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THE LARVA OF *CHAMYRIS CERINTHA* (TREITSCHKE) (NOCTUIDAE)

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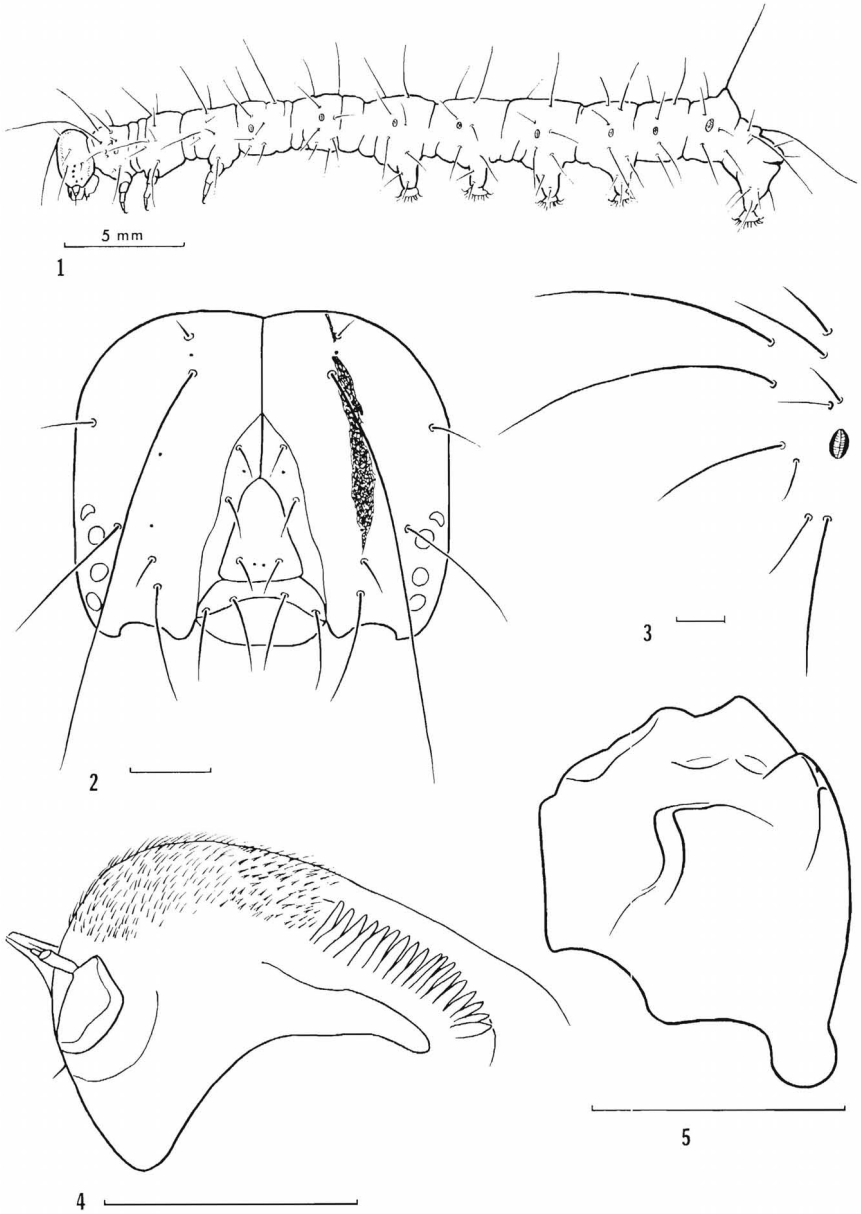
The larva of *Chamyris cerintha* (Treitschke) previously was described by Coquillett (1881), Forbes (1954), and Crumb (1956). In all instances, the descriptions primarily dealt with general body structure and color. The notes and illustrations in this paper are designed to describe the caterpillar of *C. cerintha* more thoroughly, especially in respect to the mouthparts and chaetotaxy. This is done to further document morphological structures of the larvae of the Noctuidae that I think are of key taxonomic importance, as briefly explained earlier (Godfrey, 1971). In addition, a habitus drawing of the caterpillar (Fig. 1) is provided to facilitate identification of the species.

The illustrations were drawn to scale by a grid system. The scale lines represent 0.5 mm for all figures unless designated differently. The terminology and abbreviations are consistent with those used earlier (Godfrey, 1970).

General. Head about 2.5 mm wide. Total length about 32 mm. Abdominal prolegs present on third through sixth segments. Head smooth. Body extensively covered with minute granules. Dorsal abdominal setae simple, very long. Dorsal setae on seventh abdominal segment 6–10 times height of seventh abdominal spiracle; setae on eighth segment 19 times height of spiracle on seventh segment. Dorsal setae on abdominal segments eight and nine borne on distinct tubercles.

Head (Fig. 2). Epicranial suture 1.6 times longer than height of frons. Distance from frontal seta (F-1) to frontoclypeal suture 0.5 times distance between F-1's. Adfrontal puncture (AFa) and second adfrontal seta (AF-2) posterior to apex of frons. Anterior setae (A 1-3) forming obtuse angle. Lateral seta (L) slightly caudal



Figs. 1–5. *Chamyris cerintha*, Arlington, Va. 1, left lateral aspect of last instar; 2, frontal aspect of head capsule; 3, left dorsolateral seta arrangement of prothorax; 4, left aspect of hypopharyngeal complex; 5, oral aspect of left mandible.

of transverse line formed by AF-2's. First posterior seta (P-1) definitely caudal of juncture of adfrontal sutures. Interspaces between ocelli (Oc) 1-2 and 3-4 subequal, less than interspace between Oc 2-3.

Mouthparts. Oral surface of labrum unspined. Hypopharyngeal complex (Fig. 4): spinneret tapering, not exceeding tip of Lp-2; stipular seta about ½ length of Lps-1, equal to Lp-1, longer than Lps-2 and slightly shorter than Lp-2; distal region covered with short, fine spines becoming stouter proximad; proximolateral region with distinct row of about 18 large spines. Mandible (Fig. 5) with two closely spaced, large, flat, inner teeth; inner ridges indistinct; six outer teeth present.

Thoracic segments. Segment T-1: seta D-2 caudal of line formed by D-1 and XD-2 (Fig. 3); major axis of prothoracic spiracle passing slightly behind seta SD-2 and both subventral setae (SV 1-2); SD-1 in line vertically with setae D 1-2. Segments T 2-3: seta L-1 located above and slightly posterior of L-2. Tarsal claw with distinct basal angle. Tarsal setae with parallel sides and rounded tips.

Abdominal segments. Ab-1: only two subventral setae (SV 1, 3) present; SV-1 located posterolaterad of line formed by seta V and SV-3. Ab 2-6: three subventral setae present. Ab-8: only one seta in each subventral group. Ab-9: seta SD-1 as strong as setae D 1-2. Anal and subanal setae no larger than lateral setae on anal proleg. Crochets uniordinal.

Coloration. See Forbes (1954) and Crumb (1956) for the color description.

Hosts. According to existing records, the caterpillar of *cerintha* feeds only on plants of the family Rosaceae. The recorded hosts are *Crataegus* sp., *Malus* sp. [apple], *Prunus persica* (L.) Batsch [peach], *Prunus serotina* Ehrh. [wild cherry], *Prunus* sp. [wild cherry], *Prunus* sp. [plum], and *Rosa* sp. [rose] (Coquillett, 1881; Lugger, 1899; Forbes, 1954; Crumb, 1956).

Material examined: 1 specimen, Arlington, Virginia, July 1949, reared on *Prunus serotina* from ovum from female collected by J. G. Franclemont. Hypopharyngeal complex on slide G-0189.

ACKNOWLEDGMENTS

I thank Dr. John G. Franclemont, Cornell University, for loaning the material used in this study and Dr. W. E. LaBerge, Illinois State Natural History Survey, for reviewing the manuscript.

This research was supported by USDA AGR RMA Grant No. 12-14-100-8031(33) awarded to Dr. John G. Franclemont, Cornell University, Ithaca, New York, and by funds and facilities supplied by the Illinois Natural History Survey, the Illinois Agricultural Experiment Station, and the Office of International Agriculture, College of Agriculture, Urbana, Illinois.

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MAXIMIZING DAILY BUTTERFLY COUNTS

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Early in 1967, a preliminary draft of a most interesting paper by Heinz Ebert came into my hands for initial comment. This paper (Ebert, 1970) provided me a great impetus toward the systematization of field collecting techniques, and the proper keeping of records. It was especially valuable in pointing out the great rarity of most species in southern Brazil (and probably in most of tropical America), the preponderance of small, inconspicuous, and/or highly localized butterfly species in the Neotropical fauna, and the advantages of having several collectors in an area at the same time to obtain more complete and representative recording of the species present.

I resolved to try to apply the conclusions of Ebert's paper towards a continuing study of the Lepidoptera of the central Brazilian plateau (see Brown & Mielke, 1967, 1968; Mielke, 1967, 1968a, 1968b). Initially, a complete written list was made of the species (including numbers of each sex) that were captured and positively observed in each collecting day. The following observation of Ebert (p. 6) provided an initial basis for the effort then made to maximize these daily lists:

"*In eastern Brazil the individual frequency of butterflies is generally very low.* The success of an excursion is exclusively determined by the number of species found. The higher the number of species found during a trip, the higher the chance to find some regionally (and/or individually) rare species. . . ."

This suggested that the maximization of daily species lists of butterflies, a seemingly unscientific goal (though much employed in a sister area, ornithology), could give a large scientific fallout; and this has indeed proved to be the case. For the benefit of the butterfly-interested public, both amateur and professional, this paper presents a discussion of the methods used for maximization and the results obtained, including a comparison of various Neotropical collecting areas, both in overall Rhopalocera and in individual family or tribal groups.