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Figs. 1–3. *Prosopeus* male genitalia. **1**, *Prosopeus subaeneus* Murray; tegmen of male, ventral; **2**, same, apex of inverted male internal sac; **3**, *Prosopeus scottianus* (Sharp); apex of inverted male internal sac. *sd*, sperm duct; *v*, ventral surface. Scale bars 0.1mm.

New records and taxonomic updates for adventive sap beetles (Coleoptera: Nitidulidae) in Hawai`i

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The adventive sap beetles present in Hawai`i are all saprophagous, except for *Cybocephalus nipponicus* Endrödy-Younga, which is predatory. Species in the genus *Carpophilus* are the most commonly encountered and are considered nuisance pests around pineapple fields and canneries (Illingworth, 1929; Schmidt, 1935; Hinton, 1945). The remaining species are less frequently encountered and are not considered to be important pests. We report 2 new state records, 5 new island records, and 4 taxonomic changes for the adventive sap beetles in Hawai`i. With the exception of *Stelidota chontalensis* Sharp, all of the species reported are widely distributed outside Hawai`i. The records below increase the number of known introduced species from 16 to 18 (Nishida, 2002). Material was examined from: (HDOA) Hawai`i Department of Agriculture, Honolulu; (BPBM) Bishop Museum, Honolulu; (CUIC) Cornell University Insect Collection, Ithaca, New York.

Cybocephalus nipponicus Endrödy-Younga **New island record**
Easily distinguished from all other nitidulids in Hawai`i by its small size (1mm), and hemispherical body form with head concealed from above. Females are all black; males have black elytra with the head and pronotum light brown. The new island record for O`ahu is based on specimens collected in 1988, a year earlier than the previously reported specimens from Maui and Hawai`i (Beardsley & Tsuda, 1992). Distribution: Japan, China, India, Ceylon, Singapore, Palau Is., and Mariana Is. (Endrōdy-Younga, 1971). All *Cybocephalus* species are predatory on scale insects and whiteflies. Though *C. nipponicus* has been used as a bio-control agent, there is no record of intentional introduction into Hawai`i (Beardsley & Tsuda, 1992).

Material examined: **O`ahu:** Pawa‘a, 25 Aug 1998, on hibiscus inf. w/ *Pinnaspis strachani*, M.E. Chun/98-276 (2♀, 1♂)(HDOA).

Carpophilus mutilatus Erichson **New island records**

Carpophilus mutilatus is most similar to *Carpophilus freemani* Dobson and can be separated from other *Carpophilus* present in Hawai`i by the short 3rd antennal segment, small axillary space, densely punctate pronotal disc, acuminate female pygidium, and acuminate male anal sclerite. First recognized as being established in Hawai`i from material collected in 1952 on the island of O`ahu (Ford, 1961). Specimens examined from Kaua`i and Moloka`i represent new island records. Distribution worldwide. Relatively common in decaying fruits and grains. *Carpophilus mutilatus* was, from 1913 until 1954, synonymized with *Carpophilus dimidiatus* Fabricius and many of the host records for the latter reflect the habits of the former (Hinton, 1945).

Material examined: **Kaua`i**: Mānā, May 1984, ex. seed corn, coll. S. Masukawa (2♀, 1♂) (HDOA). Kekaha, 8 Jul 1988, ex. sunflower plants, R. Oyama/Koa 88-18 (1♂) (HDOA). Nāpali Kona For. Res., Kukui tr., 20 Mar 1991, 300–330 m, J.K. Liebherr, ex. rotten *Passiflora* (15♀,8♂) (CUIC). **O`ahu**: Barbers Pt., Apr 68, E.J. Ford, Jr. (1♂) (BPBM). Barbers Pt. Apr 52, Ford (1♂) (BPBM). Barbers Pt., Nov 59, E.J. Ford, Jr. (1♂) (BPBM). Schofield, Apr 60, E.J. Ford, Jr. (2♀) (BPBM). **Moloka`i**: Kaunakakai, 15 Jan 90, field #2, on corn silk inside ear shoot, P. Eichhorn/90-030 (1♂) (HDOA).

Epuraea* (*Haptoncus*) *luteola Erichson **Taxonomic change**

[*Haptoncus luteolus* (Erichson) (sensu Grouvelle, 1913; after Murray, 1864)]

Originally placed in the genus *Epuraea* by Erichson, it was moved to *Haptoncus* by Grouvelle based on Murray’s description of the latter genus, the genus *Haptoncus* is now considered a synonym of *Epuraea*. Superficially similar to *Epuraea munda* Sharp but can be distinguished externally by the pronotal microsculpture, which consists of fine parallel lines, and the elytra, which are longest near the midline of each. Some teneral individuals of *E. ocularis* may be lacking the dark marks on the pronotum and elytra, and from these specimens *E. luteola* can be distinguished by the differences in pronotal microsculpture mentioned under that species. First collected in Hawai`i in October and November of 1949 (Ford, 1960). Distribution worldwide. Primarily associated with decaying fruit (Hinton, 1945), *E. luteola* is often found with specimens of *E. munda* and *E. ocularis* in lowlands as well as in native forests, and can often be collected from the decaying fruit of *‘ie‘ie* (*Freycinetia arborea* Gaudichaud-Beaupré).

Material examined: **O`ahu:** Ewa, Dec. 19, 1973, in raisin trap, G.Y. Funasaki (1♀, 1♂) (HDOA). Nānākuli, 30 Aug 1968, in honeydew melon, G.Y. Funasaki (1♀, 1♂) (HDOA). Hon. Airport, Jan 53, Bixby, org. Fiji (1♀) (BPBM). Barbers Pt., 10 May 49, Ford (2♂) (BPBM). Schofield, Jun 90, K. Will (1♂) (CUIC).

Epuraea* (*Haptoncus*) *munda (Sharp) **New combination**

[*Haptoncus mundus* Sharp]

Haptoncus is now considered a synonym of *Epuraea*. Can be distinguished from the other *Epuraea* present in Hawai`i by the form of the elytra, which are longest near the suture, and the microsculpture of the pronotum, which is nearly obsolete and shining. This name has only been applied to specimens collected in Hawai`i, though Sharp considered it to be introduced (Sharp & Scott, 1908). Sharp (1878) believed it to be closely related to *E. tes-*

tacea Murray from New Guinea, and separated the Hawaiian specimens on the basis of the more explanate pronotal margins. When a complete revision of this genus is completed *E. munda* may prove to be a synonym, though it is possible it represents and endemic species resulting from a relatively recent colonization event. Found in the same situations as the other *Epuraea* species.

Material examined: **Kaua`i:** Perkins, 771 [under card] (1♀) (BPBM). **O`ahu:** Barbers Pt., 6-49, coll. Ford (1♀) (BPBM). same, 10 Apr 49 (1♀), light trap, John Rodgers, May 58, E.J. Ford, Jr. (1♂) (BPBM). Waipi'o, T.H. light trap, Sep 57, E.J. Ford, Jr. (1♂) (BPBM). 'Ewa, 19 Dec 1973, in raisin trap, G.Y. Funasaki (3♀) (HDOA).

Epuraea* (*Haptoncus*) *ocularis Fairmaire **Taxonomic change**

[*Haptoncus ocularis* (Fairmaire) (*sensu* Grouvelle, 1913; after Murray, 1864)]

Originally placed in the genus *Epuraea* by Fairmaire, it was moved to *Haptoncus* by Grouvelle based on Murray's description of the latter genus, the genus *Haptoncus* is now considered a synonym of *Epuraea*. Mature, well sclerotized individuals, can be easily distinguished from other *Epuraea* species in Hawai`i by the dark marks on the anterior and posterior margin of the pronotum and on the elytra. Immature specimens can be more difficult, with the form of the elytra and luster being similar to *E. luteola*, however the microsculpture on the pronotum is distinctive, consisting of a granular mesh. First reported by Sharp (1878) from specimens collected by Blackburn. Distribution worldwide. Found in the same situations as the other *Epuraea* species.

Material examined: **O`ahu:** Poamoho tr., 9 Mar 61, L.W. Quate (1♀) (BPBM). Pūpūkea tr., III-32, O. Bryant coll. (1♀) (BPBM). Ko'olau Range, 'Āhuimanu Rd., 120 m, 2 Feb 1984, swarming, 0715–0745 hrs, G.A. Samuelson coll. (1♀) (BPBM). Hālawa, 10 Dec 70, light trap, W. Au (3♂) (HDOA). **Hawai`i:** Waimanu Val., w. bank Waimanu str., 8.v.1986, site no.1, nr. river mouth, jetsam on boulders, S.M. Gon & J. Heer Acc. #1987.051 (1♂) (BPBM). Upper Hāmākua ditch tr., 15 Aug 35, R.L. Usinger (1♂) (BPBM).

Phenolia* (*Aethinodes*) *attenuata (Reitter) **New state record**

[*Lasiodactylus attenuatus* Reitter (*sensu* Kirejtshuk & Kvamme, 2002, after Jelínek, 1999)]

Phenolia species superficially resemble *Stelidota* and can be separated by the larger size, 5-8mm, and elongate axillary space that nearly reaches the metacoxa. *Phenolia attenuata* can be distinguished from *Phenolia limbata tibialis* by its smaller size, 5-5.5mm, interstitial setae on the elytra which are fine and closely spaced forming continuous rows, and the divergent metacoxal lines on the first visible abdominal sternite. Distribution: New Guinea, Malay Archipelago, and Southeast Asia. It is present on Kaua`i and O`ahu, where it is common at low elevations in decaying citrus and other rotting fruits.

Material examined: **Kaua`i:** Princeville, night at hotel light, 2 Aug 2000, via R.T. Furumizo (2♂) (BPBM). **O`ahu:** U.H. Mānoa campus, 200 ft [61m], 26 Jun 1998, rotting tangerines on ground, C. Ewing DNA vouch. #284 (1♂) (CUIC). U.H. Mānoa, 18 Jun 98, ex. rotting fruits, W. Nagmine (2♂) (HDOA). Waimānalo, 7 Jun 1998, ex ripe bananas, L. Nagasawa/98-144 (1♂) (HDOA).

Phenolia* (*Lasiodites*) *limbata tibialis (Boheman) **New combination/new island records**

[*Soronia tibialis* Boheman (sensu Kirejtshuk & Kvamme, 2002, after Jelínek, 1999)]

Originally described as *Soronia tibialis*, then moved to *Lasiodactylus*, this species was recently moved to *Phenolia* and redescribed as a subspecies of *P. limbata* (Kirejtshuk

& Kvamme, 2002). *Previously* reported as *Lasiodactylus* sp. prob. *tibialis* (Kumashiro & Heu, 1997) from Hawai`i Island. The tentative identification has been confirmed through dissection of male genitalia and the taxonomy updated. This species is the largest adventive Nitidulidae in Hawai`i, 5.6–8.0mm. This species is similar to *P. attenuata* in overall form but has the interstitial elytral setae coarser and more widely spaced, the serial punctures of the striae shallower, and metacoxal lines not divergent from the metacoxal cavity. The O`ahu and Maui specimens represent new island records. Distribution worldwide. Found with *P. attenuata*.

Material examined: **O`ahu:** UH Mānoa Campus, 200 ft [61 m], 26 Jun 1998, rotting tangerines on ground, C. Ewing coll., DNA vouch. # 285 (1♀) (CUIC). Mānoa, UH, 8 Jun 1998, on mandarin oranges, W. Nagmine/L. Nagasawa/98-146 (1♀, 1♂)(HDOA). Mt. Tantalus (Mānoa cliffs tr.), XI-1-00, M.J. & C.A. Tauber (1♀,1♂) (CUIC). **MAUI:** Kahului airport, low spot nr. wetland #3, 20º54'26"N,156º25'52"W, 29 Mar 2000, MV light #2, *kiawe* woodland, *kiawe*, *Sesuvium, Paspalum, Pluchea*, F.G. Howarth, D.J. Preston, G.A. Samuelson, K. Martz, F. Starr (2♀) (BPBM). **Hawai`i:** Waikea, 30.V.96, ex. guava, H. Hirae (1♀,1♂) (HDOA).

Stelidota geminata (Say) **New state record**

Stelidota species are superficially similar to *Phenolia* species. They are however smaller, 2-3mm, and the axillary space is not elongate. Both Hawaiian species have the metacoxal lines present. *Stelidota geminata* can be distinguished from *Stelidota chontalensis* by the form of the pronotum which is more constricted anteriorly and posteriorly, more deeply emarginate anteriorly, and has the lateral margins more evenly curved. The pronotal and elytral margins are more explanate in dorsal view. First collected in the 1990's, it has spread quickly and may be present on all of the main islands. Most commonly found in decaying fruit at low elevations and in leaf litter in higher elevation native forests. Distribution worldwide.

Material examined: **Kaua`i:** Koke'e State Park, Nu'alolo Tr., 22º07'48"N 159º39'37"W, ex. Polypore on log (2♀, 3♂) (BPBM). **O`ahu:** UH Mānoa Campus, 200 ft [61 m], 26 Jun 1998, rotting tangerines on ground, C. Ewing coll., DNA vouch. #292 (1♂) (CUIC). Waimānalo, 13 Aug 1997, in fallen false *kamani* w/ 5 other nitidulid spp., M. Ramadan/97-330 (1♀, 2♂) (HDOA). **Moloka`i:** Pu'u Lua, summit above spring, 3180ft [969m], 16 Jun 1999, sifting *'ōhi'a* litter, C. Ewing coll.#98 21º06'28" N 156º48'48"W (1♀, 1♂) (CUIC). **LĀNA'I:** Hauola ridge tr., 3360 ft [1024m], 15Dec1998, C. Ewing coll.#24, sifting *Pritchardia* fronds and fruit, 20º48'33"N, 156º52'00"W (1♂) (CUIC). **MAUI:** Haleakalā NP, Palikū cabin, el. 1950m, 20º43'16" N, 156º08'38"W, 18 May 2001 lot03, diphacinone bait sta., Liebherr (1♀) (CUIC). **Hawai`i:** Kohala For. Res., 1122m, 14Oct1997, fogging *M. polymorpha*, D. Gruner & D. Polhemus GRU0724-006 (2♀) (BPBM), same, 12Oct1997, GRU0584-006 (BPBM).

Stelidota chontalensis Sharp **Reidentification**

Can be distinguished from *S. geminata* by the form of the pronotum which has the hind angles quadrate, anterior margin little constricted and shallowly emarginate, and the lateral margins less explanate and parallel for posterior half. Pronotal and elytral margins narrowly explanate in dorsal view. Previously reported as *Stelidota* sp. from specimens collected in Kapi'olani Park, Kaimukī, and on dried guava leaves at the University of Hawai`i Experimental Farm at Waimānalo, all in 1992 (Beardsley *et al*., 1995). Native to Central America.

Material examined: **O`ahu:** Kapi'olani Park, 5 ft [2 m], 11–12 Jan 1992, W.D. Perreira Louise

Dillingham Mem. Found., 92-357 (1♀) (BPBM). Same data (1♀) (HDOA). Kaimukī, el. 200 ft [61 m], BWS, 13 Dec 1992, W.D. Perreira stuck on apple maggot trap treated with TML (1♀) (BPBM).

Aethina* (*Idaethina*) *concolor (Macleay) **New island record**

[*Nitidula concolor* Macleay (sensu Kirejtshuk & Lawrence, 1999)]

Can be distinguished by the combination of the following characters: pygidium with basal pits, shallowly emarginated labrum with fringe of long setae, pronotum emarginate and not at all explanate, pygidium and small portion of 6th tergite exposed at elytral suture, color dark brown to black and covered with conspicuous golden setae. Originally reported from Kahuku and other locations on O`ahu as *Macroura* sp. (Beardsley & Samuelson, 1992), and then Kaua`i (Nishida, 2002), now reported from Kailua-Kona and Kīpuka Pua‘ulu on Hawai`i Island. This species is native to Australia where it is most commonly found in association with hibiscus flowers (Gough & Hamacek, 1989). It has been found across the South Pacific on Norfolk Island, New Zealand, New Guinea, Bismarck Archipelago, New Britain, New Caledonia, Loyalty Islands, Solomon Islands, Vanuatu, Fiji, Tonga Islands, Samoa, and Society Islands (Kirejtshuk & Lawrence, 1999). In Hawai`i it has been collected in flowers of *Hibiscus* (Malvaceae), *Ipomoea indica* (Convolvulaceae) (Lachance *et al.*, 2003), and *Coccinia* (Cucurbitaceae).

Material examined: **Kaua`i:** Kealoa lookout on *Ipomoea pes-caprae*, #366,7, A. Lachance (2♀) (BPBM). **O`ahu:** Schofield, Jun 90, K. Will (1♂) (CUIC). **MAUI:** Kahului, Maui, Div. Forestry baseyard, *Hibiscus breckenridgeii*, B. Hobdy/91-220 (1♀,1♂) (HDOA). **Hawai`i:** Kona, 30 May 1992, ex *Coccinia* fls., L. Doi/S. Matayoshi 92-330 (2♂) (HDOA). Kona 30 Jul 1992, ex red hibiscus, S. Matayoshi /92-476 (1♂)(HDOA).

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Rediscovery of five species of *Omiodes* Guenée (Lepidoptera: Crambidae) on Hawai`i Island

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Beginning in 1980, through a contract from the U.S Fish and Wildlife Service, an assessment of the conservation status of more than 800 species of native Hawaiian insects was undertaken by Wayne Gagné, Carl Christensen and others (Gagné, 1982; Gagné &