

*Harpiphorus tarsatus*, Say.

Determined by Mr. MacGillivray as *H. varianus*, but according to Harrington (CAN. ENT., XXV., 59) this name indicates only a variety.

*Egg* traces below the lower epidermis, but apparently sawed through from the upper side; elliptical patches, well separated, in straight rows parallel to a vein or transverse or irregularly distributed; many on a leaf; size, .8 x 1.2 mm.

*First stage*.—Head faintly brownish, eye black; width, .4 mm. Body whitish, rather opaque, annulate, not shiny, the food showing distinctly; sub-ventral fold prominent in the centre of each segment; feet on joint 6-12 and 13.

The larvæ sit all in a mass on the back of the leaf, flat on the venter, and eat the parenchyma from below.

*Second stage*.—The same. Width of head, .55 mm. Later the larvæ rest curled spirally and become covered with a white woolly coating.

*Third stage*.—Head, .65 mm. No change in colour.

*Fourth stage*.—Head, .8 mm.

*Fifth stage*.—Head, 1.1 mm.

*Sixth stage*.—Head, 1.5 mm.

*Seventh stage*.—The larvæ rest flat on the back of the leaf, curled, the anal end inside of the spiral and slightly lifted.

Head round, full at the vertex, highest centrally, clypeal sutures well-marked; smooth, black, covered with a white mealy substance nearly obscuring the surface; palpi, an area around the mouth and the distinct antennæ, pale yellowish; ocellus black; width, 1.8 mm. Thoracic feet rather small with black hooks; abdominal ones on joints 6-12, 13, large. Segments rather coarsely 6-annulate, the intersegmental incisures scarcely more distinct; sub-ventral fold well-developed, undulate. Nearly opaque honey-yellow, all the dorsal region to sub-ventral ridge covered with a mealy white secretion, partly or wholly obscuring the surface, or even growing out into filmy threads nearly 1 mm. long. Anal plate small, rounded-quadrate, black.

The white secretion is formed afresh after each moult.

[TO BE CONTINUED.]

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