

NOTES ON *BOLORIA SELENE* (NYMPHALIDAE)
IN THE PACIFIC NORTHWEST

by E. J. NEWCOMER and WESLEY H. ROGERS

Boloria selene Schiff. was reported by ALBRIGHT (*Journ. lepid. soc.* 14: 58) as occurring at Big Summit Prairie, Crook Co., Oregon, in 1958; and by CARNEY (*Journ. lepid. soc.* 15: 115) from Palmer Lake, Okanogan Co., Washington, in 1961. The latter also reports that specimens had been taken by the late JOHN C. HOPFINGER and by RUBY CURTISS in Okanogan County some years ago.

The writers, together with Mrs. FANNIE JEAN ROGERS, spent the entire day of June 1, 1962, scouting likely places for this species in the area about Palmer Lake. We found it in the wet meadow near the south-east shore of the lake, which was described by CARNEY, and took perhaps a dozen specimens. Then we examined several meadows to the south of Palmer Lake, around Loomis and along Sinlahekin Creek, without finding any more. Later that day, at WESLEY ROGERS' suggestion, we went up to Wannacut Lake. This is about 4 miles directly east of Palmer Lake and is at an elevation of about 2000 feet, as compared with 1200 feet at Palmer Lake. Here we found a likely-looking meadow at the north end of the lake, and almost immediately we found *selene* flying there. We took perhaps another dozen specimens.

Close examination of the Palmer Lake meadow had shown the presence of a violet growing down in the tall grass. This violet was also found in the meadow at Wannacut Lake. It proved to be the Northern Bog Violet (*Viola nephrophylla* Greene), which occurs in springy places from British Columbia to Quebec and south to southern California, Arizona, Colorado and Wisconsin (*vide* Abrams, L., 1951, *Illustrated flora of the Pacific States*, vol.3). This is undoubtedly the foodplant of *selene* here. The "aster" mentioned by CARNEY turned out to be the Philadelphia Daisy (*Erigeron philadelphicus* L.) which is found throughout the United States and Canada in moist places (Abrams, *ibid.*, vol.4). Its only significance in connection with *selene* is that it is visited by the adults. In Oregon the adults were attracted particularly to the blossoms of a *Senecio*. Later examination by NEWCOMER of a meadow in the Wenatchee Mountains, in Klickitat County, Washington, in which this violet was growing disclosed only *B. epithore*.

NEWCOMER collected at Big Summit Prairie, in Oregon, on June 10 but found no *selene*. It was taken there, however, on July 1. The elevation is

4600 feet and the season was late. He had taken it there in 1961 on both June 10 and July 1. The same *Viola nephrophylla* was found growing in a patch of an acre or two in the middle of this meadow. Several other meadows were examined in Crook County but no *selene* was found in any of them, even though some were within a mile of the known habitat. Nor could any violets be found in these other meadows. Since *selene* is a weak flier, it would probably not be found very far from its foodplant. Also, both areas have been collected later in the season, and no *selene* found, indicating that it has but a single brood.

The air-line distance between Palmer Lake and Big Summit Prairie is about 300 miles, and with the exception of the earlier findings in Okanogan County, some 50 miles south of Palmer Lake, *selene* has not been seen between the two places. It does occur in British Columbia about 25 miles north of Palmer Lake and in other places farther north. This distribution leads to speculation as to how a weak flier could occur in very restricted areas many miles apart. One can only conclude that formerly it was widely distributed in the West, but perhaps because of climatic changes it died out in most areas, leaving small colonies here and there. More thorough examination of wet meadows in which violets are growing, however, would perhaps disclose other such colonies in Oregon and Washington.

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