

## TWO NEW SPECIES OF LEPIDOPTERA FROM CALIFORNIA

By CHRISTOPHER HENNE

*CALLOPHRYS COMSTOCKI* sp. nov.

### Superior Surface:

Primaries: Ground color slate grey with brownish cast. Basal area and inner margin a somewhat lighter shade than apical area. Androconial patch lighter than ground color in majority of specimens, sometimes unicolorous, rarely darker. Marginal border narrow and dark, extending slightly beyond apical curve. Fringes white at outer two-thirds with a dark overlapping fringe at base, forming a double layer.

Secondaries: Ground color a somewhat lighter shade than primaries and shading into still lighter in approaching anal angle where it reaches the extreme to form in some specimens a narrow light grey area interior to the dark marginal border but which is restricted to the area adjacent to the anal angle. The marginal border is narrow at the outer angle but increases in width as it approaches the anal angle where it is conspicuously outlined from a point running approximately from the third median nervule to the black tuft at the anal angle which is its terminus. Fringes same as primaries but dark tipped near anal angle where they merge into the black tuft.

### Inferior Surface:

Primaries: Ground color brownish grey. The apical third of the wing and the discal cell are superimposed with bluish green scales. An outwardly convex rather inconspicuous broken white line shaded internally with dark brownish grey crosses the median area transversely, originating at the upper radial vein about one-third internal to the costal angle and continuing to the second median nervule. The intensity and length of this line varies in individual specimens. Marginal border not as dark as that on superior surface. Fringes greyish.

Secondaries: Ground color brownish grey but a heavy and uniform suffusion of bluish green scales obliterates the ground color almost entirely. The regions where the ground color is in evidence are possibly cases where the green scales have been removed by contact, as these areas do not appear to be consistent in size nor location. A transverse sinuate broken line shaded internally with dark grey to black similar to that on the primaries but more conspicuous and constant, originates at the costal margin and terminates at the anal angle. This line tends to follow the division between the basal and discal areas and forms



an abrupt outward convexity approximately between the second and third median nervules. The upper part of the line is composed of a series of more or less straight sections whereas those in the lower half are in the form of lunules. Marginal border shaded internally with light grey in vicinity of anal angle. Fringes greyish.

The female is the same as the male in markings and coloration.

Type locality:

Providence Mts., San Bernardino County, California.

Number and sexes of types (described from 20 ♂ ♂ and 8 ♀ ♀):

Holotype ♂, Providence Mts., San Bernardino County, California, April 20, 1938.

Allotype ♀, Providence Mts., San Bernardino County, California, April 21, 1938.

Paratypes Nos. 1 to 18 inclusive:

Providence Mts., San Bernardino County, California, April 20, 1938.

Paratypes Nos. 19 to 24 inclusive:

Providence Mts., San Bernardino County, California, April 21, 1938.

Paratype No. 25:

Providence Mts., San Bernardino County, California, March 23, 1934.

Paratype No. 26:

Emerged August 25, 1938. Ex. conf. ♀, Providence Mts. Reared on *Eriogonum* sp.

Holotype and allotype in the collection of the Los Angeles County Museum. Paratypes will be placed in the U. S. National Museum and the Canadian National collection at Ottawa.

Alar expanse: 2.2 mm. holotype ♂; 2.1 mm. allotype ♀.

Average expanse of type series 2.2 mm.

This new species shows its relationship to *Callophrys apama* Hy. Edw. but is distinct enough to warrant a specific name..

It may be distinguished readily from *apama* by the slate grey ground color in both sexes; the uniform bluish green on the underside of the secondaries and the conspicuous white fringes on the upperside, whereas the ground color of *apama* is russet brown, the golden green does not cover the entire underside of the secondaries and the fringes are ashy brown.

We are greatly indebted to Mr. Charles H. Ingham for his generous coöperation in supplying us with additional specimens to be included with the type series.



COPICUCULLIA MCDUNNOUGHII sp. nov.

Palpi grey, sprinkled and bordered with white. Clypeus light grey. Front dark grey sprinkled with white; a dark transverse line runs from here to the bases of the antennae. Tegulae whitish with a dark line near base; the area below this line is dark grey flecked with white and the area above is bordered with black. Abdomen pale ochreous with two or three small black dorsal tufts on the basal segments.

Primaries: Ground color light bluish grey with lighter shading between veins which are outlined in black, giving a striated appearance to the wings. A dark grey area which includes the orbicular and reniform extends to the costal margin interior to the orbicular at an angle in line with vein  $Cu_1$ . This dark shading also extends outwardly along the margin to junction of vein  $R_2$  and costa and is interspaced by three small white dashes. Orbicular round with a dark center and ringed with black and white, center sometimes containing white point. Reniform large, with irregular light colored center and ringed as is the orbicular on the inner two-thirds which is convex. The outer one-third is faintly outlined and concave. A fine black dash extends horizontally from the lower extremity and terminates in a series of dark striations as it nears the margin. T.a. and t.p. lines wanting. A conspicuous black dash occurs just above the inner angle originating at the outer margin where it is widest, and tapering to a point approximately one-third the distance to the base of the wing where it follows and merges with vein  $Cu_2$ . This dash forms an acute angle, interior to the outer marginal border, with a series of small black marginal dashes that become concentrated at this point to form a more or less unbroken line. The inner margin of the wing with the exception of the basal portion is heavily marked with black scales. The area above and also the area between the reniform and the apex varies in the intensity of light grey shading. In some specimens these areas are conspicuously light. The outer marginal border is whitish, streaked with brownish grey. Fringes brownish grey tipped with white.

Secondaries: Whitish tinged with ochreous brown in limbal area and shading to lighter in basal area. Veins outlined in darker brown. Fringes whitish with light ochreous base.

Underside of primaries light grey with slight brownish cast and whitish towards apex. Border clear cut, light, streaked with brownish grey. Fringes mottled grey. Secondaries whitish with veins outlined in brown and fringes white.

Female similar to male but primaries are a somewhat darker shade of grey and the secondaries are predominantly a dark brown shading to lighter in the basal area.



Type locality:

Providence Mts., San Bernardino County, California.

Number and sexes of types (described from 5 ♂ ♂ and 6 ♀ ♀):

Holotype ♂, April 22, 1938, Providence Mts., San Bernardino County, California.

Allotype ♀, April 1, 1935, Providence Mts., San Bernardino County, California.

Paratype No. 1: ♂, April 1, 1935, Providence Mts., San Bernardino County, California.

Paratype No. 2: ♂, April 21, 1938, Providence Mts., San Bernardino County, California.

Paratype No. 3: ♂, May 9, 1937, Providence Mts., San Bernardino County, California.

Paratype No. 4: ♀, April 3, 1935, Providence Mts., San Bernardino County, California.

Paratype No. 5: ♀, May 6, 1937, Providence Mts., San Bernardino County, California.

Paratype No. 6: ♀, March 19, 1934, Providence Mts., San Bernardino County, California.

Paratype No. 7: ♀, May 9, 1937, Providence Mts., San Bernardino County, California.

Paratype No. 8: ♀, April 21, 1938, Providence Mts., San Bernardino County, California.

Paratype No. 9: ♂, May 22, 1935, Argus Mts., Inyo County, California.

Alar expanse: 3.7 mm. holotype; 3.6 mm. allotype.

Average expanse of type series 3.66 mm.

Holotype and allotype in the Los Angeles County Museum. Paratypes to the U. S. National Museum, and the Canadian National Museum, Ottawa.

This species may be readily separated superficially from other members of the group by the light basal and apical areas on the primaries, the contrasting dark shading on the inner margin of the reniform and orbicular following vein  $Cu_2$ , the elongated dash at the inner angle of the wing, and the total lack of transverse lines.



1940. "Two new species of Lepidoptera from California." *Bulletin of the Southern California Academy of Sciences* 39, 71–74.

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