

## New Distribution Records for Non-Endemic Hymenoptera (Insecta) in Hawai‘i<sup>1</sup>

JOHN W. BEARDSLEY<sup>2</sup> (1026 Oak Dale Lane, Arcadia, California 91006, USA) & WILLIAM D.  
PERREIRA (P.O. Box 61547, Honolulu, Hawai‘i 96839, USA)

Nishida (1997) listed the known island distributions of all terrestrial arthropod species reported as established in the Hawaiian Islands. The additional records for Hawaiian species of the order Hymenoptera (Insecta) that are listed below are based on specimens found by the senior author in previously unidentified material at the Bishop Museum, and on specimens collected by both authors during 1994–1997, mostly from Moloka‘i. Determinations were made by the authors. Voucher specimens are in the Bishop Museum and Hawaii Department of Agriculture collections. Families, genera and species are listed in alphabetical order.

Most recent new records for Midway Atoll are not listed here as these were published previously (Beardsley, 1998a). However, 1 Midway record that was missed earlier is included. The abbreviation YSBT is used below for yellow sticky board trap, a collection device often employed by the authors.

### Agaonidae

For corrections and additions to names listed for this family in Nishida (1997), see Beardsley (1998b), except the following:

#### *Josephiella* n. sp.

#### New island records

The above is a new species being described for the species listed by Nishida (1997) as *Camarothorax* sp., recorded there only from O‘ahu. The species, which develops in leaf galls on *Ficus microcarpa*, is now known to occur also in California and the Canary Islands (Beardsley & Rasplus, in press).

*Additional material examined:* **KAUA‘I:** Alexander Dam, 2.ii.1992, A. Asquith, ex galls on *Ficus* leaves (13). **MOLOKA‘I:** Mapulehu nr. ‘Ili‘ili‘ōpae Heiau, 40 ft, 22.vii.1994, W.D. Perreira, reared ex leaves of *Ficus microcarpa* (5).

#### *Pleistodontes froggatti* Mayr

#### New island record

This species, a caprifier of *Ficus macrophylla* (Morton Bay fig), was purposely introduced into Hawai‘i from Australia in 1921 (Swezey, 1923), and is listed from Hawai‘i, Lāna‘i, Kaua‘i and O‘ahu (Nishida, 1997).

*Material examined:* **MOLOKA‘I:** Hālawā Valley, 200 ft, 4–18.viii.1995, W.D. Perreira, YSBT (1).

### Braconidae

#### *Acrophasmus immigrans* (Beardsley)

#### New island record

This species was described from O‘ahu (Beardsley, 1961) but is an accidental immigrant known also from the eastern U.S. (Krombein *et al.*, 1979).

*Material examined:* **KAUA‘I:** Koke‘e, 4–6.viii.1961, Maa, Miyataki & Yoshimoto (1).

#### *Agathis cincta* (Cresson)

#### New island records

*Agathis cincta* is a North American species. Whether this is an accidental or purposeful introduction into Hawai‘i has not been determined, but it has been present on O‘ahu since about 1966 (Beardsley, unpublished; Nishida, 1997).

1. Contribution 2000-015 to the Hawaii Biological Survey.

2. Research Associate, Hawaii Biological Survey, Bishop Museum, 1525 Bernice Street, Honolulu, Hawai‘i 96817-2704, USA.

*Material examined:* **MAUI:** 'Auahi, 18.iv.1967, N.L.H. Krauss (1); Lower Honea-Pililani Rd., 10 ft, 23.viii–6.ix.1994, W.D. Perreira, YSBT (6). **MOLOKA'I:** Kalaniana'ole Colony, 3 ft, 21.vii–4.viii.1995, W.D. Perreira, YSBT (3); same data except vii.1995 (3); same data except viii.1995 (1); Kamilo Bridge, 3 ft, ix–x.1994, W.D. Perreira, YSBT; Kapukahehu Beach, 5 ft, 28.x–11.xi.1994, W.D. Perreira, YSBT (1); same data except vii.1995 (4); same data except viii.1995 (1); same data except viii–ix.1995 (5); Mapulehu nr. 'Ili'ili'ōpae Heiau, 10–40 ft, 29.ix–10.x.1995, W.D. Perreira, YSBT (4).

***Apanteles trifasciatus* Muesebeck****New island record**

This common species which, although described from Hawai'i, probably is an early immigrant from the South Pacific. It is a parasitoid in larvae of microlepidoptera and has been recorded previously from all of the main Hawaiian Islands except Kahoolawe and Moloka'i (Nishida, 1997).

*Material examined:* **MOLOKA'I:** Pala'au State Park, ca. 1500 ft, 20.i.1995, J.W. Beardsley & W.D. Perreira, sweeping (8); same data except 10.xi.1995 (3).

***Bassus hawaiiicola* (Ashmead)****New island record**

This species, apparently an accidental immigrant of long standing, has been recorded previously from Kaua'i, Maui and O'ahu (Nishida, 1997). It is a parasitoid in larvae of microlepidoptera; Beardsley (1961) listed the recorded hosts under the name *Agathis hawaiiicola* Ashmead.

*Material examined:* **MOLOKA'I:** Hālawa Valley, 200 ft, 24.vi–8.vii.1994, W.D. Perreira & M. Fukuda, YSBT (1); Honomuni Stream, 10 ft, 29.ix–13.x.1995, W.D. Perreira, YSBT (2).

***Bracon mellitor* (Say)****New island record**

This widely distributed parasitoid of larvae of stored product-infesting Lepidoptera has previously been reported from Kaua'i and O'ahu (Nishida, 1997).

*Material examined:* **MAUI:** Haleakalā National Park, Hōlua, 9–10.viii.1962, J.W. Beardsley (1); Makawao, 12.viii.1927, M. Maniki (2).

***Bracon swezeyi* (Bridwell)****New island record**

This species, a parasitoid in larvae of microlepidoptera (Beardsley, 1961), was described from Hawai'i but probably is an accidental immigrant. It has been recorded from Kaua'i and O'ahu.

*Material examined:* **HAWAII:** Kā'u Dist: Kīlauea, ca. 4000 ft, 22.vi.1966, J.W. Beardsley (2).

***Chelonus blackburni* Cameron****New island record**

An apparent early accidental immigrant, this egg-larval parasitoid attacks many species of small and medium sized Lepidoptera and is present at low and middle elevations over much of the Hawaiian Islands (Beardsley, 1961).

*Material examined:* **KAHO'OLAWA:** Beck's Cove, 11–14.ii.1980, G.M. Nishida, UV light (2); Hakioawa, 0 m, 16–18.iv.1981, W.C. Gagné, Malaise trap (2).

***Glyptocolastes texanus* Ashmead****New island records**

This species will key to the genus *Leluthia* Cameron in the key by Marsh in Wharton *et al.* (1997). However, we are not aware that a new combination has been formally proposed for it, and it is retained here in *Glyptocolastes* following Nishida (1997). It is an accidental immigrant from North America, previously recorded only from O'ahu (Beardsley, 1961).

*Material examined:* **HAWAI'I:** Kailua, Kona, 28.ix.1966, W. Von, at light (1). **LANA'I:** 29.vi.1987, no collector, light trap (6).

***Heterospilus baeticatus* (Provancher) New island records**

This North American parasitoid of wood-boring beetle larvae was first collected in Hawai'i in 1969; an accidental introduction (Beardsley, 1971). It is listed only from O'ahu (Nishida, 1997).

*Material examined:* **KAUA'I:** Koke'e Rd. nr. mile marker #9, ca. 3000 ft, 21.x–15.xi.1994, G.K. Uchida & W.D. Perreira, YSBT (1). **MOLOKA'I:** Pala'au State Park, ca. 1500 ft, 2–16.ix.1994, W.D. Perreira, YSBT (2); same data except x.1994 (1); same data except i.1995 (1); Pāpio Stream, 600 ft, xi.1994, W.D. Perreira, YSBT (1).

***Heterospilus prosopidis* Viereck New island records**

A parasitoid in larvae of bruchid beetles, this species was purposely introduced into Hawai'i in 1910 (Beardsley, 1961). It has been recorded from most of the main Hawaiian Islands (Nishida, 1997).

*Material examined:* **KAHO'OLAWA:** Hakioawa Pt, 1km SW, 0–10m, 7–8.xi.1979, no collector, MV light trap (2). **LANA'I:** Lāna'ihale, 4.xii.1978, P. Conant, ex trap baited with malathion & methyl eugenol (1).

***Macrocentrus calacte* Nixon New island records**

First found in Hawai'i on O'ahu in 1962, this species was described from Fiji (Beardsley 1963a). It is also recorded from Hawai'i Island (Nishida, 1997).

*Material examined:* **KAUA'I:** Na Pali Coast, Kalalau Trail, 18.xii.1968, W.C. Gagné, *Munroidendron racemosum* (1); Koke'e, ca. 2000 ft, 19.v.1982, J. Takara, light trap (1). **MOLOKA'I:** nr. Honomuni Stream, 10 ft, x.1994, W.D. Perreira, YSBT (2); Mapulehu nr. 'Ili'ili'ōpae Heiau, 10–40 ft, xi–xii.1994, W.D. Perreira, YSBT (1); same data except i.1995 (1); Mapulehu, 10–100 ft, 6.v.1992, J.W. Beardsley, sweeping (2); Pala'au State Park, ca. 1500 ft, 10–24.xi.1995, J.W. Beardsley & W.D. Perreira, YSBT (1).

***Microctonus vittatae* Muesebeck New island record**

This species was first collected on O'ahu in 1955; it is an accidental introduction from North America. It develops as a parasitoid in adult chrysomelid beetles, but no specific host is known in Hawai'i (Beardsley, 1961).

*Material examined:* **HAWAI'I:** Whittington Beach Park, Honu'apo Bay, 3 ft, 20.x–3.xi.1995, W.D. Perreira, YSBT (2).

***Mirax* sp. New island records**

This parasitoid of lepidopterous leafminers is an accidental immigrant that was first reported in Hawai'i from O'ahu in 1964, when it was reared from larvae of the endemic gracillarid moth *Philodoria* (*Eophilodoria*) *marginistrigata* (Walsingham) (Chong, 1965). A specific name is unavailable for this wasp, and its origin is unknown. Nishida (1997) recorded it only from O'ahu.

*Material examined:* **KAUA'I:** Alaka'i Swamp, 14.ix.1968, C.M. Yoshimoto (4); Koke'e, ca. 3000 ft, 19.v.1982, J. Takara, *Drosophila* mushroom bait (1); **MOLOKA'I:** Pala'au State Park, ca. 1500 ft, 13.v.1994, J.W. Beardsley & W.D. Perreira, sweeping (1).

***Parallorhogas pallidiceps* (Perkins) New island record**

This species, believed to be an early accidental immigrant, is known also from the islands of Fiji and New Zealand. It develops as a parasitoid in cerambycid beetle larvae

(Beardsley, 1961), and has been recorded previously from Nihoa and most of the main Hawaiian Islands (Nishida, 1997).

*Material examined:* **LANA'I:** Lāna'ihale, 15.xii.1978, P. Conant, from trap baited with malathion and methyl eugenol (1).

***Phanerotoma hawaiiensis* Ashmead** **New island records**

This species, possibly an early introduction for biological control, is a parasitoid of microlepidopterous larvae (Beardsley, 1961) and has been recorded from most of the main Hawaiian Islands and Midway (Nishida, 1997).

*Material examined:* **KAHO'OLAWA:** Hakioawa Point, 1 km SW, 0–10m, 7–8.xi.1979, G.M. Nishida, M.L. Goff & W.A. Steffan, Malaise trap (1). **MOLOKA'I:** Mapulehu, nr. 'Ili'ili'ōpae Heiau, 10–40 ft, 10.xi.1995, J.W. Beardsley & W.D. Perreira, sweeping (4); Pala'au State Park, ca. 1500 ft, 20.i.1995, J.W. Beardsley & W.D. Perreira, sweeping (2); Pāpio Stream, 600 ft, 2–16.ix.1994, W.D. Perreira, YSBT (1); same data except ix–x.1994 (2); same data except xii.1994 (1).

***Phanerotoma myeloisae* Fullaway** **New island record**

This species, described from O'ahu but believed to be an immigrant of unknown origin, was first collected in Hawai'i by Perkins in 1907. It has been recorded previously only from O'ahu (Nishida, 1997).

*Material examined:* **MOLOKA'I:** Hālawa Valley, 200 ft, 21.vii–4.viii.1995, W.D. Perreira, YSBT (1); Mapulehu, nr. 'Ili'ili'ōpae Heiau, 10–40 ft, 10.xi.1995, J.W. Beardsley & W.D. Perreira, sweeping (7); Pala'au State Park, ca. 1500 ft, xii.1994, W.D. Perreira, YSBT (1); same data except 20.i.1995, J.W. Beardsley & W.D. Perreira, sweeping (4).

***Psytalia incisi* (Silvestri)** **New island record**

This parasitoid of tephritid fruit fly larvae was purposely introduced into Hawai'i from southeast Asia, and reported established in 1950 (Beardsley, 1961). It has been previously reported from Kaua'i, O'ahu, Maui and Hawai'i islands (Nishida, 1997).

*Material examined:* **MOLOKA'I:** Pala'au State Park, ca. 1500 ft, 20.i.1995, J.W. Beardsley & W.D. Perreira, sweeping (1).

***Rhaconotus vagrans* (Bridwell)** **New island record**

This accidental immigrant was first collected in Hawai'i in 1914; origin unknown. It is a parasitoid of larvae of cerambycid beetles (Beardsley, 1961) and has been reported from most of the main Hawaiian Islands (Nishida, 1997).

*Material examined:* **MOLOKA'I:** Hālawa Valley, 0–100 ft, 6.v.1991, J.W. Beardsley, sweeping (12); Pala'au State Park, ca. 1500 ft, 10.xi.1996, J.W. Beardsley & W.D. Perreira, sweeping (8); Mapulehu, nr. 'Ili'ili'ōpae Heiau, 10–40 ft, 10.xi.1995, J.W. Beardsley & W.D. Perreira, sweeping (2).

***Spathius prusius* Nixon** **New island records**

This accidental immigrant from the western Pacific region was first collected in Hawai'i on O'ahu, in 1962. It develops as a parasitoid on larvae of the anthribid beetle *Araecerus levipennis* Jordon (Beardsley, 1963b).

*Material examined:* **HAWAI'I:** Whittington Beach Park, Honu'apo Bay, 3 ft, 20.x–3.xi.1995, W.D. Perreira, YSBT (1); **KAHO'OLAWA:** Moa'ula, 1400 ft, 27.iv.1980, W.C. Gagné (1); **KAUA'I:** Mt Kāhili, 19.xi.1968, W.C. Gagné, *Cheirodendron* (1). **MOLOKA'I:** nr. Honomuni Stream, ca. 10 ft, 16–30.ix.1994, W.D. Perreira, YSBT (1); Mapulehu, 10–100 ft, 6.v.1992, J.W. Beardsley, sweeping (1); Mapulehu, nr. 'Ili'ili'ōpae Heiau, 10–40 ft, 24.vi–8.vii.1994, W.D. Perreira & M. Fukuda, YSBT (1); same data except 2–16.ix.1994, W.D. Perreira (1); Pala'au State Park, ca. 1500 ft, 20.i.1995, J.W. Beardsley & W.D. Perreira; sweeping (8); same data except 10.xi.1996 (2);

Pāpio Stream, 600 ft, 2–16.ix.1994, W.D. Perreira, YSBT (1).

***Urosigalphus bruchi* Crawford** **New island record**

This species was purposely introduced into Hawai'i from Texas in 1921 for biological control of bruchid larvae (Beardsley, 1961). Nishida (1997) recorded it from Midway and many of the main Hawaiian Islands. It probably occurs on all of the islands, but there are no records from Hawai'i or Lāna'i.

*Material examined:* **KAHO'OLAWA:** Hakoawa, 300 ft, 27.iv.1980, S.L. Montgomery (1).

**Chrysididae**

***Trichrysis triacantha* (Mocsary)** **New island record**

An accidental immigrant of oriental origin that was first collected in Hawai'i in 1964 (Beardsley, 1991), this species was known previously in Hawai'i only from O'ahu (Nishida, 1997).

*Material examined:* **MOLOKA'I:** Mapulehu nr. 'Ili'ili'ōpae Heiau, 10–40 ft, 21.vii–4.viii.1995, W.D. Perreira, YSBT (1).

**Colletidae**

***Hylaeus albonitens* (Cockerell)** **New island records**

This Australian species was collected for the first time in the Hawaiian Islands on Kaua'i, in 1994 (Hopper, 1995) and has not been reported previously from any other island.

*Material examined:* **MOLOKA'I:** Kualapu'u, in coffee field, 750 ft, 15–22.xii.1995, YSBT, W.D. Perreira (1); Mapulehu nr. 'Ili'ili'ōpae Heiau, 40–60 ft, 25.xi–9.xii.1994, YSBT, W.D. Perreira (1). **O'AHU:** Honolulu, U. H. Campus, Mānoa, 60 ft, 1.xi.1991, W.D. Perreira (1); same data except iii.1992, in lab, (2); same data except 9.vi.1996, J.W. Beardsley (1).

**Halictidae**

***Dialictus* sp. possibly *nevadensis* (Crawford)** **New island records**

This species was previously reported in Hawaiian literature as *Halictus* (*Chloralictus*) sp. (Beardsley, 1958). It is an apparent accidental immigrant from North America. According to Krombein *et al.* (1979) *Chloralictus* Robertson is a junior synonym of *Dialictus* Robertson. This sweat bee is now common in lowland areas on the major Hawaiian Islands. It has been reported from Hawai'i (Bianchi, 1967), Maui (Anonymous, 1994), Moloka'i (Nakahara, 1979) and O'ahu (Beardsley, 1958).

*Material examined:* **LĀNA'I:** Keōmuku Village, 2.vi.1971, on *Sida* flowers, J.W. Beardsley (2).

**Heloridae**

***Helorus ruficornis* Förster** **New island records**

This parasitoid of chrysopid larvae, an accidental immigrant of Eurasian origin that was first collected in the Hawaiian Islands in 1985, has been reported in Hawai'i only from O'ahu (Beardsley, 1986, 1990).

*Material examined:* **KAUA'I:** Koke'e, Pu'u o Kila, 4,100 ft, 23.viii.1987, W.D. Perreira (1). **MAUI:** Waikamoi Forest Reserve, 4000 ft, 2–3.i.1986, W.D. Perreira (1). **MOLOKA'I:** Hālawa Valley, 200 ft, 24.vi–8.vii.1994, W.D. Perreira, YSBT (1); Pala'au State Park, 1500 ft, 16–30.ix.1994, W.D. Perreira, YSBT (1).

**Ichneumonidae**

***Anomalon californicum* (Cresson)** **New island record**

This species was accidentally introduced from North America and first collected in

Hawai'i in 1945 (Townes, 1947). Nishida (1997) listed it from Hawai'i, Ni'ihau and O'ahu. It probably occurs on all of the main Hawaiian Islands; however, we have seen no specimens from Kaua'i, Maui, or Moloka'i.

*Material examined:* **LĀNA'I:** Shipwreck Beach, 3.ix.1961, L. Lofgren (1). **MIDWAY:** Sand I, x.1997, Malaise trap (2).

***Barichneumon californicus* Heinrich** **New island records**

This species is an accidental immigrant from western North America that was first collected in the Hawaiian Islands in 1975 (Beardsley, 1977a). Nishida (1997) listed it from Kaua'i and O'ahu.

*Material examined:* **HAWAI'I:** Mauna Ke'a SSE side, 13,200 ft, 5.v.1982, alive on snow patch, W.C.Gagné (1); **KAHO'OLAWE:** Hakioawa, 25.iv.1980, F.G. Howarth (1); **LĀNA'I:** Lāna'ihale summit, 20.v.1981, at MV light, W.C. Gagné (1); **MAUI:** Haleakalā National Park, 2438m, 7.iv.1980, on *Styphelia*, W.C. Gagné (1); **MOLOKA'I:** Kawela, 10 ft, 1.ix.1978, S.L. Montgomery (1).

***Casinaria infesta* (Cresson)** **New island record**

This species has been listed from all of the main Hawaiian Islands except Lāna'i and Kahoolawe (Nishida, 1997). Swezey (1926) stated that this parasitoid of pyralid moth larvae was accidentally introduced from North America and was first seen in Hawai'i in 1921.

*Material examined:* **LĀNA'I:** Maunalei, 18.ii.1965, N.L.H. Krauss (3).

***Diadegma pattoni* (Ashmead)** **New island record**

This is an accidental immigrant from North America first found in Hawai'i in 1973 (Beardsley, 1977b). Nishida (1997) listed it from Hawai'i, Kaua'i, Maui and O'ahu.

*Material examined:* **MOLOKA'I:** Kaluako'i, 10 ft, 13.v.1994, sweeping *ilima* and weeds, J.W. Beardsley & W.D. Perreira (2).

***Diplazon laetatorius* (Fabricius)** **New island records**

Although this common parasitoid of aphidophagus syrphid larvae has probably been present on all of the Hawaiian islands for many years, it was not listed previously from Kaua'i or Moloka'i (Nishida 1997).

*Material examined:* **KAUA'I:** Awa'awapuhi, 10.vi.1922, E.H. Bryan (2). **MOLOKA'I:** above Waikolu Valley, 1400 m, 28.iv.1955, C.R. Joyce (1).

***Eriborus sinicus* (Holmgren)** **New island record**

This species was purposely introduced into the Hawaiian Islands in 1928 from China, under the name *Diocetes chilonis* Cushman (a synonym), to combat the rice borer *Chilo suppressalis* (Walker). It was found established in 1929 (Fullaway, 1931). Nishida (1997) listed it from Hawai'i, Kaua'i, Maui and O'ahu.

*Material examined:* **MOLOKA'I:** Pēpē'ōpae, 4600 ft, vii.1959, D.E. Hardy (1).

***Gelis tenellus* (Say)** **New island record**

This is a hyperparasitoid in cocoons of Braconidae, Ichneumonidae, and Chrysopidae that is widely distributed in North America (Krombein *et al.*, 1979). In the Hawaiian Islands it is presumed to be an accidental immigrant, and is listed from Hawai'i, Kaua'i, Maui and O'ahu (Nishida, 1997).

*Material examined:* **LANA'I:** Kānepu'u, 24.ix.1988. W.D. Perreira (1). **MOLOKA'I:** Pu'u Kolokole, 9.vi.1971, M. Delfinado (1).

***Gotra* sp.****New island record**

This species, for which no specific name is yet available, apparently originated from the Philippine Islands and was first collected in the Hawaiian Islands in 1974 (Beardsley 1974). Nishida (1997) listed it from Kauaʻi and Oʻahu.

*Material examined:* **MOLOKAʻI:** Maunaloa, 1200 ft, W.D. Perreira (1).

***Ichneumon cupitus* Cresson****New island records**

This species is widespread in western North America (Krombein *et al.*, 1979) and may have been introduced purposely into Hawaiʻi by Koebele to combat armyworms. Previously it was recorded only from Hawaiʻi Island (Nishida, 1997).

*Material examined:* **MAUI:** Haleakalā, upper Kīpahulu Valley, west camp, 1920 m, 7–15.vii.1983, F.G. Howarth & W.C. Gagné (3); Puʻu Kukui, 900 m, 9–31.x.1971, Malaise trap, J.L. Gressitt (9). **MOLOKAʻI:** Puʻu Kolekole, 17.iii.1964, D.E. Hardy (2); above Waikolu Valley, 1400 m, 28.iv.1955, C.R. Joyce (2). **OʻAHU:** Mt Kaʻala, 4.x.1973, P. Corves (5); Mt Tantalus, 8.iv.1978, C.W. Mills (1).

***Ichneumon* sp. nr. *laetus* Brullé****New island records**

This species is listed as *I. laetus* by Nishida (1997). However, we are not aware that the specific identity has been confirmed. This species also may have purposely introduced into Hawaiʻi by Koebele. Nishida (1997) listed it from Hawaiʻi Island only.

*Material examined:* **KAUAʻI:** Kokeʻe, 11–17.ix.1965, C.M. Yoshimoto (1). **OʻAHU:** Konahuanui, 6.viii.1941, B.A. Sherman (1); Poamoho Trail, 790m, 6.xii.1974, F.G. Howarth (3); Mt Kaʻala, 15.viii.1967, D. Tsuda (3).

***Ichneumon purpuripennis* Cresson****New island records**

Krombein *et al.* (1979) listed this species only from California. It may have been introduced into Hawaiʻi by Koebele to combat armyworms. Nishida (1997) recorded this species from Hawaiʻi Island only.

*Material examined:* **MAUI:** Haleakalā crater, 25.viii.1929, P. St. Sure (1); Haleʻau, West Maui Mts, 7.ix.1932, N.L.H. Krauss (1). **OʻAHU:** Mt Kaʻala, 14.x.1966, C.M. Yoshimoto (1).

***Megastylus flavopictus* (Gravenhorst)****New island record**

This Holarctic species, an accidental immigrant, was first reported in Hawaiʻi in 1982 from Kauaʻi, and is a parasitoid of the larvae of Mycetophilidae (Diptera) (Beardsley & Kumashiro, 1988b).

*Material examined:* **HAWAIʻI:** Pōhakuloa Training Area, Bobcat Trail, MBRC site 17156, 1700 m, 26.v.1994, crawl cave, deep zone, F.G. Howarth & F.D. Stone (2).

***Mesostenus gracilis* Cresson****New island record**

This accidental immigrant from North America, first collected in the Hawaiian Islands in 1966, was listed by Nishida (1997) from Hawaiʻi and Maui islands, although the original note on its discovery in Hawaiʻi (Beardsley & Kumashiro, 1988a) also listed the Oʻahu record cited below.

*Material examined:* **OʻAHU:** Koko Head, 27.ii.1982, C.H. Chu (1).

***Pachysomoides stupidus* (Cresson)****New island record**

This species, an accidental immigrant of wide distribution in North and South America, develops as a parasitoid in larvae of *Polistes* wasps. It was first found in the Hawaiian Islands in 1970 (Beardsley, 1971) and is recorded from Kauaʻi, Maui and Oʻahu (Nishida, 1997).

*Material examined:* **MOLOKA'I:** Mapulehu nr. 'Ili'ili'ōpae Heiau, 10–40 ft, 20.i.1995, sweeping, J.W. Beardsley & W.D. Perreira (1).

***Pristomerus spinator* (Fabricius)                      New island record**

This species was purposely introduced into Hawai'i from Texas in 1942 to combat armyworms, under the name *Pristomerus appalachianus* (Viereck), a synonym (Funasaki *et al.*, 1988). It has been reported as established on Kaua'i, Maui and O'ahu (Nishida 1997).

*Material examined:* **MOLOKA'I:** Kualapu'u, in coffee field, 750 ft, 2–16.ix.1994, W.D. Perreira, YSBT (1).

***Spilichneumon superbus* (Provancher)                      New island record**

Swezey (1909), who redescribed this species under the synonym *Amblyteles koebelei*, stated that it was introduced purposely into Hawai'i by Koebele to combat armyworms. It is widespread in North America (Krombein *et al.*, 1979), and is listed from Hawai'i, Maui, Moloka'i, Ni'ihau and O'ahu (Nishida, 1997).

*Material examined:* **KAUA'I:** Koke'e, 28.viii.1921, O.H. Swezey (1); 11–17.ix.1965, C.M. Yoshimoto (2); Nualoa, 4.viii.1925, O.H. Swezey (1).

***Tromatobia ovivora* (Boheman)                      New island records**

This species was first reported as an accidental immigrant, under the name *Tromatobia rufopectus* (Cresson), in 1932. It is a widely distributed species the larvae of which develop as predators in the egg sacs of argioid spiders (Rosa, 1932). Nishida (1997) listed it from Hawai'i, Kaua'i and O'ahu.

*Material examined:* **LĀNA'I:** Lānai Mts, xi.1947, ex egg case of *Argiope avara*, N.L.H. Krauss (8). **MOLOKA'I:** Pala'au State Park, 1500 ft, 20.i.1995, sweeping, J.W. Beardsley & W.D. Perreira (1).

***Venturia* sp.                      New island records**

This species is listed only from Kaua'i and Kure islands (Nishida, 1997). It probably occurs on all the islands of Hawaii, but in the past has been confused with, and often misidentified as *Venturia canescens* (Gravenhorst), which also occurs here. This species is bisexual and males are common, whereas *V. canescens* apparently is uniparental. It appears to be an accidental introduction into Hawai'i of unknown origin.

*Material examined:* **HAWAI'I:** Hawaii Volcanoes National Park, 1200 m, 25.iii.1961, L. Quate (1); Kohala, 13.viii.1954, (no collector)(1). **LĀNA'I:** Maunalei Gulch, 28.x.1947, N.L.H. Krauss (9). **MAUI:** Ha'ikū, 12.xi.1931, N.L.H. Krauss (2). **MOLOKA'I:** Kamiloloa, 15.vii.1971, on *Reynoldsia*, D.E. Hardy (1); Kaunakakai-Hālawa, 16.vi.1962, K. Yano (3). **NI'IIHAU:** X.1945, Chock & Au (1). **O'AHU:** Mānoa, iii.1928, E.H. Bryan (1); Mānoa, 23.vi.1928, N.L.H. Krauss (6).

***Vulgichneumon diminutus* (Matsumura)                      New island record**

This species was first collected in Hawai'i in 1980. It is a parasitoid of pyralid moth larvae with a widespread oriental distribution (Beardsley, 1990). In the Hawaiian Islands it was previously reported from Maui and O'ahu (Nishida, 1997).

*Material examined:* **MOLOKA'I:** Pāpio Stream, 600 ft, 2–16.ix.1994, W.D. Perreira, YSBT (1).

**Sphecidae**

***Chalybion bengalense* (Dahlbom)                      New island record**

This wasp is an accidental immigrant that is widely distributed in the Palearctic and Oriental Regions. It was first found in Hawai'i in 1947 (Weber, 1948), and is listed by Nishida (1997) from Hawai'i, Moloka'i and O'ahu.

*Material examined:* **KAUA'I:** Lihu'e Airport, 120 ft, 21.X.1994, G.K. Uchida & W.D. Perreira (1).



**Literature Cited**

- Anonymous.** 1994. *Distribution & host records of agricultural pests and other organisms in Hawaii*. Survey Programs, Plant Pest Control Branch, Plant Industry Division, Hawaii Department of Agriculture, Honolulu. 68 p.
- Beardsley, J.W.** 1958. Note on *Halictus (Chloralictus)* sp. *Proc. Hawaii. Entomol. Soc.* **16**: 337.
- . 1961. A review of the Hawaiian Braconidae (Hymenoptera). *Proc. Hawaii. Entomol. Soc.* **17**: 333–66.
- . 1963a. Note on *Macrocentrus calacte* (Nixon). *Proc. Hawaii. Entomol. Soc.* **18**: 202.
- . 1963b. Note on *Spathius prusias* Nixon. *Proc. Hawaii. Entomol. Soc.* **18**: 202.
- . 1971. Note on *Pachysomoides stupidus* (Cresson). *Proc. Hawaii. Entomol. Soc.* **21**: 20.
- . 1977a. Note on *Barichneumon californicum* Heinrich. *Proc. Hawaii. Entomol. Soc.* **22**: 403.
- . 1977b. Note on *Diadegma pattoni* (Ashmead). *Proc. Hawaii. Entomol. Soc.* **22**: 403.
- . 1979. Note on *Gotra* sp. *Proc. Hawaii. Entomol. Soc.* **23**: 23.
- . 1986. Note on *Helorus* sp. *Proc. Hawaii. Entomol. Soc.* **27**: 4.
- . 1990. Note on *Helorus ruficornis* Förster. *Proc. Hawaii. Entomol. Soc.* **29**: 2–3.
- . 1991. Note on *Trichrysis triacantha* (Mocsary) (Hymenoptera: Chrysididae). *Proc. Hawaii. Entomol. Soc.* **30**: 14.
- . 1998a. Hymenoptera from Midway Atoll. *Bishop Mus. Occas. Pap.* **58**: 37–50.
- . 1998b. Chalcid wasps (Hymenoptera: Chalcidoidea) associated with the fruit of *Ficus microcarpa* in Hawaii. *Proc. Hawaii. Entomol. Soc.* **33**: 19–34.
- . & **B. Kumashiro.** 1988a. Note on *Mesostenus gracilis* Cresson. *Proc. Hawaii. Entomol. Soc.* **28**: 12–13.
- . & **B. Kumashiro.** 1988b. Note on *Megastylus flavopictus* (Gravenhorst). *Proc. Hawaii. Entomol. Soc.* **28**: 13.
- . & **B. Kumashiro.** 1990. Note on *Vulgichneumon dimidiatus* (Matsumura). *Proc. Hawaii. Entomol. Soc.* **29**: 3.
- . & **J.-Y. Rasplus.** In Press. A new species of *Josephiella* Narendran (Hymenoptera: Chalcidoidea: Epichrysomallinae) that forms leaf galls on an ornamental banyan tree, *Ficus microcarpa*, in Hawaii and California. *J. Nat. Hist.* (in press).
- Bianchi, F.A.** 1967. Note on *Halictus (Chloralictus)* sp. *Proc. Hawaii. Entomol. Soc.* **19**: 324.
- Chong, M.** 1965. Note on *Mirax* sp. *Proc. Hawaii. Entomol. Soc.* **19**: 4.
- Fullaway, D.T.** 1931. Note on *Diocetes chilonis* Cushman. *Proc. Hawaii. Entomol. Soc.* **7**: 351.
- Funasaki, G.Y., P.-Y. Lai, L.M. Nakahara, J.W. Beardsley & A.K. Ota.** 1988. A review of biological control introductions in Hawaii: 1890–1985. *Proc. Hawaii. Entomol. Soc.* **26**: 105–60.
- Hopper, D. & H.V. Daly.** 1995. Range extension of *Hylaeus* (Hymenoptera: Colletidae) on Kauai. *Bishop Mus. Occas. Pap.* **42**: 35.
- Krombein, K.V., P.D. Hurd, Jr., D.R. Smith & B.D. Burks, eds.** 1979. *Catalog of Hymenoptera in America north of Mexico*. Smithsonian Inst. Press. 2,735 p.
- Marsh, P.M.** 1997. Subfamily Doryctinae, p.206–233. In: Wharton, R. A., P. M. Marsh & M. J. Sharkey, eds., *Manual of the New World genera of the family Braconidae* (Hymenoptera). *Int. Soc. Hymenopt. Spec. Publ.* **1**.
- Nakahara, L.M.** 1979. New records from Molokai. *Proc. Hawaii. Entomol. Soc.* **23**: 16.
- . & **J.W. Beardsley.** 1979. Note on *Heterospilus baeticatus* (Provancher). *Proc. Hawaii. Entomol. Soc.* **23**: 24.
- Nishida, G.M.** 1997. Hawaiian terrestrial arthropod checklist. Third edition. *Bishop Mus. Tech. Rep.* **12**, 263 p.
- Rosa, J.S.** 1932. Note on *Tromatobia rufopectus* (Cresson). *Proc. Hawaii. Entomol. Soc.* **8**: 230.

- Swezey, O.H.** 1909. Army worms and cut worms of sugar cane in the Hawaiian Islands. *Div. Entomol., Hawaii. Sugar Planters Assoc. Exp. Stn. Bull.* **7**, 32 p.
- . 1923. Records of introduction of beneficial insects into the Hawaiian Islands. *Proc. Hawaii. Entomol. Soc.* **5**: 299–304.
- . 1926. *Casitaria infesta* (Cress.) in Hawaii (Hym.). *Proc. Hawaii. Entomol. Soc.* **6**: 296–97.
- Townes, H.** 1947. A *Eumenes* wasp and six adventive Ichneumonidae new to Hawaii. *Proc. Hawaii. Entomol. Soc.* **13**: 105–06.
- Weber, P.W.** 1948. Note on *Chalybion bengalense* (Dahlbom). *Proc. Hawaii. Entomol. Soc.* **13**: 205.