

the cocoons which he had watched under the microscope, together with a figure illustrating the way in which the longitudinal ribs are built up and strengthened little by little to support the transverse thread.

There are still some points of interest in connection with this little insect which require further study. I have found upon the leaves small mines which I presume were made by the caterpillars in their first stage, but I have not actually found the larve of *B. Canadensisella* in these mines, nor discovered the eggs. It is important to find out the usual location of the cocoons in which the insects pass the winter. *B. pomifoliella*, which is occasionally injurious to the foliage of apples trees, and was this year very abundant at St. Catharines, Ont., spins its elongated whitish cocoon on the twigs of apple trees.

In the autumn of 1889, I found large numbers of the cocoons of another species shaped somewhat like those of *B. Canadensisella*, but rather longer and pure white in colour. These were attached to dead grass leaves and the fruiting stems of a moss, under sugar maples. It seems possible that these may have fed upon the leaves of the trees and fallen to the ground when ready to spin. I hope next season to work out completely the life history of the Birch Bucculatrix. I append a description of *B. Canadensisella*.

Moth small, wings expanding  $\frac{3}{4}$  of an inch. General colour, bright brown, the wings crossed with silvery white bars, three of these run from the outer edge about half way across the wings obliquely towards the apex, and there are two shorter subtriangular blotches on the inner margin of each fore wing. These latter, when the wings are closed, form two white dorsal saddles, the anterior of which is slightly the larger, and is followed closely by a tuft of raised black scales. At the extremities of the fore-wings are also several raised black scales a few of which are separated into an apical spot by an irregular narrow white band. The cilia of the fringes are pale brown. Head white; frontal tuft dark brown in the centre; antennae brown, slender, about  $\frac{1}{2}$  inch long. Thorax brown with margins including the bases of the fore-wing, white. Leg and body pale fuscous silvery.

Fig. 14 showing the various stages of the Birch Bucculatrix has been kindly lent for use in this report by Prof. C. V. Riley, and was originally used to illustrate an article by Dr. A. S. Pockard, the most complete yet written on the species, which appeared in *Insect Life*, vol. V. p. 16.

## ON AN EGG PARASITE ON THE CURRANT SAW-FLY.

(*Trichogramma*, sp.)

Under the above title Professor Lintner published in his Second Report, 1885, an interesting account of a minute parasite which he had discovered in 1867 and again in 1882, attacking the eggs of the Imported Currant Saw-fly in the State of New-York. This injurious saw-fly, the larva of which is usually known to Canadian fruit-growers as the "Currant Worm," is a pest which demands constant attention throughout the summer, and although the ordinary applications of Paris Green early in the season and White Hellebore later on when the fruit is formed, are perfectly efficacious, cheap and simple; yet, there is hardly a district where plantations may not be found stripped of every leaf during some part of the season. It is not well enough appreciated by fruit-growers that if the leaves be stripped from a bush either by fungous or insect enemies, even after the crop is gathered, they suffer much loss thereby; for without leaves the bush cannot store up nourishment to support the crop of the next year, and although there might be abundance of flowers, the fruit will drop without maturing from bushes which were stripped the year before. In view of the above, the discovery and distribution of a parasite which would keep in check such a redoubtable enemy, becomes an important matter.

I was therefore very much pleased on the 10th of last June to find upon the leaves of a gooseberry bush in the garden of Mr. R. Montfort, at Galetta, near Arnprior, Ont., eggs of the Imported Currant Saw-fly, which showed evident signs of containing parasites. Instead of presenting the usual translucent white appearance, they were shining jet-black and showed the shape of the pupa of the parasite within.