

On Some Foreign Carabidae Established in Hawaii* (Coleoptera)

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During the preparation of INSECTS OF HAWAII, Volume 15: COLEOPTERA I—CARABIDAE, three foreign carabid beetles new to the Hawaiian fauna have been recognized. I believe that they should be placed on record here so that they may be made known to Hawaiian and other workers who may wish to use the facts before my book on the Hawaiian Carabidae is published. In addition to the three newly recognized species, I include notes on *Somatrichus unifasciatus* (Dejean), which has been recorded heretofore in Hawaii from only one specimen. Only brief details will be given here to place the species on record. Amplified accounts of the newly established forms are included in my INSECTS OF HAWAII manuscript. Should further information be required before my book is published, COLEOPTERORUM CATALOGUS may be consulted.

PTEROSTICHINI SPHODRI

Pristonychus complanatus Dejean (Fig. 1, a).

Sphodrus Complanatus Dejean, 1821, Catalogue de la Collection de Coléoptères..., 11 (listed only).

Pristonychus Complanatus Dejean, 1828, Species Général des Coléoptères... 3: 58.

Laemostenus complanatus (Dejean), of authors.
Hawaii, Oahu.

This is thought to be originally a north African species. It has become widely dispersed by commerce, and it is known in many port cities where it is often found in buildings. It may have been introduced to Hawaii from the west coast of North America where it is found from California to British Columbia.

The earliest collected Hawaiian specimen I have seen was taken by "Thompson" at Kipuka Puaulu, Hawaii, in June, 1950. E. Slifer collected it on the ridge above Aiea, Oahu, in August, 1959. Other collectors have since found it, sometimes in abundance, at Kilauea, Kipuka Puaulu

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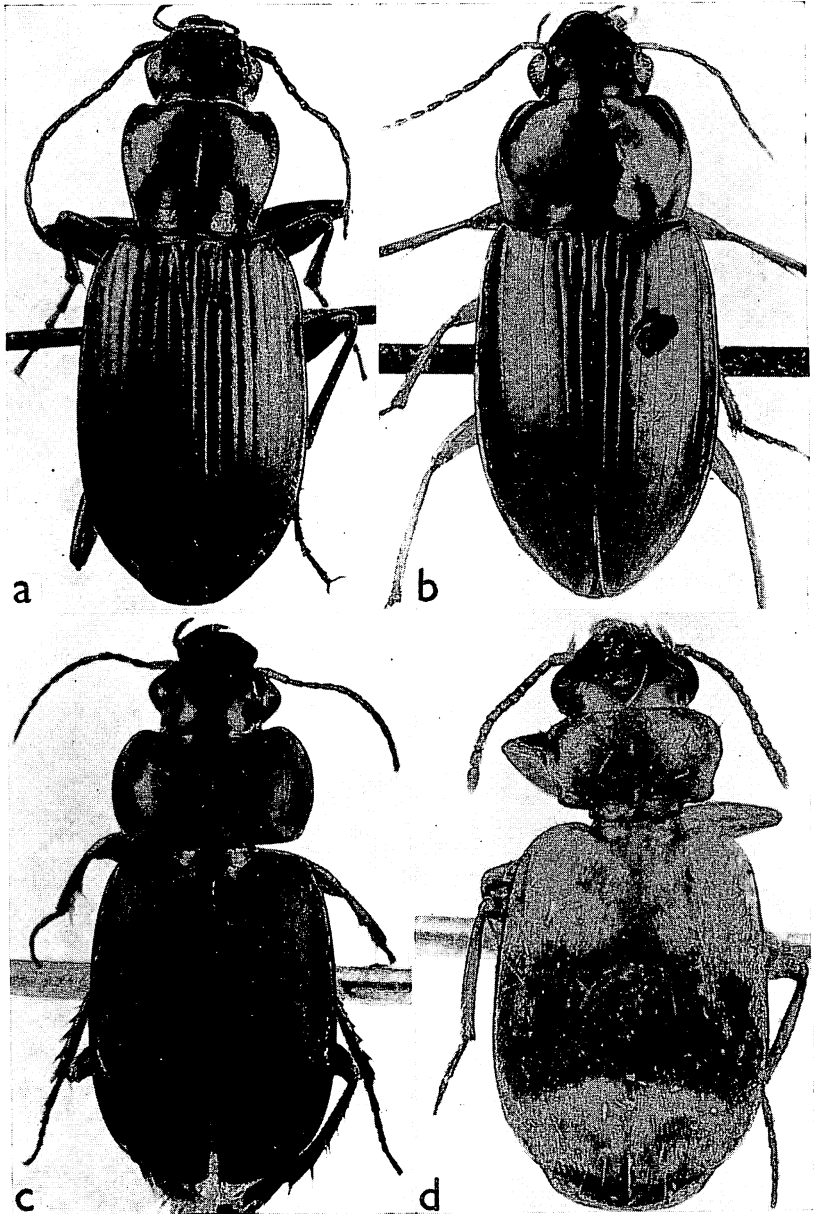


FIG. 1. Foreign Carabidae newly established in Hawaii. *a*, *Pristonychus complanatus* Dejean, male, length 14.0 mm; Kilauea, Hawaii. *b*, *Anisotarsus purpuraceus* Bates, female, length 9.0 mm; John Rogers Airport, Oahu. *c*, *Aephniidius opaculus* (Zimmermann), female, length 5.5 mm; Ewa, Oahu. *d*, *Somatrichus unifasciatus* (Fabricius), female, length 4.0 mm; Ewa, Oahu.

and on the Saddle Road on the island of Hawaii. It has been found on the ground and under dead bark.

This is a very odoriferous species. Its large size (for the Hawaiian fauna, that is) of between about 12 to 16 mm, in combination with its fourth metatarsal segments being setose on their dorsal discs and the tarsal claws being basally denticulate beneath, make it easily distinguished from all other carabids known in Hawaii.

HARPALINI
ANISODACTYLI

Anisotarsus purpuracens Bates (Fig. 1, *b*).

Anisotarsus purpuracens Bates, 1882, *Biologia Centrali-Americana*. Insecta, Coleoptera 1(1): 50.

Hawaii, Maui, Oahu.

This beetle was described from Mexico, and its range extends into the southwestern United States. It has been confused under some other names.

The first specimens collected in Hawaii which I have examined were taken in a light trap at Ewa, Oahu, 10 September 1958, by E.J. Ford, Jr. J.W. Beardsley collected it in a light trap at Waiakoa, Maui, 30 July 1964. It was, to my knowledge, first collected on the island of Hawaii at Kamuela, 17 April 1965, by R. Kurokawa, who reported finding it on the ground. It has since been taken in numbers at various localities on Oahu (where it is commonly attracted to lights in the lowlands), at Makawao, Maui, and at Humuula, Mt. Hualalai and in Kona, Hawaii. It is frequently abundant locally.

The beetle ranges in length between about 8.0 and 10.0 mm, and its characteristic shape, together with the abbreviated scutellar striole on each elytron appearing to be situated on the second interval instead of the first, there being only one supraorbital setigerous puncture on each side of the head (situated at a point just caudad of a line drawn from the middle of the eye) and the penultimate segment of each labial palpus having several setae, are characters which will distinguish this species from all other carabids now known in Hawaii excepting *Stenolophus limbalis*. Upon superficial examination, specimens of *purpuracens* may appear to be unusually large *limbalis*, but *purpuracens* has six or more setae on each penultimate segment of the labial palpi, whereas there are only two or three on *limbalis*. The two species are easily separated by characters plainly visible on the dorsum, because the pronotum of *limbalis* is conspicuously multipunctate across the base with the punctures longitudinally confluent at the middle, and the elytral microsculpture forms very fine transverse meshes. The base of the pronotum of *purpuracens* lacks such coarse puncturation and has only minute punctures similar to those on the disc, and the microsculp-

ture of the elytra consists of very different, coarser, isodiametric or subisodiametric reticulations.

MASOREINI

Aephnidius opaculus (Zimmermann) (Fig. 1, *c*).

Masoreus opaculus Zimmermann, 1832, Faunus. Zeitschrift für Zoologie und vergleichende Anatomie Herausgegeben von Gistel 1: 120.

Oahu.

The beetle is known from India, Ceylon and Burma east through the Philippines to Guam. It is possible that it has been introduced from Guam to Hawaii.

The first collected Hawaiian specimens which I have seen were taken in a Public Health light trap on Oahu in October, 1965, by J.W. Beardsley. He also took specimens in a light trap at Ewa, Oahu, in November, 1968.

This a small (4.0 to 5.0 mm long), peculiarly dull black species with notably coarse microsculpture, which is conspicuously different from any other carabid known from Hawaii. The trochanters of the posterior legs are very long (more than one-half as long as their femora), and the scutellar striae of the elytra are obsolete. It has the full complement of two pairs of lateral submarginal pronotal setae. The setae on the tibiae are conspicuously heavy and spiniform and are indicative of an active burrowing habit.

LEBIINI

Somatrichus unifasciatus (Dejean) (Fig. 1, *d*).

Carabus elevatus Fabricius, 1787, Mantissa Insectorum..., 198 (homonym).

Lebia unifasciatus Dejean, 1831, Species Général des Coléoptères 5: 389.

Oahu.

This distinctive carabid is thought to be an African species. It has been dispersed widely by commerce and is known from many areas where it is associated with man's activities. It is present in Micronesia and may have been introduced to Hawaii from that area. It is rather strange that it did not become established in Hawaii at an early date.

It was first recorded in Hawaii from a single specimen collected at Ewa, Oahu in 1954 (E.J. Ford, Jr., *Proc. Hawaiian Entomol. Soc.* 15: 388, 1955). I have seen more recently collected specimens captured in light traps at Ewa and Waipio, Oahu, and it probably will become a common, widely distributed insect in Hawaii.

The bicolored, hirsute, apically subtruncated elytra, very transverse, multisetose pronotum and its length of about 4.0 mm serve to distinguish this species from all others in Hawaii.