

STUDIES IN PACIFIC COAST LEPIDOPTERA

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NEW RACES OF CALIFORNIA BUTTERFLIES

In the preparation of material for the author's forthcoming book on the Butterflies of California, a number of interesting varieties have been separated that are deserving of designations. A preliminary description of these will be recorded in this publication, to be subsequently followed by colored illustrations.

EUCHLOE AUSONIDES Bdv. *flavidalis*, var. nov.

This is a color form of *ausonides* in which a yellow suffusion covers the upper surfaces of both primaries and secondaries. It may be described in detail as follows:

UPPER SURFACE.

Primaries. Ground color light yellow. Costae, yellow mottled lightly with dark scales. Apices marked with grey brown spots of oval form occurring in relation to the nervules and constricted at their outer and inner edges. On the upper and lower radial and third median veins these spots are continued inwardly to their junction with a broad submarginal dark band, the latter extending from costae to third median vein. A dark dash marks the outer termination of second median vein. Fringes alternately grey and yellow, the grey scales in relation to the marginal row of spots. An irregular semi-lunate black dash at outer edge of cell. Basal area shaded inwardly with grey scales.

Secondaries. Ground color yellow, of a slightly darker shade than primaries. Ends of all nervules slightly accented by grey scales, the color continuing out to the fringes. Basal area heavily shaded with grey. The entire surface of the secondary has a slightly transparent effect allowing the green mottlings of the under surface to show through as delicate shadings.

UNDER SURFACE.

Primaries. Ground color yellowish white, except at apices which are pure white. Costae and outer extent of all nervules dark yellow. A concentration of this dark yellow color occurs in the region of the submarginal dark band (of upper surface) dark dash at outer edge of cell nearly as marked as on upper surface.

Secondaries. Ground color yellowish white, venules dark yellow. Irregular blotching and mottling of wing with olive green as in other closely related forms, but somewhat heavier than in typical *ausonides*. Antennae dark grey tipped with yellow. Thorax and abdomen, grey, covered with long white pile. Legs, yellow.

Type. One ♀ collected by E. J. Newcomer at Palo Alto, California, May 23, 1905, in the Collection of the author, Southwest Museum. So far as I know this form occurs only in the female.

EUCHLOE AUSONIDES. Bdv. *Semiflava*, var. nov.

This form is marked practically as the above except that the upper surface of the secondaries alone shows the yellow suffusion, and the greenish mottling on the under side of secondaries is less extensive.

Type. One ♀ San Jose Mission, California, April, 1919. Collection of the author, Southwest Museum.

It is justifiable, in our estimation, to name these forms in view of the fact that they show a tendency within the genus toward a dimorphism of the females. An illustration of the types of above two color forms will be published in our forthcoming plate X, Butterflies of California.

ANTHOCHARIS REAKIRTI Edw. Wrighti aberr. nov.

This remarkable aberration of *reakirti* probably represents a case of melanism, in which the dark markings of *reakirti* are carried to the ultimate degree. It was submitted by our friend W. S. Wright of San Diego, for whom it is named.

UPPER SURFACE.

Primaries. Ground color white, heavily shaded with black in the basal area and along the costae. All of the outer half of the wing from a line drawn diagonally across the outer edge of cell to inner angle is black, with the exception of a few orange-red scales, centrally placed in the black area.

Secondaries. Ground color white, profusely sprinkled with black scales. Basal area heavily shaded with black. Venules heavily and widely margined with black in the limbal area, giving the wing a striated appearance. This black banding is extending onto the fringes.

UNDER SIDE.

Primaries. Costae finely mottled with black, more heavily concentrated in the apical region. Cell, basal and discal area white, venules beyond the outer edge of cell heavily margined with grey leaving only minute striations of yellow in the interspaces. The orange colored area of typical *reakirti* has practically disappeared except for a minute line in the radial interspaces. The outer portion of apex has a greenish appearance, due to the admixture of the yellow and grey scales.

Secondaries. Much as in *reakirti* except for a heavier concentration of the mottled areas.

Body and antennae as in typical *reakirti*.

The type is figured on plate XI, figure 16, of our series, "Butterflies of California," to be subsequently published. It was taken by S. W. Monroe, at Chula Vista, California, March 7, 1919.

