

Measurements: Female: BL 10.08–14.78 mm, BB 2.86–4.20. Male: BL 9.41–13.94 mm; B 2.68 3.61–3.78 mm.

Types. Holotype ♀ (BPBM 16,401): **HAWAI'I:** Kona Forest Unit, Hakalau Forest NWR [National Wildlife Reserve], 675 m [5500 ft], 25 Aug 2000, reared ex *Pittosporum*, W. Haines collector; same data but 1 Aug 2000 (allotype ♂, paratypes: 1 ♂, 2 ♀); same data but 5 Sep 2000 (♀ paratype); same data but 9 Nov 2000 (♀ paratype); same data but 19 Nov 2000, HVNP003854 (♂ paratype, HAVO); same data but 1 Aug 2000, HVNP003843 (♀ paratype, HAVO) Note: 2 ♀ paratypes preserved in alcohol.

Remarks. This new species appears to fit closely with its *Pittosporum*-associated congeners from Maui and Lāna'i, and more remotely to its counterpart from Kaua'i. Males tend to have the hind femur much heavier and longer than females, which have the hind femur rather slender and pedunculate, resembling *Neoclytarlus*.

Etymology. This new species takes its name from the Hawaiian *ho'awa* for *Pittosporum*, its host. This epithet may seem a bit unusual due to its Hawaiian pronunciation which should approximate in English to: ho-ava-e.

Key to *Pittosporum*-associated *Plagithmysus* in Hawai'i

- 1. Pronotum with anterior median tubercle not overhanging the anterior margin 2
- . Pronotum with anterior median tubercle distinctly overhanging the anterior margin
(Kaua'i) **sugawai** Gressitt & Davis
- 2. Vertex with median line extending into at least basal part behind antennal tubercles 3
- . Vertex with median line nearly to completely obliterated, the surface with a dull rough microsculpture ... (Hawai'i) **hoawae** Samuelson, **n.sp.**
- 3. Prothorax with side below the submedian ridge generally clothed with pale pubescence ...
(Lāna'i) **pittospori** Gressitt
- . Prothorax with the area laterad of the submedian ridge glabrous or scantily clothed ... (W Maui)
..... **rebecca** Gressitt

Plagithmysus (Neoclytarlus) kahului* Samuelson, **n.sp.*

(Figs. 4–5)

Male (Holotype). Body form with prothorax especially massive in this sex. Derm of body surfaces buffy fuscous to testaceous: the light differences in derm color offset by a rather uniform close clothing of whitish buff; antenna buff-testaceous; legs: femora brownish testaceous, tibiae and tarsi buff-testaceous. Vestiture: frons, gena, vertex, prothorax, ventral surfaces, and femora densely clothed with whitish buff; elytron slightly more thinly clothed in places but with an additional denser discal stripe which does not stand out so sharply due to the overall pubescence, the fairly stout stripe extends along the posterior 3/4 of the suture and gradually broadens basally where it obliquely terminates at the basal 1/4; femora supplemented by slender suberect setae along the ventral surface, the mid- and hind femur with these trailing setae slightly longer than the narrowest part of the pedicel; hind tibia submoderately clothed with slender raised pale setae, these rather short above and long below; mid- and hind basitarsus above with fine slightly raised setae, these mixed of black and white hairs.

Head broadest at eyes but barely broader than occiput and distinctly narrower than the anterior part of the prothorax; frons with depth = to breadth across interocular space (25 : 25), sides ± parallel, surface ± flat above but anterior 3/10 bent obliquely upward; antennal bases weakly swollen, the surface obliquely depressed to median line which ends slightly above middle of frons; eye rather small: 0.68 x as deep as breadth of interocular space and barely longer than gena to genal angle (17 : 16); vertex barely convex and showing large, shallow punctures: approximately 15–20 punctures on each side of median line. Antenna extending to basal 1/4 of elytron near beginning of stripe; scape clavate, the apical area moderately thickened; segments 3–5 slender, gradually broadened to apices and fitted with

trailing hairs ventrally; remaining segments increasingly shorter (except last), these tending to be stout with apices obliquely but weakly produced; 11 with apex rather briefly rounded; relative lengths of segments: 23 : 6+ : 19 : 20 : 19 : 13 : 2 : 9 : 8 : 7 : 10. Prothorax robust: about 0.95 x as long as broad and slightly broader than elytra; anterior margin slightly convex; side moderately convex, more so at base; base straight; disc broadly and subevenly convex, the median ridge low and gradually concave in lateral profile between anterior tubercle and postmedian group; anterior tubercle low, narrow, subtruncate-rounded, not interrupting anterior margin; postmedian group low, with 1st a broad crescent about 1/7 as broad as prothorax, the 2nd a slightly narrower but a deeper crescent; submedian area swollen basally and subtuberculate prebasally. Scutellum with apex convex. Elytron about 2.9 x as long as pronotum and 6 x as long as broad, the breadth slightly decreasing to basal 2/5, then tapered a little more strongly to preapex; preapex suddenly narrowed to subacute-rounded apex; disc in reflected light punctulate, the punctures fine and central ones mostly 0.5 x as large as interspaces with intervals smooth-alutaceous (punctures appearing closer with intervals rougher in direct light). Ventral surfaces with derm somewhat obscured by close adpressed pubescence: prosternum in reflected light closely punctulate, the intervals somewhat raised; metasternum \pm smooth-alutaceous with low asperations associated with seta bases; abdomen more finely punctulate; abdominal apex truncate. Legs fairly slender; mid femur clavate on apical 2/3; hind femur moderately arched, clavate on apical 3/5, the sides of the club somewhat flattened; hind tibia feebly arched and moderately flattened; hind basitarsus slender and distinctly longer than segments 2 + 3 (14+ : 10). Body length 10.08 mm; breadth 2.77 mm.

Female (Allotype). Body mass more normal for a *Neoclytarus* in being more slender than in the male, thus with the prothorax not so massive and distinctly narrower than the elytra. Derm of body surfaces mostly subshining matt black, tinged with fuscous around antennal sockets, inner eye-margins, gena, mouthparts, and elytral bases (these areas black in other females); abdominal sternites smoother, shining; antenna yellow-testaceous; legs with femora largely fuscous but becoming yellowish on pedicels of the mid and hind; tibiae yellowish to fuscous apically; tarsi yellowish to fuscous. Dorsum glabrous to scantily clothed excepting feeble submedian stripe of whitish hairs on pronotal disc and densely clothed whitish discal stripe on elytral disc, similar to male; antenna with trailing setae on segments 3–5 and fine close golden pubescence on 6–11; ventral surfaces lacking the close adpressed pubescence of the male but with silvery raised setae moderate on thorax and sparse on abdomen; femora with trailing hairs short, mostly shorter than pedicel breadth of the mid and hind; tibiae also with short trailing hairs; mid- and hind basitarsus finely and rather thinly clothed with slender black setae.

Frons about as deep as broad (25 : 26), finely and closely punctulate, the punctures becoming larger at sides, surface \pm dull, median line extending to about middle; eye about 0.73 x as deep as breadth of interocular space and deeper than gena (19 : 16); gena and vertex finely, closely punctulate, and generally dull but with a small number of larger shallow punctures. Antenna short as in male, with segment lengths also in a similar ratio. Prothorax 0.97 x as long as broad, broadest at middle, distinctly narrower than elytra; sides quite convex; disc irregularly convex; the median ridge low with tubercles not very strongly developed: the anterior- and posterior-most ones the largest with small dentations in saddle between them; sublateral ridge with a broad low prominence prebasally; surface finely and closely punctulate, the intervals finely raised and somewhat asperate in places, altogether producing a dull-shine. Elytron finely and closely punctulate, intervals smooth-alutaceous to microrugose, surface with a dull shine. Ventral surfaces rather smoother than dorsum; abdomen nearly as long as elytra. Legs: mid- and hind femur moderately arched with pedicels about 1/2 as long as club; hind tibia flattened and slightly arched apically; hind basitarsus much longer than 2 + 3 (16 : 10). Body length 11.09 mm; breadth 2.86 mm.

Variation (6 ♂, 4 ♀). Males generally pale buff and marked as in holotype; females generally blackish and marked as in allotype but the pronotal submedian whitish stripe sometimes more pronounced and complete than noted for the allotype. Males tend to be shorter than females (6.55–9.41 mm vs. 9.24–11.09 mm), with the body length/breadth ratio slenderer in males than females (3.9–4.0 vs. 2.4–3.0), the robust male prothorax notwithstanding. The pronotal length/breadth ratio broadly overlaps in both sexes 0.95–0.98 (discounting 1 ♀ at 0.86). Males tend to have the elytral length/pronotal length



Figures 4–5. *Plagithmysus kahului* Samuelson, n. sp. 4. Male. 5. Female.

shorter than females (2.91–3.26 vs. 3.19–3.62). Body length 6.55–11.09 mm; breadth 1.68–3.02 mm.

Types. Holotype ♂ (BPBM 16,402), allotype ♀, paratype ♂: **MAUI** (isthmus): Kahului Airport: Spreckelsville beach, on coastal sand dunes off E end of Kahului Airport runway, 20°53'56"N, 156°27'16"W, 2 m, 29 Mar 2000, on *Chenopodium oahuense*, F. Starr & G.A. Samuelson; same data, except G.A. Samuelson & R. Takumi (2 ♀ paratypes); same loc., 30 Mar 2000, D.J. Preston (1 ♀ paratype); same loc., wetland, 20°53'57"N, 156°26'53"W, 28 Apr 2000, on *Chenopodium*, Preston & J.E. Dockall (4 ♂ paratypes).

Remarks. The new species is close to *Plagithmysus chenopodii* Perkins from O'ahu, and keys to that species in Gressitt & Davis (1969). Males tend to have the pronotal median ridge clothed with depressed pubescence while in *chenopodii* the median ridge is usually glabrous; females tend to have the side of the prothorax (laterad of the submedian stripe) glabrous while in *chenopodii* the lateral area is sometimes moderately clothed with adpressed pubescence. Both species are sexually dimorphic in vestiture and color, the males with a buff-colored derm plus a close pale pubescence and the females with a black derm, the general pubescence tending heavier in *chenopodii* while lighter to non-existent in the new species. In both species the short broad elytral stripe stands out dramatically against the blackish surface in females but in males the stripe is less conspicuous due to the general buff vestiture.

The discovery of this species was unexpected during the arthropod survey at Kahului Airport (Howarth & Preston 2001). Much of the land there is dominated by naturalized plants, but a strip of the native lowland plant community exists along the ocean end of the runway to the adjacent sand dunes above the beach. There the *Chenopodium* with its associated plagithmysine continue to this day, attesting to the reasonable health of the this rather limited community.

Etymology. The name for this species takes Kahului as a noun in apposition, as a dedication to its provenance.

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Callirhipidae, a new family to the Hawaiian beetle fauna¹

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Coleoptera: Callirhipidae

Callirhipis robusta Waterhouse

New state record

This species represents the first established member of Callirhipidae in Hawai'i. *Callirhipis robusta* was described from a unique specimen from Thailand in the British Museum by Waterhouse (1877: 385).

Hawaiian specimens along with similar specimens from Laos were sent to R. Madge, Commonwealth Institute of Entomology, London, who made the identification in March 1990. The natural range of *C. robusta* embraces SE Asia. This species was first seen on O'ahu over 15 years ago but is infrequently collected. The recent captures in Kahalu'u Valley mark about an 8 km range extension from Kāne'ohe and indicates the establishment and spread of this beetle. Larvae are woodborers, usually in decaying wood. The habitat of the Kahalu'u location is lowland wet forest, with *Acacia koa* and *Pandanus tectorius*, and the possibly indigenous *Hibiscus tiliaceus* as the predominant native trees, plus a dense infusion of exotic species, including species of *Brassaia*, *Cecropia*, *Eugenia*, *Persea*, and *Psidium*.

Material examined. O'AHU: Kāne'ohe, 17 Nov 1989, attracted to house lights, C. Murdock (1 ex, CIE, London); Kāne'ohe, 21 Nov 1994, Neil Reimer (1 ex, HDOA); Kāne'ohe, 18 Jun 1996, in house, M. Braden (1 ex, BPBM); Kāne'ohe, Kahalu'u Val., near end of Ahuimanu Road, 100 m, 21

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