

Kerosene Emulsions (as described at page 19). During the winter the trees should be examined and the scales scraped off as far as possible. Small trees may also then be sponged with the Kerosene Emulsion preparatory to spraying them at the time the young lice appear. In Saunders's "Insects Injurious to Fruits," syringing with a solution of washing-soda in water is recommended, to be applied about the time the young lice leave the scale. "This solution is made by dissolving half a pound or more of soda in a pailful of water. Painting the branches and twigs with linseed oil, has also been found successful. As a precautionary measure, every young tree should be carefully examined before being planted, and if found infested, should be thoroughly cleaned."

An interesting observation was made at New Westminster, B.C. Mr. A. J. Hill, who has kindly assisted me in collecting and giving information concerning injurious insects in his neighborhood, sent me in April last, twigs of apple trees handed in by Mr. C. G. Major, of New Westminster, which were thickly covered with this insect. Noticing an old scale of the year previous had been perforated by a parasite, I placed the twigs in a glass jar, and soon after had the great pleasure of finding large numbers of the beautiful little Chalcid (*Aphelinus mytilaspidis*, LeBaron).

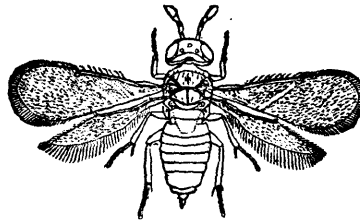


Fig. 12.

This is a minute yellow fly, which is parasitic upon the scale insect, and has in some instances largely reduced its numbers. It is shown greatly enlarged at Fig. 12.

Pear-blight Beetle, "Shot-borer," "Pin-borer" (*Xyleborus dispar*, Fab.)

(*Xyleborus pyri*, Peck, of American authors.)



Fig. 13.

*Attack.*—A small, blackish beetle boring into trunks and limbs of apple trees. In the latter case generally entering at a bud and boring right round the stem in the wood near the bark, then inside this another burrow is run, after which a short perpendicular shaft is frequently sunk. Sometimes the first burrow runs in for a short distance, and then branches irregularly in different directions.

Fig. 13 shows the female of this beetle enlarged and of the natural size.

During the last three or four years frequent complaints have been received from the Annapolis Valley, in Nova Scotia, of the depredations of a small borer which was attacking the apple trees. This, from the size of the holes whence the mature beetles have emerged, has locally been described as the "pin-borer," or "shot-borer." During the past summer, owing to the kindness of Mr. T. E. Smith, of the Nova Scotia nurseries, Cornwallis, N.S., I have been supplied with a good series of the perfect beetles, as well as much useful information concerning this and many other injurious insects. I find that the culprit is the above named insect, which is a small dark brown beetle, not more than  $\frac{1}{2}$  of an inch in length, with legs and antennæ of a much lighter colour, and having the eggs deposited early in June, as I have seen

Mr. Smith says: "I think the eggs are deposited early in June, as I have seen in the same burrows, eggs, larvæ in all sizes, and the beetle. The eggs and larvæ are white. I have seen the beetles fly from tree to tree in June, and I think they only attack diseased trees. I have not tried the soap wash recommended. I have