

TYPE LOCALITY OF *CERCYONIS STEPHENSI* REVISITED

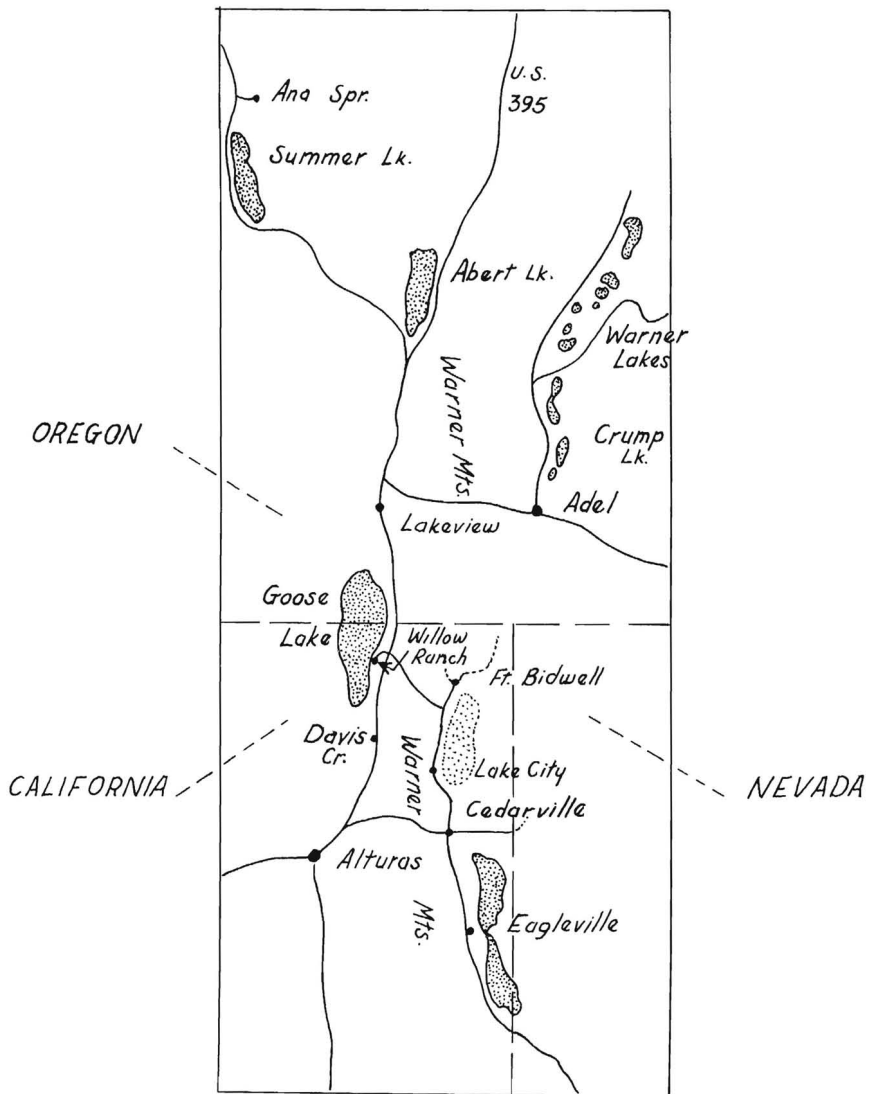
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W. G. Wright described *Satyrus stephensi* on page 184 of The Butterflies of the West Coast in 1905. He gave the type locality as "Northeastern California." The type specimens had been collected in 1894 by Frank Stephens. Dr. John A. Comstock investigated this form in the early 1920's and published a paper on it (Bull. So. Calif. Acad. Sci., 23: 13, 1924). He had collected specimens in Modoc County in the vicinity of Goose Lake. He noted that Wright did not describe *stephensi* until 11 years after the specimens were taken, and that they had been exposed to daylight during that time, so that the figures in Wright's book are too light. He also pointed out that figure 249 is a female and not a male, as Wright had labeled it. Comstock considered *stephensi* to be a female form of *Cercyonis ariane* (Boisduval) (now *C. pegala ariane*), and it has been so classified by most subsequent writers.

Comstock quoted Stephens as writing that he caught the types "a few miles from the Nevada line and some thirty miles south of the Oregon line." This would put the locality somewhere between Davis Creek and Alturas. It is very doubtful whether Stephens got over east of the Warner Mountains in what is now called Surprise Valley; Comstock does not indicate that Stephens got over there. Probably that area was relatively inaccessible then, although the settlement at Fort Bidwell dates back to the 1860's.

Now, not only does the paved U. S. Highway 395 traverse the area from north to south, but there is also a paved road going east over Cedar Pass to Cedarville, in Surprise Valley. In addition, there is another road, partly paved, going over Fandango Pass into the Valley, and a paved road in the Valley running from Fort Bidwell to the southern boundary of Modoc County. That part of the country is dominated by the Warner Mountains, an isolated range extending north and south about 70 miles in California and 30 miles in Oregon. Eagle Peak, in Modoc County, reaches up to almost 10,000 feet and there are a dozen other peaks higher than 8,000 feet. The valleys below, on each side of the range, vary from 4,500 to 5,000 feet, and on both sides there are lakes. In California, there are three on the east side, Upper Lake, Middle Alkali Lake, and Lower Lake. In Oregon there are the Warner Lakes, extending from Pelican Lake, near Adel on the south, to Bluejoint Lake on the north. These lakes are fed by streams coming out of the Warner Mountains. On the west side there is a single large lake, Goose Lake, which stretches for 25 miles,



EXPLANATION OF MAP

Sketch map of the Warner Mountain area. Scale: One inch equals 20 miles.

two-thirds of it in California and the rest in Oregon (see map). The water level of these lakes varies, depending on the snowfall in the mountains; and the shores are often marshy and bordered by wet meadows and irrigated hay fields. The meadows especially are the home of

Cercyonis. Annual precipitation is 12 to 15 inches west of the mountains and about seven to eight inches east of them.

This country is mostly devoted to raising hay and livestock; and most of the land is privately owned and fenced with wire mesh. This makes collecting difficult and limited mostly to the roadsides and the occasional meadow with only barbed-wire fencing.

In July, 1964, I crossed the Warners over Fandango Pass, entering Surprise Valley six miles south of Fort Bidwell. Just before reaching the valley floor I stopped to examine a rather dry pasture with clumps of wild rose and other bushes scattered over it. Here I found *Cercyonis pegala ariane* (Boisduval), following Comstock's characterization of this subspecies, but there were only males. They agree well with Wright's figure 250, and with Comstock's figures of *ariane*, one of which came from near Fort Bidwell. I then looked for possible collecting places between Lake City and Cedarville. About five miles north of the latter place a road goes east to Leonard's Hot Springs. Sweet clover bordered this road and there was a pasture with clumps of wild rose in it. Here I took more males of *ariane* and also a mating pair, the female, a beautiful, recently emerged individual of the form *stephensi*, the male, *ariane*. It was evidently a bit early for the females, being July 17, but it augured well for the return trip some days later.

Coming northward after five rather warm days, I found males plentiful in the pasture north of Cedarville and also took several females there. At the Fandango Pass location, I found them even more numerous. They flitted about, often coming to rest in the bushes, but they could be captured on the wing, the females especially having a rather slow flight.

That afternoon I examined the area around Davis Creek but found nothing. At Willow Ranch, about 12 miles north of Davis Creek, I took several males, but no females.

Next morning I went out to the Warner Lakes, in Oregon, and located a collecting site 10 miles north of Adel near the north end of Crump Lake. Here there was a large, marshy meadow near the road; *ariane* was flitting about, often lighting on the high stems of grass or reeds, and females were numerous.

After spending an hour and a half there on each of two mornings, I had about 25 males and 40 females of *C. p. ariane*, most of them in beautiful condition. So, on the second day I proceeded to Ana Springs, north of Summer Lake, arriving there about 3:00 P.M. I had stopped there on the trip southward, but, as in California, had found only males. The locale there is a rather small marsh about two miles east of Ana Springs (*ariane* also occurs at the Springs, but only sparingly). Males

and females were fairly numerous, and I managed to take about 35 of the butterflies.

In addition to these localities, *ariane* occurs in the Carson Valley, south of Carson City, and I took a few males there. I also took a few males at Chandler State Park, north of Lakeview, in Oregon. The species no doubt occurs in many other places in that area, such as south of Cedarville, around Davis Creek, around the north end of Goose Lake, probably throughout the Warner Lakes area, around Summer Lake, and possibly also Abert Lake.

Looking at the entire catch of 155 specimens (82 males and 73 females), it is evident that there is a great deal of variation. Males are quite uniformly dark; some individuals have yellowish areolas around the dark ocelli on the upperside and others do not; and the number of ocelli on the hindwings varies from one to four. Females vary from rather dark with only a little yellowing around the primary ocelli, to quite light with a wide yellow band on both wings. The latter can be called typical *stephensi*. From the somewhat limited material at hand, I find that the percentages of females which represent the *stephensi* form are 88% in Surprise Valley, 25% at Crump Lake, and 62% at Ana Springs.

I also paid some attention to the other species of *Cercyonis* in this area. I have taken *C. silvestris* (Edwards) along the road some miles south of Eagleville in Surprise Valley, near Crump Lake, and near Picture Rock Pass, just north of Ana Springs, in each case in rather dry areas on the blossoms of rabbit brush (*Chrysothamnus*). *C. oetus* (Bdv.) has been taken, also on rabbit brush, at Lake City and in Fandango Valley, in California; in various places in the Warners in Oregon; in the Hart Mountain Antelope Refuge; and at numerous other places farther north in Oregon.

BOOK NOTICE

MICROLEPIDOPTERA OF JUAN FERNANDEZ ISLANDS. By J. F. Gates Clarke. Proc. U. S. National Museum, vol. 117, pp. 1-106, 111 text figs., 1 plate. 1965.

A total of 71 species are treated from this island group, which is located some 400 miles off the coast of southern Chile. Included are 41 previously undescribed species, primarily pyraloids, and eight new genera. Of the total, ten are widespread moths which are associated with activities of man and presumably are introduced, while only five others have been recorded in adjacent portions of South America. Clarke points out that the high endemism (about 75%) is probably disproportionate, in part a product of the preliminary state of knowledge concerning Microlepidoptera both in the islands and in mainland Chile and Argentina. Some 28 species known only from the archipelago are pyraloids of the family Crambidae, the only group which seems to have undergone extensive speciation in the Juan Fernandez Islands.—EDITOR.