AN IMPORTED RED SPIDER ATTACKING FRUIT TREES.

BY L. CAESAR, PROVINCIAL ENTOMOLOGIST, GUELPH, ONT.

For some time the writer had suspected that the Red Spider so common on fruit trees in Ontario was not our common species, *Tetranychus bimaculatus*. Accordingly specimens were sent in September, 1912, to Mr. Nathan Banks of the Bureau of Entomology, Washington, D. C., with some details as to the extent of its distribution and the food plants attacked. In reply Mr. Banks stated that the species was *Tetranychus pilosus*, an European species that attacks fruit trees, and that its relationship to *Tetranychus mytilaspidis*, which feeds chiefly on oranges, was very close and, perhaps, identical.

Tetranychus pilosus is about the same size as *bimaculatus*, but differs from it in several respects:—It is more nearly circular in outline, somewhat stouter and has a number of distinct white tubercles on the dorsal surface, with a fine hair arising from each. It is dark red in colour, many specimens being blackish, with the mouth parts and usually a dorsal longitudinal area much paler than the rest of the upper surface, whereas the colour of *T. bimaculatus* varies from greenish yellow to red. The latter species feeds largely on the lower surface beneath a fine silken web, in or under the protection of which it lays its eggs; the former feeds and lays its eggs on both

Fig. 5.—*Tetranychus pilosus*, adult female, greatly enlarged.
(Drawn by Miss M. Hearle.)

surfaces, and makes no web, but fastens its eggs by a few fine silken threads to the leaf or twig on which they are laid. The eggs are uniformly blood red, while those of *bimaculatus* are pearly white. *T. pilosus* passes the winter in the egg stage, these being deposited in the axils of the twigs and branches. *T. bimaculatus* passes the winter as adults in the ground or in sheltered hiding places.

February, 1915

The host plants of *T. pilosus* so far as observed are the European plum, apple, sour cherry, pear, peach and hawthorn. European plums are by far the favorites, with apples next and then sour cherries. Peaches and Japanese plums are very little infested. Hawthorns in a few apparently exceptional cases have been severely attacked.

Fig. 5. — *Tetranychus bimaculatus*, adult female, greatly enlarged.
(Drawn by Miss M. Hearle.)

The foliage of badly infested trees becomes covered with numerous fine, whitish blotches very noticeable on the upper surface. After a time such leaves become brownish and at a distance of a hundred yards or more the whole of the foliage has the appearance of being covered with fine road dust.

This hitherto unrecorded Red Spider has been found by the writer in most of the fruit districts of the Province. That it has not been mentioned earlier appears to have been due to its close resemblance to our common species, *Tetranychus bimaculatus*.

GEOMETRID NOTES.—REVISION OF THE GENUS HYDRIOMENA, HUB., GROUP WITH LONG PALPI.

BY L. W. SWETT, BOSTON, MASS.

(Continued from page 11.)

17. *Hydriomena bistrilata* Zell. (Verh. zool.—bot. Ges. Wien, XXII, p. 493, 1872; Packard, Monograph, p. 95, 1876, Pl. VIII, fig. 32). This species with long palpi was placed incorrectly as a variety of *H. californiata* with which it has nothing in common. The general ground colour is dark olive-green and white. It is quite a striking species, as the entire wing seems to be surrounded with olive green and has a white mesial space. It appears like a specimen of *autumnalis* with the entire wing suffused with dark olive-green and the white central portion contrasting

February, 1915