

detailed description has yet been published. In the fall of 1909 we received from Ft. Wingate, N. M., a number of pupæ of this species, which began to emerge about the middle of April, 1910. The time of emergence is usually towards noon, and in the early afternoon the males commence their flight. Our first attempts to secure a pairing were futile, but on experimenting further it was found that freshly-emerged males copulated very readily with females that had emerged the previous day. From two such pairings a large number of ova were secured, oviposition lasting over a period of a week, and being in each case practically complete; the number of ova laid by a single female is in the neighbourhood of 300. The duration of the egg stage is about two weeks, the young larvæ on hatching feeding readily on oak and reaching maturity in from four to five weeks. Pupation takes place, as in all the members of this group, in the ground. A very small proportion of the brood emerged after a short pupal duration of about three weeks, these being all females; the remainder are at the time of writing still pupæ, and will probably hibernate as such. Whether in their natural condition there are normally two broods we do not know, but consider it very probable from the fact that Biederman mentions obtaining ova the latter part of August. Following is a more detailed account of the various stages:

Ova.—Smooth, flatly elliptical, pale yellow; dimensions, 2 mm. \times 1.7 mm. \times 1.2 mm.

Stage I.—Head oval, with a few short setæ; width, .8 mm. Body on first hatching yellowish, later greenish-gray, with smooth skin and black primary tubercles. The prothorax contains a narrow cervical plate of a slightly darker colour than the surrounding area, on the anterior margin of which are placed four small rounded black tubercles, each with two setæ. On mesothorax tubercles i and ii appear to have united to form a spine .8 mm. long, from the apex of which two fine setæ arise; on metathorax the position of tubercles i and ii is occupied by a small conical tubercle with two setæ. Tubercle iii on both segments also possesses two setæ, whereas iv shows but one. On the abdominal segments, with the exception of the 9th, both tubercles i and ii are present, i being much the larger; each has but one seta. Tubercle iii arises from the anterior margin of the segment directly above spiracle, whilst iv is well below lateral fold of skin, and rather minute. On the thoracic and first two abdominal segments there is also a fifth small tubercle, placed rather ventrally. The 9th abdominal segment contains dorsally but one tubercle placed in the central line, and rather larger than the preceding ones. Laterally the