

## A NEW APODEMIA FROM CALIFORNIA (Lepidopt.)

By JOHN A. COMSTOCK

In the new Check List of the Macrolepidoptera of Canada and the United States of America, Dr. J. McDunnough correctly groups the members of the genus *Apodemia*, with *A. mormo* Feld.<sup>1</sup> as the parent species (synonyms *dumeti* Behr<sup>2</sup> and *mormonia* Bdv.<sup>3</sup>), form *virgulti* Behr<sup>4</sup> (synonyms *sonorensis* F. & F.<sup>5</sup> and *cythera* Edw.<sup>6</sup>), form *mejicanus* Behr<sup>7</sup> (syn. *duryi* Edw.<sup>8</sup>) and form *deserti* B. & McD.<sup>9</sup>

*Mormo* is characterized by the fact that the primaries on the upper surfaces are more or less completely suffused with orange-fulvous internal to the second submarginal row of white spots, while the ground color of the secondaries is entirely gray-black.

*Virgulti* has much the same disposition of orange-fulvous on the primaries, but this extends somewhat beyond the second row of white spots and nearly reaches the first row. Also, in typical examples, this color is more nearly an orange-red. The secondaries have a discrete band of this orange red placed between the first and second rows of submarginal spots, the remainder of the wing being predominantly gray-black.

*Mejicanus* is distinguished by the great expansion of the orange-fulvous which covers practically all but the outer margins of both wings, exclusive of the white spots with their black margins.

*Deserti* is a desert form or race of *mormo* in which the white spots are relatively larger, the orange-fulvous of a lighter shade and the ground color more gray. Like *mormo* it has no orange-fulvous on the upper surface of primaries in the outer third of the wing, and no fulvous on secondaries, except for an occasional minute spot or two at the base.

A very distinct race occurring at Antioch, California, has recently been called to our attention by Mr. W. Harry Lange, Associate in Entomology of the University of California, for whom we take pleasure in naming it.

APODEMIA MORMO RACE LANGEI n. nov.

Expanse, male, 18 to 24 mm. Female, 24 to 27 mm.

Male holotype, 21 mm. Fringes, checkered black and white, the black disposed at the ends of the nervules and veins. Outer third of wing (upper surface of primaries), black, with a submarginal row of seven small white spots, all of about equal size, and a second row of larger subtriangulate white spots internal



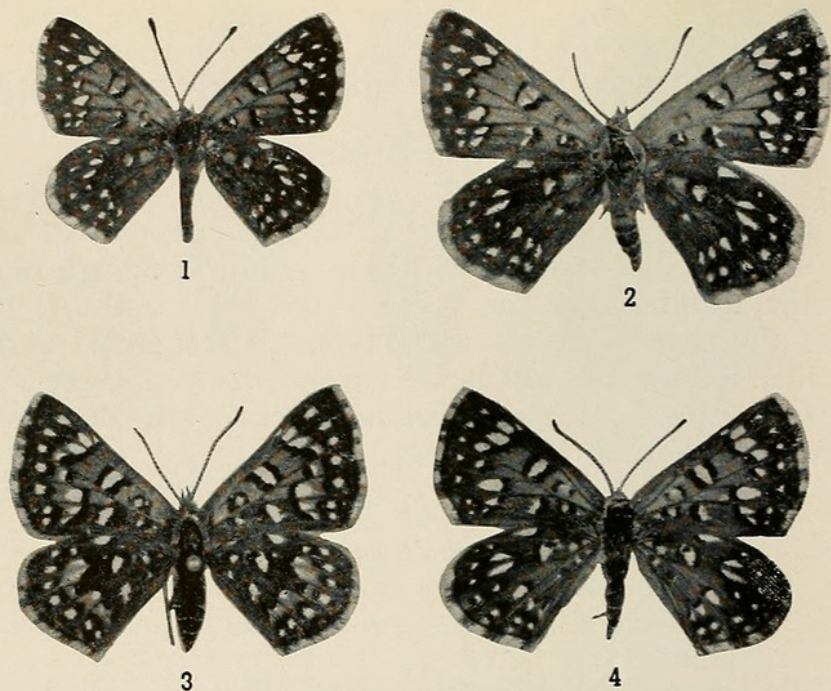


PLATE 50

Fig. 1. *Apodemia mormo langei*, holotype male.

Fig. 2. *A. mormo langei*, allotype female.

Fig. 3. *A. mormo virgulti*, female.

Fig. 4. *A. mormo*, female.

All figures enlarged  $\times 1\frac{1}{3}$ .

Photo by Cobb.

to the first, which are of unequal size, the third and sixth being the largest. Internal to this the wing is suffused with deep orange-fulvous, except for a narrow black strip along the costal margin and a wide band of black on the inner margin.

At the outer angle of the cell there are two transverse black dashes which in all of the other species and forms previously mentioned enclose a large white spot, but which in *langei* are laved with orange-fulvous with only a minute point of white at the lower edge of the space. In the fifty examples before us there is not a single individual in which this discal spot is filled with white, but in thirty-four there are two of these small white points disposed at the opposite poles of the space, while in five examples there is no evidence of any white scaling. This feature will at once serve to separate *langei* from all other forms in our fauna, since all of the others have this space entirely filled with white.

Below this discal spot, and close to the posterior margin occur two small white points, edged internally with black, and a third white spot of similar character occurs midway between the paired spots aforementioned and the base of the wing.



Secondaries, upper surface. These are very similar to *mormo* except for one important particular. In the outer angle of the cell there occurs in all other forms under discussion a large white spot, margined with black, and a second small white spot placed midway between it and the base. In *langei* the large spot is orange-fulvous with only occasionally a small white point at the lower margin, and the innermost spot is always fulvous and is the larger of the two.

The remainder of the wing is black, with the usual two rows of white spots crossing the submarginal area. A few examples show a slight suffusion of orange-fulvous over portions of the inner half of the wing, but in the great majority this area is a solid black.

On the under surface the wings more nearly resemble those of *mormo*, although there is a heavier scaling of white, nearly approaching *deserti* in this respect. This white scaling is more heavily concentrated along the inner margin of *langei* than it is in any other of the above mentioned forms.

Antennae as in the other forms. Thorax and abdomen heavily clothed with long white scales on ventral surface as in *deserti*; dorsal surface much as in *mormo*.

Female, allotype, expanse 27 mm.; very similar to male in all respects except for the larger size. A second example shows a considerable suffusion of orange-fulvous over the inner half of second wing, but is probably atypical in this respect.

Described from 48 males and 2 females, all collected at Antioch, Contra Costa County, California, in August, 1933, and August, 1938, by W. Harry Lange; the holotype and allotype collected August 14, 1938.

Holotype, allotype and a series of paratypes in the collection of the Los Angeles Museum. Paratypes will be placed with the National Museum in Washington, the Canadian National Museum at Ottawa, the Philadelphia Academy of Natural Sciences, the California Academy of Sciences, San Francisco, and the British Museum. A series will be returned to Mr. Lange.

It is possible that *Apodemia mormo langei* may prove to be restricted to a very narrow territory in the San Joaquin Valley. Concerning its locus Mr. Lange writes: "this species is confined to a narrow strip of sand dunes running east from Antioch along the San Joaquin River. I have never seen it very common and have found it associated with a rather tall *Eriogonum*, 1-3 feet high, with tall flower stalks and a rosette of leaves at the base." Undoubtedly this *Eriogonum* is the larval food plant.



The author has reared *A. deserti* from *Eriogonum inflatum* which is a somewhat similar plant.

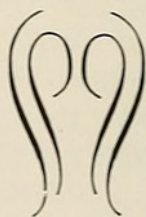
It may be noted in connection with this genus that Seitz<sup>10</sup> has erred in several particulars. He states that *mejicanus* Behr occurs in North California, whereas Dr. Behr gives the type locality as "from the Sierra Madre, in the neighborhood of Mazatlan." (Mexico.)

It does not occur in California.

Seitz also misspells *duryi* (as *druryi*) and incorrectly credits it to Henry Edwards. His figure of *cythera* does not match the illustration of the type as shown in Holland's Butterfly Book.<sup>11</sup>

#### REFERENCES

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8. Papilio, ii, 47, 1882.
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10. Macrolep. of the World, vol. 5, p. 700.
11. The Butterfly Book, revised ed., plate XXVIII, figs. 5, 6.





1939. "A new Apodemia from California (Lepidopt.)." *Bulletin of the Southern California Academy of Sciences* 37, 129–132.

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