

1140 W. Orange Grove Ave., Arcadia, California, U.S.A.
© Copyright 1964

PETALUMA, A NEW GENUS,
WITH THE DESCRIPTION OF A NEW SPECIES

J. S. BUCKETT and W. R. BAUER

University of California, Davis, California
and
California State Department of Agriculture
Sacramento, California

THIS NEW GENUS IS COMPARED with *Paramiana* Barnes & Benjamin, to which it is most closely related. It was discovered in Petaluma, California, and until recently was known from only two specimens. *Petaluma* is unique in many respects, particularly in the greatly enlarged first and last tarsal segments as well as the gigantic unguis.

The genitalic organs were stained with lignin pink to better contract the weakly sclerotized areas and the genitalia were illustrated by Miss Judith Jay. We wish also to extend our appreciation to Mr. Michael Gardner for his assistance on this project.

PETALUMA new genus

Head clothed with hair; antennae bipectinate to tip, bipectinations longest at center of antenna; frons with large triangular-shaped rounded prominence, palps with second segment possessing long hairs ventrally; proboscis normal; eyes large, rounded, moderately lashed. Thorax heavily clothed with forked hairs dorsally; dorsum with spreading divided crests, ventrally clothed in simple hairs; fore tibiae lacking armature, first and last tarsal segments greatly enlarged, as in figure 3; fore tarsal unguis very large, twice the size of mid tarsal unguis, ventrally possessing a cluster of hairs or bristles; mid tibiae with single pair of end spurs; mid tarsal unguis twice the size of hind tarsal unguis; hind tibiae possessing a pair each of medial and end spurs; hind tarsal unguis more normal size, but still rather large. Primaries and secondaries with shape as in figure 1, abdomen lacking tufts; clothed with hair both dorsally and ventrally. Genitalia as in figures 2 and 4. Type species: *P. californica* n. sp.

This genus is most closely related to *Paramiana* B. & B. *Petaluma* is much more robust and possesses a triangular-shaped rounded prominence on the frons, whereas in *Paramiana* the frons is entirely rounded; the antennae are bipectinate, whereas in *Paramiana* the male antennae are ciliate; unguis on all tarsal segments larger in *Petaluma*; the vesica of the aedeagus possesses an even band of spines in *Petaluma*, whereas in *Paramiana* there is generally one accessory group of spines plus a band of spines. At present the female sex and immature stages are unknown.

***Petaluma californica* Buckett and Bauer, new species**

Holotype male: Head clothed in various shade soft brown hairs; antennae basally with tufts of dark brown hair, flagellum brown, lengthily bipectinate, bipectinations longest medially; frons with large triangular-shaped rounded prominence, appearing to be covered with a white powdery substance, frontal prominence surrounded with light yellowish brown hairs; eyes large, rounded, moderately lashed; palps clothed in both dark and light brown hairs, second segment ventrally with long black hairs. Thorax with collar tricolor, basally red-brown, medially black, tipped with light brown; dorsum with spreading divided crests of black forked hairs; ventrally heavily clothed with brownish, blackish and purplish white-tipped hairs; fore tibiae lacking armature; tarsal segments black and white banded, unguis unusually large and possessing a group of hairs or bristles; mid tibiae with one pair of black and white banded end spurs; mid tarsi black and white banded, unguis half the size of fore tarsal unguis; hind tibiae with a single pair of both medial and end spurs, unguis smaller than mid tarsal unguis. Primaries with basal area light brown, basal dash black; transverse anterior line black, geminate, inner line faint, outer line distinct, included space light brown, outcurved between veins with largest outcurved angle to base of claviform then sharply inward to vein 1, and then outcurved again between vein 1 and inner angle; median area darker brown than basal and subterminal spaces; claviform black outlined, filled with lilac; orbicular black outlined, filled with light brown; reniform quadrate, only slightly constricted, outlined in black, largely filled with lilac gray, with some white scales centrally; transverse posterior line black, faintly geminate, inner line distinct, deeply incurved between veins, from costa closely around reniform and rather strongly oblique to inner margin about one half way out from base; subterminal area light brown at costa becoming paler at "W" mark, then a dark streak below followed by a lilac white patch on inner margin; subterminal line pale brown at costa, incurved opposite reniform then a strongly marked pale "W" mark then rather even, incurved at inner margin; terminal area light for one quarter its distance from costa then dark brown, interrupted medially by white "V" with point toward basal area; terminal line black; fringes of red brown and dark brown intermixed spatulate scales; ventral surface of primaries pubescent, basally dark brown to transverse posterior line, then light brown to terminal line; remaining portion of wing with veins black outlined; terminal line present as lunules between veins. Secondaries whitish dorsally, shiny, irrorated with brown; veins outlined in brown; discal lunule brown, brown medial band running nearly parallel to outer margin; terminal line brown; fringes fuscous; ventral surface of secondaries whitish, scantily pubescent basally; costally with heavy brown irroration,

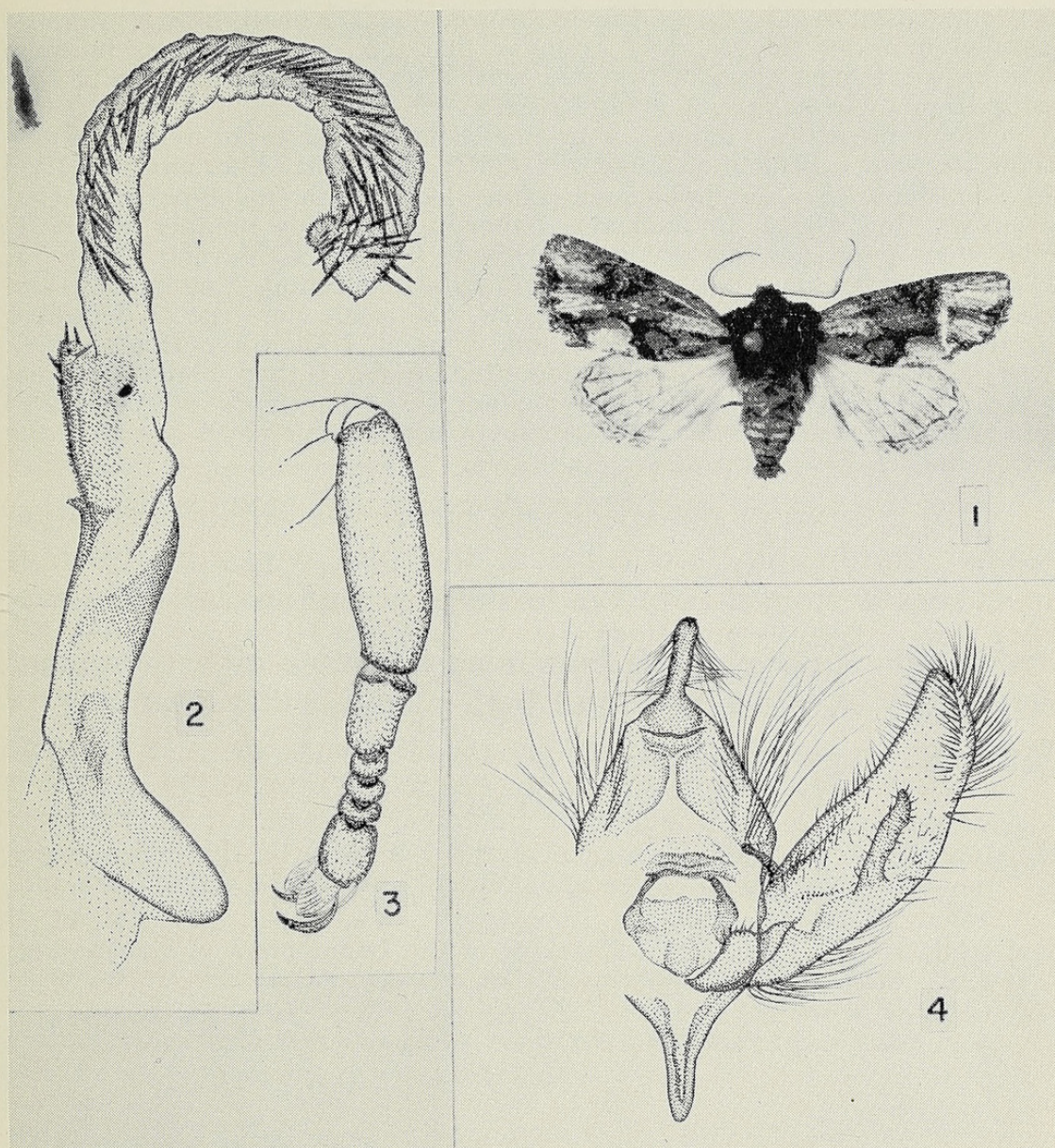


Fig. 1. Holotype male. Petaluma, Sonoma County, California, February 16, 1955 (J. S. Buckett).

Fig. 2. Aedeagus of *P. californica* Buckett and Bauer. Paratype male, Petaluma, Sonoma County, California, February 9, 1960 (J. S. Buckett), Bauer-Buckett slide number 63J19-21.

Fig. 3. Fore tibia and tarsus shown to illustrate enlarged first and last tarsal segments. Paratype male, Placerville, El Dorado County, California, March 15, 1964.

Fig. 4. Male genitalia of *Petaluma californica*, minus aedeagus. Data same as that of figure 2.

forming costal band; discal lunule brown; medial band brown, running parallel to outer margin, less irregular than on dorsal surface; terminal line brown, fringes whitish, irrorated with brown. Greatest expanse of fore wing 16 mm. Genitalia as in figures 2 and 4.

Holotype male: (deformed in the transverse posterior region of the right forewing) Petaluma, Sonoma County, California, February 16, 1955 (J. S. Buckett). Paratype male same locality as holotype, collected February 6, 1960 (J. S. Buckett), Bauer-Buckett slide number 63J19-21; eight male paratypes, Placerville, El Dorado County, California, March 15, 1964. Holotype male deposited in the Type Collection, Entomology Department, University of California, Davis. One male paratype is deposited in the Franclemont private collection, Cornell University, Ithaca, New York; one male paratype is also deposited in the United States National Museum, Washington, D. C. The remaining seven paratypes are retained in the collection of the authors. All specimens used in this paper are from the Bauer-Buckett Collection, Davis, California.

With a series of ten specimens before the authors, variation seems considerable, the color of the fore wings in different specimens is from that of the holotype to suffused dark brown.

We take great pleasure in naming this moth after the quaint community in which we were both members for a number of years.

REFERENCES

- HAMPSON, G. F., 1906. Catalogue of the Noctuidae in the collection of the British Museum. Taylor and Francis Pub. Co., London, England, 532 + xiv pp.
- McDUNNOUGH, J. H., 1938. Checklist of the Lepidoptera of Canada and the United States of America. *Mem. S. Calif. Acad. Sci.*, 1: 1-272.



Buckett, John S. and Bauer, William R. 1964. "Petaluma, a new genus." *The Journal of Research on the Lepidoptera* 3(3), 193–196.

<https://doi.org/10.5962/p.333486>.

View This Item Online: <https://www.biodiversitylibrary.org/item/224901>

DOI: <https://doi.org/10.5962/p.333486>

Permalink: <https://www.biodiversitylibrary.org/partpdf/333486>

Holding Institution

Smithsonian Libraries and Archives

Sponsored by

Biodiversity Heritage Library

Copyright & Reuse

Copyright Status: In Copyright. Digitized with the permission of the rights holder

Rights Holder: The Lepidoptera Research Foundation, Inc.

License: <https://creativecommons.org/licenses/by-nc-sa/4.0/>

Rights: <https://www.biodiversitylibrary.org/permissions/>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.