

EXPLANATION OF PLATES.

The drawings were made by Mr. Harry B. Bradford under the direction of the authors.

Plate 1.

- Fig. 1. Head capsule of larva, front view.
 " 2. Head capsule of larva, side view.
 " 3. Setal map of body segments of larva.
 " 4. Larva.
 " 5. Wings of male.
 " 6. Forewing of female.

Plate 2.

- Fig. 7. Pupa, dorsal view.
 " 7a. Section of pupa skin, showing sculpture.
 " 8. Pupa, ventral view.
 " 9. Pupa, side view.
 " 10. Abdominal proleg of larva.
 " 11. Male genitalia of moth, front view; aedoeagus removed.
 " 12. Male genitalia of moth, back view; aedoeagus removed.

Plate 3.

- Fig. 13. Male genitalia, side view.
 " 14. Male genitalia, front view.
 " 15. Signum of female bursa copulatrix.

THE LARVA OF THE NORTH AMERICAN BEETLE *ZENODOSUS SANGUINEUS* SAY OF THE FAMILY CLERIDAE.

By ADAM G. BÖVING AND A. B. CHAMPLAIN.

The description of the following form adds another genus to those previously described by us.¹

Zenodosus sanguineus Say.

(= *Thaneroclerus sanguineus* Say.)

(Plate 4, figs. 1-11.)

U. S. Nat. Mus., Wash., D. C.; four specimens of which one specimen is dissected and mounted on two slides; labeled: *Zenodosus sanguineus* Say, Harrisburg, Pa. In mines of Ptinids and Calandrids in dead scar on living *Betula*. Larvae collected and adults reared by A. B. Champlain.

Total length of body, about 10 mm.; extreme width, about 2 mm.; extreme thickness almost 2 mm.; anterior width of prothorax about 1½ mm. Head capsule with length to width as 5 : 4. Chitinous parts shiny. Head capsule dark Indian red; mandibles dark brown, almost black; prothoracic shield brown ochre, posteriorly with two slightly darker colored spots, medianly with fine light line, meso- and metathoracic plates, basal plate of cerci and claws sepia brown; other chitinized parts brown ochre to pale brown; membranous parts vermilion red with slightly lighter pattern above heart and muscle attachments;

¹Adam Böving and A. B. Champlain: Larvae of North American beetles of the family Cleridae. Proc. U. S. Nat. Mus., vol. 57, No. 2323, p. 620.

intersegmental membranes slightly lighter red than segments. Setae pale yellow. Mandible with two setae. Spiracles very small; the mesothoracic spiracle with diameter in proportion to diameter of abdominal spiracles as 3 : 2; peritreme and finger-shaped tubes slightly chitinized. Basal plate of cerci circular, flat, well chitinized, covers median half of the dorsal surface of ninth abdominal segment; cerci entirely absent.

The present larva agrees in general shape, in size, color and almost every detail, except the complete lack of cerci, with the larva of *Thaneroclerus girodi* Chevrolat. In the family Cleridae it belongs to the sub-family "D," established on larval characters by Böving and Champlain.¹ The genus *Zenodosus* Wolcott has been separated by Wolcott² from the genus *Thaneroclerus* Spinola, in which the present species hitherto was placed. This separation, however, is hardly supported by any valid larval characters. The only difference between the larvae of the two genera as represented by *Thaneroclerus girodi* Chevrolat and *Zenodosus sanguineus* Say is rudimentary cerci in the former and no cerci in the latter form. All the other generic characters are identical as comparison will show between the generic description of *Thaneroclerus* given by Böving and Champlain³ and the present figures 1-11, Plate 4.

EXPLANATION OF PLATE 4.⁴

Zenodosus sanguineus Say.

Fig. 1. Ocelli and antenna, external view.

Fig. 2. Left mandible, ventral side.

Fig. 3. Labrum and clypeus, external view (epipharyngeal plate shining through).

Fig. 4. Right mandible, dorsal side.

Fig. 5. Ocelli and antenna, internal view.

Fig. 6. Larva, lateral view, slightly turned to show the epicranial suture.

Fig. 7. Mesothoracic spiracle.

Fig. 8. Third abdominal spiracle.

Fig. 9. Left leg of first pair.

Fig. 10. Maxillae, labium, mentum, submentum, gular plate with large conical protuberance.

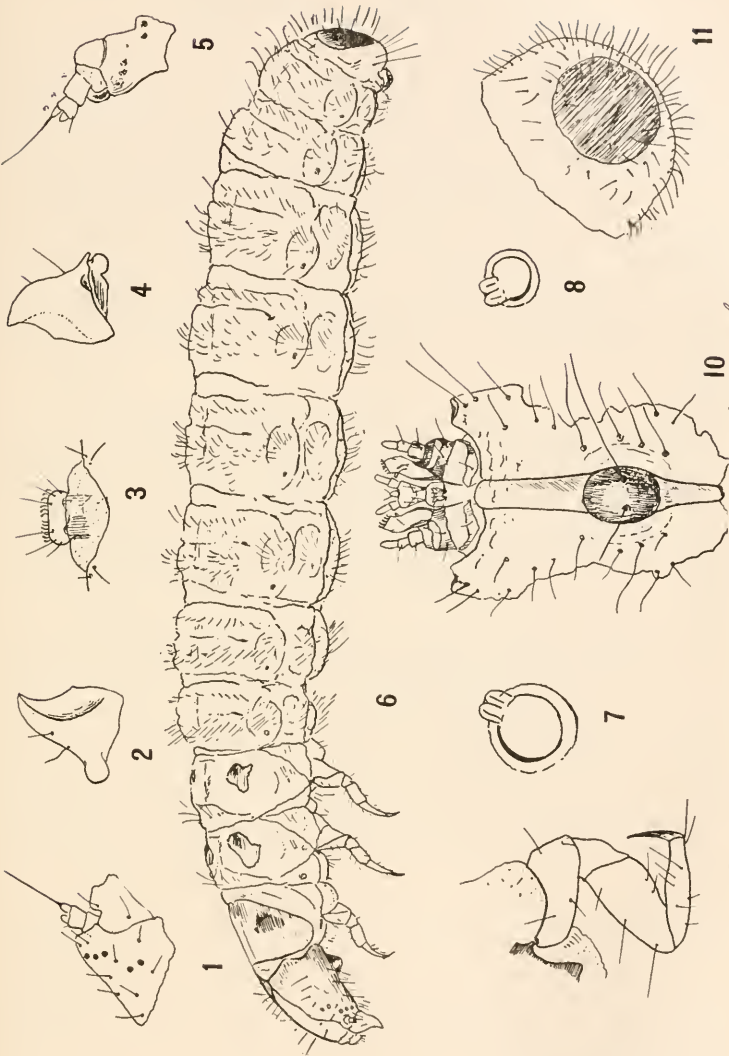
Fig. 11. Basal plate of cerci on the dorsal side of ninth abdominal segment.

¹Adam Böving and A. B. Champlain: Larvae of North American beetles of the family Cleridae. Proc. U. S. Nat. Mus., vol. 57, No. 2323, p. 620.

²Ent. News, Vol. XXI, 1910, p. 321.

³L. c., p. 621.

⁴Drawings by Adam G. Böving.



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