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New records of non-native insects (especially Hymenoptera) from the Hawaiian Islands

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Here I report new state and island records of alien species, along with several name and status corrections. These are a mix of recent discoveries and specimens that were previously partially or fully identified by John W. Beardsley and others, but had not been published. This paper includes 37 new state records, five of which are considered questionably established due to being based on single collections from areas near ports of entry; 14 species with new island records; and seven changes, updates, or corrections to species names (several of the last also include new island records).

Due to the difficulty in identifying specimens even to genus, a large number of long-established introduced Hymenoptera remain to be published, particularly in Chalcidoidea and Platygastroidea. Others are undescribed even in their native range and require more comprehensive treatment. I have included taxa currently identified only to genus where they are particularly common and/or distinctive. Additional Bethylidae, Cleonymidae, Eulophidae, Pteromalidae, and Scelionidae will be dealt with in separate papers.

Unless otherwise noted, specimens listed below are deposited at the Bishop Museum (BPBM). Other collections referenced are the University of Hawai'i at Mānoa Insect Museum (UHIM) and KNM personal collection (KNMC). Specimens were imaged at the Bishop Museum using a Leica imaging system system and LASX software (Leica Microsystems Inc.), and focus stacks produced using Helicon Focus 8. All images are of females unless noted, since they are more commonly collected and usually more distinctive for Hymenoptera.

COLEOPTERA

Elateridae

Anchastus swezeyi van Zwaluwenburg, 1931 **Revised status, New island record**

This beetle was described as "probably endemic" without explanation or justification in its description (Van Zwaluwenburg 1931). At the time it was known only from windward Haleakalā, which Van Zwaluwenburg described as an area "in which no entomological collecting had ever been done previous to the visit of Messrs. Swezey and Whitten." It has previously been reported from Hawai'i, where it is now one of the most common beetles found in montane forests. Here I additionally report it from Kaua'i, O'ahu, and Moloka'i, where it has been present for some time. Such a dramatic increase in abundance, both at low elevations and in areas such as the Ko'olau range where it had never been found despite intensive collecting through the 1930s, indicates that this species is undoubtedly adventive. A note from J.W. Beardsley on one of the identification labels also states "this species is listed as endemic to Hawai'i but I suspect it is an immigrant."

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Figure 1. *Lyprauta* sp. (Diptera: Keroplatidae).

Material examined. **KAUA‘I**: North Bog, on leaves, 22.1631°N 159.5999°W, 1 Aug 2023, K.N. Magnacca, K23080103-06. 1♀. **O‘AHU**: Pauoa Flats, 1600 ft [690 m], 11 Aug 1982, W.D. Perreira, 1♂. Mt. Tantalus, 2000 ft [610 m], flood light, 22 Sep 1984, W.D. Perreira, 1♀. Camp Pūpūkea, 1950 ft [595 m], yellow sticky board trap, 15–28 May 1996, W.D. Perreira, 2♂. Central Kalua‘a Gulch, 630 m, Townes Malaise trap, 21.4611°N 158.0995°W, 31 Mar–8 Jun 2023, K.N. Magnacca, O23060801–01, 2♀. **MOLOKA‘I**: Nr. Honomuni Stream, ca. 10 ft [3 m], yellow sticky board trap, W.D. Perreira: 1♂ 2–16 Sep 1994, 1♀ 16–30 Sep 1994. Papi‘o Stream, 600 ft [180 m], yellow sticky board trap, W.D. Perreira: 1♀ 14–28 Oct 1994, 1♀ 20 Jan–3 Feb 1995.

DIPTERA

Culicidae

Aedes (Hulecoeteomyia) japonicus

(Theobald, 1901) **New island record**

Previously recorded from Kaua‘i, O‘ahu, Maui, and Hawai‘i (Larish & Savage 2005, Yang & Hasty 2013, Magnacca 2015). Like on the older islands, on Moloka‘i it was moderately abundant in a mesic gulch, but not found at higher, wetter sites.

Material examined. **MOLOKA‘I**: Kua Gulch 830 m, 2 Jul 2024, K.N. Magnacca, 1♀.

Keroplatidae

Apyrtula sastrei Matile, 1982 **New island record**

This predaceous fungus gnat was previously recorded from O‘ahu.

Material examined. **KAUA‘I**: PMRF oxidation pond, pan trap group 7, 21.9937°N 159.7649°W, 25 Mar 2021, K.N. Magnacca & J.H. Preble, PP032507-03, 1♀.

Figure 2. *Proceroplatus* sp. (Diptera: Keroplatidae).

***Lyprauta* sp.** **New state record**

This and the following species were recorded as single individuals from nearby coastal areas. The area receives direct military air traffic from other regions, so both are considered questionably established until further specimens are found. The genus can be separated from others in Hawai‘i by the wing venation (Fig. 1), but male genitalia is required for species identification, so at present its identity is unknown. Some species are pests in greenhouses (Chandler & Pijnakker 2009). Identification by Neal Evenhuis.

Material examined. **KAUA‘I**: Nohili dunes, pan trap group 6, 22.0637°N 159.7835°W, 24 Mar 2021, K.N. Magnacca & J.H. Preble, PP032406-12, 1♀.

***Proceroplatus* sp.** **New state record**

Easily distinguished from the other introduced keroplatids by the bright yellow thorax, marks on the wing, and pectinate antennae (Fig. 2). Identification by Neal Evenhuis.

Material examined. **KAUA‘I**: PMRF beach cottage, at porch light, 22.0091°N 159.7776°W, 23 Mar 2021, K.N. Magnacca, P032320-12, 1♀.

HEMIPTERA

Pentatomidae

Agonoscelis puberula Westwood, 1881 **New state record**

The African cluster bug was first recognized as invasive in the Americas in 2003 but apparently originally introduced to Cuba around 1978 (Thomas *et al.* 2003, Kment & Rider 2017). On July 1, 2019, a single adult landed on the shirt of a homeowner who lives in Wai‘anae Valley. He mailed it to the Hawai‘i Department of Agriculture (HDOA) Plant Quarantine Branch, where it was tentatively identified it as *A. puberula*. Digital photos

Figure 3. *Agonoscelis puberula* (Hemiptera: Pentatomidae).

were sent to Dr. Thomas J. Henry, Hemiptera specialist at United States Department of Agriculture (USDA)-Systematic Entomology Laboratory who confirmed the identification. Physical specimens were subsequently confirmed by Dr. James Zahniser at USDA-National Identification Services on July 9, 2019. PPC staff surveyed the Waiʻanae area where the first individual was found and discovered a large population of *A. puberula* infesting *Leonotis nepetifolia* (lion's ear). Additional surveys at Kealia Trail found *A. puberula* on *L. nepetifolia* there as well. In August 2019, Pūlama Lānaʻi staff discovered a single adult, again on *L. nepetifolia*. The earliest Oʻahu observation may have been on June 6, 2019 (https://www.inaturalist.org/observations/29411836). It was found on Kauaʻi in 2021 (specimen listed below) and on Hawaiʻi in 2022 [link]. The Molokaʻi collection is surprising as it was collected in near-pristine wet forest far from its typical weedy host plants, but such a collection in a Malaise trap may indicate either a larger population at lower elevations that is prone to wide dispersal, or feeding on native hosts. Given this distribution, it is likely that it is present on Maui as well. It has a wide host range, including crops such as coffee and cotton, but does not usually seem to be a significant pest. It may even be slightly beneficial as its preferred hosts are *L. nepetifolia* and *Marrubium vulgare* (common horehound) (Kment & Rider 2017), both of which are weeds in Hawaiʻi. The color pattern is superficially somewhat similar to *Brochymena quadripustulata* (Fab.), but it is easily distinguished from all other stink bugs in Hawaiʻi by the long hairs covering the entire body (Fig. 3).

Material examined. **KAUAʻI**: PMRF Barking Sands, Diver's Landing, sweeping coastal scrub, 24 Aug 2021, P082406-01, K.N. Magnacca, 1♂. **MOLOKAʻI**: Puʻu ʻAliʻi NAR 1,160 m, Malaise trap, 21.1412°N 156.9022°W, 14 May–17 Jun 2024, M24051418, 1♂.

HYMENOPTERA

Bethylidae

Cephalonomia peregrina Westwood, 1881 **Misidentification**

This species was first reported as having arrived in Hawai‘i in cardboard packaging from India infested with a ptinid beetle, with identification by Ferrière (Swezey 1933a). It was subsequently reared by Swezey and released at his home in Mānoa (Swezey 1933b). The reason for this identification is unclear, as the description of *C. peregrina* is very brief and largely useless. Although the description of *C. peregrina* is insufficient to establish its identity, it does describe the male as “Omnino pallide fulvus” [In general, pale tawny] and the female “Pallide picea...alis anticis stigmate oblongo-ovali” [Pale pitchy...wings beyond the stigma oblong-oval]. The relatively dark coloration and winged females are incompatible with the specimens at hand. Possibly Ferrière used Kieffer’s (1914) key, which uses minimal characters and lists only three species for the Afro-Indian region. All specimens at BPBM and UHIM identified as *C. peregrina* and matching Swezey’s descriptions of the records, including those that originally arrived in cardboard from India, are yellow or testaceous and (with the exception of some males) wingless. These exactly match *C. gallicola* Ashmead, a cosmopolitan species which was already established in Hawai‘i by that time. This resemblance was noted previously by Muesebeck (cited by Hardy 1950), who likewise said that *C. peregrina* could not be definitely identified due to the poor description but that the specimens clearly matched *C. gallicola*. Apparently this was not followed up on, and *C. peregrina* has remained on record in Hawai‘i. I have examined long series of both supposed taxa and conclude that they are the same, and *C. peregrina* should be removed from the Hawai‘i species list.

Material examined. **O‘AHU**: Identified as *C. gallicola*: Honolulu, U.H. Campus Library, in book, 3 Nov 1945, D.E. Hardy, 3♀ (UHIM). U.H. Campus library, in book, 5 Nov 1949, D.E. Hardy, 2♀. Honolulu, Kapahulu St, ex building, 15 Jun 1990, J. Strazanac, 1♀. Honolulu, ex tatami mat purchased at Marukai (Kalihi), stinging, 14 Jun 1993, R. Kunishi, 3♀. Identified as *C. peregrina*: Pusa, India, ex ptinid in cardboard [note: this undoubtedly refers to the origin of the shipment referenced above; no collector is listed but the handwriting matches Swezey’s], 29 May 1930, 2♀ (UHIM). Honolulu, reared ex *Catorama mexicana*, O.H. Swezey: 1♂ 1♀ 6 Aug 1930; 3♀ (BPBM), 2♀ (UHIM) 23 Aug 1930; 1♂ (BPBM), 1♂ (UHIM) 24 Aug 1930; 1♂ (BPBM), 2♀ (UHIM), 6 Sep 1930. Mānoa Valley, ex *Catorama*, 22 May 1932, O.H. Swezey, 2♂. **MAUI**: Kailua, ex barley from Calif[ornia], Aug 1918, J.C. Bridwell, 2♀.

Goniozus aethiops Bridwell, 1919 **New state record**

This is an African species imported to the western US for control of the pink bollworm, *Pectinophora gossypiella* (Saunders) (Lepidoptera: Gelechiidae; Gordh & Evans 1976). It is quite unusual among *Goniozus s.s.* in having a short, weakly carinate clypeus and the head smooth and strongly shining (Fig. 4), resembling only some other African species but also similar to many *Sierola*. These characters also make it easy to recognize among the Hawaiian bethylids.

Material examined. **O‘AHU**: Hickam AFB [Air Force Base], light trap, 7 Jun 1985, J.W. Beardsley, 2♂ (BPBM), 1♂ (HDOA). Waimānalo, reared ex cocoons on *Cryptophlebia* infested macadamia nuts, Sep 1989, V. Jones, 2♀. Hale‘iwa, ‘Uko‘a pond, Malaise trap, Jun 2015, 3♂. Makaleha Stream el. 3 ft [1 m], 27 May–5 Jun 2017, W.D. Perreira & D.A. Yee, 1♂. **HAWAI‘I**: Mauna Kea, North, DMP380, N19.92072° W155.44506°, Malaise, 13 Aug–15 Sep 2004, D.M. Pollock, 1♀.

Figure 4. *Goniozus aethiops* (Hymenoptera: Bethylidae). Left: dorsal view of head. Right: lateral habitus.

Figure 5. *Goniozus floridanus* (Hymenoptera: Bethylidae). Left: dorsal view of head. Right: lateral habitus.

Goniozus floridanus Ashmead, 1887 **New state record**

This Nearctic species is somewhat similar to *G. williamsi* (see below), but the fore femur is not as broad and it lacks the prominent vertex carina (Fig. 5).

Material examined. **KAUA‘I**: Kokole, at night, on *Leucaena leucocephala*, 21.982°N 159.760°W, 23 Mar 2021, K.N. Magnacca, P032317-09, 1♀. **O‘AHU**: Mānoa, *Acacia koa*, 24 Sep 1933, N.L.H. Krauss, 1♀. Barbers Point, 11 Aug 1966, C.M. Yoshimoto, 1♀. Uni. Hawai‘i, light trap, Oct 1969, J.W. Beardsley, 2♂ (HDOA). ‘Ewa, light trap, Jun 1978, J.W. Beardsley, 1♂ (HDOA). Hickam AFB, sweeping, 19 May 1988, J.W. Beardsley, 1♂ 1♀ (HDOA). Waimānalo at UH farm, 60–80 ft [18–25 m], sweeping weeds and crops, 18 Jul 1994, J.W. Beardsley & W.D. Perreira, 2♂ 2♀. Hale‘iwa, ‘Uko‘a pond, Malaise trap, Jun 2015, 1♂ 1♀.

Goniozus foveolatus Ashmead, 1887 **New state record**

This is the species recorded as “*Goniozus* cf. *columbianus*” by Howarth *et al.* (2002, 2012). In his revision of the North American Bethylidae, Evans (1978) placed *G. foveolatus* as a junior synonym of *G. columbianus* Ashmead due to incorrectly citing them as having been described in the same publication; in fact *G. foveolatus* was described earlier and is thus the senior name, as noted elsewhere (Gordh & Móczár 1990). Examination of both types confirms the identification. Separated from *G. floridanus* and *G. williamsi* by

Figure 6. *Goniozus foveolatus* (Hymenoptera: Bethylidae). Top left: dorsal view of head. Top right: lateral view of head. Bottom left: lateral habitus. Bottom right: ventral view of head, showing palpi. habitus.

the black mandible, obtuse clypeal apex in lateral view, and absence of the transverse propodeal carina (Fig. 6). In addition, it belongs to a large group of Nearctic *Goniozus* that have only four maxillary and two labial palpomeres as in *Sierola*, whereas most species in the genus (including all the others known from Hawai‘i) have the palpal formula 5/3.

Material examined. **O‘AHU**: Barbers Point NAS [Naval Air Station], ex *Ficus retusa*, 31 Aug 1976, J.W. Beardsley, 1♀. Ka‘ala twin towers, 3,950 ft [1,200 m], 21.509°N 158.148°W, sweeping, 4 Nov 2012, K.N. Magnacca, 3♀. **MOLOKA‘I**: Kapukahehu Beach, 10 ft [3 m], yellow whitefly trap board, 24 Jun–8 Jul 1994, W.D. Perreira & M. Fukada, 4♀. **MAUI**: Kahului Malaise trap site #1, nr. Crash fire sta. 20°54′22″N, 156°25′56″W, 16 Nov 1999, F.G. Howarth *et al.*, 1♀. **HAWAI‘I**: Kohala Mt Rd nr. Koai‘a Preserve, ca. 3,400 ft [1,040 m], yellow sticky board trap, 20 Oct–3 Nov 1995, W.D. Perreira, 1♀. Pōhakuloa Training Area, Kīpuka Kalawamauna, 5,300 ft [1,620 m], 19.7460°N 155.6581°W, sweeping *Bidens*, 8 Aug 2012, K.N. Magnacca, 1♀.

Goniozus gracilicornis (Kieffer, 1906) **New state record**

Like the long-established *Goniozus emigratus* (Rohwer), and unlike the other members of the genus recorded in this paper, this species has cell 1M closed and was originally described in the genus *Parasierola*. It is easily recognized by the combination of the wing venation and the broad head, short behind the eyes, with the clypeus weakly carinate (Fig. 7). It is widespread across North America from southern Canada to northern Mexico (Evans 1978).

Figure 7. *Goniozus gracilicornis* (Hymenoptera: Bethylidae). Top left: dorsal view of head. Top right: lateral view of head. Bottom left: lateral habitus. Bottom right: left fore wing.

Material examined. **HAWAI‘I**: Waikōloa to ‘Anaeho‘omalu, on *Pennisetum setaceum*, 20 Nov 1982, W.C. Gagne, 1♀. Pōhakuloa Training Area, Old Saddle Rd, 6,500 ft [1,980 m], 19.7457°N 155.5271°W, on *Myoporum*, 17 Jun 2012, K.N. Magnacca, 1♀, KNMC. Pōhakuloa Training Area, Kīpuka Kalawamauna, 5,300 ft [1,620 m], 19.7460°N 155.6581°W, sweeping *Bidens*, 8 Aug 2012, K.N. Magnacca, 1♀. Pu‘u Wa‘awa‘a, West Kīleo, 4,300 ft [1,300 m], 19.7345°N 155.8359°W, beating *Santalum*, 14 Aug 2012, K.N. Magnacca, 1♂, KNMC.

Goniozus williamsi Bridwell, 1919 **New state record**

This species is native to the Philippines (Bridwell 1919) and appears to be widespread on Pacific islands; specimens have been seen from Tutuila and Palmyra. It may be native on some of them as well. It is part of a large complex of similar species found in southeast Asia, with carinate vertex crest, broad head and fore femur, and yellow mandibles, and most with glabrous basal wing cells. *Goniozus williamsi* is distinguished from the others by the presence of a transverse propodeal carina and a shallow emargination in the vertex carina between the ocelli (most clearly seen in a slightly frontal view due to the reflexed carina). Examination of the type showed that its placement in the key of Ram and Subba Rao (1967) is incorrect; in addition to the transverse carina being present, the femora are all dark (Fig. 8). Given how long it has been present on the other islands, it likely occurs on Hawai‘i island as well.

Figure 8. *Goniozus williamsi* (Hymenoptera: Bethylidae). Left: dorsal view of head. Right: lateral habitus.

Material examined. **KAUA‘I**: Moloa[‘a], ex corn control plot, Aug 1990, P. Britt, 1♀. **O‘AHU**: Waimānalo, sweeping, 2 Aug 1988, J.W. Beardsley, 1♀. UH farm at Waimānalo, el. ca. 60–80 ft [18–24 m], sweeping crops & weeds, 5 Jun 1995, 1♀. Tantalus Drive, el. 1,500 ft [460 m], yellow sticky board trap, 12–27 May 1997, W. D. Perreira, 1♀. Round Top Drive, el. 900 ft [275 m], yellow sticky board trap, W.D. Perreira: 1♀ 10–16 Jun 1997, 1♀ 2–16 Sep 1997. Tantalus Drive, el. 1,600 ft [490 m], yellow sticky board trap, 22 Jul–5 Aug 1997, W.D. Perreira, 2♂. Tantalus, Nāhuina Trail, el. 1,200 ft [366 m], 5–19 Aug 1997, yellow sticky board trap, W.D. Perreira, 1♀. Waialua Farmlands, Trap 035 baited with BioLure, L. Leblanc: 2♀ 26 Sep–7 Dec 2004, 1♀ 24 Dec 2004–7 Jan 2005, UHIM. Pahole crest, 2,200 ft [670 m], 21.5393°N 158.1924°W, on *Bidens torta*, 28 Jul 2012, K.N. Magnacca, 1♀. Wai‘anae–Ka‘ala Trail, 2,400 ft [732 m], 21.5014°N 158.1566°W, on *Alyxia stellata*, 2 Nov 2012, K.N. Magnacca, 1♀. Pahole crest, 2,150 ft [655 m], 21.5374°N 158.1924°W, on *Acacia koa*, 1 Feb 2017, K.N. Magnacca, 2♀. **MOLOKA‘I**: Nr. Honomuni stream, el. 10 ft [3 m], yellow sticky board trap, 9–22 Dec 1995, J.W. Beardsley & W.D. Perreira, 1♀. **MAUI**: Nr. Pa‘akea Gulch, el. ca. 1,250 ft [380 m], yellow sticky board trap, 18 Nov–2 Dec 1995, W.D. Perreira, 1♀. Hanawī Stream, el. 1,040 ft [320 m], yellow sticky board trap, 18 Nov–2 Dec 1995, W.D. Perreira, 1♀.

Braconidae

***Blacus* sp.** **New state record**

This species is widespread at least on Kaua‘i, Moloka‘i, and Maui, and is one of the most common and abundant species observed resting on leaves. In Beardsley’s (1961) key to Hawaiian Braconidae it runs to couplet 17, where it fails because the distal abscissa of the radius runs clearly to the wing apex but there is only one cubital cell (Fig. 9). In the revision of Blacinae (Achterberg 1988), the male and female run imperfectly to different species. The species listed as *Blacus cremastobombyciae* Fullaway in Nishida (2002) is very different (testaceous with the distal radius absent), and in fact does not belong to the genus or even subfamily; it has long been known as *Mirax cremastobombyciae* in the subfamily Miracinae (Achterberg 1976), but this name change was apparently never registered in the Hawai‘i insect checklist.

Material examined. **KAUA‘I**: Kōke‘e site E 1,130 m, on *Metrosideros polymorpha*, 22.125°N 159.665°W, 25 Aug 2021, K.N. Magnacca, K082501-05, 1♀. Kōke‘e site E 1130 m, Townes Malaise trap, 22.1253°N 159.6646°W, 25 Aug–17 Sep 2021, K.N. Magnacca, KM091701-35, 1♂. Kōke‘e site E 1,130 m, on *Psychotria mariniana*, 22.125°N 159.665°W, 17 Sep 2021 K.N. Magnacca, K091716-

Figure 9. *Blacus* sp. (Hymenoptera: Braconidae).

14, 1♀. **O‘AHU**: Kaukonahua Road 225 m, on *Corymbia citriodora*, 21.5364°N 158.0885°W, 28 Feb 2025, K.N. Magnacca, 1♀. **MOLOKA‘I**: Kumu‘eli gulch 1,030 m, on ground, 21.0971°N 156.8692°W, 3 Jul 2024, K.N. Magnacca, 2♂. Kumu‘eli gulch 1,030 m, Malaise trap, 21.0971°N 156.8692°W, 3 Jul–20 Aug 2024, K.N. Magnacca, M24070310-01, 1♂ 1♀. **MAUI**: Launiupoko 760 m, Townes Malaise trap, 20.8582°N 156.5957°W, 19 Oct 2022–17 Mar 2023, K.N. Magnacca & K. Bustamente, M23031701-64, 3♂ 4♀.

Cerocephalidae

***Laesthiola flavida* Bouček, 1993** **New state record**

This species has had a remarkably long history in Hawai‘i but has never been recorded, probably related to it being rarely collected and only recently described from Florida (Bouček 1993). It has not been recorded elsewhere and nothing is known about its life history, but it is easily recognizable among Cerocephalidae by the smooth lateral area of the propodeum (Fig. 10). The male has not been previously recorded; it is much darker but matches the female in the propodeal sculpture and in having a row of admarginal ventral setae on the fore wing.

Material examined. **KAUA‘I**: Moloa‘a Bay, arthropod survey, Habitat: Cultivated, Sector #14, yellow pan trap, Crop: banana, 2–21 Feb 1990, R. Messing & A. Asquith, 1♂. **O‘AHU**: H.S.P.A grounds [Honolulu], on cane, Apr 1908, R.C.L. Perkins, 1♀. Honolulu, on window, 11 Dec 1915, P.H. Timberlake, 1♀. Honolulu, 7 Mar 1916, O.H. Swezey, 1♀. Mānoa, in home, 17 Sep 1926, O.H. Swezey, 1♀. Ewa, light trap, 20 Nov 1976, J.W. Beardsley, 1♀. **MOLOKA‘I**: Kalaniana‘ole Colony, el. 3 ft [1 m], yellow sticky board trap, W.D. Perreira: 5–19 Jan 1996, 2♀; 12–26 Apr 1996, 1♀. Kalaniana‘ole Colony, el. 3 ft [1 m], yellow pan trap, 26 Apr–10 May 1996, W.D. Perreira, 1♀.

Figure 10. *Laesthiola flavida* (Hymenoptera: Cerocephalidae). Top left: Female, lateral. Top right: female, dorsal. Bottom left: male, lateral. Bottom right: male, dorsal.

Colletidae

Hylaeus anthracinus (F. Smith, 1853) **Range reduction**

This native bee had been recorded from Niʻihau (Beardsley & Tuthill 1959), which was regarded as suspicious given that its sister species *H. flavifrons* (Kirby) occurs on Kauaʻi and was found on Lehua islet just off of Niʻihau (Daly & Magnacca 2003). The specimen that was the basis of this record had been missing, but was recently found in the BPBM collection. It is a male, and clearly has the very broad scape of *H. flavifrons*, not the narrower one of *H. anthracinus*. The face marks are somewhat small, which presumably led to the misidentification as *H. anthracinus*, but this character is known to be variable in *H. flavifrons* (Daly & Magnacca 2003). Therefore, Niʻihau should be deleted from the range of *H. anthracinus*.

Material examined. **NIʻIHAU**: Niʻihau, around *Planchonella* sp., 13 Aug 1947, L.D. Tuthill, 1♂ [*H. flavifrons*].

Crabronidae

Bembecinus littoralis Vecht, 1949 **New state record**

This species has been found widely on sandy beaches on Oʻahu since its first discovery. It is the first member of the subfamily Bembicinae to become established in Hawaiʻi, and is strikingly different from other sphecoid wasps in Hawaiʻi, with yellow stripes similar to *Vespula* but much narrower (Fig. 11). In Vecht's (1949) key to Indonesian species, both males and females match *B. littoralis* in both structural and color characters, including the color variability of the female hind tarsus. Both in Hawaiʻi and its native range it appears to be found almost exclusively at the coast; it can sometimes be extremely abundant.

Figure 11. *Bembecinus littoralis* (Hymenoptera: Crabronidae). Top left: frontal view of head. Top right: dorsal view of apical metasoma. Bottom left: dorsal view of posterior mesosoma. Bottom right: lateral view showing propodeal flange.

The following life history notes were contributed by Paul Krushelnycky. On June 12–13 2024, about 15–20 *Bembecinus* puparia were collected from a patch of sand at James Campbell NWR, Kahuku, O‘ahu. These were obtained by sifting sand in an area with many nest burrow holes. Each nest consisted of a single cell containing an immature *Bembecinus* sealed in a capsule. This oblong capsule consisted of many small sand pebbles glued to a dark membrane. The capsule exterior was quite hard and rigid, protecting the developing wasp. Those that were opened contained white pupae with melanized eyes. Attached loosely around the capsule were often wings of cicadellid prey and other debris that was presumably inside the nest burrow prior to pupation. Five adults emerged between June 23 and July 22. Another five apparently entered dormancy and emerged as adults in January and February 2025. Two puparia were found to have small holes in their exterior or were damaged when collected, and when opened fly maggots were observed. These were reared and turned out to be an unidentified phorid.

Material examined. **O‘AHU**: Kaneohe Marine Corps Base, North Beach, flying over ground, 10 May 2017, 2♀. James Campbell NWR, at nest aggregation, 22 Apr 2024, P. Krushelnycky, 4♂ 3♀.

Figure 12. *Dicranorhina ritsemae luzonensis* (Hymenoptera: Crabronidae), male. Oblique fronto-dorsal view.

Dicranorhina ritsemae luzonensis Rohwer, 1919 **New island record**

This species was previously recorded from O‘ahu and Maui (Nishida 2002, Howarth & Preston 2007). There are only a handful of specimens, but some are recent so it is probably still present. It is distinct from other larrine crabronids in Hawai‘i in having the apical third of the wing tinged with brown (Fig. 12). The specimens on hand agree with the description of Williams (1928) in having the clypeus, mandible, and pronotal lobes reddish brown rather than black, in contrast to the key of Mawadda *et al.* (2019). Howarth & Preston (2007) said that the generic name is a homonym of a beetle genus and it should be listed as *Polemistus luzonensis* Rohwer, but this is incorrect; *P. luzonensis* is a different taxon, and the beetle genus is *Dicronorhina*.

Material examined. **KAUA‘I**: Mahaulepu, with crickets in sand dune root holes, 15 Sep 1976, S.L. Montgomery, 1♀. **O‘AHU**: Nu‘uanu Valley, 28 Oct 1949, 2♀ (HDOA). Honolulu, 14 Nov 1949, P.W. Weber, 2♀ (HDOA). Pālama, 3 Nov 1950, T. Iwami, 1♀. Honolulu, 5 Jan 1951, J. Beardsley, 1♀. Honolulu, on window ent. lab. HSPA, 30 Jan 1952, O.H. Swezey, 1♀ (HDOA). Honolulu, 19 Apr 1954, C.R. Joyce, 1♀. Nu‘uanu Valley, 22 Nov 1956, J.S. Rosa, 1♀ (HDOA). Kuli‘ou‘ou Valley Trail, el. 200 ft [60 m], 18 Jun 1998, W.D. Perreira, 1♂.

Nitela bicornis (Williams, 1928) **New state record**

This species is very distinct from the two following, with strongly angulate anterior corners on the pronotum, transverse ridges on the mesoscutum, and the frons dull with very tiny, almost indistinguishable punctures (Fig. 13). It was originally described from the Philippines, and the type is at BPBM. *Nitela* provision their nests with aphids and barklice (Williams 1928). Although so far recorded from only one specimen, it is likely established

Figure 13. *Nitela bicornis* (Hymenoptera: Crabronidae). Left: frontal view of head. Right: dorsal habitus.

since it was found in the mid elevation forest, and due to its life history probably spends most of its time in the canopy where it would be rarely encountered.

Material examined. **O'AHU**: Wa'ahila Ridge, 21 Jul 1999, N21°18.009′ W157°48.416′, Malaise trap, G.M. Nishida, 1♀.

Nitela domestica (Williams, 1928) **New state record**

This very small crabronid resembles a bethylid, with a prominent frontal carina, somewhat prognathous head, and quadrate pronotum, which unlike in Bethylidae does not extend close to the tegulae dorsally. It is readily recognized among *Nitela* by the pair of low, slightly curved carinae on the frons (Fig. 14). It is native to the Philippines, China, and Japan (Williams 1928, Li & Li 2010).

Material examined. **O'AHU**: Hawai'iloa Trail, on *Diospyros sandwicensis*, 22 Jul 2017, K.N. Magnacca, 1♀. UH Mānoa campus, sweeping *Eucalyptus deglupta*, 3 Feb 2025, K.N. Magnacca, 1♀.

Figure 14. *Nitela domestica* (Hymenoptera: Crabronidae). Left: frontal view of head. Right: lateral habitus.

Figure 15. *Nitela pendleburyi* (Hymenoptera: Crabronidae). Left: frontal view of head. Right: dorsal habitus.

Nitela pendleburyi Turner, 1926 **Identification, New island record**

This species was initially reported as "*Nitela* sp." by Beardsley & Perreira (2000) based on the 1994–1998 O'ahu and Moloka'i specimens, but they were unable to provide a name. It is also the taxon referred to as "*Nitela* sp. A" in Howarth & Preston (2002, 2007). It runs to *N. pendleburyi* in the key to Oriental species of Li & Li (2010) and matches the original description; it is native to Malaysia (Turner 1926). The eyes are strongly convergent above (interocular width at toruli/interocular width at median ocellus about 0.50, eyes nearly touching lateral ocelli), eyes bare, and frons and mesoscutum nearly smooth (frons very faintly longitudinally striate in the female) with moderately fine punctation (Fig. 15); this combination is unusual among *Nitela*. It is quite different from *N. domestica* or *N. bicornis*, lacking the strongly raised, laminate anterior carina of the former (weakly carinate in the male, only raised and angulate in the female), and without carinae or reticulate sculpture on the frons or mesoscutum.

Material examined. **O'AHU**: Wa'ahila Ridge, 40–190 m, 25 Apr 1999, G.M. Nishida, 1♂ 1♀. Pearl Harbor, West loch, el. 3 ft, Yellow sticky board trap, 11–25 Feb 1998, W.D. Perreira, 2♀. **MOLOKA'I**: Kamalō Bridge, el. 3 ft [1 m], Yellow sticky board trap, W.D. Perreira; 1♀ 2–16 Sep 1994, 1♀ 16–30 Sep 1994, 1♂ 5–19 Jan 1996. Kualapu'u in coffee field, Yellow sticky board trap, el. 750 ft [230 m], 27 Oct–10 Nov 1995, J.W. Beardsley and W.D. Perreira, 2♀. Mapulehu nr. 'Ili'ili'ōpae Heiau, el. 10–40 ft [3–12 m], Yellow sticky board trap, 26 Apr–10 May 1996, 1♀ (BPBM), 1♀ (HDOA). Mapulehu nr. 'Ili'ili'ōpae Heiau, el. 10–40 ft [3–12 m], Yellow sticky board trap, 10–24 May 1996, 1♀. **MAUI**: Olowalu, 10–11 Apr 1996, H. Nagase, 1♂. Kahului Airport drainage canal, 20°54.464′N, 156°26.124′W, 2 cup traps on, 8–10 Sep 1999, F.G. Howarth, D.J. Preston, & R.A. Englund, 1♀. West Maui, 20.798°N 156.5875°W, 3–4 May 2013, S.W. Droege 11506, USGS-DRO 374910, 1♀. South Maui, 20.7613°N 156.4504°W, 7–8 May 2013, S.W. Droege 11539, USGS-DRO 374177, 1♀.

Passaloecus borealis Saussure, 1892 **Corrected identification**

This species has had a rather confused taxonomic history. It was first recorded from Hawai'i as *P. ithacae* Krombein (Beardsley 1971), which was later synonymized with *P. insignis* van der Linden, under which name it has been listed in the Hawaiian arthropod checklist (Nishida 2002). The former name is now considered to be a synonym instead of the Nearctic *P. monilicornis* Dahlbom (Vincent 1978). However, the taxon found in Hawai'i is clearly none of these, but is instead *P. borealis*. It is distinguished by the form of the mesosoma, with the notauli and medial lines about equal length, scutal patches present and oval-shaped, lateral scutal margins reflexed, and omaulus broad (Vincent 1978). Among small crabronids in Hawai'i, it can be easily recognized by the white mandible (Fig. 16).

Figure 16. *Passaloecus borealis* (Hymenoptera: Crabronidae). Left: frontal view of head. Right: lateral habitus.

Material examined. **O‘AHU**: P[earl] City, 12.14.68, F.S. Weadt, 1♀. U. of H[awai‘i], 20 Apr 1969, Raso, 1♀ [identified as *P. ithacae* by C.M. Yoshimoto]. Mānoa, 11 May 1970, Kam, 1♂. Mānoa, 21 Apr 1977, S. Ishikawa, 1♀. UH Mānoa at Spalding Hall, el. ca. 80 ft [25 m], sweeping grasses & weeds, 27 Mar 1995, J.W. Beardsley, 1♀.

Polemistus pusillus Saussure, 1892 **New state record**

This species is native to central Mexico, and provisions its nests with aphids (Menke & Vincent 1983). It is easily recognized by the large depressed spots on the anterior mesonotum marking the posterior end of the notauli (especially distinct in the female; Fig. 17), and the toothed ventral antenna of the male (Menke & Vincent 1983). The mesoscutum is also dull and velvety at low magnification, and the very short notauli and lack of other dorsal lines separates it from *Passaloecus borealis*. The only other species of *Polemistus* known from Hawai‘i, *Po. luzonensis* Rohwer, is very different with strongly foveate grooves extending the full length of the mesonotum.

Material examined. **O‘AHU**: Wa‘ahila Ridge, N21°18.009′ W157°48.416′, Malaise trap, 21 July 1999, G.M. Nishida & R. Englund, 1♂ 2♀.

Figure 17. *Polemistus pusillus* (Hymenoptera: Crabronidae). Left: frontal view of head. Right: lateral habitus.

Solierella peckhami (Ashmead, 1897) **New island record**

This species has been in the islands for many years and has been previously recorded from Niʻihau, Kauaʻi, Oʻahu, Molokaʻi, Maui (Nishida 2002). These records extend its range to all the main islands except Lānaʻi, and it is probably also present there.

Material examined. **KAHOʻOLAWE**: Beck's Cove, 200 m, 11–14 Feb 1980, G.M. Nishida, 1♀. **HAWAIʻI**: Kailua, 19°38.91′N 155°59.73′W, 108 m, 16 Oct 1992, G.M. Nishida, 1♀.

Trypoxylon buddha Cameron, 1889 **New state record**

A single female of this species was collected on Oʻahu. The locality is not far from a harbor, so it is not considered established until more specimens are found. It keys clearly to *T. buddha* in Tsuneki (1979) and matches a specimen at BPBM identified by Tsuneki. The apical foveae on T1–3 are very distinctive for this species. Among the *Trypoxylon* in Hawaiʻi, it can also be easily identified by lacking the strong facial carinae of the following species and the red coloration of the previously established species (Fig. 18). Its native range extends from India southeast to Malaysia (Tsuneki 1979).

Material examined. **Oʻahu**: Kalaeloa National Wildlife Refuge, site 2 pan trap 3, 16 Jun 2023, M. Ross & N. Chan, 1♀.

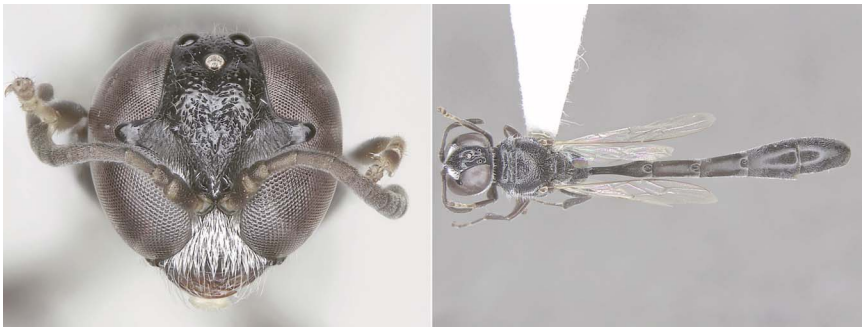

Figure 18. *Trypoxylon buddha* (Hymenoptera: Crabronidae). Left: frontal view of head. Right: dorsal habitus, showing metasomal foveae.

Trypoxylon melanurum Cameron, 1901 **Identification**

This species was reported as "*Trypoxylon* sp." by Beardsley & Perreira (2000) and Nishida (2002). Examination of their specimens shows that it is a member of the very distinctive *scutatum* species group, which have carinae marking off a shield-shaped area of the frons including the median ocellus (Fig. 19). This, along with the entirely black coloration, serves to separate it from the other *Trypoxylon* species found in Hawaiʻi. It clearly matches the concept of *T. melanurum* in Tsuneki (1978). Its native range includes almost all of India and Bangladesh (Tsuneki 1978).

Material examined. **Oʻahu**: Pearl Harbor, West Loch, 1–5 ft [0–2 m], yellow sticky board trap, W.D. Perreira: 30 Sep–11 Oct 1997 (1♂), 13–20 Dec 1997 (1♂), 3–14 Jan 1998 (2♂), 11–25 Feb 1998 (3♂).

Figure 19. *Trypoxylon melanurum* (Hymenoptera: Crabronidae). Left: frontodorsal view of head, showing frontal enclosure. Right: lateral habitus.

Diapriidae

***Basalys* sp.** **New state record**

This genus is distinguished by the combination of notauli absent, antenna with an abrupt 3-segmented club and the seven preceding flagellomeres small and nodiform, and the presence of a tubular, pigmented basal vein which is not connected to the submarginal vein as in Belytinae (Fig. 20). It superficially resembles *Doliopria* in the small size and strongly clubbed antenna, but in that genus the antenna is 11-segmented rather than 12 (only six nodiform segments between the pedicel and club), and the basal vein is absent. In addition to the specimens listed below, three specimens from O‘ahu and Moloka‘i have

Figure 20. *Basalys* sp. (Hymenoptera: Diapriidae). Arrow indicates the basal vein.

the antenna 11-segmented but otherwise like *Basalys*, and the basal vein present; it is unclear if these represent a different, aberrant species of *Basalys* or mutant individuals. Individuals of some other genera have been seen with apparently one fewer antennal segment than normal, but in those cases it is usually obvious with the segment being longer than normal and often partly divided, which is not the case here.

Material examined. **KAUA'I**: Moloa'a Bay, arthropod survey, Habitat: Cultivated, Sector #14, yellow pan trap, Crop: banana, 2–21 Feb 1990, R. Messing & A. Asquith, 4♀. **O'AHU**: Mt. Tantalus, 22 Sep 1968, E.F. Drake, 1♂ 1♀. Ulumawao, sweeping, 22 Oct 1968, W.C. Gagné, 1♂. Honolulu International Airport, light trap, May 1981, J.W. Beardsley, 1♀. UH farm at Waimānalo, el. 60–80 ft [18–24 m], 15–22 May 1996, yellow sticky board trap, W.D. Perreira, 2♀. **MOLOKA'I**: Nr. Honomuni stream, el. 10 ft [3 m], yellow sticky board trap, Nov 1994, W.D. Perreira, 1♀. Mapulehu nr. 'Ili'ili'ōpae Heiau, el. 10–40 ft [3–12 m], yellow sticky board trap, 18 Aug–1 Sep 1995, 1♂. **MAUI**: 'O'opuola Stream, el. 800 ft [245 m], yellow sticky board trap, 18 Nov–2 Dec 1995, W.D. Perreira, 1♀.

***Belyta* sp.** **New state record**

Based on the wing venation and reniform scutellar fovea (Fig. 21), this species is close to the Eurasian *B. depressa* Thomson and is clearly not any of the species known from the Oriental or Australian regions. However, the genus is very poorly studied outside of Europe, particularly in North America where the species have not been examined in over 100 years and many undescribed species probably exist.

Material examined. **KAUA'I**: Alaka'i Swamp Trail, pitfall, Jul–Aug 1991, A. Asquith, 2♀. 'Alaka'i Trail, pitfall, Sep–Oct 1991, 1♂ 1♀. Alaka'i Swamp Trail, non-target study, 920220, 31 Jan–20 Feb 1992, 1♂.

Figure 21. *Belyta* sp. nr. *depressa* (Hymenoptera: Diapriidae).

Figure 22. *Calogalesus* sp. (Hymenoptera: Diapriidae). Left: anteroventral view of head. Right: lateral habitus.

***Calogalesus* sp.** **New state record**

This genus is easily recognized by the ventrally projecting mandibles (almost parallel and beak-like, not overlapping when closed), distinct notauli, and arched, nearly glabrous petiole (Fig. 22). Only three species are described; in the key of Feng *et al.* (2016), the Hawai‘i males run to *C. malabaricus* Rajmohana & Narendran but the female does not match any, so it is likely undescribed. Undescribed species are reported from Africa, Asia, and Australia; at least two are found in the Caribbean and one of these may be cosmopolitan (Masner & Garcia 2002), which may be the one here. This taxon was reported as “Diapriidae gen. sp. A” in Howarth *et al.* (2012).

Material examined. **O‘AHU**: Honolulu International Airport, light trap, May 1981, J.W. Beardsley, 1♀. **MOLOKA‘I**: Mapulehu nr. ‘Ili‘ili‘ōpae Heiau, el. 10–40 ft [3–12 m], yellow sticky board trap, 29 Sep–13 Oct 1995, 1♂ 1♀. Mapulehu, el. 10–60 ft [3–18 m], sweeping, 10 Nov 1995, J.W. Beardsley, 1♂. Nr. Kamalō Bridge, el. 3 ft [1 m], yellow sticky board trap, Dec 1995, W.D. Perreira, 1♂. **LĀNA‘I**: Lāna‘ihale, ex trap baited with dead *Dacus* [= *Bactrocera*] *dorsalis*, 6 Jul 1978, P. Conant, 1♀. **MAUI**: Kahului Airport, 20°54′22″N 156°25′56″W, sample #B19 Malaise #1, 16 Nov 1999, F.G. Howarth & D.J. Preston, 3♀. Kahului Airport, AOA, 20°54′22″N 156°25′56″W, 16 Dec 1999, Malaise tr. #17, *Leucaena* shrubland, F.G. Howarth, D.J. Preston, F. Starr, K. Martz, 1♀.

***Doliopria* sp.** **New island record**

Previously recorded from O‘ahu (Early & Goff 1986).

Material examined. **MOLOKA‘I**: Pala‘au State Park, 1,500 ft [460 m], yellow sticky board trap, 20 Jan–3 Feb 1995, J.W. Beardsley & W.D. Perreira, 1♀. Nr. Honomuni stream, el. 10 ft [3 m], yellow sticky board trap, 26 May–9 Jun 1995, J.W. Beardsley & W.D. Perreira, 1♀.

Entomacis mellipetiola (Ashmead, 1887) **New state record**

This is now one of the most common diapriids in Hawai‘i. It probably occurs on all islands, and many more specimens have been seen than those listed below. *Entomacis* is easily recognized by the combination of 13-segmented antennae in both sexes and a nar-

Figure 23. *Entomacis mellipetiola* (Hymenoptera: Diapriidae). Female, showing the 13-segmented antenna and deep notch in the syntergite (circled).

row, deep incision in the anterior margin of the syntergite (Fig. 23). This species is widespread throughout North America. The Hawai‘i specimens clearly match the description and figures in Yoder (2004). On O‘ahu and Maui it has been taken in the same sample with the following species, but is easily distinguished by the shorter petiole, lacking the tubular costal vein, having female F1–3 cylindrical rather than slightly expanded apically, and being slightly smaller overall. There are numerous other minute differences.

Material examined. **KAUA‘I**: Kōke‘e site B 1100 m, on *Coprosma waimeae*, 22.117°N 159.670°W, 25 Aug 2021, K.N. Magnacca, K082511-09, 1♀. Kōke‘e site E 1130 m, Townes Malaise trap, 22.1253°N 159.6646°W, 25 Aug–17 Sep 2021, K.N. Magnacca, KM091701-46, 1♀. **O‘AHU**: Wai‘anae, Kūmaipō gulch 665 m, Townes Malaise trap, 21.4997°N 158.1543°W, 27 Jul–28 Sep 2023, K.N. Magnacca O23092801-98, 3♂ 5♀. **MOLOKA‘I**: Kumu‘eli gulch 1,030 m, Malaise trap, 21.0971°N 156.8692°W, 2 Jul–20 Aug 2024, K.N. Magnacca, M24070310-01, 2♀. **MAUI**: Launiupoko 760 m, Townes Malaise trap, 20.8582°N 156.5957°W, 19 Oct 2022–17 Mar 2023, K.N. Magnacca & K. Bustamente M23031701-179, 3♀. **HAWAI‘I**: Kīpāhoehoe mid kīpuka 1,410 m, Townes Malaise trap, 19.2480°N 155.8166°W, 11 May–27 Jun 2022, K.N. Magnacca, H22062701-17, 1♂. Pāpā mid road 1,230 m, Townes Malaise trap, 19.2118°N 155.8169°W, 1 Jul–4 Aug 2022, K.N. Magnacca, H22080401-49, 1♂ 2♀. Kukuiopa‘e upper 1,400 m, Townes Malaise trap, 19.3047°N 155.8196°W, 11 Aug–25 Oct 2022, K.N. Magnacca, H22102501-82, 3♀.

Entomacis* cf. *penelope Nixon, 1980 **New state record**

Among North American species (Yoder 2004) this species is closest to *E. eoraria* Yoder, 2004 but the male antenna does not match. Among East Asian species (Chemyreva 2015) it is closest to *E. penelope* Nixon, and may be that species; it is widespread in the Palearctic from Ireland to Japan. The costal vein is present and tubular (Fig. 24), which is

Figure 24. *Entomacis* cf. *penelope* (Hymenoptera: Diapriidae).

somewhat unusual in the genus. However, many undescribed species are known, and the Asian species are not as fully treated morphologically as those of the Nearctic.

Material examined. **O'AHU**: Pahole NAR, bioblitz pan trap 3, 25–27 Mar 2010, K.N. Magnacca, 2♀. **MAUI**: Helu gulch 3 1130 m, on *Cyanea scabra*, 20.8678°N 156.6133°W, 6 Jul 2022, K.N. Magnacca, M22070602-05, 1♂. Helu gulch 1 1,100 m, pan trap loop, 20.870°N 156.615°W, 8 Jul 2022, K.N. Magnacca, M22070811-40, 2♀. Launiupoko 760 m, Townes Malaise trap, 20.8582°N 156.5957°W, 19 Oct 2022–17 Mar 2023, K.N. Magnacca & K. Bustamente M23031701-80, 5♀.

***Paramesius* sp.** **New state record**

This is one of several diapriids that have become established in Hawai'i in recent decades, none of which have been identified by species name. Like many of those others, this one is widespread but rare in collections; it has only been taken in Malaise traps. Like *Entomacis* it is a member of the tribe Spilomicrini and has the antennae 13-segmented in both sexes, but the last antennal segment is much longer than the penultimate one, the antenna is distinctly broader at the apex, and the syntergite is not notched (Fig. 25). The petiole is also more robust than most other diapriids found here.

Material examined. **KAUA'I**: Kōke'e site B 1,100 m, Townes Malaise trap, 22.1173°N 159.6696°W, 22 Apr–25 Aug 2021, K.N. Magnacca, KM082502-80, 1♀. **O'AHU**: Wai'anae, Kūmaipō gulch 665 m, Townes Malaise trap, 21.4997°N 158.1543°W, 27 Jul–28 Sep 2023, K.N. Magnacca O23092801-99, 4♀. **MOLOKA'I**: Kumu'eli gulch 1,030 m, Malaise trap, 21.0971°N 156.8692°W, 2 Jul–20 Aug 2024, K.N. Magnacca, M24070310-02, 2♀. **HAWAI'I**: Pāpā mid road 1,230 m, Townes Malaise trap, 19.2118°N 155.8169°W, 1 Jul–4 Aug 2022, H22080401-50, K.N. Magnacca, 5♀. Kukuiopa'e upper 1,400 m, Townes Malaise trap, 19.3047°N 155.8196°W, 11 Aug–25 Oct 2022, K.N. Magnacca, H22102501-83, 2♀.

Figure 25. *Paramesius* sp. (Hymenoptera: Diapriidae).

***Spilomicrus* sp.** **New island record**

Previously recorded only from O‘ahu (Nishida 2002).

Material examined. **MAUI**: Kahului Malaise trap site #2, nr. Crash fire sta. 20°54′18″N 156°25′42″W, Malaise trap #1, 30 Nov 1999, F.G. Howarth, D.J. Preston, J.E. Dockall, K. Martz, & F. Starr, 1♀.

***Stylaclista* sp.** **New island record**

Previously recorded only from O‘ahu (Nishida 2002). Very distinctive, with the female apical metasoma segments prolonged. Many more specimens have been taken from Kaua‘i than are listed below; most have not been mounted since it is so common.

Material examined. **KAUA‘I**: Kōke‘e, 29 Aug 1962, J.W. Beardsley, 1♂. Kōke‘e, *Drosophila* mushroom bait, 19 May 1982, J. Takara, 1♀. Kōke‘e site B 1100 m, Townes Malaise trap, 22.1173°N 159.6696°W, 22 Apr–25 Aug 2021, K.N. Magnacca, KM082502-81, 1♀. **MOLOKA‘I**: Kalaniana‘ole Colony, el. 3 ft [1 m], yellow sticky board trap, 1–15 Mar 1996, W.D. Perreira, 12♀. **MAUI**: Kula, ex suction traps in vegetable field, Mar–Apr 1989, A. Moore, 2♂ 3♀. Launiupoko 760 m, Townes Malaise trap, 20.8582°N 156.5957°W, 17 Mar 2023, K.N. Magnacca & K. Bustamente, M23031701-78, 3♀. **HAWAI‘I**: Kīlauea Iki, 3,800 ft [1,160 m], 23 Jun 1966, J.W. Beardsley, 1♀. Kohala Mts, *Acacia koa*, 14 May 1973, J.W. Beardsley, 2♂. Pāpā mid road 1,230 m, Townes Malaise trap, 19.2118°N 155.8169°W, 1 Jul–4 Aug 2022, H22080401-4 K.N. Magnacca, 2♀.

Dryinidae

Haplogonatopus vitiensis Perkins, 1906 **Correction**

This species has been incorrectly recorded in the Hawaiian arthropod checklist (Nishida 2002) as *Acrodontochelys vitiensis* (Perkins). The checklist index gives that name as a

senior synonym of both *H. vitiensis* and *Neogonatopus vitiensis* Perkins. The latter is correct (Olmi 1984), but *H. vitiensis* is a different nominal taxon. *Haplogonatopus vitiensis* attacks delphacids, and is one of the dryinids released and established for control of the sugarcane leafhopper (Swezey 1923); *Acrodontochelys* (= *Neogonatopus*) *vitiensis* attacks cicadellids (Perkins 1906), and has never been released in or recorded from Hawai‘i. The confusion no doubt arises in part because they were described in the same publication (Perkins 1906).

Encyrtidae

Cryptanusia comperei (Timberlake, 1929) **New state record**

This species fails in the key to Hawaiian Encyrtidae (Beardsley 1976), but is immediately recognizable by the broad, flat antennae and coloration (Fig. 26). Some of the endemic *Coelopencyrtus* have the flagellar segments somewhat expanded, but not to the extent of this species. It is a mealybug parasitoid, native to Australia (Timberlake 1929). It is supposed to be distinguished from *C. aureiscutellum* (Girault), which is recorded from New Zealand, by having the pleura all black and the body overall lacking violet reflections, as well as the leg coloration (Timberlake 1929). However, according to Noyes and Hayat (1984), specimens taken in the native range in Australia exhibit wide variation in coloration, so these two names and others may be synonyms.

Material examined. **O‘AHU**: Pahole NAR, bioblitz pan trap 18, 25–27 Mar 2010, 1♀. Palikea, Honouliuli Forest Reserve, beating *Cheirodendron trigynum*, 19 Oct 2017, K.N. Magnacca, 1♀. Pu‘u Hāpapa 815 m, on *Psychotria hathewayi*, 21.467°N 158.103°W, 17 Jul 2017, O23071708-01, K.N. Magnacca, 1♀.

\Figure 26. *Cryptanusia comperei* (Hymenoptera: Encyrtidae).

Figure 27. *Meselatus bicolor* (Hymenoptera: Epichrysomallidae).

Epichrysomallidae

***Meselatus bicolor* Chen, 1999** **New state record**

A single specimen of this non-pollinating fig wasp were collected in montane forest in Kaʻū, Hawaiʻi. It is easily distinguished from the only other epichrysomallids present in Hawaiʻi, *Odontofroggatia* spp. and the *Josephiella* stem and leaf gall wasps, by the 5-segmented tarsi and longer antennae (funicle with 7 segments in the female, 6 in male) of the head and mesosoma (Fig. 27). It is a fruit galler in banyan, *Ficus microcarpa* (Chen *et al.* 1999). No figs were noted in the immediate area so it likely was blown up from the lower elevations where alien trees were more common. Although only one specimen was collected, it is almost certainly well established based on it being collected deep in native forest, some distance from its host plant and far from ports of entry. It runs to *Sycophilodes* rather than *Meselatus* in the key of Pramanik & Dey (2014) due to the single scutellar setae, and apparently belongs to a new genus (J.-Y. Rasplus, pers. comm.). Identification by Jean-Yves Rasplus.

Material examined. **HAWAIʻI**: Kapāpala CMA 1,440 m, sweeping ferns, 19.349°N 155.473°W, 12 Apr 2023, H23041201-19, K.N. Magnacca, 1♀.

Eulophidae

***Elasmus* sp. 3** **New state record**

This species is rather unusual in its color and setal pattern: the bristles of the hind tibia are in nearly straight lines, coxae and femora entirely black except the apex of the fore femur, and T2 and adjoining parts of T1 and T3 are orange-yellow with the rest of the metasoma black (Fig. 28). Both the setal pattern and coloration separate it from the two previously

Figure 28. *Elasmus* sp. 3 (Hymenoptera: Eulophidae).

known *Elasmus*, *E. atratus* and *E. polistis*. Those recorded as "sp. A" and "sp. B" or "sp. 1" and "sp. 2" by Howarth *et al.* (2012) were reexamined and found to be male and female respectively of *E. polistis*; however, the present species is assigned a different number in order to avoid confusion. It is closest to *E. mandibularis* Girault of Australia, but that species has the metasoma all dark. It is not any of the species described from North America, the Palearctic, or Australia (Burks 1965, Riek 1967, Graham 1995, Yefremova & Strakhova 2009, 2010, 2011, Gunawardene & Taylor 2012). It is probably an undescribed Australian species.

Material examined. **KAUA'I**: WWVH road, on *Leucaena leucocephala*, 21.988°N 159.762°W, 26 Aug 2021, K.N. Magnacca, P082604-02, 2♀.

Eupelmidae

***Eusandalum* sp.** **New state record**

This is the first Hawai'i record of the subfamily Calosotinae *sensu lato* (recently recircumscribed with *Eusandalum* now placed in Eusandalinae; Burks *et al.* 2022). Although it has the typical eupelmid habitus (Fig. 29) it is quite distinctive, lacking pegs on the mid tibia and tarsus and with the antennae elongate and filiform, lacking a compact clava. The genus is very large and has not been recently revised.

Material examined. **O'AHU**: Wai'anae Mts., Ka'ala, 4,000 ft [1,220 m], 7 May 1969, E.F. Drake, 1♂. Waialua, el. 20 ft [6 m], 16 Nov 1995, sweeping of sugarcane and weeds, J.W. Beardsley & W.D. Perreira, 1♀.

Figure 29. *Eusandalum* sp. (Hymenoptera: Eupelmidae). Top left: lateral habitus. Top right: oblique dorsal. Bottom left: frontal view of head. Bottom right: dorsal metasoma.

Eurytomidae

Chryseida bennetti Burks, 1956 **New state record**

This wasp has the typical eurytomid habitus of a high, robust mesosoma with large punctures and a laterally compressed, shining metasoma. It can be immediately distinguished from all other eurytomid genera by the dull metallic green coloration of the mesosoma (Fig. 30). The range of variation in size and leg color (from entirely testaceous to having prominent brown bands medially on the femora) in Hawai‘i specimens matches that in the original description. It is a parasitoid of bruchid beetle larvae in legume seeds (Burks 1956), and has evidently been present in the islands for some time. It is known from specimens from four islands going back nearly 30 years, and likely occurs on Maui and Lāna‘i as well.

Material examined. **KAUA‘I**: PMRF Barking Sands, Diver’s Landing, sweeping coastal scrub, 24 Aug 2021, P082406-08, K.N. Magnacca, 1♀. **O‘AHU**: Barbers Pt., el. 5–10 ft [2–3 m], 14 Nov 1995, general sweeping, J.W. Beardsley & W.D. Perreira, 1♀. UH farm at Waimānalo, el. 60–80 ft [18–24 m], 15–22 May 1996, yellow sticky board trap, W.D. Perreira, 1♀. Dillingham Field, el. 10 ft [3 m], 15–28 May 1996, yellow sticky board trap, W.D. Perreira, 1♀. **MOLOKA‘I**: Mapulehu nr. ‘Ili‘ili‘ōpae Heiau, el. 10–40 ft [3–12 m], 29 Sep–13 Oct 1995, yellow sticky board trap, W.D. Perreira, 1♀. Pālā‘au State Park, el. 1,500 ft [460 m], general sweeping, 20 Jan 1995, general sweeping, J.W. Beardsley & W.D. Perreira, 5♀. **HAWAI‘I**: Whittington Beach Park at Honu‘apo Bay, el. 3 ft [1 m], 20 Oct–3 Nov 1995, yellow sticky board trap, W.D. Perreira, 7♀.

Figure 30. *Chryseida bennetti* (Hymenoptera: Eurytomidae).

Figitidae

Trybliographa stigmata (Say, 1836) **New state record**

A single specimen of this very distinctive eucoiline was taken at Kōkeʻe State Park; a second was later found in similar habitat on Oʻahu. It is immediately recognizable from all others in Hawaiʻi because cell R is completely filled in with pigment, giving the appearance of a large stigma (Fig. 31). Identification confirmed by Matt Buffington, USDA/SEL.

Material examined. **KAUAʻI**: Kōkeʻe State Park, 1,110 m, on cabin lanai, 22.1277°N 159.6625°W, 21 Apr 2021, K.N. Magnacca, K042101-01, 1♀. **OʻAHU**: Puʻu Hāpapa, 815m, on *Pisonia umbellifera*, 21.467°N 158.103°W, 17 Jul 2023, K.N. Magnacca, O23071705, 1♀.

Formicidae

***Lioponera* sp.** **New state record**

A series of unusual alate male ants was collected on Lehua islet off of Niʻihau. Subsequently an older series of males was discovered at BPBM, misidentified as *Ooceraea* (= *Cerapachys*) *biroi* Forel, the only other doryline present in Hawaiʻi. Although *O. biroi* was first recorded from Hawaiʻi in 1908 (Swezey 1917) and reported to have been widely collected around Oʻahu and other islands (Huddleston & Fluker 1968), only a handful of actual specimens could be found in the BPBM and HDOA collections. So far, only workers of *O. biroi* and males of *Lioponera* have been seen. The two are easily separated in both castes: workers of *Lioponera* have large eyes and the alates lack notauli (Fig. 32), while the workers of *Ooceraea* are blind and alates have complete Y-shaped notauli. A specimen from Hawaiʻi was sequenced for COI; it is close to and possibly conspecific with a sequence on the Barcode of

Figure 31. *Trybliographa stigmata* (Hymenoptera: Figitidae).

Figure 32. *Lioponera* sp. (Hymenoptera: Formicidae). Top left: dorsal view of mesosoma. Top right: lateral habitus. Bottom left: lateral view of mesosoma. Bottom right: petiole and anterior gaster.

Life Database (BOLD) from Sumatra, and more distant from one from Pakistan (2.9% and 7.2% sequence divergence respectively in the standard barcode region; BOLD process ID numbers GMIAK678-17 and GMPBS103-18). Images of these specimens cannot be distinguished from the Hawai‘i taxon, but they are of low quality and important characters are not visible. One species, *L. longitarsus* Mayr, is reported as widespread from North Africa to Taiwan and Australia (Barech *et al.* 2017), but the sequence results suggest that there may be cryptic species involved.

Material examined. **NI‘IHAU**: Lehua shelter, at light at night, 22.0154°N 160.0975°W, 31 May 2023, K.N. Magnacca, K23053107-18, 4♂. Same data, 1 Jun 2023, K23060108-03, 2♂. **O‘AHU**: ‘Ewa, Apr 1975–Jul 1976, J.W. Beardsley, 6♂. Hickam AFB, 10 Oct 1977–17 Nov 1978, C.W. Mills III, 9♂.

Megachilidae

Megachile lanata (Fabricius, 1775) **New island record**

This species has previously been recorded from O‘ahu, Moloka‘i, Maui, and Hawai‘i (Magnacca *et al.* 2013, Magnacca 2015, Matsunaga *et al.* 2019).

Material examined. **KAUA‘I**: PMRF Barking Sands, oxidation pond, 21.993°N 159.766°W, 24 Mar 2021, K.N. Magnacca, P032412-02, 1♂.

Megachile policaris **New island record**

This species was first detected in ‘Ewa, O‘ahu, and has previously been recorded from Maui and Hawai‘i (Koch *et al.* 2021). This is the first record from Kaua‘i. It is easily recognized by the expanded white tarsi of the males, used for covering the eyes of females during mating.

Material examined. **KAUA‘I**: PMRF Barking Sands, Nohili ditch, pan trap group 12, 22.0537°N 159.7764°W, PP032412-01, 24 Mar 2021, K.N. Magnacca & J.H. Preble, 1♀. PMRF, oxidation pond, on *Verbesina encelioides*, 21.993°N 159.766°W, 24 Aug 2021, K.N. Magnacca, P082413-01, 1♀. **O‘AHU**: Barbers Point, el. 0–5 ft [0–2 m], *Verbesina*, D.A. Yee & W.D. Perreira, 4 Sep 2015, 1♀. Barbers Point, el. 0–5 ft [0–2 m], W.D. Perreira: 13 Sep 2015, 1♂ 1♀; 6 Oct 2015, 1♂.

Mymaridae

Palaeomymar markhoddlei Triapitsyn, 2018 **New island record**

This species was described from California and Maui, and is presumed to be an egg parasitoid of the two-spotted leafhopper *Sophonia orientalis* (Matsumura) (Triapitsyn 2018). It is recorded here from Kaua‘i and O‘ahu, and likely occurs on the other islands as well.

Material examined. **KAUA‘I**: Kōke‘e site A, 1,115 m, pan trap, 22.113°N 159.669°W, 23 Apr 2021, J.H. Preble, 2♀. **O‘AHU**: Pia Gulch, 440 m, Townes Malaise trap, 21.3151°N 157.7425°W, 30 Aug–17 Oct 2023, K.N. Magnacca, 4♂.

Perilampidae

Perilampus chrysopae Crawford, 1914 **New state record**

This is a new state record for the family, which are quite distinct from any other wasps found in Hawai‘i (Fig. 33). It is a hyperparasitoid in lacewing cocoons, and found widely across the US (Smulyan 1936). Due to its life history it would be infrequently collected, so it is probably established despite the single record.

Material examined. **MAUI**: East Maui, Pulehu, ex cucumber, 2,150 ft [655 m], 27 Sep 1994, G.K. Uchida & C. McGrath, 1♀.

Figure 33. *Perilampus chrysopae* (Hymenoptera: Perilampidae).

Platygastridae

Platygaster acciculosis Drake, 1970 **New island record**

This species was described from Hawai‘i island, but there are earlier specimens from elsewhere. It is probably found on all islands.

Material examined. **KAUA‘I**: Kōke‘e, 17 Sep 1965, J.W. Beardsley, 1♀. Alaka‘i Swamp, 17 Sep 1965, J.W. Beardsley, 1♀. Honopū Trail, 1,245 m, 22.1468°N 159.6501°W, Townes Malaise trap, 18 May–27 Jul 2023, K.N. Magnacca, K23051804-115, 1♀. **O‘AHU**: Palolo Valley, reared ex *Diarthronomyia chrysanthemi*, 24–30 Nov 1949, M. Goto, 3♀. Mt. Ka‘ala, 4,000 ft [1,220 m], 28 Sep 1985, J.W. Beardsley, 1♀.

Synopeas* nr. *curvicauda (Förster, 1856) **New state record**

This minute parasitoid of cecidomyiid gall midges is very distinctive, with the ovipositor carried coiled in a ventral projection of the second metasomal sternum (Fig. 34). A large number of undescribed species in this group are known; the taxon found here appears similar to one found in Colombia (Hernandez-Mahecha *et al.* 2018), clearly differing from *S. curvicauda* in having the scutellum strongly convex dorsally.

Material examined. **KAUA‘I**: PMRF Barking Sands, WWVH road, on *Leucaena leucocephala*, 26 Aug 2021, K.N. Magnacca, P082604-04, 1♀. **MOLOKA‘I**: Mapulehu nr. ‘Ili‘ili‘ōpae Heiau, el. 10–40 ft [3–12 m], general sweeping, 20 Jan 1995, 2♀. Kapukahehu Beach, 5 ft [2 m], yellow sticky board trap, Apr–May 1995, W.D. Perreira, 1♀. Kualapu‘u, 1,750 ft [530 m], in coffee field, yellow sticky board trap, 12 May 1995, W.D. Perreira, 1♀.

Figure 34. *Synopeas* nr. *curvicauda* (Hymenoptera: Platygastridae).

Scelionidae

***Aradophagus* sp.** **New state record**

This peculiar genus is easily recognized by the very flat, foliose metasoma (Fig. 35). It is also mostly pale, whereas most other scelionids in Hawai‘i are dark. It does not fit any described species. A note by Beardsley accompanying the specimens says “Runs to *Aradophagus pulchricornis* Masner in Masner’s 1979 key, but antennae are not multicolored, coxae [and] trochanters not whitish. Prob. an undescribed sp.” Since all specimens were collected together near the port of Honolulu, it may not be established. However, members of the genus are rarely collected in general, and their true hosts are unknown (García & Masner 1994).

Material examined. **O‘AHU**: Honolulu, Pier 52, light trap, Aug 1985, J.W. Beardsley, 4♂.

Cremastobaeus* cf. *boolei Veenakumari, 2017 **New state record**

This species differs from the following by the all-dark body and shorter metasoma (about 1.5 times as long as the mesosoma, compared to 2 times; Fig. 36). In the key to Indian species (Veenakumari & Prashanth 2017) it runs to *C. boolei*, based primarily on the completely striate frontal depression. However, the scape is mostly brown rather than clear yellow, and with the undoubtedly large number of undescribed species (species in other regions have not been revised), it cannot be identified with confidence.

Material examined. **KAUA‘I**: Kipu Ranch, sweeping, 22 Sep 1993, C. Campbell, 1♀ (HDOA). **O‘AHU**: ‘Ewa, 18 Nov 1959, J.W. Beardsley, 2♀. ‘Ewa, J.W. Beardsley: 4 Aug 1965, 9♂ 14♀; 23 Sep 1965, 25♂ 7♀. Barbers Point, Apr 1966, J.W. Beardsley, 18♂ 30♀. Waimānalo sweeping, 6 Sep 1988, J.W. Beardsley, 4♂ 2♀. Waimānalo, sweeping, 2 Aug 1988, J.W. Beardsley, 1♂ 1♀.

Figure 35. *Aradophagus* sp. (Hymenoptera: Scelionidae).

Figure 36. *Cremastobaeus* cf. *boolei* (Hymenoptera: Scelionidae).

Figure 37. *Cremastobaeus* sp. (Hymenoptera: Scelionidae).

***Cremastobaeus* sp.** **New state record**

This species is easily recognized by the yellow body with a strongly contrasting dark brown to black head (Fig. 37). Of the 26 Oriental species (Veenakumari & Prashanth 2017), the only ones with similar coloration are *C. nigrocephalus* Veenakumari 2017, which differs in having a hump on T1, and *C. suvarnadeha* Veenakumari 2017, which has the metascutellum and posterior tergal margins smooth.

Material examined. **O'AHU**: Kului Gulch 450 m, on *Freycinetia arborea*, 21.314°N 157.745°W, 17 Apr 2024, K.N. Magnacca, O24041703-02, 1♀. **MAUI**: Launiupoko 760 m, Townes Malaise trap, 20.8582°N 156.5957°W, 19 Oct 2022–17 Mar 2023, K.N. Magnacca, M23031701-44, 1♀.

Encyrtoscelio mirissimus Dodd, 1914 **Identification, New island record**

This bizarre genus is immediately recognizable by the large, carinate frontal ledge and ventrally protruding mandibles, similar to *Calogalesus* (Fig. 38). It was previously recorded as *Encyrtoscelio* sp. (Beardsley 1989, Nishida 2002). In the revision of the genus (Caleca & Bin 1995), the Hawai'i taxon can be identified as *E. mirissimus* based on the large eye, mandible teeth, and head shape. The most similar species, *E. apterus* (Szelényi) and *E. miroides* Caleca, are also from Europe and Africa respectively and less likely to arrive in Hawai'i than the Australian *E. mirissimus*. Most individuals are micropterous, but a few macropterous females are present. They are evidently parasites of the eggs of burrowing bugs (Hemiptera: Cydnidae; Caleca & Bin 1995).

Material examined. **KAUA'I**: 13–17 Sep 1965, Kōke'e, J.W. Beardsley, 1♀. **O'AHU**: Honolulu, J.W. Beardsley, Jul 1965, 4♂ 2♀. Waipi'o Peninsula, 29 Dec 1965, J.W. Beardsley, 1♀. Ewa, Sep 1974, pit trap, J.W. Beardsley, 2♂ 1♀. Kailua, pitfall trap, 4 Oct 1976, J.W. Beardsley, 3♀.

Figure 38. *Encyrtoscelio mirissimus* (Hymenoptera: Scelionidae). Left: dorsal view. Right: lateral view.

Figure 39. *Paridris gorn* (Hymenoptera: Scelionidae). Top left: dorsal habitus. Top right: lateral habitus. Bottom left: oblique frontal view of head. Bottom right: T3–6 and partially extruded ovipositor.

Kailua, coconut grove, el. 10 ft [3 m], yellow sticky board trap, 17 Dec 1994–2 Jan 1995, W.D. Perreira, 2♂. Kalaeloa NWR, site 3 Malaise trap, 22 Jun 2023, M. Ross & N. Chan, 1♂. **LĀNA‘I**: Lāna‘i, ex pitfall trap, Dec 1985, J.W. Beardsley, 1♂ 3♀.

Paridris gorn Talamas & Masner, 2012 **New state record**

Easily recognized among the Hawaiian scelionids by the pair of short spines on the metanotum, in contrast to the median triangular projection found in the native *Opisthacantha* and other similar genera. It exactly matches the description and images of *P. gorn* in

Talamas *et al.* (2012), including the smooth T4–5 and constricted, finely punctate-rugulose T6 (Fig. 39). It is widespread in the southeastern US from Ohio through Georgia, and probably an egg parasitoid of crickets (Talamas *et al.* 2012). It is also very similar to *P. subplana* (Dodd) (= *P. coorgensis* Sharma) of southeast Asia (Talamas & Pham 2017, Talamas *et al.* 2024), and it is possible that it is an introduced species in the US, either synonymous with or closely related to *P. subplana* (E.J. Talamas, pers. comm.). Identification confirmed by E.J. Talamas.

Material examined. **O'AHU**: 'Ewa, light trap, Jun 1955, 1♀. **HAWAI'I**: Kona, H.T. Osborn, 4♀. Chain of Craters Road nr. 'Ālo'i crater, 3,000 ft [915 m], 23 Jun 1966, J.W. Beardsley, 2♀.

Figure 40. *Probaryconus cauverycus* (Hymenoptera: Scelionidae). Left: dorsal habitus. Right: oblique frontal view of head.

Probaryconus cauverycus Saraswat, 1978 **New state record**

Unlike all the other elongate scelionines present in Hawai'i, this genus has projections on the propodeum rather than the metanotum (Fig. 40). The female also has an anterior bulge on T1 as in *Paridris*. The antennae are all dark, but this appears to be a variable character; the holotype of *P. cauverycus* has the scape and clava dark and funicle pale, while the holotype of the synonym *P. karnatakensis* (Sharma) also has the scape pale (Talamas *et al.* 2017). Identification confirmed by E.J. Talamas.

Material examined. **O'AHU**: 'Ewa, alfalfa field, 14 Mar 1961, 1♂. Waimānalo, sweeping, 6 Sep 1988, J.W. Beardsley, 2♂ 2♀.

Trimorus lepidus Fouts, 1948 **New state record**

This is the first species of the subfamily Teleasinae recorded from Hawai'i. It runs to *T. lepidus* in the key of Fouts (1948), and exactly matches high-quality images of the holotype (Fig. 41). This species is unusual in having fully winged females and micropterous males; the male of *T. lepidus* has apparently not been previously recorded. Two additional species appear to be represented by single specimens collected around the same time from East Maui – one is also black with T1 deeply grooved but has the upper frons fully polished with few setae; the second is brownish with the grooves of T1 short, only covering the middle third, and almost the entire face smoothly polished except just above the mandibles. Both are smaller than *T. lepidus*, about 0.9 mm versus 1.2–1.4 mm. One *Trimorus* specimen was previously recorded from Hawai'i (Gruner 2004), but it could not be located and the description of it being faintly metallic green does not match any of

Figure 41. *Trimorus lepidus* (Hymenoptera: Scelionidae). Top left: female, lateral. Top right: female, oblique dorsal. Bottom left: female, face. Bottom right: male, lateral.

those here, so it may represent a fourth species. At least some species of *Trimorus* are known to be parasites of eggs of Carabidae (Fouts 1948), and these species may be having an impact on native *Blackburnia*, *Mecyclothorax*, or other native beetles.

Material examined. **MOLOKA'I**: Kamakou Preserve, 1,200–1,300 m, 7 Oct 1987, N. Reimer & J. Strazanac, 1♂ 1♀. **MAUI**: Waikamoi, J.W. Beardsley: 19 Jul 1965, 2♂ 4♀; 21 Jul 1965, 1♂; 24 Jul 1965, 1♂ 1♀. Maui I. (W[est]), 27 Oct 1966, T. Saigusa, 10♂. **HAWAI'I**: Ahumoa Crater, 6,500 ft [1,980 m], 21 Jun 1966, J.W. Beardsley, 1♂. Kīpuka Kī, 7 Apr 1972, 1♂.

Vespidae

Delta latreillei petiolare (Schulz, 1904) **Possibly extirpated**

This species has been erroneously listed as endemic in the Hawaiian checklist (Nishida 2002), despite having been described from New Guinea and originally recorded as an adventive species (Townes 1947); Carpenter (2008) noted that the genus *Delta* is adventive in Hawai'i. No specimens more recent than 1966 are present in collections or observed on citizen science websites – unusual for such a large, conspicuous wasp, and where the similar *D. pyriforme philippinense* and *D. curvatum* are commonly seen – suggesting it may now be extirpated from Hawai'i.

Eumenes punctatus de Saussure, 1852 **New state record**

Several of the *Delta* species in Hawai'i were first recorded as *Eumenes*, but this is the first member of *Eumenes s.s.* to be found here. It is mostly black with some small yellow markings. Among vespids present in Hawaii, it superficially resembles a small *Delta pyriforme*

Figure 42. *Eumenes punctatus* (Hymenoptera: Vespidae).

philippinense. It is easily separated from all the *Delta* and *Phimenes* species by the coloration and the strong, close punctation of the body, including the metasoma (Fig. 42). It is distinctly different from *E. mediterraneus*, introduced to Tahiti, which has the petiole broader and more abruptly expanded, and with much more extensive yellow marks. Although so far known from only a single specimen, it is likely established since it was found well into native forest.

Material examined. **O'AHU**: Pahole Gulch, 585 m, on *Pipturus albidus*, 21.5415°N 158.1928°W, 6 Jan 2023, W. Haines, 1♀.

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