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NEW BUTTERFLIES FROM MOUNT MCKINLEY NATIONAL PARK, ALASKA, WITH A REVIEW OF *EREBIA ROSSII* (RHOPALOCERA, SATYRIDAE)

BY CYRIL FRANKLIN DOS PASSOS

INTRODUCTION

From the point of view of lepidopterists, one of the most interesting localities in North America is Mount McKinley National Park, Alaska. In this park is situated the highest peak on the continent, Mount McKinley, of which the south pinnacle is 20,300 feet in altitude, and the north peak is only 300 feet lower. The present area of the park is 3030 square miles. The climate of the park differs on the two sides of the Alaska Range. On the inland side there are short, comparatively warm summers and long, cold winters, with little precipitation. The area draining into the Pacific enjoys a more equable climate, the summers being longer and cooler and the winters warmer than in the interior, with much greater precipitation. The park embraces treeless plateaus covered with mosses and grasses, and fertile valleys only 3000 feet in altitude where flowers are plentiful.

Several Rhopalocera have been named from this interesting region, which appears to have a specialized fauna, among them being:

Parnassius evermanni Men., (race *thor* Hy. Edw.?), tr. f. *kohlsaati* Gunder (1932a, p. 123).

Colias chrysotheme vitabunda Hovanitz (1943, p. 3).

Eurymus chippewa Kirby, form ♀ *kohlsaati* Gunder (1931, p. 45).

Erebia mackinleyensis Gunder (1932b, p. 278).

Erebia youngi rileyi dos Passos (1947, p. 3).

Brenthis (Clossiana) aphirape denali Klots (1940, p. 413).

Plebius aquilo Bdv., tr. f. *kohlsaati* Gunder (1932a, p. 127).

While two of Gunder's names were proposed as "transition forms" (aberrations), they may become available later in a specific or subspecific sense.

Two more names are proposed in this paper. Unfortunately the data accompanying most of the specimens do not bear any ecological information beyond the elevation at which they were taken. It is probable that they were captured near the park headquarters where there is a hotel and railway station. This locality is on the east side of the park.

All photographs herein reproduced were taken by the author. The figures are about four-fifths natural size.

***Oeneis mckinleyensis*, new species**

Figures 1-12

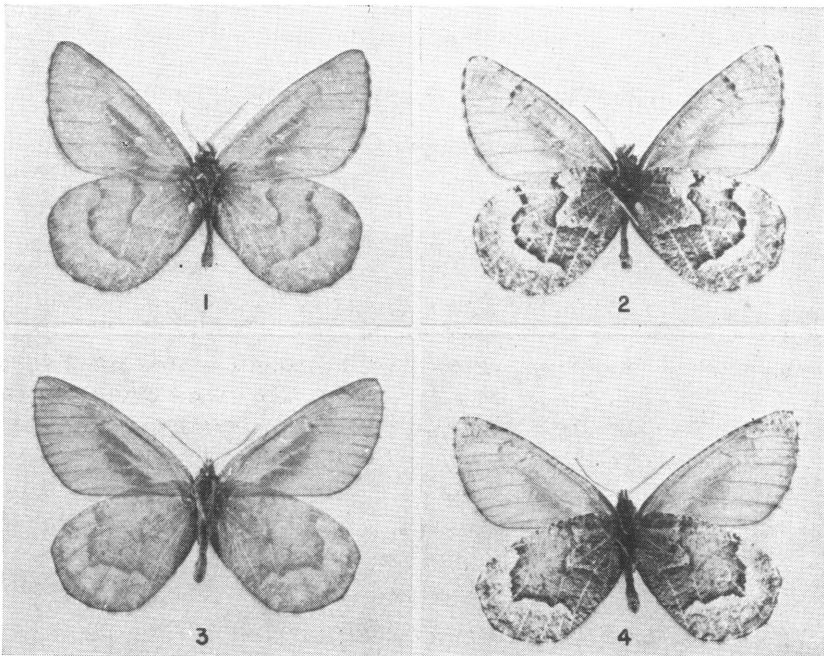
MALE: Expanse 39-47 mm., holotype 43 mm.

Above, primaries Snuff Brown,¹ Avellaneous, or Tawny Olive (holotype). Costal, outer and part of inner margins with a distinct, narrow line, Bone Brown or Buffy Brown. Prominent triangular patch of dark androconia extending from base of wing to end of cell, partly within cell but mostly along inner margin and outside cell. Base of costa slightly flecked with Avellaneous or Pale Olive Buff scales. Occasionally with faint White subapical dot. Fringes Avellaneous or Pale Olive Buff, cut by Bone Brown or Buffy Brown veins. Secondaries same color as primaries; basal and limbal areas slightly paler; the median band and submarginal band of the under side showing through. Occasionally pale submarginal markings between the veins. Marginal line and fringes as on primaries.

Below, primaries same color as above but paler. Apex flecked with Gray scales. Occasionally with one or more faint White submarginal dots between the veins. Faintly outlined median band somewhat produced beyond the cell, the androconia distinctly showing through. Aniline Yellow veins from basal to limbal areas. Marginal line and fringes as above. Secondaries with a broad, irregular, Verona Brown or Wood Brown median band, outlined with Carob Brown, more even on the inner side,

¹ All color terms are those employed in "Color standards and color nomenclature" by Robert Ridgway, Washington, D. C., 1912, published by the author.

separated from a darker basal area by an area flecked more or less with Gray, especially adjoining the median band. The median band arises in the center of the costa and terminates at the anal angle. It is separated from an indistinct, irregular, Wood Brown submarginal band by a prominent Gray area, paler next to the median band. Costa flecked with Verona Brown or Wood Brown and Gray. Aniline Yellow veins merging to Gray beyond the median band. Marginal line and fringes as on primaries.



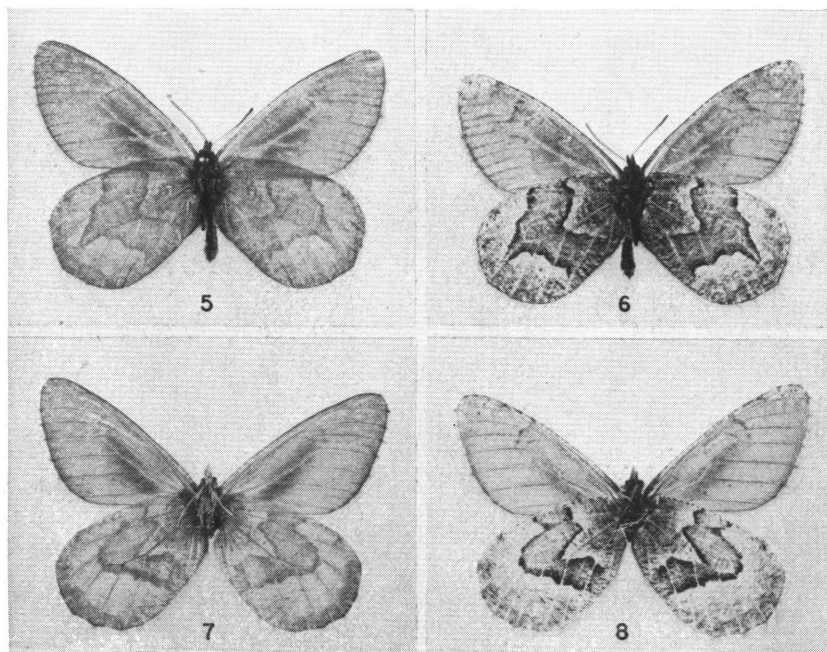
FIGS. 1-2. *Oeneis mckinleyensis* dos Passos, paratype male, upper and under sides.

FIGS. 3-4. *Oeneis mckinleyensis* dos Passos, holotype male, upper and under sides.

Head concolorous with wings on upper side; eyes Cinnamon-Rufous; antennae Capucine Orange ringed with Black; palpi White with Black hairs; thorax Black covered with hairs concolorous with wings on upper side, hairs Black on under side; legs Mouse Gray; abdomen hairy, concolorous with wings.

FEMALE: Expanse 39.5–48 mm., allotype 47 mm.

Above, primaries Prout's Brown, Chamois, or Isabella Color (allotype). Marginal area somewhat darker. Costal, outer and part of inner margins with a distinct, narrow line, Bone Brown or Buffy Brown. Base of costa slightly flecked with Avellaneous or Pale Olive Buff scales. Occasionally with a faint White sub-apical dot. The outlined median band on the under side faintly



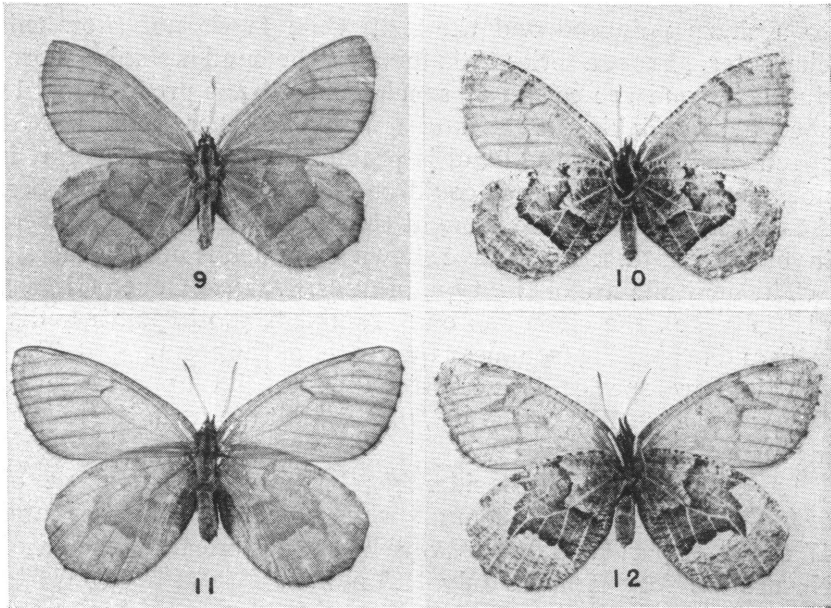
FIGS. 5-6. *Oeneis mckinleyensis* dos Passos, paratype male, upper and under sides.

FIGS. 7-8. *Oeneis mckinleyensis* dos Passos, paratype male, upper and under sides.

showing through. Fringes Avellaneous or Pale Olive Buff, cut by Bone Brown or Buffy Brown veins. Secondaries same color as primaries; basal and limbal areas slightly paler; the median band and submarginal band of the under side showing through. Occasionally pale submarginal markings between the veins. Marginal line and fringes as on primaries.

Below, primaries same color as above but paler. Apex flecked

with Gray scales. Occasionally with one or more faint White submarginal dots between the veins. Faintly outlined median band somewhat produced beyond the cell. Aniline Yellow veins from basal to limbal areas. Marginal line and fringes as above. Secondaries with a broad, irregular, Verona Brown or Wood Brown median band, outlined with Carob Brown, more even on the inner side, separated from a darker basal area by an area flecked more or less with Gray, especially adjoining the median



FIGS. 9-10. *Oeneis mckinleyensis* dos Passos, paratype female, upper and under sides.

FIGS. 11-12. *Oeneis mckinleyensis* dos Passos, allotype female, upper and under sides.

band. The median band arises in the center of the costa and terminates at the anal angle. It is separated from an indistinct, irregular, Wood Brown submarginal band by a prominent Gray area, paler next to the median band. Costa flecked with Verona Brown or Wood Brown and Gray. Aniline Yellow veins merging to Gray beyond the median band. Marginal line and fringes as on primaries.

Head, eyes, antennae, palpi, thorax, legs, and abdomen similar to male.

The shape of the median band on the under side of the secondaries of both sexes, especially the males, is extremely variable. For that reason it has been thought desirable to figure three male and one female paratypes in addition to the holotype and allotype. From these figures it will be seen that the band may be rounded or produced far beyond the cell. In one extreme case (figs. 7, 8) the band has an extraordinary zigzag design. Of a series of 79 males examined, 35 have the median band produced to a sharp point beyond the cell, while 44 do not show this character. From a series of 30 females, the band is similarly produced beyond the cell in 19 specimens and not produced in 11 specimens. Taking males and females together, there are 54 specimens in which the band is produced and 55 in which it is not, as equal a division as could be made with an odd number. At first sight it might be thought that two different species were involved, but dissections have shown that such is not the fact.

The genitalia are of the type of *Oeneis taygete* Geyer ([1830], pl. [17]), i.e., the clasp has one prominent tooth pointing distally and projecting from near the center of the costa.

This new species is nearest in superficial appearance to *Oeneis hanburyi* Watkins (1928, p. 617), but differs in the following respects:

1. In series it is considerably larger. The holotype of *mckinleyensis* expands 43 mm., while some specimens expand 47 mm. A paratype of *hanburyi* in the American Museum of Natural History expands only 41.5 mm.

2. The androconia on the upper side of the primaries are dark, and the patch is prominent. In *hanburyi* these scales are only slightly darker than the ground color of the wings.

3. The median band is wider, the adjoining areas are lighter, and there are fewer striations, especially in the females. This band is often produced far beyond the cell, while in *hanburyi* that is hardly ever, or at most only slightly, the case.

4. The clasp of *mckinleyensis* is longer, narrower, and less pointed. In *hanburyi* the clasp is more triangular. However, this distinction is based only upon the dissection of the paratype of *hanburyi* and nine specimens of *mckinleyensis*. The latter are uniform in the respect noted.

Several other species of *Oeneis* fly at or about the same time as *mckinleyensis*, June 15 to July 30, and apparently in the same general locality. These facts, however, require confirmation, especially the precise habitats where these insects occur. Only one specimen of *taygete* has been seen from Mount McKinley. That specimen is dated July, 1925, and is from the Sweadner Collection in the Carnegie Museum, Accession 12938. It was kindly lent to the author by Dr. Walter R. Sweadner, Curator of Entomology. Also seen from the same general locality is a long series of *Oeneis brucei yukonensis* Gibson (1920, p. 15i) taken between June 8 and August 1, 1929 and 1932. Future collectors in the Mount McKinley National Park area should give careful attention to the elevations at which the various species occur, their habitats, and gather other ecological information. It is to be hoped that such information will be published, and that some progress will be made towards ascertaining the life histories of the butterflies described from this region.

TYPE MATERIAL: The holotype male is from McKinley Park, Alaska, June 19, 1932, and the allotype female is from Mount McKinley Park, Alaska, July 20, 1932. There are 12 pairs of paratypes from Alaska as follows: 4 males and 7 females, McKinley Park, June 16–July 15, 1932; 3 males and 2 females, Mount McKinley Park, July 3–July 20, 1932, and 1 female, same locality, 3500 feet, July 5, 1938, *ex* collection G. P. Engelhardt; 2 males, McKinley National Park, June 20, 1930 (genitalic slide no. 199, C. F. dos Passos) and June 21, 1930; 3 males, McKinley, June 16, 1930 (genitalic slide no. 66, C. F. dos Passos), June 18, 1930 (genitalic slide no. 197, C. F. dos Passos), and June 25, 1930 (genitalic slide no. 186, C. F. dos Passos), and 2 females, same locality, June 20 and July 7, 1930. The holotype and allotype are in the American Museum of Natural History, *ex* collection C. F. dos Passos. One pair of paratypes each will be sent to the British Museum (Natural History), the Canadian National Collection, the Carnegie Museum, and the United States National Museum. The remaining paratypes are in the collection of the author.

ADDITIONAL MATERIAL EXAMINED: Twenty-one males and 5 females, Mount McKinley Park, June 27–July 27, 1932, and 4 males and 2 females, same locality, 3500 feet, July 5, 1938, *ex* collection G. P. Engelhardt (one male genitalic slide no. 187, C. F. dos Passos); 2 males, McKinley Park, July 29, 1930, *ex* collection D. Fraser (genitalic slides nos. 13 and 14, C. F. dos Passos), and 26 males and 9 females, same locality, June 15–July 25, 1932 (two male genitalic slides nos. 188 and 200, C. F. dos Passos); 1 male, McKinley National Park, June 28, 1930; 1 male, Mount McKinley, July 30, 1929; 10 males and 1 female, McKinley, June 16–30, 1930, all in the collection of the author; 7 males and 11 females, Mount McKinley National Park, June 16–July 28, 1930 (F. Morand), *ex* collection J. D. Gunder, Accession 34998; 3 males and 2 females, McKinley Park, July 28–August 3, 1930, *ex* collection D. Fraser, Accession 32500, and 1 female, same locality, July 29, 1930; 1 male, Mount McKinley, July 15–30, 1930, *ex*

collection J. D. Gunder, Accession 34998; 12 males, McKinley, July 2-28, 1930, *ex* collection J. D. Gunder, Accession 34998; 2 males and 2 females, Alfred Creek Camp, Alaska, July 15 and 26, 1922, 3000 feet (R. A. Pope), and 2 males and 1 female, same locality, July 15, 1922, *ex* collection R. Ottolengui, Accession 31373; 6 males and 1 female, Boulder Creek, Alaska, June 26, 1922 (R. A. Pope); 1 male, Teller, Alaska, July 18, 1928, Accession 29316; 1 male, east end Clinton Colden Lake, Mackenzie, Northwest Territories, August 10, 1907 (E. T. Seton and E. A. Preble), all in the American Museum of Natural History; 1 male, June 19, 1930, McKinley National Park, *ex* collection H. Engel, Accession 13257, in the Carnegie Museum.

***Erebia rossii rossii* (Curtis)**

Hipparchia Rossii CURTIS, [1835], in Ross, Narrative of a second voyage in search of a north-west passage, app., p. 67, pl. A, fig. 7.

Ereb[ia] Rossii, WESTWOOD, 1851, Genera of diurnal Lepidoptera, vol. 2, p. 380.

Erebia Rossii, BUTLER, 1868, Catalogue of diurnal Lepidoptera . . . family Satyridae in the . . . British Museum, p. 89.

M[aniola] Rossii, KIRBY, 1871, A synonymic catalogue of diurnal Lepidoptera, vol. 1, p. 67.

Erebia Rossii, EDWARDS, 1872, Synopsis of North American butterflies, p. 26.

Erebia Rossii, SCUDDER, 1875, Bull. Buffalo Soc. Nat. Sci., vol. 2, p. 243.

Erebia Rossii, EDWARDS, 1877, Trans. Amer. Ent. Soc., vol. 6, p. 34.

Erebia Rossii, STRECKER, 1878, Butterflies and moths of North America, p. 152.

Erebia Rossii, EDWARDS, 1884, Trans. Amer. Ent. Soc., vol. 11, p. 289.

Erebia disa ?var. vel. bona sp. *rossii*, ELWES, 1889, Trans. Ent. Soc. London, p. 330.

Erebia Rossii, SKINNER, 1898, A synonymic catalogue of the North American Rhopalocera, p. 35.

Erebia rossii, ELWES, 1898, Trans. Ent. Soc. London, p. 202.

Erebia rossii, ELWES, 1899, *ibid.*, p. 348.

Erebia rossii, ELWES, 1903, *ibid.*, p. 240.

Erebia rossii, CARY, 1906, Proc. U. S. Natl. Mus., vol. 31, p. 448.

E[rebia] rossii, EIFFINGER (*nec* Curtis), 1908, in Seitz, Macrolepidoptera of the world, vol. 1, p. 109.

E[rebia] rossii, WEYMER, (*partim*), 1911, in Seitz, Macrolepidoptera of the world, vol. 5, p. 238.

Erebia rossi, GIBSON, 1920, Report of the Canadian Arctic expedition 1913-18, vol. 3, pt. 1, p. 17i, pl. 4, fig. 9.

E[rebia] rossii, GOLTZ (*nec* Curtis), 1930, in Seitz, Macrolepidoptera of the world, suppl. 1, p. 150, pls. 9g, 9h.

Erebia rossi, HOLLAND, 1931, The butterfly book, revised ed., p. 203, pl. 73, figs. 3, ♂, 4, ♀, under side.

Erebia rossi, HOLLAND AND AVINOFF, 1935, Mem. Carnegie Mus., vol. 12, pt. 2, sect. 5, p. 7, pl. 18, figs. 16-18.

Erebia rossii, LEUSSLER, 1935, Bull. Brooklyn Ent. Soc., vol. 30, pp. 50-51.

Erebia rossii, WARREN, 1936, Monograph of the genus *Erebia*, p. 158.

E[rebia] rossii rossii, WARREN, 1936, *op. cit.*, p. 159, pl. 73, figs. 925, 928, 931, 934, genitalia pl. 32, figs. 308-309.

Erebia rossii, McDUNNOUGH, 1937, Canadian Ent., vol. 69, pp. 14-15.

Erebia rossii, DOS PASSOS, 1939, Bull. Cheyenne Mt. Mus., vol. 1, pt. 2, p. S-12.

This insect was described from a series of five specimens taken on Boothia Felix (now called Boothia Peninsula) by Commander James Clark Ross on July 18 and 25, 1830, and July 14, 1831. The number of each sex is not given in the original description, but since both the male and the female are described, and the male is figured, there must have been at least one of each sex.

The United States National Museum has three of the five types of *rossii rossii*, all apparently females. Attached to one is a legend in French, as follows:

"Voy. du Cap. Ross. p. lxxvii. pl. A. f. 7.

"Pôle. Voyage du Cap. Ross. Donné par M. Doubleday qui les tenait de M. Curtis lui même l'etiquette ci-dessous de la propre main de ce dernier.

"Cinq individus seulement ont été rapportés par le Capitaine Ross qui les a pris du 14 au 28 juillet sur les rochers abruptes et les pierres détachées où ils étaient rares.

"Le No. 1 m'apparaît être un ♂ si je considère les ailes et cependant l'abdomen est d'une ♀ ! aurait-il été changé? J'en doute car ces trois individus étaient fort maltraités quand M. Doubleday m'a envoyé cette précieuse espèce. Cependant la description de M. Curtis fait également supposer un ♂. quant aux N^{os}. 2 et 3 ce sont évidemment deux ♀.

"On voit parce que j'ai dit plus haut combien est précieuse cette boîte espèce que personne en France en possède et même n'a vue et que ne figure dans aucun catalogue.

"Elle est parente des *Ereb.* *Embla* et *Disa*, mais bien distincte."

I am indebted to Mrs. Richard Leroy Schuster of New York City for her assistance in deciphering the difficult orthography of the original label.

These three specimens were acquired by the United States National Museum through the purchase of the collection of William Barnes, who in turn obtained them from the collection of Charles Oberthür, when Barnes purchased the types of North American *Rhopalocera* in that collection. Before that time they were probably in the collection of Achille Guenée, who is believed to have been the author of the above-quoted legend. According thereto, the handwritten labels attached to the specimens were written by Curtis.

As observed by McDunnough (*tom. cit.*, p. 15), this subspecies is "... characterized by the small ocelli of forewings (mostly

confined to the two subcostal ones) and the general indistinct nature of the banding on the underside of the hind-wing." The subapical ocelli sometimes are missing, or very indistinct. The marginal band on the under side of the secondaries is greatly obscured in typical *rossii rossii*.

DISTRIBUTION: The habitat of this subspecies is along the northern fringe of the continent from the Mackenzie Delta to southern Baffin Island, inland for an unknown distance in the Barren Grounds, and on Southampton Island in Hudson Bay.

MATERIAL EXAMINED: Two males and 2 females, Southampton Island, Hudson Bay, July 18, 1930 (G. M. Sutton), Accession 8925 in the Carnegie Museum; 1 male, same data, (genitalic slide no. 260, C. F. dos Passos), in the collection of the author, *ex* collection Carnegie Museum; 14 males and 1 female, Coppermine, Northwest Territories, July 17-18, 1947, and 2 males, Dismal Lakes, Northwest Territories, July 19, 1947, all collected by, and in the collection of, William Hovanitz.

***Erebia rossii ornata* Leussler**

Figures 13-16

Erebia rossii Curtis race *ornata* LEUSSLER, 1935, Bull. Brooklyn Ent. Soc., vol. 30, p. 50.

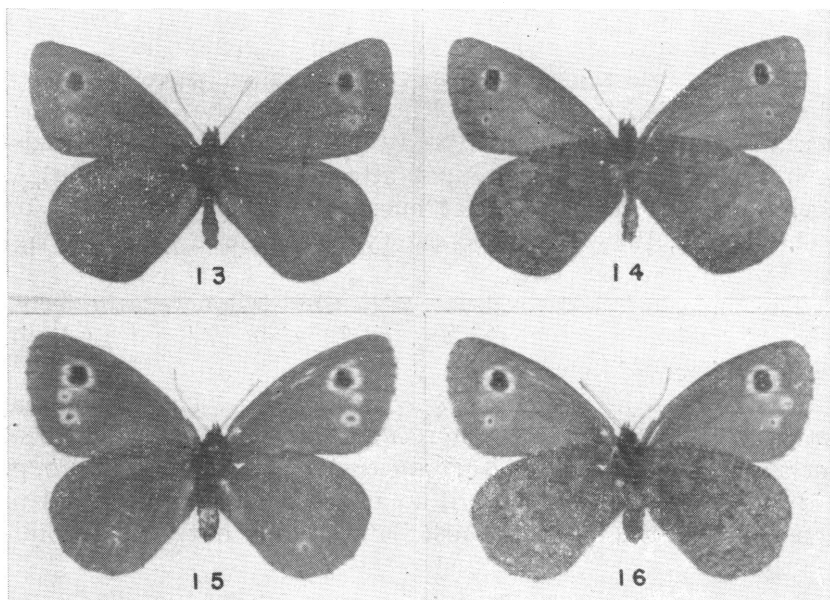
Erebia rossii ornata, McDUNNOUGH, 1937, Canadian Ent., vol. 69, p. 15.

Erebia rossii ornata, DOS PASSOS, 1939, Bull. Cheyenne Mt. Mus., vol. 1, pt. 2, p. S-12.

This insect was described from a series of 16 males and nine females taken at Churchill, Manitoba, Canada, by Owen Bryant, between June 15 and 20, 1930. The holotype male and allotype female are in the collection of the Ohio State University, Columbus, Ohio, *ex* collection R. A. Leussler, *ex* collection O. Bryant.

This subspecies usually may be distinguished from the other subspecies of *rossii* by the fact that the two subapical ocelli on the upper side of the primaries almost invariably fuse into one rather large ocellus. The band on the under side of the secondaries is obscure as in *rossii rossii*. These characters are well shown by the figures of a pair of paratypes of *ornata* (figs. 13-16) in the collection of the author. The types never have been figured.

DISTRIBUTION: Thus far this subspecies has been seen only from Churchill, with the exception of a single male from "Minniota" [Miniota], Manitoba, June 10, 1926, in the collection of the present author, as to which the data may be incorrect.



FIGS. 13-14. *Erebia rossii ornata* Leussler, paratype male, upper and under sides.

FIGS. 15-16. *Erebia rossii ornata* Leussler, paratype female, upper and under sides.

***Erebia rossii kuskoquima* Holland**

Erebia rossii, SKINNER, 1899, Ent. News, vol. 10, p. 113.

Erebia rossi [sic] (Curtis) Var. *kuskoquima* HOLLAND, 1931, The butterfly book, revised ed., p. 203, pl. 61, figs. 21, ♂, 22, ♀, 23, ♀, under side.

Erebia rossi variety *kuskoquima*, HOLLAND AND AVINOFF, 1935, Mem. Carnegie Mus., vol. 12, pt. 2, sect. 5, p. 8.

Erebia rossii race *kuskoquima*, LEUSSLER, 1935, Bull. Brooklyn Ent. Soc., vol. 30, pp. 50-51.

E[rebia] rossii ssp. *erda* f. *kuskoquima*, WARREN (nec Holland), 1936, Monograph of the genus *Erebia*, p. 161.

Erebia rossii kuskoquima, McDUNNOUGH, 1937, Canadian Ent., vol. 69, pp. 14-15.

Erebia rossii kuskoquima, DOS PASSOS, 1939, Bull. Cheyenne Mt. Mus., vol. 1, pt. 2, p. S-12.

The types of *kuskoquima* were collected by A. Stecker, who was in charge of the Moravian Mission to the Eskimos on the Kuskokwim River, Alaska. Dr. Sweadner was kind enough to supply the information that Stecker's base station was located at Bethel, about 20 miles up the Kuskokwim River at the inland

edge of the coastal tundra, and that most of Stecker's collecting was done there and down the river towards its mouth.

Holland neglected to label the types of this subspecies. When the types of North American *Rhopalocera* in the Carnegie Museum were photographed in 1938 after Holland's death, this omission was discovered. Thereupon after consultation with Dr. A. Avinoff, then director of that museum, the present author on February 17, 1938, labeled as the types the three specimens figured by Holland (*loc. cit.*).

The male, referred to above, is hereby designated the lectotype of *Erebia rossii* (Curtis) var. *kuskoquima* Holland, and will be labeled accordingly.

As observed by Holland (*op. cit.*, p. 203), "The extradiscal band on the lower side of the secondaries, which in the typical form is obscure, is lighter . . .," and as McDunnough (*tom. cit.*, p. 15) remarks, ". . . the basal area is also much lighter and in consequence the median dark band stands out quite prominently."

Warren (*in litt.*) agrees with the present author that his figures (*op. cit.*, pl. 73, figs. 928, 934) of "*kuskoquima*" should be referred to *rossii rossii*. He does not figure *kuskoquima*. McDunnough (*loc. cit.*) already had pointed out this fact. Warren's other figures (*op. cit.*, pl. 73, figs. 926, 932, pl. 74, figs. 935, 941, genitalia pl. 32, figs. 310-312) of "*kuskoquima*" should be referred to the Palearctic subspecies.

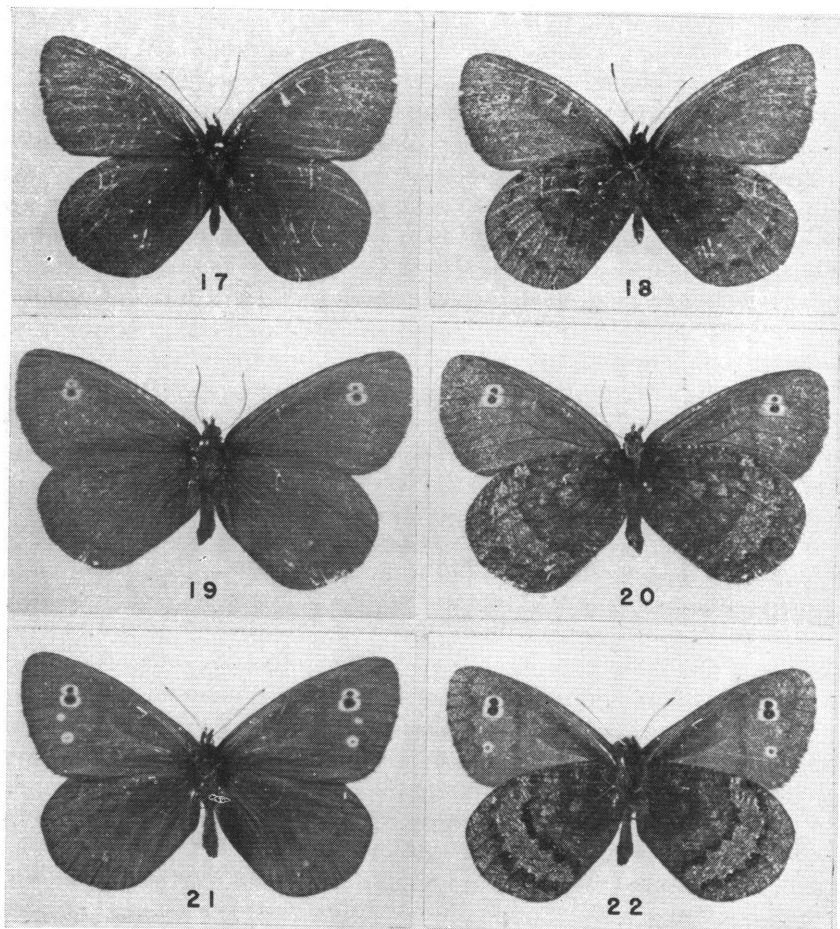
DISTRIBUTION: Thus far this subspecies is known only from the Kuskokwim River Valley, Alaska.

***Erebia rossii gabrieli*, new subspecies**

Figures 17-28

MALE: Expanse 38.5-50 mm., holotype 48 mm.

Above, primaries and secondaries Light Seal Brown, Auburn, or Mummy Brown (holotype). The primaries seldom without ocelli; usually with two subapical ocelli and sometimes with one to two submarginal Orange or Orange Buff spots. The ocelli are joined and circled with Orange or Orange Buff, and Black pupiled, slightly elongated, the Black pupils seldom joined. Secondaries usually without ocelli, but in a few instances with one to four Orange or Orange Buff spots, some with, but usually without, minute Black pupils. Fringes Gray.

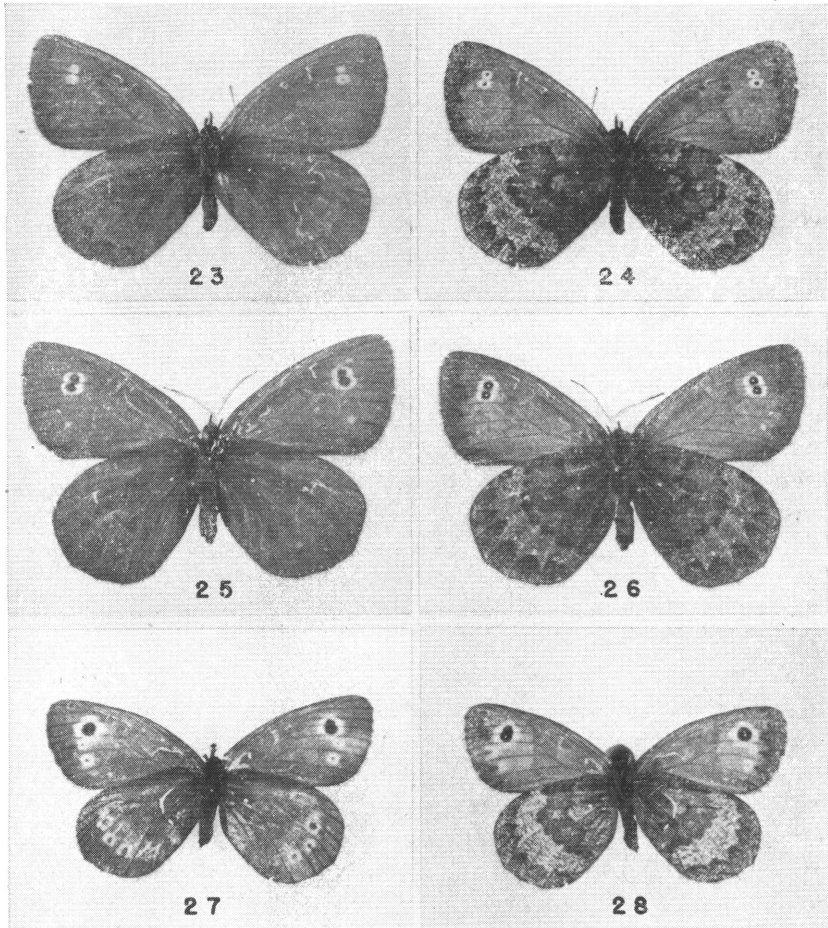


FIGS. 17-18. *Erebia rossii gabrieli* dos Passos, paratype male, upper and under sides.

FIGS. 19-20. *Erebia rossii gabrieli* dos Passos, holotype male, upper and under sides.

FIGS. 21-22. *Erebia rossii gabrieli* dos Passos, paratype male, upper and under sides.

Below, primaries, basal, and discal areas Bay or Chestnut. Costal and limbal areas Mars Brown or Chestnut Brown. Apex flecked with Gray scales. The ocelli reappearing usually with minute White points. Secondaries, basal, and limbal areas Cinnamon-Drab or Ecu-Drab flecked with Gray, separated by a broad, irregular, Hessian Brown or Chestnut Brown median



FIGS. 23-24. *Erebia rossii gabrieli* dos Passos, paratype female, upper and under sides.

FIGS. 25-26. *Erebia rossii gabrieli* dos Passos, allotype female, upper and under sides.

FIGS. 27-28. *Erebia rossii gabrieli* dos Passos, paratype female, upper and under sides.

band lightly flecked with Gray scales. Crenulate marginal band same color as median band. Fringes as above.

Head and eyes Black, the former covered with Black hairs; antennae annulated, Orange and Black, club tipped with Black; thorax and abdomen Black, hairy; legs somewhat paler than wings.

FEMALE: Expanse 40–46 mm., allotype 45 mm.

Above, primaries and secondaries Mummy Brown, Prout's Brown, or Auburn (allotype). The primaries with two subapical Orange or Orange Buff ocelli pupiled with Black; some specimens with one or two additional Orange or Orange Buff submarginal spots on the primaries. Usually only the subapical ocelli have Black pupils. The allotype has an Orange scale or two in the subapical ocelli. Secondaries with none to occasionally four small submarginal ocelli sometimes pupiled with Black. Fringes Gray.

Below, primaries, basal, and discal areas Burnt Sienna, Snuff Brown, or Tawny Olive. Costal and limbal areas Mars Brown, Chestnut Brown, or Snuff Brown. Apex flecked with Gray scales. The ocelli reappearing usually with minute White points. Secondaries, basal, and limbal areas Wood Brown or Fawn Color flecked with Gray, separated by a broad, irregular, Chestnut Brown or Natal Brown median band lightly flecked with Gray scales. Crenulate marginal band same color as median band. Fringes as above.

Head, eyes, antennae, thorax, abdomen, and legs similar to male.

Two males in the collection of the author deserve special mention. One has the usual pair of ocelli on the upper side of left primary. On the right primary there are four ocelli in an Orange Buff submarginal band. The other specimen is marked in the same way, but the markings are on the opposite wings.

Of a series of 139 males examined, 63 have three or more ocelli or spots on the primaries, 64 have two ocelli, and 12 have one or none. A series of 21 females reveals four with four or more ocelli or spots on the primaries, 10 with three ocelli, and seven with two. Usually large and numerous ocelli or spots on the primaries are offset by similar markings on the secondaries.

This subspecies is named for my friend A. G. Gabriel, Assistant Keeper, Department of Entomology, British Museum (Natural History). The author is indebted to Mr. B. C. S. Warren for kindly examining specimens of the new subspecies and advising that in his opinion it is worthy of a name.

The new subspecies differs from *rossii rossii* in that the two subapical ocelli on the upper side of the primaries are larger, and the median band on the under side of the secondaries is more prominent. In *rossii rossii* this band is barely visible. It differs

from *ornata* in that the two subapical ocelli are usually smaller and seldom fuse into one. The dark median and marginal bands on the under side of the secondaries are usually narrower. It differs from *kuskoquima*, its nearest relative, in that the median band on the under side of the secondaries is narrower, the pale area between that band and the dark marginal band is wider and somewhat darker, thus leaving the marginal band somewhat narrower. The females very seldom have as many large and conspicuous ocelli on the upper side of the wings, especially on the secondaries. The genitalia of these four subspecies have been examined, but do not appear to show any constant differences.

DISTRIBUTION: The habitat of this subspecies is in the Alaska Range, where it seems to fly at about 3500 feet elevation. A large portion of this range is in Mount McKinley National Park. No substantial barrier appears to exist between *kuskoquima* and *gabrieli*, and the latter is perhaps but an altitude subspecies.

TYPE MATERIAL: The holotype male is from Mount McKinley Park, 3500 feet, Alaska, July 5, 1938, *ex* collection G. P. Engelhardt, and the allotype female is from the same locality, July 17, 1932. There are 20 pairs of paratypes from Alaska as follows: 3 males and 11 females, Mount McKinley Park, between June 21 and July 26, 1932, and 2 females, same locality, 3500 feet, July 5, 1938, *ex* collection G. P. Engelhardt; 1 male, McKinley National Park, June 28, 1930; 10 males and 7 females, McKinley Park, between June 17 and July 24, 1932; 6 males, McKinley, June 20 and 25, 1930. The holotype and the allotype are in the American Museum of Natural History, *ex* collection C. F. dos Passos. One pair of paratypes is in the Canadian National Collection. One pair of paratypes each will be sent to the British Museum (Natural History), the Carnegie Museum, and the United States National Museum. The remaining paratypes are in the collection of the author.

ADDITIONAL MATERIAL EXAMINED: The author has examined also the following specimens of *gabrieli* from Alaska, but they are not made paratypes: 83 males, Mount McKinley Park, between June 27 and July 22, 1932, and 1 male, same locality, 3500 feet, June 5, 1938, and another male, same locality and elevation, July 5, 1938, the latter two *ex* collection G. P. Engelhardt; 1 male, McKinley Park, June 20, 1930, and 30 males, same locality, between June 19 and July 25, 1932; 1 male, McKinley, June 30, 1930, all in the collection of the author; 1 male, McKinley Park, July 29, 1930, *ex* collection D. Fraser, Accession 32500; 6 males, McKinley, June 7-20, 1930, and 16 males and 7 females, same locality, June 20-July 9, 1930, *ex* collection J. D. Gunder, Accession 34998, all in the American Museum of Natural History.

ADDITIONAL LITERATURE CITED

DOS PASSOS, CYRIL FRANKLIN

1947. *Erebia youngi* Holland, its subspecies and distribution (Lepidoptera, Satyridae). Amer. Mus. Novitates, no. 1348, pp. 1-4.

GEYER, CARL

- [1827-1838]. In Hübner, Jacob, Sammlung exotischer Schmetterlinge. Augsburg, vol. 3, 53 colored pls.

GIBSON, ARTHUR

1920. The Lepidoptera collected by the Canadian Arctic expedition, 1913-18. . . . Report of the Canadian Arctic expedition 1913-18, vol. 3: Insects pt. 1: Lepidoptera, pp. li-58i, pls. 1-5 (2 colored), fig. 1.

GUNDER, JEANE DANIEL

1931. Some new butterflies (Lepid., Rhopalocera). Bull. Southern California Acad. Sci., vol. 30, pp. 45-48.
1932a. A few new butterflies (Lepidoptera, Rhopalocera). Pan-Pacific Ent., vol. 8, pp. 123-127.
1932b. New Rhopalocera (Lepidoptera). Canadian Ent., vol. 64, pp. 276-284.

HOVANITZ, WILLIAM

1943. The nomenclature of the *Colias chrysotheme* complex in North America (Lepidoptera, Pieridae). Amer. Mus. Novitates, no. 1240, pp. 1-4.

KLOTS, ALEXANDER BARRETT

1940. A new *Brenthis* from Alaska (Lepidoptera, Nymphalidae). Jour. New York Ent. Soc., vol. 48, pp. 413-414.

WATKINS, HARRY TRANT GODFREY

1928. New satyrid butterflies. Ann. Mag. Nat. Hist., ser. 10, vol. 1, pp. 615-618.

