

NOTES ON THE EARLY STAGES OF *DARITIS* (*HOWARDI*?)
(PERICOPIDÆ) FROM CABEZON PEAK, NEW MEXICO

by NOEL MCFARLAND

Through the kindness of SAM L. VANLANDINGHAM I received a most unusual lepidopterous larva, by mail, in October 1958. It proved to be a member of the genus *Daritis* Wlk., probably *Daritis howardi* Hy.Edw. (see DYAR's description of the larva of *Daritis howardi* in *Proc. ent. soc. Washington* 4: 407; 1900.)

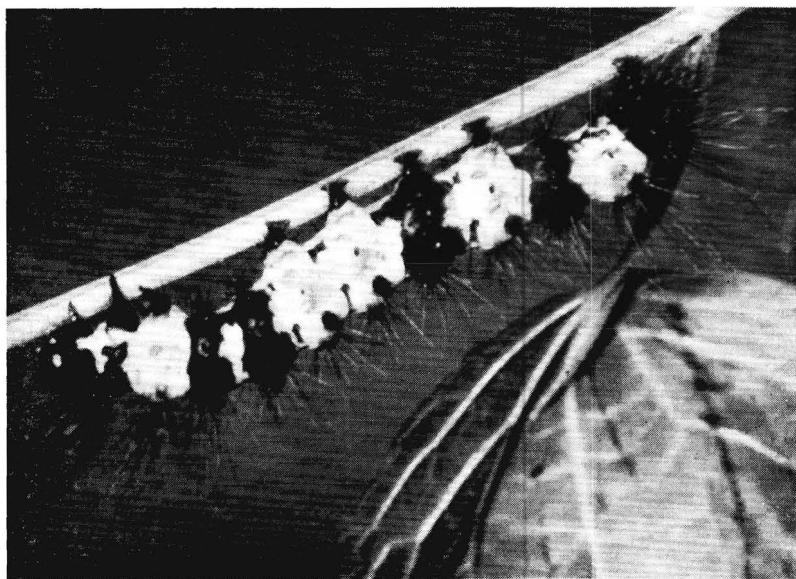
Mr. VANLANDINGHAM was on a geological expedition to Cabezon Peak (el. 7898'), Sandoval Co., New Mexico. On Oct.11, 1958, he was "on Cabezon Peak, approximately half way up the steep western slope, at about 7200'. The terrain was rocky and covered with much basaltic debris. Vegetation was sparse, low, and patchy." In this environment he discovered the boldly-colored larva, on a rock near its foodplant. No specimens of the foodplant were obtained, and its identity remains unknown. I am fairly certain (from fragments received in the box with the larva) that it was some type of dwarf shrub (possibly *Brickellia* sp.?).

I received the larva when I was in Lawrence, Kansas, in Oct. 1958. Upon arrival, it had eaten all but a few scraps of the foodplant and had recently molted; it was much in need of food. For two days I was unable to locate any plant which it would accept as a substitute for its New Mexican foodplant. During this period without food it did an unusual thing, which gave me several more days. It settled down and prepared to molt again, even though it had recently molted and had by no means "filled out" in its present instar. I have observed this phenomenon in some arctiid larvæ when they are deprived of food; most other larvæ would die of starvation under such conditions.

Next, I decided to look for any available Composite genera close to *Brickellia* (the possible foodplant). The nearest relative in Lawrence, Kansas, proved to be *Eupatorium rugosum* (*E. urticæfolium* in some books). This was offered to the larva as soon as it molted. After one day of crawling about, it suddenly settled down and began to feed ravenously, eating both day and night. It continued to thrive on *Eupatorium* for 22 days. During this period it molted two more times, reaching a length of fully $3\frac{3}{8}$ inches before it ceased feeding and wove a cocoon. It had increased in length by approximately $1\frac{1}{4}$ inches since I received it in the mail on Oct.15; all this growth was completed on the substitute plant, *E. rugosum*. The photograph shows the larva in the penultimate instar, after it had ceased feeding in that instar and was about to molt.

In captivity, this larva did not give any indication that it was strictly nocturnal. It was active and feeding both by day and by night. It had a rather rapid, "lumbering" gait, and would never curl up when handled.

On Nov.11, when nearly all available *Eupatorium* had been frost-killed and I was desperately wishing that the larva would stop growing and pupate, it did cease feeding and began to crawl restlessly about in search of a place to pupate. It was placed in a cigar box which had a layer of sand on the bottom, and was loosely-filled with dead leaves and shreds of Kleenex. About 12 A.M., Nov.13, it began to weave its cocoon,



Larva and pupa of *Daritis* (*howardi*?).

having settled down on the lid of the box where it had woven a silk-mat upon which to cling (3" in diameter, approximately). From this up-side-down position on the lid of the box it hollowed out an open space by pushing away all the dry leaves and shreds of Kleenex and crudely weaving them into place with a fairly tough, colorless silk. This cleared space was approximately 4" in diameter, and extended from the top of the cigar box (which was 1 $\frac{3}{4}$ " deep) to the sand-covered floor. Particles of sand were picked up and woven to the sides of the "clearing." When this was finished, a flimsy, basket-like (and very open) cocoon was started. The "basket" was supported by 13 tough strands of silk, all of which were anchored to the lid of the box. When completed, the "basket" hung suspended from the lid and nearly reached the floor of the cigar box, but did not touch at any point. It was about 1 $\frac{1}{4}$ " deep at the middle and about 1 $\frac{3}{4}$ " in diameter where it was attached to the lid. Over the bottom and sides of the "basket" were many cross-strands of silk, which filled it in somewhat and gave added strength; the appearance was that of a very open mesh. On Nov.17, the larva dropped from its silken mat on the lid of the box, and into the "basket." On Nov.21, 12 A.M., it molted into the pupal stage. The pupa pushed the old larval skin out of the "basket." It was quite capable of slow movement of the abdominal segments. The flimsy "basket-cocoon" sagged with the weight of the pupa, but none of the tough, colorless strands broke. No larval hairs were used in construction of this cocoon. During the winter, the pupa died, probably due to poor wintering conditions. It was not parasitized.

Last instar larva: the general appearance is well-depicted in the photograph, which, although of the penultimate instar, is an exact representation of the final instar in regard to pattern and coloration. The light areas are creamy yellow, the dark bands black. The long, soft, shiny black hairs arise from large tubercles; where these tubercles are on the light background they are yellow-orange; where the tubercles are on black bands, they are black with a cold blue-black iridescence. Lateral shields on the prolegs are of the same blue-black iridescence. True legs are black. Head is shining black. Length, approx. 80 mm.

Pupa: very dark blackish with a faint reddish tinge when held up to light. Faintly glossy. Abdominal and thoracic regions sparsely covered with short, stiff rusty brown hairs (not visible in the photograph). Maximum length, 35 mm.

The photograph of the larva was taken from a 35 mm. color transparency by CARL RETTENMEYER. Both prints were made by S. L. VAN-LANDINGHAM.