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Description of the larva of Necrophorus tomentosus, Web.

By F. G. SCHAUPP.

Length of fullgrown larva; 22 mm. breadth 5 mm.

Form elongate, sub-cylindrical, tapering towards each end.

Color. Head red-brown; tergal scutes and legs brown; abdomen white.

Head triangular; broader than long; anteriorly narrower; hind angles broadly rounded; posterior margin sinuate, anterior arcuate; convex above, somewhat flat beneath. Eyes scarcely distinct.

Antennæ four-jointed, rising at the sides of the head a little before the middle; longer than the mandibles; first joint very short, conical, truncate at tip; second elongate, sub-cylindrical, three times longer than the first; third as long as the second, clavate with a bristle at the inner side of tip; the terminal joint slender, nearly as long as the second with two bristles.

Mandibles short and stout, multidentate, slightly arcuate, constricted at the middle.

Maxillæ very stout; first joint one half shorter than the second, the second is truncate at tip, covered by a hairy plate, at the inner side there is a connate lobe? and at the outer side near the middle a four-jointed palpus, first and second joints short and stout, nearly of equal length; the third clavate, longer than the second, fourth slender as long as the second.

Mentum triangular, broadest in front, supporting the ligula which is narrow at base, broadest at the middle and tapering into a point; palpitwo-jointed, the basal joint short and stout, the second slender, slightly longer.

Prothorax twice as broad as long, broader than the head, narrower anteriorly, sides arcuate, the scute, covering the entire surface, with sinuate anterior and posterior impressed line connected at the sides.

Meso-and Metathora.v similar, but shorter and broader, the scutes without the impressed lines, in mesothorax with an impressed puncture at each side, in metathorax with a small spine at each side.

Abdominal segments broadening to the fourth, then gradually narrowing to tip with a short tubular prolongation and two lateral appendages; the tergal scutes with four spines posteriorly, the spines becoming stouter and longer towards the penultimate segment.

The underside of the thoracic segments is strongly sinuate posteriorly, the prothorax with a hook at the middle, the abdominal segments 1–8 with a yellow depressed spot at middle, the ninth with a yellowish crescent-like broad scute multidentate posteriorly.

Stigmata nine, the first at the underside of prothorax beneath, and behind the legs, the following eight on the upperside of segments one to eight.

Legs, stout and short, with one long claw.

A piece of meat was placed August 3rd in a box half filled with earth, together with ten specimens of Necrophorus velutinus; after ten days there were plently of larvæ about 5 mm. long, August 26th they were all in the ground, some pupated Sept. 12th.

Another lot, much smaller in size went into the ground August 15, pupated August 22.

All the larvæ were full of louse-like parasites, which seemingly did not much injury to the larvæ, but sucked out the pupæ all of which shrunk and died.

Of fifty larvæ I obtained not a single imago.

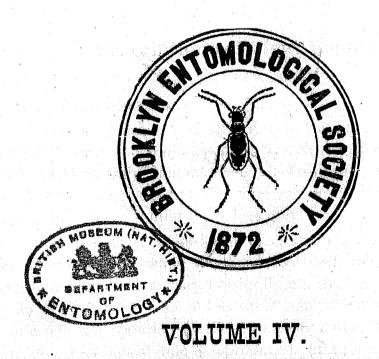
Probably in freedom the larvæ go deeper into the ground, and get there rid of the lice. Numerous larvæ raised in freedom could not be found after they had gone under ground in spite of very close researches.

Note.—One of our next numbers will contain a plate with illustrations to the above description.

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Explanation to plate I of Vol. V.

- 1. Larva of Necrophorus tomentosus, Web., described page 37 Vol. IV, of Bulletin. a. head above; b. head beneath, c. antennæ; d. maxilla; e. mentum.
- 2. Larva of Patrobus longicornis, Say., described at page 56 of Vol. IV. of Bulletin. a. head; b. antennæ; c. maxilla; d. mentum.
- 3. Larva of Silpha americana, Lin., described at page 2 of Vol. V, of Bull. a. antenna; b. maxilla; c. mentum; d. leg.
- 4. a & b. Pupa of Cicindela repanda. Dej.
- 5. Pupa of Chlaenius laticollis, Say.
- 6. Pupa of Galerita janus; 6a. lateral appendage.
- 7. a & b. Pupa of Dorcus parallelus of described on page 35 Vol. IV, of Bulletin. 6b. anus of Q of Dorcus.
- 8. Sesia Syringæ, Harr., described at page 17 Vol. V, Bulletin. a. larva; b. pupa; c. part of antenna of ♀; d. part of antenna of ♂; e. mouthparts of larvae.

Remarks on some Coleopterous pupae.

Cicindela repanda. Mandibles very large becoming black a few days before the development of the imago. Sides of abdomen with five stout processes, those on the fifth segment very long. [In some of the specimens I had, these processes were clothed at tip with a brush of hair, others were not, but of all developed repanda.]

Chlaenius laticollis. All segments except the last two are hairy; abdominal segments 3 to 5 have a lateral process terminated by a knob, while the pupa of Chlaenius leucoscelis have no such process.

Dicaelus dilatatus. Resembles the pupa of Chlaenius, but is more glabrous above, and the abdominal segments have instead of the lateral projections only bristles.

Galerita janus. Head and prothorax much narrower than any of the preceeding pupæ; it is like the larva of the species, of a very peculiar form and it differs from the pupa of G. Lecontei figured in Packard's Guide p. 433 by having the lateral appendages not pointed, but with a little knob at the tip.

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