

A NOTE ABOUT *LYCÆNA NIVALIS BROWNI* (LYCÆNIDÆ)

by F. MARTIN BROWN

In the fall of 1959 Mr. E. J. NEWCOMER of Yakima, Washington, sent to me some *Lycænidae* for determination. Among them was a short series of *Lycæna nivalis* (Bdv.) of particular interest. I asked him to collect for me more material in the season of 1960. This he did. Upon comparing the material he sent from Yakima and parts of Klickitat Counties with that in my collections from California, Idaho, Montana and Wyoming it seemed that the Washington material was distinctive enough to warrant a subspecific name. In October 1960 I had the opportunity to study the large series of *nivalis* from the northwestern states in the collections of the American Museum of Natural History in New York. This included the type series of *nivalis browni* dos Passos. At the close of this study I decided that the material Mr. NEWCOMER had sent to me, although distinguishable from most of the specimens considered to be *browni* by the author of the subspecies, is nothing more than an extreme form of that Copper.

In the course of this brief study of *browni* certain things about it became apparent. The characteristic smoky suffusion of the females that makes the subspecies recognizable seems to be a response to moisture. Such a response seems to be absent in *nivalis nivalis* which I have seen from a variety of habitats in California and Oregon and a few places in Washington along the lower reaches of the Columbia River. Apparently the gene or genetic complex that is responsible for *browni's* reaction to moisture is absent from *nivalis nivalis*.

In the most humid parts of the range of *browni* the females are universally dark. In the semi-arid parts of its range few if any of the females are "smoked". The tendency is for the smokiness to be highly developed in the western parts of the range of the subspecies and to diminish eastward until in most areas where it is found in Wyoming smokey females are exceptional. These eastern *browni* approach typical *nivalis* in color but are more brassy and less coppery-red; also they tend to be somewhat larger.

The NEWCOMER material that I include as an extreme form of *browni* differs from all of the *nivalis* that I have seen, except from less than one percent of the Idaho catch, in that the orange submarginal markings on the upper side of the hind wings of both sexes is absent or at best obsolete. Over eighty percent of the specimens I have had from Mr. NEWCOMER that were collected in Yakima County and in Klickitat County north of

Saltus Pass (3,150 feet above sea level) bear no trace of these orange marks. The others bear them in much reduced form.

Some will insist that this slight but rather constant difference warrants subspecific recognition. I disagree and believe that the material being discussed represents the ultimate expression of melanism in the melanistic subspecies *browni*.

#### References

- Boisduval, J. B. A., 1869. Lépidoptères de la Californie. *Ann. soc. ent. Belgique* 12: 44 (original description of *nivalis*).  
 dos Passos, C. F., 1938. Some new subspecies of North American *Lycænidae* (Lepid.). *Canadian ent.* 70: 45-46, pl.2, figs.1-4 (original description of *browni*).

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### OBSERVATIONS ON *STRYMON LIPAROPS* (LYCÆNIDÆ)

On re-reading H. K. CLENCH's article (*Lepid. news* 9: 105-117; 1955) on the habits of *Strymon falacer* (Godt.), I was struck by the similarity between the situation he described with respect to the distribution of this species in a field surrounded by woods in Michigan and the circumstances under which I collected *S. liparops* (Bdv. & Lec.) in a similar field at Point Pelee, Essex Co., Ontario, on July 8th and 9th, 1956. At Mr. CLENCH's urging, I am recording my observations as I recall them on those days, in the hope that these may stimulate more critical observations of these species.

The field in question was roughly 10 acres or more, broken by small stands of sumach and other trees. The predominant plant species visited by butterflies were *Apocynum* sp., *Melilotus alba* Desr. and *Asclepias syriaca* L. *M. officinalis* (L.) Lam. was present but I do not recall collecting anything on it. There were a few *S. liparops* on the *Apocynum*. This plant seemed to be favoured by *Epargyreus clarus* Cram.; a dozen or more individuals were seen or collected on this species. The *S. liparops* were commonest by far on the *M. alba* and then on the *A. syriaca*, which was considerably less abundant.

I have no data as to sex ratio, but I do recall observing that the hair-streaks frequented flowers (both *M. alba* and *A. syriaca*) that were approximately 15 to 20 feet from the woods' edge. The frequency of *M. alba* dropped off rapidly from this point towards the woods but remained high, or increased, towards the center of the field. The frequency of *S. liparops*, however, decidedly decreased towards the center of the field.

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