

fully proved that trapping is worse than useless. I had two traps in my orchard all last season, from March to November, and one the previous season, and last season my apples were so wormy and knotty that I got absolutely no good fruit, while men half a mile away who sprayed got a good crop of fair, fine marketable apples. Great stress is laid on the capture of "coddling" moths in the circulars, meaning, I suppose, *Carpocapsa pomonella*. Although I carefully examined all that I caught, I have a record of only one specimen of that species in the two seasons! Of course, it gets a good many "dor bugs," but I think they are largely males, and at any rate there were more last season than the previous one. It catches also many ant lions, Carabidæ, ichneumons, and species which do not eat anything that is of any use to farmers, and I really think that the destruction of beneficial insects more than balances any good that may be done. But "the fool and his money are soon parted," and farmers are always an easy prey for bunko men and land sharks, so I suppose that many traps will be sold, and many orchards unsprayed in consequence.

I find that the great majority of specimens caught are males, and, of course, as they don't lay eggs, their capture is of no value to the farmer. Of several very common things I have never taken a ♀, though I have carefully examined all, hoping to get specimens for my collection.

The Larvae of *Myrmeleon texanus* Banks and *M. rusticus* Hagen.

(See Plate XI.)

J. F. McCLENDON.

(Contributions from the Zoological Laboratory of the University of Texas, No. 33.)

In addition to the technical description of the larvæ of *Myrmeleon texanus* Banks, and *M. rusticus* Hagen, the following paper includes a few paragraphs on the homologies between the external anatomy of the larva and imago. This subject has received some attention from Hagen, Redtenbacher and other entomologists, but their work was of a general nature. In the present paper I have carefully compared the larva with

the imago, and with the larvæ and imagines of *Corydalis cornuta* and some other Neuroptera. The two myrmeleon larvæ differ but slightly in form, so that the following description will apply to both.

The epicranial suture is obsolete, so the two genæ are fused above (Fig. 2, *g*) but the forked portion remains, and separates the front (Fig. 2, *f*) from the genæ. The suture between the front and the clypeus (Fig. 2, *c*) is obsolete. The middle portion of the clypeus is produced downward in front and meets the palpiger of the labium. The labrum and ligula (Fig. 2, *i*) are small and infolded into the mouth, the two adhering together and closing the oral orifice in front. The eye is represented by a conical peduncle (Fig. 4, *o*) bearing six simple eyes. The antenna (Fig. 4, *a*) arises from the gena, close to the postero-lateral edge of the clypeus. The mandible (Fig. 3, *m*) articulates with the clypeus above and apparently with the gena below; it is grooved beneath, and the maxilla (Fig. 3, *m*¹), which is devoid of a lacinia, galea or palpus, fits in the groove, the two forming a duct leading to the pharynx. The remainder of the head is more difficult of analysis. Between the head proper and the prothorax there are two segments (Fig. 2, *pg* and *n*). The posterior represents the neck of the imago, the ventral portion being the gula, or a part of it. The dorsal portion of the anterior represents the occiput; and the lateral portions the postgenæ, or rather a part of them, for the postgenæ of the imago extend forward and articulate with the mandibles. The ventral portion of this segment probably represents part of the gula. The genæ are separated below by a narrow strip of thinner chitin, which probably represents the submentum (Fig. 2, *sm*). The mentum is probably represented by a triangular piece (Fig. 2, *m*) partially fused with the palpiger. The palpiger (Fig. 2, *p*) bears, on each side, a lobe (Fig. 2, *c*, *x*) formed of two triangular pieces. The palpus consists of a large flat basal joint (Fig. 2, *p*¹) and three small joints. The ligula is infolded into the mouth as stated above.

The pronotum is divided transversely into two pieces (Fig. 2, *pn*, *pn*¹), but these apparently do not represent the scutum

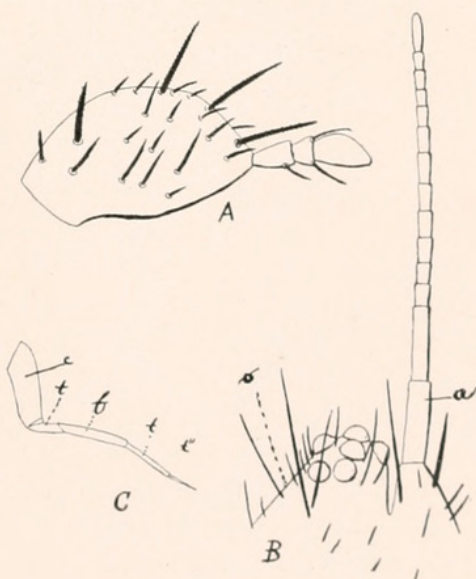
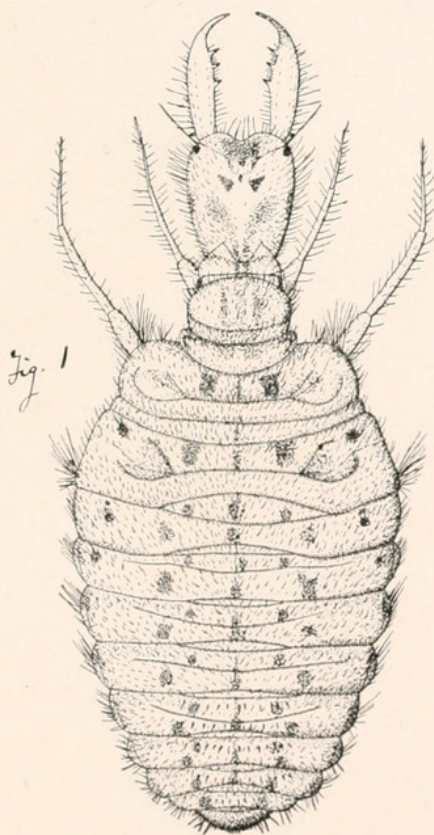
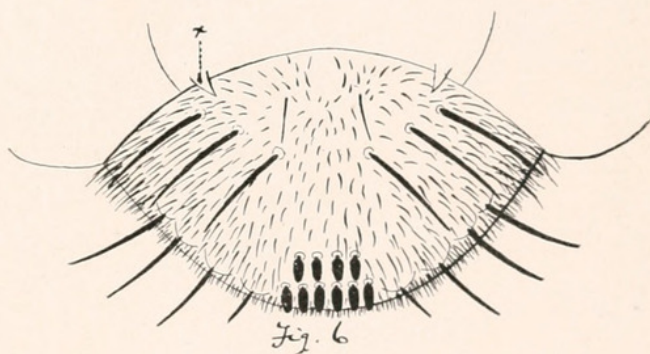
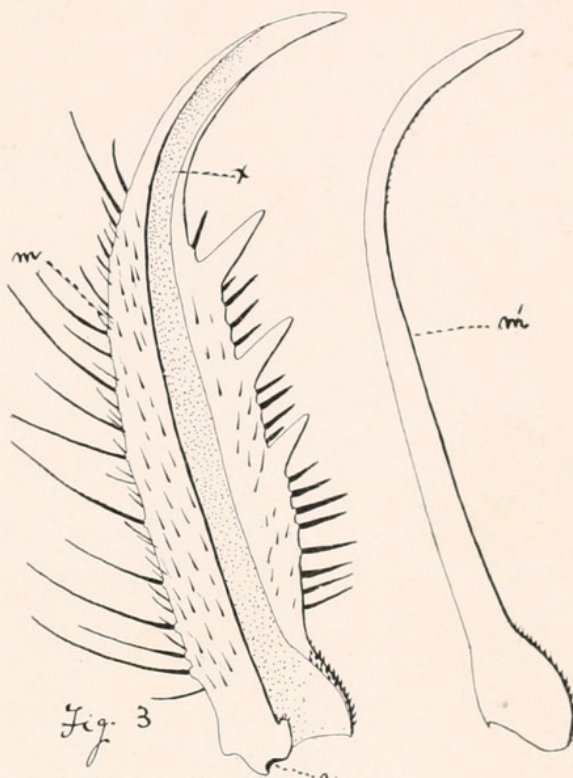
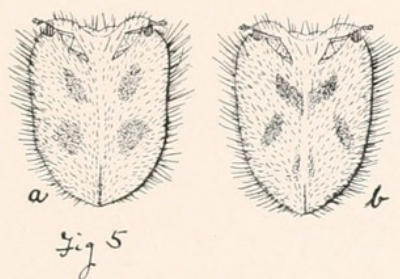
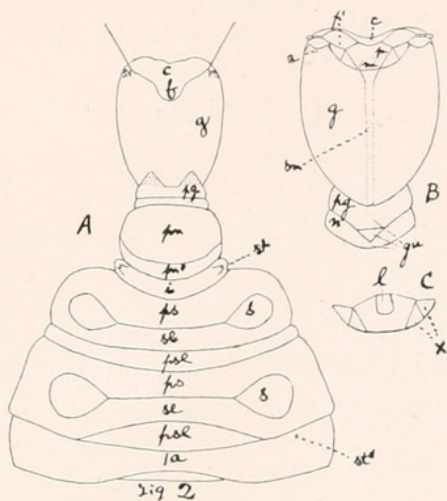


FIG. 4.

LARVÆ OF MYRMELEON TEXANUS BANKS AND M. RUSTICUS HAGEN.



McClendon, J. F. 1902. "The larvae of *Myrmeleon texanus* Banks and *M. rusticus* Hagen." *Entomological news, and proceedings of the Entomological Section of the Academy of Natural Sciences of Philadelphia* 13, 209–212.

View This Item Online: <https://www.biodiversitylibrary.org/item/20202>

Permalink: <https://www.biodiversitylibrary.org/partpdf/27301>

Holding Institution

Smithsonian Libraries and Archives

Sponsored by

Smithsonian

Copyright & Reuse

Copyright Status: NOT_IN_COPYRIGHT

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.