

A Review of the Hawaiian Mycetophagidae (Coleoptera)

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There are four species of Mycetophagidae (hairy fungus beetles) found in Hawaii. All of these are adventitious, and Hawaii is, therefore, without an endemic mycetophagid fauna. Of our four species, one is cosmopolitan, one is widespread in North America and the other two are found in Samoa also.

The Mycetophagidae are world-wide in distribution; about 200 species have been described. They are best represented in the Old World; six genera containing 32 species are found in America north of Mexico, and very few have been found in the Neotropical region. Two genera representing 12 species are listed in New Zealand, and five genera containing nine species have been recorded from Oceania east of Papua, excluding Hawaii and New Zealand. The only species thus far found in Samoa are two that were for many years known only from Hawaii. None have been described from Fiji.

The beetles and their larvae frequent dead or dying vegetation where fungi are obtainable. They may be found beneath bark or in dead twigs. The larvae are slender, subparallel-sided, with rather conspicuous four-segmented antennae, sparse long hairs at the sides of the body, and the terminal abdominal segment bears two prominent, sclerotized, dorsal protuberances.

KEY TO THE HAWAIIAN GENERA

1. Fore coxae separated by a distance about equal to twice the breadth of a coxa **Propalticus**
Fore coxae narrowly separated, the intercoxal process obviously narrower than a coxa 2
2. Clypeal suture distinctly impressed; inflexed edges of the elytra oblique, visible from the sides, their inner edges at a lower plane than the lateral margin of the elytra; elytra not maculate; side margins of the prothorax not greatly produced **Typhea**
Clypeal suture obsolete or nearly so; inflexed edge of the elytra invisible from the sides, hidden by the lateral edges of the elytra which are produced downward to a plane below that of the inner edge of the inflexed part which is concave and dorso medianly inclined; elytra maculate; sides of the prothorax produced into thin flanges similar to and subcontinuous with the sides of the elytra **Litargus**

Genus *Propalticus* Sharp, 1879

This is an anomalous genus provisionally placed in the Mycetophagidae. It does not fit into the general structural scheme of the Mycetophagidae, but has been included in the family by Dr. Sharp and Dr. Hugh Scott because no better place could be found by them for it. It is quite possible, I believe, that a new family should be erected to receive it.

Propalticus was erected by Dr. Sharp (Trans. Ent. Soc. London, p. 88, 1879) for the reception of our Hawaiian species, which is, therefore, the genotype. In 1882, Dr. Sharp described a second species, *Propalticus jansoni*, from New Guinea. In 1922 (Trans. Linn. Soc., Zool. (2), vol. 18, pp. 253-257) Dr. Scott gave an excellent review of the genus and described a third species, *P. sechellarum*, from the Seychelles. Dr. Scott also tells of having seen undescribed species of the genus from "Madagascar, Sumatra and the Nias Islands, Japan, Sierra Leone and San Thomé." He has also seen some undescribed species of what may be a closely related genus from the Cameroons and the Belgian Congo. He has thus shown that the genus has a wide distribution from West Africa to Hawaii.

In several keys and family synopses which I have used, I have been unable to place this genus in the family Mycetophagidae, but it does seem to approach the Cryptophagidae. Unfortunately, I am unqualified to properly revise the genus or to place it more accurately and will follow Dr. Scott for the present.

1. *Propalticus oculatus* Sharp (fig. 1,d).

Sharp, D.: Trans. Ent. Soc. London, p. 88, 1879; Cistula Ent., vol. 3, p. 31, pl. II, fig. 1, 1882.

Scott, H.: Fauna Hawaiiensis, vol. 3, p. 420, pl. xvi, figs. 12-14, 1908; Trans. Linn. Soc. London, vol. 18, p. 253, fig. 7a, 1922.

This species can be easily recognized by its robust form, peculiar antennae, widely separated coxae, five segmented tarsi and by the peculiar apical spur on the fore tibia.

Dr. Scott described the antennae as 14 or 15 segmented in "Fauna Hawaiiensis," but in 1922 corrected his statement and showed that the antennae are really only 11 segmented. The peculiarly formed antennal club is most misleading and appears to be formed of five or six segments.

This species has also been found in Samoa. It is an active jumper and is probably found on all of our main islands. I have seen specimens collected at all seasons of the year from bark of dying and dead avocado and dead *Xylosma*.

Genus *Typhea* Curtis, 1830

The characters given in the key will enable one to recognize this genus among the Hawaiian Mycetophagidae. There are nine species in the genus and these are found in widely separated localities about the world.

2. *Typhea stercorea* (Linnaeus) (fig. 1,c).

Dermestes stercorea Linnaeus: Syst. Nat. 10th ed. p. 357, 1758.

Dermestes fumata Linnaeus: Syst. Nat. 12th ed. p. 654, 1766.

This species is the largest of our mycetophagids and can easily be recognized by its subparallel-sided form and concolorous body. It

has been spread by commerce and is now cosmopolitan. It was found by Blackburn before 1885 in Honolulu and can be expected to be found generally distributed throughout the lowlands of our islands and may be found on dead vegetation or perhaps about grain or grain products.

Genus *Litargus* Erichson, 1832

The two members of this genus found in our islands can be generically recognized by the flange-like sides of the elytra and prothorax and by their conspicuously maculate elytra. The genus is cosmopolitan in distribution and contains over 60 species.

KEY TO THE HAWAIIAN SPECIES OF LITARGUS

Terminal segment of the antennal club approximately as long as the two preceding segments together; elytra not strongly attenuated caudad

L. balteatus

Terminal segment of the antennal club obviously shorter than the two preceding segments together; elytra rather conspicuously tapered from base to apex

L. vestitus

3. *Litargus balteatus* Le Conte

Le Conte, J.: Proc. Philadelphia Acad. Nat. Sci., vol. 8, p. 14, 1856.

This species is widespread in North America and evidently ranges southward into Central America. It belongs to Casey's subgenus *Alitargus* because its terminal antennal segment is elongate and obliquely truncate. Some of our specimens probably belong to the variety *transversus* Le Conte, but, because of variation, I believe it best that we refer our specimens to *L. balteatus* until it can be shown that two different types occur here and that they can be separated.

The long terminal antennal segment together with its more robust shape readily distinguishes this species from *Litargus vestitus*.

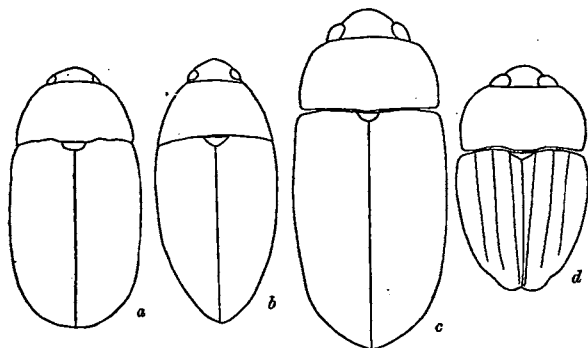


FIG. 1. Outlines of Hawaiian Mycetophagidae: a, *Litargus balteatus* Le Conte; b, *Litargus vestitus* Sharp; c, *Typhea stercorea* (Linnaeus); d, *Pro-palticus oculatus* Sharp.

This species is generally distributed throughout the islands. It occasionally comes to light and has been found in dead sugar cane and cane leaves and in dead *Sapindus*.

4. *Litargus vestitus* Sharp

Sharp, D.: Trans. Ent. Soc. London, p. 88, 1879.

This species was found in Hawaii before 1885 by Blackburn and has also been found in Samoa. It is quite probable, I believe, that it will be found to have a widespread distribution in Oceania. In our islands it ranges from sea level to over 5000 feet, and has been collected from dead guava, *Acacia confusa*, pods of *Acacia farnesiana* and from *Acacia koa*.