myself, and because Mr. Chambers informed me that he should not himself publish them. In all other points Mr. Chambers agrees to the value and unquestionable authority of Lord Walsingham's determinations.

In the choice of specific names, it will be observed that his Lordship does not restrict himself to the termination *ella*, as witness his *Cressoni*, *simulatus*, *inornata*, *inscripta*, etc. While it is a great convenience, to the tyro especially, to have a conventional termination for the specific names of all species constituting a certain family, such as *ella* for the Tineids, *ana* for Tortricids, and *alis* for Pyralids, there is no doubt that strict adherence to such a rule sometimes puts the author to inconvenience, and often necessitates more than a "poet's license" with grammatical rules.

In a future paper I shall have occasion to refer to a few of Lord Walsingham's new species in connection with their life histories.

ENTOMOLOGY FOR BEGINNERS.

BY THE EDITOR.

THE APPLE-TREE APHIS—Aphis mali? Fabr.

This species of Aphis is very common throughout the Northern United States and Canada, and has of late appeared in such numbers in some localities as to excite much alarm among fruit growers. The eggs are deposited by the parent lice in the autumn, about the base of the buds of the apple tree, and in crevices of the bark on the twigs. When first laid they are light yellow or green, but gradually become darker in color and finally black. During the winter these tiny, oval, shining black eggs may be found with the aid of a magnifying glass on almost every apple tree.

As soon as the buds begin to expand in the spring, small lice are hatched from these eggs, which locate themselves on the swelling buds and young tender leaves, and inserting their sharp beaks into the tissues, feed on the sap they contain. The lice vary in color from green to dark greenish-brown, the darker color prevailing at first, the lighter color in a few days afterwards. When they are abundant, the buds—especially the blossom buds—are sometimes thickly covered with them, yet it is seldom that any serious injury results from their attack. The growth at this

https://doi.org/10.4039/Ent1596-5 Published online by Cambridge University Press

period of the year is so rapid, and the sap circulates through the branches in such abundance, that the comparatively small quantity consumed by these plant lice seems scarcely to be missed. In a few days the young leaves expand, when the insects are distributed over the foliage, and usually attract no further notice.

All the lice hatched in the spring are females, and they reach maturity in ten or twelve days, when they commence to give birth to living young, producing about two each every day for two or three weeks, after which the older ones die. The young locate about their parents and mature in ten or twelve days, when they also become mothers as prolific as their predecessors. As the season advances some of the females acquire wings, by means of which they fly to other trees, where they found new colonies. In figure 5 both winged and wingless specimens are shown much magnified. Late in the autumn males, as well as females, are produced, and the work of the year closes with the deposit of eggs as already described. Were it not for the activity of Lady-birds and other useful predaceous insects, which appear early upon the scene and devour multitudes of these lice, they would soon swarm on every leaf of our apple trees and become a source of serious trouble.

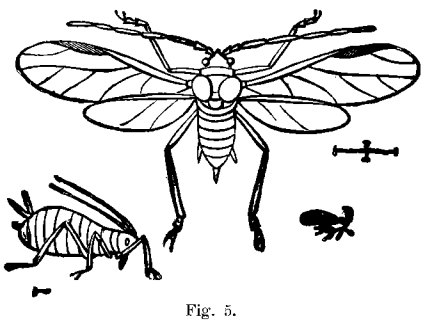

Fig. 5.

NOTES ON THE EARLY STAGES OF CALOPTERON RETICULATUM, FABR.

BY D. W. COQUILLETT, WOODSTOCK, ILL.

On the 10th of July I found a pupa of this species suspended by the hind end of its body beneath a log. The larval skin was rent and worked backward, but still retained nearly its original shape and color, and by comparing it with certain larvæ which I have frequently met with in similar situations, there is no doubt in my mind but that these latter belong to the above species.

These larvæ very closely resemble that figured by Packard on page 465 of his "Guide" (fig. 432), which in the text on the succeeding page is referred to *Photuris*. The dried specimens now before me measure

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