

prepupal and pupal periods under ground, changing to adults late in the autumn and emerging early the following spring.

Although most destructive to pears, plums and prunes, the pear thrips readily attacks other fruit trees such as apples and cherries, besides many other trees and shrubs, the broad-leaved maple being one of the worst sufferers of all. It is not a native insect and is as yet unknown in Canada outside of Vancouver Island, though it has been reported from several localities in both Eastern and Western United States as well as from Europe.

The question of controlling this pest is thoroughly considered, and the authors state confidently that it can be readily held in check. Spraying is the only satisfactory method and may be applied twice or three times, according to the severity of the infestation, two sprayings in either case being made before blossoming, as treatment against the adults is more important than that directed against the larvæ. Miscible oil No. 2 in combination with nicotine sulphate gave best results for the first spray, while whale oil soap also with nicotine sulphate is most suitable and economical for the second and third sprays.

The bulletin is admirably illustrated with photographs and drawings by Dr. Cameron.

*Life-history of the Leaf-eating Crane-fly, *Cylindrotoma splendens* Doane.* By Alfred E. Cameron, M.A., D. Sc., F.E.S., Ann. Ent. Soc. Am., XI, No. 1, 1918, pp. 67-87, 18 figs.

This is an important contribution to the biology of crane-flies, as the species described is a member of a particularly interesting and isolated tribe of Tipulidæ, the Cylindrotomini, the known larvæ of which live exposed upon the leaves of various terrestrial and aquatic plants, instead of living in the mud of streams or in rotten wood as is the case with most of the family.

The discovery by Dr. Cameron of the larvæ of this species feeding on the leaves of the false bugbane (*Trautvetteria grandis*) on Vancouver Island is the first finding of the immature stages of *Cylindrotoma* in America, the only other nearctic species of the tribe, whose larva is known, being *Liogma nodicornis*. The other four species with known larvæ are all palæarctic and belong to as many genera, one of which is also a *Cylindrotoma*.