæ nat. size at the lower part of the infested spot.

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