

11 (BISH); Kapālama Heights, Kamehameha Girls School, 6 Jun 1932, *A. F. Judd, E. H. Bryan Jr., & M. Neal s.n.* (BISH 42874); Ko'olau Loa Distr., Sunset Beach, common ornamental or pot flower, elev. 5 m, 25 Mar 1975, *D. Afualo s.n.* (BISH 580134).

#### Acknowledgments

Jan Doorenbos (WAG) identified numerous voucher specimens of cultivated *Begonia* from BISH, which provided an excellent reference base for ongoing identification of new specimens received by Herbarium Pacificum.

#### Literature Cited

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### New plant records from the Hawaiian Archipelago

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The following contributions include new island records, new state records, and range extensions of plants located on Kure Atoll, Midway Atoll, Maui, and Hawai'i. Voucher specimens are housed in the Bishop Museum's *Herbarium Pacificum*, Honolulu.

#### Agavaceae

##### *Sansevieria trifasciata* Prain

##### New island record

Previously known to be naturalized on O'ahu where several extensive roadside populations were found (Imada *et al.*, 2000), *S. trifasciata* (mother-in-law's tongue) is now also known to be naturalized on Maui where it is similarly distributed.

*Material examined: MAUI:* E. Maui, Ho'okipa, roadside populations on coast, 5 ft [2 m], 15 Sep. 2000, *Starr & Martz 000915-2*.

#### Aizoaceae

##### *Tetragonia tetragonoides* (Pall.) Kuntze

##### Range extension

Previously known from coastal sites on Midway Atoll, Nihoa, Kaua'i, O'ahu, West Maui, and Hawai'i (Wagner *et al.* 1990; Oppenheimer *et al.*, 1999; Starr & Martz, 2000), *T. tetragonoides* (New Zealand spinach) is now also known from East Maui where it can be found from sea level to 3500 ft [1065 m], especially in Paia and Kula.

*Material examined: MAUI:* E. Maui, Kula, on roadcut near Rice Park, 3000 ft [915 m], 21 Aug 2001, *Starr & Martz 010821-1*; E. Maui, Kula, telephone sub-station near Kekaulike Ave, 3050 ft [930 m], 21 Aug 2001, *Starr & Martz 010821-2*; E. Maui, Kula, side of Kolohala Rd, 3500 ft [1065 m], 21 Aug 2001, *Starr & Martz 010821-3*; E. Maui, Paia Bay, in sand near parking lot, 9 Jan 2002, 10 ft [3 m], *Starr & Martz 020109-2*.

**Annonaceae*****Artabotrys hexapetalus* (L. f.) Bhandari      New island record**

Previously reported as naturalized on O'ahu (Nagata, 1995), *A. hexapetalus* (climbing ylang ylang) [syn. *A. uncinatus* (Lam.) Merr] is sparingly naturalized within the Kīpahulu section of Haleakalā National Park and in pastures nearby in Popoloa. Native to India (St. John, 1973), this woody climber is distinguished by its fragrant green flowers that grow singly or paired, with six, one-inch long petals converging at the base and spreading above; flower stems are flattened and hooked; leaves are thick, pointed, shiny, oblong 5–10 inches [12–25 cm] by 2–3 inches [5–8 cm]; and fruits are four to ten, yellow, fragrant, and inedible, each about an inch long and clustered like grapes on a stem (Neal, 1965).

*Material examined: MAUI:* E. Maui, Kīpahulu, Haleakalā National Park, near headquarters, vine growing up into trees, 100 ft [30 m], 21 Nov 2000, *Starr & Martz 001122-1*.

**Apiaceae*****Ciclospermum leptophyllum* (Pers.) Sprague**

Previously known from disturbed areas such as gardens, pastures, and roadsides on Midway Atoll and all the main islands (Wagner *et al.* 1999), *C. leptophyllum* (fir-leaved celery). It was also documented from Kure Atoll, where it is common in lawn areas, runways, and other open areas, in an anonymous survey (1979) and in Herbst & Wagner (1992), but not in Wagner *et al.* (1999).

*Material examined: KURE ATOLL:* Green Island, near quarters and nearby lawn, 15 ft [5 m], 22 May 2001, *Starr & Martz 010522-7*.

***Hydrocotyle bowlesioides* Mathias & Constance      Range extension**

Previously reported from Kaua'i, O'ahu, Lāna'i, West Maui, and Hawai'i (Wagner *et al.*, 1999; Oppenheimer & Bartlett, 2002), *H. bowlesioides* (marsh pennywort) is now also known from East Maui where it can be found in moist lawns in the Wailea area.

*Material examined: MAUI:* E. Maui, Wailea, at base of rock trellis and in lawn at end of Pi'ilani Hwy, 300 ft [90 m], 24 Apr 2001, *Starr & Martz 010424-1*.

**Araliaceae*****Hedera helix* L.      New island record**

Previously reported as sparingly naturalized on Kaua'i, O'ahu, and Hawai'i (Wagner *et al.*, 1999), *H. helix* (English ivy) commonly escapes cultivation in Olinda, Maui where it can be found in *Eucalyptus* forest along Pi'iholo Rd. Fruits have recently been collected on both cultivated and naturalized plants. According to Pat Bily (pers.comm.), the seeds are viable.

*Material examined: MAUI,* E. Maui, Olinda, climbing 3–4 m high in *Eucalyptus* trees at the top of Olinda Rd, 3800 ft [1158 m], 18 Dec 2000, *Starr & Martz 001218-1*; E. Maui, Kula, cultivated hedge bearing fruit on Old Kula Hwy near Copp Rd, 2900 ft [880 m], 19 Apr 2001, *Starr & Martz 010419-1*; E. Maui, Pi'iholo, naturalized along power line cut, bearing fruit, 3700 ft [1127 m] 26 Oct 2001, *Starr & Martz 011026-1*.

***Schefflera arboricola* (Hayata) Hayata      New naturalized record**

Native to Taiwan (Whistler, 2000), and not previously reported to be naturalized in the Hawaiian Islands, *S. arboricola* (dwarf umbrella tree) is widely cultivated on Maui and has recently been observed naturalizing in moist areas of Haiku on trees, fence posts, and steep banks. This common plant can be distinguished by its shrubby habit; alternate,

palately compound leaves that are similar to *S. actinophylla* (octopus tree) but smaller with six to nine oblanceolate leaflets that are leathery and dark glossy green; flowers with five small yellow petals 3–4 mm long and 5 white stamens borne on long, spreading branches of a terminal panicle; and fruits that are small orange drupes (Whistler, 2000).

*Material examined: MAUI:* E. Maui, Hā'iku, growing as epiphyte on tree, 1250 ft [381 m], 28 Nov. 2000, *Starr & Martz 001128-3*.

#### Aristolochiaceae

*Aristolochia littoralis* Parodi

#### New island record

Previously reported from O'ahu and Kaua'i (Wagner *et al.*, 1999; Imada *et al.*, 2000), *A. littoralis* (calico flower) is now also known from Maui where it is sparingly naturalized in Kīpahulu, East Maui. It was also observed to be spreading in Waikapū, West Maui.

*Material examined: MAUI:* E. Maui, Kīpahulu, near Hā'ō'ū, growing on rock walls and along road, 160 ft [48 m], 21 Nov 2000, *Starr & Martz 001121-3*.

#### Asclepiadaceae

*Calotropis gigantea* (L.) W. Aiton

#### New naturalized record

Previously reported as persisting near old home sites and escaping in Kohala and Kona, Hawai'i, and on Kaho'olawe but not known to be naturalized (Wagner *et al.*, 1999), *C. gigantea* (crown flower) is widely cultivated on Maui, has been observed spreading from ornamental plantings, and is occasionally found far away from any known plants in Kīhei, Kahului, and Wailuku. Native to India and Southeast Asia (St. John, 1973; Whistler, 2000), this popular lei flower is distinguished by a large erect habit up to 13 ft [4 m]; milky sap; white powdery opposite leaves 3.5–9.0 in [8–23 cm] long; and axillary umbels of white to pale purple, crown-like flowers (Whistler, 2000). The feral form seems to most often have purple flowers.

*Material examined: MAUI:* E. Maui, North Kīhei, S. Kīhei Rd on sand dunes, 5 ft [1.5 m], 9 Mar 2001, *Starr & Martz 010309-1*; E. Maui, Kīhei, just mauka of the Maui Research and Technology Park, on mauka side of gate, coming up in pasture area recently disturbed to install a culvert, 250 ft [75 m], 3 May 2001, *Starr & Martz 010503-2*. W. Maui, Kahului, in abandoned sugar cane field, 100 ft [30 m], *Starr & Martz 010701-1*.

#### Boraginaceae

*Carmona retusa* (Vahl) Masamune

#### Range Extension

Previously reported from Kaua'i and West Maui (Lorence *et al.*, 1995), *C. retusa* is now also known from Hā'iku, East Maui where it can be found in lawns, along fences, and in hedges, often producing a carpet of seedlings.

*Material examined: MAUI:* E. Maui, Hā'iku, scattered over mostly urban areas along Hā'iku Rd, 500 ft [152 m], 28 Nov 2000, *Starr & Martz 001128-1*.

#### Brassicaceae

*Brassica nigra* (L.) W. Koch

Previously reported from O'ahu, Maui, and Hawai'i (Wagner *et al.* 1999), *B. nigra* (black mustard) is also known from Midway Atoll where it is widespread in the southeast corner of Eastern Island, forming monotypic stands. It was also observed on Sand Island, where a few plants persist in gardens. Previously reported from Midway in Apfelbaum *et al.* (1983) and in Bruegmann (1998), but not in Wagner *et al.* (1999).

*Material examined: MIDWAY ATOLL:* Eastern Island, Kat Hokama collector, 15 ft [5 m], 26 May 2001, *Starr & Martz 010526-1*.

***Lepidium virginicum* L.**

Previously reported from Midway Atoll, O'ahu, Moloka'i, Maui, and Hawai'i (Wagner *et al.* 1999), *L. virginicum* (pepper grass), it was also documented from Kure Atoll where it is locally common near the camp in the center of the island, in Woodward (1972), and in Herbst & Wagner (1992), but not in Wagner *et al.* (1999).

*Material examined:* **KURE ATOLL:** Green Island, in with other common lawn weeds near camp, 15 ft [5 m], 22 May 2001, *Starr & Martz 010522-1*.

**Buddleiaceae*****Buddleia davidii* Franch.****New island record**

Previously reported as sparingly naturalized on Kaua'i (Shannon & Wagner, 1996), *B. davidii* (butterfly bush) is spreading from plantings into nearby pastures and gulches in Kula, East Maui.

*Material examined:* **MAUI:** E. Maui, Kula, by electric station near the crest of Kekaulike Ave, seedlings and juveniles seen in pasture and gulch near hedge, 3740 ft [1140 m], 31 Aug 2000, *Starr & Martz 000831-9*.

**Caryophyllaceae*****Sagina japonica* (Sw.) Ohwi****New island record**

Previously reported from a single collection at Honolulu International Airport (Wagner *et al.*, 1999), *S. japonica* (pearlwort) is now also known from Midway Atoll where it is uncommon on the hard-packed coral runway.

*Material examined:* **MIDWAY ATOLL:** Sand Island, on sandy part of north-south coral runway, 20 ft [6 m], 10 May 1999, *Starr & Martz 990510-6*.

***Stellaria media* (L.) Vill.****New island record**

Previously reported from Kure Atoll, Kaua'i, O'ahu, Lāna'i, Maui, and Hawai'i (Wagner *et al.*, 1999), *S. media* (chickweed) is now also known from Midway Atoll where it is uncommon in the lawn in the north part of Sand Island.

*Material examined:* **MIDWAY ATOLL:** Sand Island, near abandoned Pacific Cable Company buildings, 20 ft [6 m], 20 May 2001, *Starr & Martz 010520-2*.

**Commelinaceae*****Callisia fragrans* (Lindl.) Woodson****New island record**

Previously known to be sparingly naturalized in urban areas of Kaua'i and O'ahu (Wagner *et al.* 1999), *C. fragrans* (inch plant), is now also known from Maui. This plant was brought to our attention by Dr. Fern Duvall and was collected from a population that had apparently volunteered behind his house.

*Material examined:* **MAUI:** E. Maui, Makawao, Kailua Gulch, volunteering in yard, sprawling down bank into gulch, 1500 ft [457 m], 13 Feb 2001, *Starr & Martz 010213-1*.

**Convolvulaceae*****Ipomoea pes-caprae* (L.) R. Br.**

Previously reported from Midway Atoll, Lisianski, Laysan, French Frigate Shoals, Nihoa, and all the main islands (Wagner *et al.* 1999), *I. pes-caprae* (pohuehue, beach morning glory). It was also documented from Kure Atoll, where it is uncommon near the coast, in an anonymous survey (1979), and Herbst & Wagner (1992), but not Wagner *et al.* (1999).

*Material examined:* **KURE ATOLL:** Green Island, scattered in area near coast on west point, 15 ft [5 m], 22 May 2001, *Starr & Martz 010522-9*.

**Cyperaceae*****Cyperus gracilis*** R. Br.**New island record**

Previously known to be sparingly naturalized on Kauaʻi, Oʻahu, Molokaʻi, Lānaʻi, and Maui (Wagner *et al.*, 1990; Hughes, 1995; Oppenheimer & Bartlett, 2002), *C. gracilis* (McCoy grass) is now also known from the island of Hawaiʻi, where it can be found in moist lawns in the Hilo area.

*Material examined:* **HAWAII:** Hilo, in waste areas on University of Hawaii campus, 200 ft [60 m], 1 Aug 2001, *Starr & Martz 010801-12*.

**Euphorbiaceae*****Euphorbia peplus*** L.

Previously reported from Midway Atoll, Kauaʻi, Maui, and Hawaiʻi (Wagner *et al.*, 1990; Lorence *et al.*, 1995), *E. peplus* (petty spurge). It was also documented from Kure Atoll, where it is uncommon near the camp in the center of the island, in an anonymous survey (1979) and Herbst & Wagner (1992), but not Wagner *et al.* (1999).

*Material examined:* **KURE ATOLL:** Green Island, near camp, 15 ft [5 m], 22 May 2001, *Starr & Martz 010522-4*.

**Fabaceae*****Calopogonium galactioides*** Benth. ex Hemsl. **New naturalized record**[Syn. *C. caeruleum* (Benth.) Hemsl.]

Native to Mexico (St John, 1973), *C. galactioides* was previously reported to be cultivated on Maui by the Pineapple Research Institute in 1946 (Wagner *et al.*, 1999). On Maui, this vine-like plant is now common in *Eucalyptus* forest and pastures in Olinda, Piʻiholo, and Kula where it can be observed crawling and twining over itself and other plants. *C. galactioides* can be distinguished from other Fabaceae in Hawaiʻi by its trifoliate leaves, a distinct upper stamen, glandular stipels, blue standard 9–11 mm long, and dark strongly septate seed pods about 2 cm in length.

*Material examined:* **MAUI:** E. Maui, Olinda, crawling in *Eucalyptus* forest, 2600 ft [792 m], 12 Oct 2000, *Starr & Martz 001012-1*; E. Maui, Piʻiholo, sprawling on ground and climbing *Eucalyptus robusta* near ʻEhu Rd, 2200 ft [670 m], 26 Nov 2000, *Oppenheimer & F. Duvall H110041*.

***Centrosema pubescens*** Benth.**New island record**

Recently reported from Kauaʻi (Flynn & Lorence, 1998), *C. pubescens* is now also known from Maui where it is locally naturalized near “five corners”, Hāʻiku.

*Material examined:* **MAUI:** E. Maui, Hāʻiku, crawling in pasture and waste areas along Peʻahi Rd, 800 ft [245 m], *Starr & Martz 001130-1*.

***Falcataria moluccana*** (Miq.) Barneby  
& J.W. Grimes**Range extension**[Syn. *Paraserianthes falcataria* (L.) I. Nielsen]

Previously known from Kauaʻi, Oʻahu, Molokaʻi, West Maui, and Hawaiʻi (Wagner *et al.*, 1990; Oppenheimer & Bartlett, 2002), *F. moluccana* (Moluccan albizia) is now also known from East Maui where it is escaping well beyond forestry plantings in Peʻahi, Hāʻiku.

*Material examined:* **MAUI:** E. Maui, Hāʻiku, E. Kuʻiaha Rd, escaping from plantations into nearby pastures and gulches, 650 ft [200 m], *Starr & Martz 000526-1*.

***Senna alata* (L.) Roxb.****Range extension**[Syn. *Cassia alata* L.]

Previously reported as cultivated and persisting after cultivation or perhaps escaping on Kaua'i, O'ahu, and West Maui (Wagner *et al.*, 1999; Oppenheimer & Bartlett, 2000), *S. alata* (candle bush) is escaping into pastures on East Maui in Huelo and Ke'anae.

*Material examined: MAUI:* E. Maui, Huelo, on side of road and in pastures, 450 ft [137 m], 6 Dec 2000, Starr & Martz 001206-1.

**Grossulariaceae [Saxifragaceae]*****Brexia madagascariensis* Thouars ex Ker-Gawl. New naturalized record**

Native to Madagascar and the Seychelles and cultivated in Hawai'i since the early 20th century but not known to be naturalized (St. John, 1973), *B. madagascariensis* is now known from Wahinepe'e, East Maui where it is escaping well beyond plantings in way-side parks. A small, smooth tree with leaves that are evergreen, leathery, long, narrow, stipulate, with entire or sharp-toothed edges, borne on thick, cylindrical branches; greenish flowers which appear clustered at leaf axils, with five stamens attached to a lobed and fringed disk around a superior ovary; and five angled, one celled, hard fruit which contains numerous angular seeds (Neal, 1965).

*Material examined: MAUI:* E. Maui, Wahinepe'e, Hāna Hwy, 600 ft [182 m], 15 Jul 2001, Starr & Martz 010715-1.

**Lauraceae*****Cassytha filiformis* L.****New island record**

Previously reported from all the main islands except Kaho'olawe (Wagner *et al.*, 1999), *C. filiformis* (kauna'oa pehu) is now also known from Kure Atoll where a small patch of this parasitic vine was observed on the northeastern coast hosting mainly on *Scaevola*.

*Material examined: KURE ATOLL,* northeastern coast in a thicket of *Tournefortia argentea* and *Scaevola sericea*, 15 ft [5 m], 22 May 2001, Starr & Martz 010522-12.

**Malvaceae*****Sidastrum micranthum* (St. Hil) Fryxell****New island record**

Previously reported from pastures on O'ahu and Hawai'i (Wagner *et al.*, 1999), *S. micranthum* is now also known from Maui where this tall herb is widespread in pastures in the Kaupo area.

*Material examined: MAUI:* E. Maui, Kaupō, widespread along road and in pastures from 200 ft [61 m] to 1000 ft [305 m], collection made at 350 ft [106 m], 20 Nov 2000, Starr & Martz 001120-1.

**Myrtaceae*****Pimenta dioica* (L.) Merr.****New island record**

Previously reported from Kaua'i where it is found in secondary forest and mixed forestry plantings in the hills above Kalāheo (Lorence *et al.*, 1995), *P. dioica* (all spice) is now also known from Maui where this fragrant tree is widely cultivated as an ornamental and has been observed spreading in Haiku, along Baldwin Ave, and in Wailuku. It is also naturalized in Waimanalo, O'ahu where it is spreading from forestry plantings, but has yet to be collected.

*Material examined: MAUI:* E. Maui, Hā'iku, near Hā'iku School on side of road, many seedlings germinating and scattered juveniles coming up in a thicket of guava scrub, 400 ft [120 m], 25 Apr 2001, Starr & Martz 010425-1.

**Nyctaginaceae*****Boerhavia coccinea* Mill.****New island record**

Previously known from Kauaʻi, Oʻahu, Maui, Molokaʻi, Lānaʻi, Kahoʻolawe, and Hawaiʻi (Wagner *et al.*, 1999; Oppenheimer & Bartlett, 2002), *B. coccinea* (scarlet Boerhavia) is now also known from Kure Atoll where it is uncommon near the camp in the center of the island.

*Material examined:* **KURE ATOLL:** Green Island, near quarters, 15 ft [5 m], 23 May 2001, Starr & Martz 010523-1.

**Oleaceae*****Noronhia emarginata* (Lam.) Stadman****New island record**

Native to Madagascar and cultivated in the Hawaiian Islands before 1906 (St. John, 1973), *N. emarginata* (Madagascar olive) was previously recorded as naturalized on Kauaʻi (Flynn & Lorence, 2002: 15). On Maui naturalized populations have recently been observed in Makamakaole, Honomanū, Huelo, and Hāʻiku, often on steep gulch walls. This hardy tree resembles the kamani (*Calophyllum inophyllum*), but can be distinguished from it and other Oleaceae in Hawaiʻi by its simple, broad, emarginate, paired leaves up to 6 in [15 cm] long with few indistinct veins; fragrant flowers that grow in clusters at leaf axils; and purplish, egg-shaped fruit about 1 in [2 cm] (Neal, 1965; Dehgan, 1998).

*Material examined:* **MAUI:** W. Maui, Makamakaole, Waiokila gulch, scattered along road and on steep gulch walls, 900 ft [295 m], 10 Mar 2001, Starr & Martz 010310-1; E. Maui, Hāʻiku, near Hāʻiku School on side of road, in thicket of guava, 400 ft [120 m], 25 Apr 2001, Starr & Martz 010425-2; E. Maui, Honomanū, spreading from initial plantings down gulch wall on Hāna Hwy, 200 ft [60m], 8 May 2001, Starr & Martz 010508-1.

**Oxalidaceae*****Oxalis corniculata* L.**

Previously reported from Midway Atoll and all the main islands (Wagner *et al.*, 1999), *O. corniculata* (yellow wood sorrel). It was also documented from Kure Atoll, where it is occasional near the camp in the center of the island, in an anonymous survey (1979) and by Herbst & Wagner (1992), but not Wagner *et al.* (1999).

*Material examined:* **KURE ATOLL:** Green Island, near quarters in open lawn areas, 15 ft [5 m], 22 May 2001, Starr & Martz 010522-8.

**Poaceae*****Arrhenatherum elatius* (L.) P. Beauv.****New island record**

ex J. &amp; C. Presl

Previously known from a single collection in 1936 from a pasture on Hawaiʻi (Wagner *et al.*, 1990), *A. elatius* (tall oatgrass) is now also known from a single collection in a pasture on Maui.

*Material examined:* **MAUI:** E. Maui, upper Kanaio, on side of pasture road to Auwahi, 4200 ft [1280 m], 21 Jul 2001, Starr & Martz 010721-2.

***Dichelachne crinita* (L.) Hook. f.****New naturalized record**

Native to Australia (Weiller *et al.*, 1995), *D. crinita* was first collected on Maui by Robert Hobby in 1982. It has since been collected twice in widely separated sites, attesting to its naturalized status on Maui.

*Material examined:* **MAUI:** E. Maui, Kula, crest of Kekaulike Ave, on side of road, 3640 ft

[1100 m], 1 Sep 1998, *Starr & Martz 980901-1*; E. Maui, Polipoli, on side of road, 5500 ft [1676 m], 21 Dec 2000, *Starr & Martz 001221-1*. Polipoli, erect clumps, grass spreading around hunter check-in station, 6000 ft [1828 m], 1982, *Hobdy 1419*.

***Eragrostis amabilis* (L.) P. Beauv.**

ex Roem. & Schult.

Previously known from Midway Atoll and all the main islands (Wagner *et al.*, 1990; Hughes, 1995; Lorence *et al.*, 1995; Oppenheimer & Bartlett, 2002), *E. amabilis* (love grass). It was also documented from Kure Atoll, where it is locally common near the water tank in the center of the island, by Lamoureux (1961) as naturalized in disturbed areas near quarters. It was recorded again in an anonymous survey (1979) and in Herbst & Wagner (1992), but not in Wagner *et al.* (1999).

*Material examined: KURE ATOLL:* Green Island, near water building, 15 ft [5 m], 22 May 2001, *Starr & Martz 010522-5*.

***Lolium perenne* L.**

**New island record**

Previously known from grasslands and pastures on the island of Hawai'i (Wagner *et al.*, 1999), *L. perenne* (perennial ryegrass) is now also known from similar situations on Maui.

*Material examined: MAUI:* E. Maui, Haleakalā National Park, Kalahaku overlook, growing in cinders next to parking area, 9300 ft [2830 m], 26 Oct 2000, *Starr & Martz 001026-2*; E. Maui, Ka'ono'ulu, occasional in pastures, 5600 ft [1706 m], 20 May 2001, *Oppenheimer H50123*.

***Panicum antidotale* Retz.**

**New island record**

Previously known from O'ahu, Moloka'i, and Hawai'i where it is naturalized in dry, disturbed areas such as pastures and along roads (Wagner *et al.*, 1990), *P. antidotale* (giant panic grass) is now also known from Maui where this robust grass is naturalized in Waikapū and Kīhei.

*Material examined: MAUI:* W. Maui, Waikapū, side of Waiko Rd, 250 ft [76 m], 9 Dec 2000, *Starr & Martz 001209-2*; E. Maui, Kīhei, Kawililipoa, in sand near coast, 10 ft [3 m], 1 Feb 2002, *Starr & Martz 020201-1*.

***Pennisetum polystachion* (L.) Schult**

**Range Extension**

Previously known from O'ahu, Lāna'i, East Maui, and Hawai'i (Wagner *et al.*, 1999), *P. polystachion* (blue buffel grass) is now also known from West Maui and from Ōma'opio, East Maui where it is occasional on roadsides and in waste areas.

*Material examined: MAUI:* W. Maui, Waikapū, side of Waikō Rd, 250 ft [76 m], 9 Dec 2000, *Starr & Martz 001209-1*; E. Maui, 'Ōma'opio, side of 'Ōma'opio Rd near Piliwale Rd, 1650 ft [500 m], 17 Jan 2002, *Starr & Martz 020117-1*.

**Primulaceae**

***Anagallis arvensis* L.**

Previously reported from Midway Atoll and all the main islands (Wagner *et al.*, 1999), *A. arvensis* (scarlet pimpernel). It was also documented from Kure Atoll, where it is found on the compacted coral runway, in an anonymous survey (1979) and in Herbst & Wagner (1992), but not in Wagner *et al.* (1999).

*Material examined: KURE ATOLL:* Green Island, on abandoned runway in compacted coral rubble, 15 ft [5 m], 22 May 2001, *Starr & Martz 010522-6*.



**Rhamnaceae*****Colubrina asiatica*** (L.) Brongn.**New island record**

Previously known from strand and coastal sites on Ni‘ihau, Kaua‘i, O‘ahu, and Moloka‘i (Wagner *et al.*, 1990), *C. asiatica* (*‘anapanapa*) is now also known from Maui where a lone thicket exists near the coast in Launiupoko.

*Material examined: MAUI:* W. Maui, Launiupoko, in *Prosopis* thicket near the coast, 5 ft [2 m], 1 Jul 2001, *Starr & Martz 010701-3*.

**Rosaceae*****Pyracantha koidzumii*** Rehder**New island record**

Wagner *et al.* (1990) cited one naturalized species of *Pyracantha* (firethorn) in Hawai‘i, *P. angustifolia*, which was known to be naturalized on Kaua‘i and Hawai‘i. Later, Herbarium Pacificum Staff (1999) expanded this to three species, including *P. koidzumii*, which is endemic to Taiwan and apparently the most commonly cultivated firethorn in Hawai‘i. They cite naturalized plants from Koke‘e on Kaua‘i and the Volcano transfer station on Hawai‘i. This thorny, colorful shrub is now also known from Maui where it can be found volunteering in pastures in upper Kula.

*Material examined: MAUI:* E. Maui, Kula, crest of Kekaulike Ave, scattered individuals found throughout pastures, in association with *Pennisetum clandestinum* and *Jacaranda mimosifolia*, 3720 ft [1134 m], 31 Aug 2000, *Starr & Martz 000831-7*.

***Rubus glaucus*** Benth.**New island record**

Native from Mexico to Ecuador (St. John, 1973), *R. glaucus* was previously reported from the Puna district, Hawai‘i, where fertile material had yet to be collected, but it was apparently naturalized and spreading Wagner *et al.* (1999). On Maui, naturalized populations of *R. glaucus* exist along the Waikamoi Flume Rd, Olinda; Crater Rd, Kula; and Waipoli Rd, Polipoli. At the Olinda site this thorny climber is naturalized over 0.75 mi [1.2 km] of flume road and adjacent forest where it sprawls on vegetation and climbs 20 ft [6 m] into the canopy and is not yet widespread but is definitely locally established and spreading. At the Kula site *R. glaucus* is currently only known from two small patches. At the Polipoli site gulch bottoms and walls are invaded over an undetermined extent. This species is distinguished by its thin white petals, sharp thorns, white undersides of leaves, and thimble-shaped fruits.

*Material examined: MAUI:* E. Maui, Polipoli, Waipoli Rd, at DLNR gate and in Ka‘ono‘ulu gulch below hunter check-in station, 5400 ft [1654 m], 21 Feb 2002 *Starr & Martz 020221-2*; E. Maui, Olinda, Waikamoi Flume Rd, near pump house along road, 4200 ft [1280 m], 29 Oct 2000, *Starr & Martz 001029-1*; E. Maui, Kula, Crater Rd, sprawling over bank on side of road, 4000 ft [1220 m], 13 Jan 1999, *Starr & Martz 990113-1 & 990113-2*; E. Maui, Makawao district, Haiku uka, Ko‘olau Forest Reserve, above road to Waikamoi flume, along pipeline west of old reservoirs, sprawling plants covering vegetation in wet forest and forming dense thickets, locally common and spreading, collected with Jennifer Geiger, 4300 ft [1310 m], 18 Jun 2001, *Oppenheimer H60144*.

**Rubiaceae*****Mitracarpus hirtus*** (L.) DC.**New island record**

Previously known from Hilo, Hawai‘i (Wagner *et al.*, 1990), *M. hirtus* is now also known from Kaupō, Maui where it is common in the lower reaches of Hāwelewele gulch.

*Material examined: MAUI:* E. Maui, Kaupō, in dry stream bed of Hāwelewele gulch, 40 ft [12 m], 26 Jul 2001, *Starr & Martz 010726-2*.

**Rutaceae***Murraya paniculata* (L.) Jack**New island record**

Native to tropical Asia, Australia, and Polynesia, *M. paniculata* (mock orange) was previously known to be cultivated in Hawai'i (Neal, 1965; St. John, 1973; Wagner *et al.*, 1990). Kraus (elsewhere in these *Records*) records it as a new naturalized record from O'ahu. It is also known to be sparingly naturalized in Kaupō, East Maui. Distinguished from other Rutaceae in Hawai'i by its small tree or large shrub habit; dense, shiny foliage with 3–7 pinnately compound leaflets; lack of prickles; sweet smelling, white, five parted flowers; and red, inedible, 1–2 seeded fruit about 0.5 inch [1.5 cm] in diameter (Neal, 1965).

*Material examined:* MAUI: E. Maui, Kaupō, all life stages present in pastures and along fence lines near Puka'auhuhu, 450 ft [137 m], 26 Jul 2001, Starr & Martz 010726-7.

**Scrophulariaceae***Veronica serpyllifolia* L.**New island record**

Previously reported from moist pastures or disturbed areas of wet forest and subalpine woodland of Kaua'i, Lāna'i, and Hawai'i (Wagner *et al.*, 1990; Nagata, 1995), *V. serpyllifolia* (thyme-leaved speedwell) is now also known from Maui where it grows in a similar habitat.

*Material examined:* MAUI: E. Maui, Waikamoi, Ko'olau Forest Reserve, growing in clumps in soggy soils around the shack at Waikamoi Gulch at end of the Waikamoi flume road to the reservoirs, 4300 ft [1310 m], 29 Oct 2000, Starr & Martz 001029-2.

**Solanaceae***Cestrum nocturnum* L.**New island record**

Previously known from Kaua'i, O'ahu, and Maui (Wagner *et al.*, 1990; Oppenheimer & Bartlett, 2000), *C. nocturnum* (night cestrum) is now also known from Hilo, Hawai'i where it is growing in lowland forest. Near Kamuela/Waimea it was observed to be spreading from cultivated plants.

*Material examined:* HAWAI'I: Hilo, side of Waiākea stream near University of Hawai'i Hilo campus, 200 ft [60 m], 1 Aug 2001, Starr & Martz 010801-5.

*Solanum torvum* Sw.**New island record**

Previously known from O'ahu and Maui (Wagner *et al.*, 1990; Oppenheimer *et al.*, 1999), *S. torvum* (turkeyberry) is now also known from Hilo, Hawai'i where it was volunteering in waste areas.

*Material examined:* HAWAI'I: Hilo, University of Hawaii Hilo campus, 200 ft [60 m], 1 Aug 2001, Starr & Martz 010801-1.

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### The status of the cricket parasites *Ormia ochracea* and *Phasioormia pallida* in the Hawaiian Islands (Diptera: Tachinidae)

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In 1989 specimens of a medium-sized fawn-colored tachinid fly were collected at two locations on O'ahu. Specimens were sent to tachinid specialists Hiroshi Shima in Japan and Bryan Cantrell in Australia for identification soon after collection. Both indicated that the species was a species of the genus *Phasioormia* (an Oriental genus found from Malaysia to India), but could not place it to species. Comparing the specimens at hand to original descriptions of the two species currently in *Phasioormia* [*P. pallida* Townsend, and *P. bicornis* (Malloch)], I identified the species as *Phasioormia pallida*, the type species of the genus. A note indicating the new state record for this species was published by Preston (1993).

Subsequently, Marelene Zuk (Zuk *et al.*, 1993, Simmons & Zuk, 1996) conducted work on Hawaiian populations of the field cricket *Teleogryllus oceanicus* (LeGuillou), which were parasitized by a tachinid identified in her work as *Ormia ochracea* (Bigot), an American species. Concurrently to the cricket studies and independent of my sending specimens to specialists in Japan and Australia, a further set of specimens from Hawai'i were sent by D. Elmo Hardy to John Amoroso in Florida who identified them as *Ormia ochracea* (Bigot). This identification unfortunately resulted in the same specimens having two different names.

Noting that the types of both species existed in The Natural History Museum, London (BMNH), I published in the tachinid specialist newsletter, *Tachinid Times*, a plea for assistance for someone to directly compare the Hawaiian specimens with the two types to confirm the true identity of the species occurring in Hawai'i (Evenhuis, 1995). However, to date I received no offers of assistance.

Since both names for the same species made it to the published literature and no one could resolve the name confusion, Nishida (1997, 2002) was left with no alternative but to list both names in his Hawaiian terrestrial arthropod checklists, although in reality only one of the names would prove to be correct.

In May 2002, I visited the BMNH and was able to directly compare the types of both *Phasioormia pallida* and *Ormia ochraea*. After making notes on the morphological differences between the two genera and species and comparing my notes with the Hawaiian specimens, I can now confirm that the true identity of the species occurring in Hawai'i (known from populations on the Big Island, Kaua'i, and O'ahu) is *Ormia ochracea*.