

**VITULA SERRATILINEELLA Rag., A Honey Feeding Larva**

By J. Wm. Cockle, Kaslo, B. C.

Having set aside some frames of partially capped honey, I was much surprised when examining them in October to see that they were covered with what appeared at first sight as cobweb; on closer examination I discovered a lot of small whitish larvae secreted under the webs in the partially filled cells. Where the cell was empty the larva was to be seen coiled up in the bottom, but in case the larva was feeding on the honey it had spun a web about one and a half inches in diameter over the comb and either rested on the web or under it. Observation showed that the larva reached down through a hole in the web to feed, but did not remain in the cell until all the honey had been extracted. In a few instances when the larva had emptied the first cell it had pierced the wall of the adjoining cell, from which it continued feeding; this was the exception and not the rule; most of the larvae fed from the top.

On October 14th, finding that the number of larvae were decreasing and that there were no signs of any pupae, I removed the balance to a breeding jar, placing in it a little dry earth, a few dry leaves and a small block of comb honey.

When removing one of the larvae from which to make a description, I took it up on the point of the knife with which I had previously cut the honey. It crawled over the honey without the slightest trouble, the stickiness did not appear to inconvenience it at all or to interfere with its progress, but they prefer to travel upon the dry comb or upon the mat of silk with which they cover the comb surrounding the cell from which they are feeding and in which they leave a small hole over the cell through which they feed.

During the succeeding months the larvae spun tunnelled silk passages all round the jar, extending them both through the comb and also down into the dry earth at the bottom of the jar. They covered the whole interior of the jar with a mat of silk as thick as a good sheet of paper but could be observed through the glass resting in the tunnels. In these they passed the winter, and as they were kept in a warm room, they were never dormant but appeared to be feeding all the time.

*Description of mature larva.* Length 16 m.m. Color cream. Head light brown, mandibles and lower edge of cheek much darker brown, thoracic segment lighter than head, divided at dorsum, a dark brown splash at stigma, abdominal segments with tubercles at 1 and 2 more or less brownish, hairs white. Last abdominal segment with two eyed brown rings at 2, from these the hairs are longer than those on the other segments, also a tubercle at 1 with a heavy brown spot but not ringed. Anal segment splashed with brown which extends down to the vent, there are also 4 brown spots. Feet concolorous.

*Pupa.* Date of pupation not observed but was probably during March. Color light golden brown, slightly darker at head and anal

segment, a row of raised brown tubercles on stigma, that on the second abdominal segment partially overlapping the upper edge of the wing cover, on the third the tubercle is just above the edge of the wing cover, on the fourth there is a secondary tubercle below and anterior to the major one, the anal segment is without tubercles and is armed with several short spines.

The pupa was enclosed in a white silk cocoon placed mostly within the tunnels. This factor was mainly responsible for the almost complete loss of the resulting imagoes, some of them being denuded of all scales in their passage through the silk net, whilst others were damaged by contact with the honey, the net result being one male and one female secured for identification.

Date of emergence, May 29th, 1919, on which date two specimens were taken at light outside. The latter agree with some named **V. serratilineella** by Dr. Dyar, the bred specimens are slightly grayer and are not so contrasting in maculation. I am indebted to the kindness of Dr. J. McDonough for verification of my identification. To quote from his letter, he says: "I think you will be safe in calling the species **V. serratilineella**, although personally I have never been satisfactorily able to separate this western species from its near ally in the east, **V. edmandsi** Pack. The maculation is identical and the habits appear to be the same in both species, the only difference being that the western form is slightly larger. However, in view of the geographical distribution it seems advisable at present to retain the name **serratilineella** for the western form."

The habit referred to by Dr. McDonough, is the fact that **V. edmandsi** is an inquiline of Bumble Bees nests in which it feeds; a description of this is given in Parkard's Guide to the Study of Insects.

Dr. Dyar in Pro. U. S. Nat. Museum, Vol. 27, page 921, records having taken this moth at Shawnigan Lake, B. C., Aug. 17th and Sept. 4th, whilst the Kaslo specimen that he had for identification was dated June 24. The dates of those in my collection are May 19, 29, June 7, 24, 29, July 9, 19, Aug. 12, Dec. 30, the latter taken in the house this winter.

I have also received specimens from Mr. Williams Hugh, of Cloverdale, B. C. His opinion is that it can never be considered an injurious pest, "strong colonies never tolerate its presence and the bees certainly clean up the webs from the combs."

Mr. F. W. L. Sladen, Dominion Apiculturist, writes me that he has never observed it, and Mr. W. J. Sheppard, Provincial Apiculturist, also informs me that although he examined thousands of hives in British Columbia during the past six years that he has not seen any evidence of it.

The conclusion is, that this moth will only be found amongst stored frames or diseased colonies.