## THE LIFE-HISTORY OF *CROCIGRAPHA NORMANI*, GRT.

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On the 6th May, 1901, a cluster of 30 eggs of *Crocigrapha Normani*, Grt., was found by the writer. Six of these had been destroyed and the contents eaten, probably by some hemipterous insect. The eggs were laid in rows close together, touching each other, on the upper side of a leaf of *Caulophyllum thalictroides*, Michx., and formed almost a complete square, an average of six eggs being in each row. They looked as if they had just been laid. Young maple, ash and birch trees were growing near by.

*Egg.*—Almost semispheroidal; 0.7 mm. wide, 0.6 mm. high, about 31 ribs rising from almost near the base, which is flattened and pitted, making it appear roughened. The whole egg has a shiny appearance, particularly so towards and at the tip of each rib. The ribs are acutely angled, and the whole surface, except the base, is distinctly marked with wavy, transverse ribs. When found, the eggs were white. On the 7th May they were all ringed near the apex with reddish brown, and there was also a blotch of this colour near the apex. The eggs hatched on the 11th May.

*Stage I.*—Length, at first, 3.25 mm. Head 0.4 mm. wide, pale brown, slightly bilobed, with a shallow furrow down the front; mouth-parts reddish; hairs on face pale. Body cylindrical, pale yellow; after feeding, the food contents give a greenish appearance; skin smooth, shiny. The cervical shield is concolorous with head, and bears two rows of transverse tubercles, 4 large ones in front and 4 smaller ones behind. Tubercles on body shiny black, large, single-haired; tubercles i and iii in a line, ii and iv almost in a line, but iv nearer to iii than ii is to i. Spiracles very minute, faintly black, and in a line with tubercle iv, and about the same distance from tubercle iii as from iv; setæ short and black. A faint dark green dorsal vessel is apparent. All the feet are concolorous, slightly darkened at tips. The first two pairs of abdominal feet on segments 7 and 8 are aborted, only being about half formed.

The young larvæ are "loopers," and spin a considerable quantity of silk; when disturbed on a leaf, they rise up on their prolegs and assume a sphinx-like attitude. Apple, beech, willow, elm, basswood, wild gooseberry, ash, plantain, birch and wild cherry were offered, and while they fed on nearly every one of these plants, elm and beech were the favourite food.