

PRELIMINARY NOTES ON THE LIFE HISTORY OF
CALLOPHRYS (SANDIA) MAC FARLANDI

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It is evident that the proper description of the life history of *Callophrys (Sandia) macfarlandi* Ehrlich & Clench will have to wait until detailed comparative studies of related Hairstreaks can be made. It therefore seems that a preliminary report of our knowledge is in order at this time.

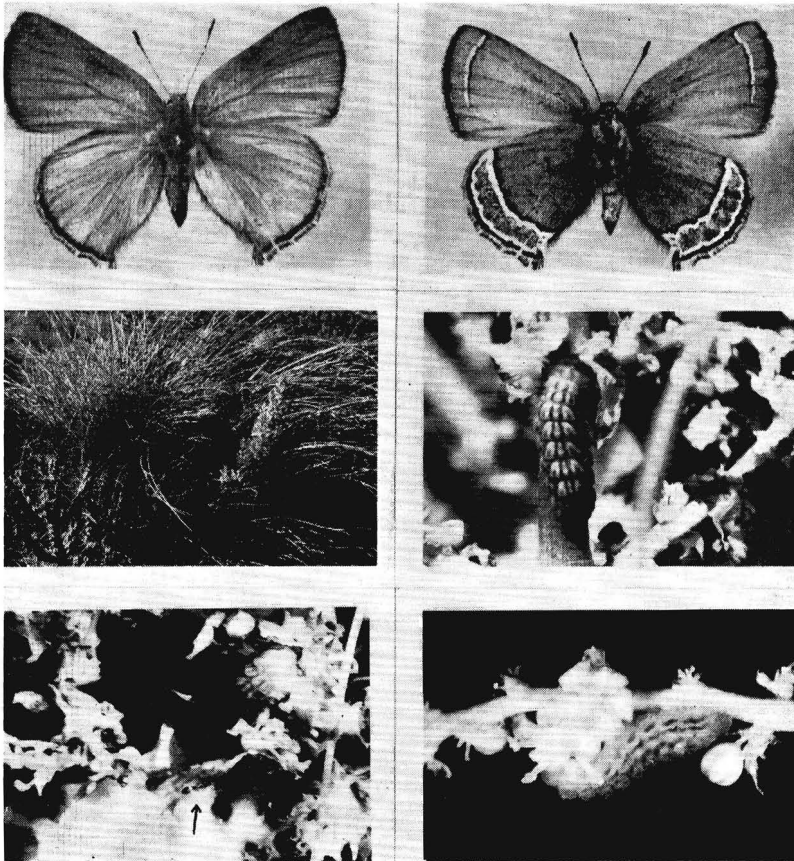
The egg appears to be typical of the Lycenidæ: a pitted oblate spheroid. In the single observed instance of egg laying, the female deposited the egg on a lateral stem near the main stem of the flower stalk. Other eggs were observed on the sheath at the base of the stems of the flower stalks. Undoubtedly all instars of the larva have been observed and preserved, although no single individual has been raised from egg to adult. Therefore we do not know the exact number of instars.

The larvæ were characteristically slug-shaped and were extremely variable in color. The main color range was from a human flesh color to dark maroon. This range of color included over 75% of the specimens. Several larvæ were of a distinct pink color, and a single specimen was light green. In pattern some were immaculate and others had several rows of chevron stripes and spots. More than 200 larvæ were examined.

The larvæ feed primarily on the blossoms of *Nolina microcarpa* S. Watson (Agavaceæ), a Beargrass. However, we observed some of the larger larvæ chewing pits into the stem of the bloom stalk. Most larvæ were found at rest on the main and lateral stems of the bloom stalk and often concealed themselves in the sheath at the base of the stems. Even those larvæ feeding on the blossoms were camouflaged well enough, by their color and markings, that they were not seen at first glance. An unidentified species of ant was attending the larvæ.

No pupæ were found in nature, so the pupation site is unknown. The form of the pupa is typical of the genus.

The flight of the adults is rather rapid and erratic, and our observations indicated that they remained close to the location of the larval food plant. The flight during the day is rather limited. Nearly all specimens found in flight were sighted between 9:00 A.M. and 10:30 A.M. Adults were observed to spend the night deep in the basal rosette of the food plant. The main flight in 1959 appeared to be during the first three weeks of May. Some of the mature larvæ that we collected were permitted to



Callophrys (Sandia) macfarlandi: top left — upperside; top right — underside; middle left — *Nolina microcarpa*, the foodplant; middle right — larva feeding on blossoms (dorsal); bottom left — two larvæ feeding (note attending ant above arrow); bottom right — larva feeding (lateral).

pupate. Some of these then emerged the last part of May and early in June; the remainder did not emerge until the following year. Some fresh specimens of the second generation were taken in flight with the more worn specimens of the first generation.

The type locality is on the dry west slope of the Sandia Mts., in Bernalillo County, New Mexico, just north and east of Albuquerque. The exact locality is the La Cueva Camp Ground in La Cueva Canyon. The holotype was caught some 10 yards east of the stone shelter house at the camp ground, and many in the type series were taken in the



Type locality of *C. macfarlandi*; PAUL EHRLICH and JACK STALLINGS collecting in foreground.

immediate vicinity. About the only other butterflies common at the type locality at the time the type series was collected were *Apodemia mormo* Felder & Felder and *Callophrys (Mitoura) siva* Edwards. *C. macfarlandi* appears to be more abundant in Tijeras Canyon, a short distance from the type locality, and collectors are urged to seek it in this area rather than at the type locality.

References

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