

## A New *Plagithmysine* from *Ilex* on Hawaii (Coleoptera: Cerambycidae)<sup>1</sup>

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The number of known species of the endemic Hawaiian plagithmysine complex has been steadily increasing of late.<sup>4</sup> This group of beetles exhibits great variety of form, but because of the discovery in recent years of intergrades, the complex has been reduced to the single genus *Plagithmysus*, now containing more than 130 species. The host specificity in this group is extremely narrow, providing very interesting correlations between evolution, distribution and host-plant range. It has frequently been possible to predict the presence of a new species in a particular host on a particular island because of the existence of a species in that host on another island. In our first joint paper (Gressitt & Davis, 1969. Proc. Hawaii. Entomol. Soc. 20:345) we described *P. usingeri* from Oahu without knowledge of the host plant. Later Gressitt (and W. Gagne) collected a new species, *ilicis*, from *Ilex* on Molokai. Noting that this species was quite close to *usingeri*, Gressitt searched in *Ilex* on Oahu and found larvae, but failed to rear them through. Then Davis collected more larvae from *Ilex* in the same place (summit of Mt. Kaala) and successfully reared *usingeri* through on his improved diet rearing medium (modified Harley's medium). Davis has by now reared more than 16 specimens of *usingeri* from Oahu. In the meantime Gressitt reared material from *Ilex* on West Maui and described the form as *ilicis ekeanus*. Years earlier, Gressitt had collected a larva in *Ilex* in the Kohala Mts. on Hawaii. Recalling this, J. Jacobi was asked to search in *Ilex* on the mountains. Larvae were found but not reared to adult. Davis and Jacobi, and later Gressitt, then began searching in *Ilex* in Hawaii Volcanoes National Park, and found larvae in 1973. None of these were reared to maturity. In May 1974 Davis, Gressitt and R. Taylor searched systematically through many infested *Ilex* trees on the sulphur bank rim near Kilauea Crater. A few larvae, and one pupa, were found and from this material Davis successfully reared two perfect adult specimens of the species described below. With this new species, we now have four closely related forms, within one species-group, from Oahu, Molokai, West Maui and Hawaii, respectively. The questions now remain as to whether a form exists in *Ilex* on east Maui, on Lanai (suggestive evidence seen), and possibly on Kauai, and whether or not the population in the Kohala Mts. is the same as that at Kilauea. Thus an interesting species/islands/host-tree relationship is coming to light, whereas five years ago no identified cerambycids were known from *Ilex* in these islands.

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<sup>4</sup>See Gressitt & Davis, recent issues of these Proceedings, and Gressitt, 1972, Pacif. Ins. 14:635-645, for recent articles in this series.

The material deposited in Bishop Museum.

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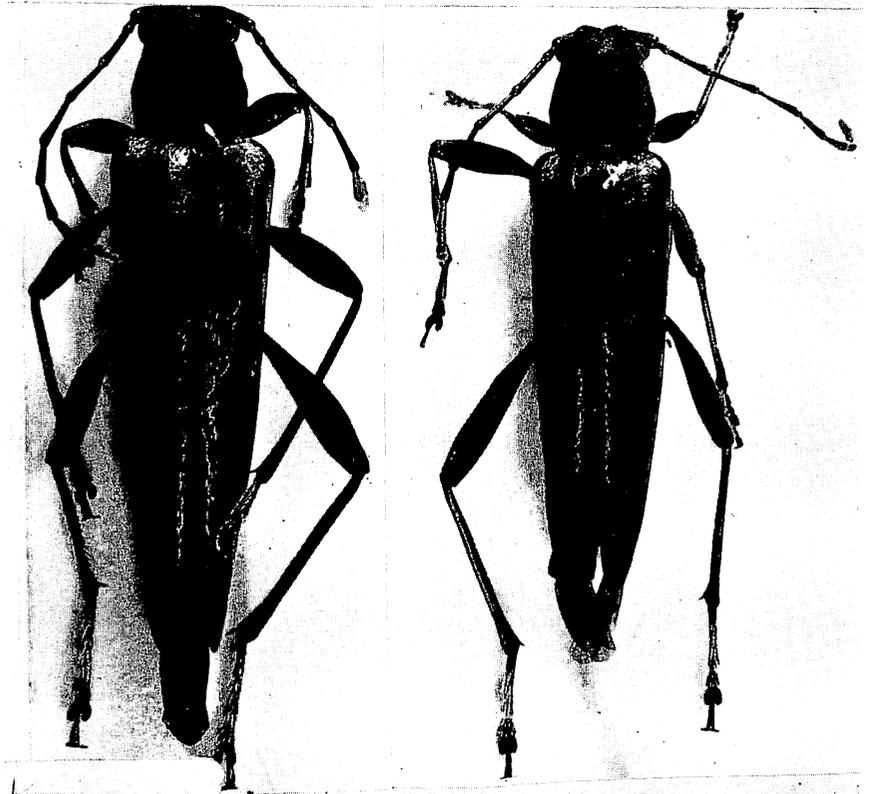


FIG. 1. *Plagithmysus* (s. str.) *kawauae* Gressitt & Davis: holotype (left); paratype (right); both females.

***Plagithmysus* (s.str.) *kawauae* Gressitt and Davis, n. sp. (Fig. 1)**

Female. Elongate, evenly tapering posteriorly. Dark castaneous to pitchy black, in part paler or with pale hairs: Head pitchy black; eye brown; antenna dull reddish brown; prothorax nearly black; scutellum brownish pitchy; elytron testaceous on basal 1/4 of disc, pitchy at side and suture, pitchy castaneous on remainder, but blacker behind middle; with surface dark reddish brown to pitchy castaneous; legs reddish brown, paler on tarsi and femoral petioles. Body unevenly clothed with pale pubescence, short and sparse on head; oblique on lower portions, scarce, mostly fine, oblique and short, on antenna, minute and dull on prothorax, minute on scutellum, much longer and whiter on elytron, but lacking on pale area except at extreme base, dense at center of disc and along suture almost to apex, outer portion nearly glabrous behind submedian band; ventral surface with a moderate white band along side from posterior 1/3 of metepisternum, with oblique hairs on rest, denser on thoracic sterna; hind tarsus with long dense white hairs.

*Head* slightly narrower than prothorax, finely punctured to rugulose, with sparse larger flat-bottomed punctures on occiput, and shallow somewhat shiny median groove; frons subparallel-sided, slightly deeper than wide; eye a bit wider than deep, barely as deep as gena. *Antenna* slender,  $3/5$  as long as body; scape slender, slightly arched, gradually thickened; segment 2 nearly 2x as long as broad; 3 as long as 1, not quite as long as 4; 5 as long as 3; 6 is  $3/4$  as long as 5; 6-10 successively shorter; 11 barely longer than 8. *Prothorax* slightly broader than long, widest slightly behind middle, somewhat unevenly convex at side, narrower at apex than base; disc finely reticulate-punctate, with moderately small tubercle near middle of anterior margin and a slightly larger one between middle and base, plus a weak arcuate ridge at side of disc. *Scutellum* short and broadly rounded behind, granulose. *Elytron* nearly 4x as long as head and prothorax combined, subevenly tapering, fairly smooth, shiny, subvermiculate in part, obtusely rounded at apex. *Ventral surfaces* finely punctured on thorax, very sparsely so on abdomen except at side. *Legs* slender; femora flattened, gradually broadened; tibiae nearly straight, flattened; hind tarsus with 1st segment distinctly longer than remainder combined. Length 12.8 mm; breadth 3.

*Paratype*, Female: Agreeing closely except elytral base with pale area more restricted and duller, and elytral pale stripe with hairs fewer and covering less area, with submedian band quite incomplete. Length 11.8 mm; breadth 2.7.

Holotype female (BISHOP 10, 359), Sulphur Banks Rim, 1200m, Kilauea Volcano, Hawaii Volcanoes National Park, Island of Hawaii, 17.V.1974, reared from pupa collected in *Ilex anomala* branches, by C.J. Davis, R. Taylor & J.L. Gressitt; paratopotype ♀, same data except from submature larva, reared on artificial medium, pupated 3.VI.1974.

Differs from *usingeri* G. & D. in being longer, with pronotal tubercles smaller, scutellum glabrous, elytron smoother, with less pubescence basally, but with sutural stripe greatly broadened anteriorly, pale only basally, and less acute apically. Although we described *usingeri* as belonging to the subgenus *Neoclytarlus*, this group belongs more properly in the typical subgenus *Plagithmysus*. This relates to the key characters (femoral length, and form, in relation to elytral length) proving frequently to be inapplicable. The species name refers to kawai, Hawaiian name for *Ilex*.