New Hawaiian Plant Records for 1995

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These previously unpublished Hawaiian plant records include new state and island records and range extensions to supplement information published in Wagner *et al.* (1990) and in *Records of the Hawaii Biological Survey for 1994* (Evenhuis & Miller 1995). After the completion of the *Manual of the flowering plants of Hawai'i* (Wagner *et al.* 1990), curatorial support from National Science Foundation made possible an attempt to process all voucher specimens then in the BISH specimen backlog. This revealed some significant older collections that were unavailable to the authors of the *Manual*. Furthermore, recent voucher collections deposited at BISH and specimen identifications received from specialists subsequent to the conclusion of the *Manual* have provided more new information. These data are reported here. All supporting voucher specimens are on deposit at BISH.

Asteraceae

Sonchus oleraceus L. **New island record**

Although Wagner *et al.* (1990: 358) excluded Niihau from the distribution of *S. oleraceus*, there are 2 voucher specimens, both seen by the authors of the *Manual* in 1983, from that island. This oversight is here rectified and *S. oleraceus* is now known to occur on all the Hawaiian Islands.

Material examined. NIIHAU: Kaali, Jan 1912, *J. F. G. Stokes s.n.;* Kii, 15 ft, 29 Mar 1949, *H. St. John 23581*.

Boraginaceae

Cordia dichotoma G. Forst. **New naturalized state record**

Significance. Long cultivated on the University of Hawaii, Manoa campus, and in a few locations around Honolulu as a street and shade tree, this is the first collection made from plants that are clearly naturalized. Neal (1965) records *C. myxa* L. as a synonym for *C. dichotoma* but current taxonomic thinking recognizes 2 species (Verdcourt 1991). *Cordia dichotoma* is distinguishable from the 2 species discussed in Wagner *et al.* (1990: 392) by its softly hairy or glabrous foliage, fragrant white flowers less than or equal to 15 mm long, and flesh-colored to dull pinkish, pulpy fruits, the base of which is enclosed in a saucer-shaped calyx.

Material examined. OAHU: Waimanalo, Bellows Air Force Base, back road, seeds are probably being spread by bulbuls, 18 Oct 1994, *E. Funk s.n.*

Cyperaceae

Recent identifications for sedge specimens revealed 3 taxa new to Hawaii. Each record is based on a single voucher, and further collections are desirable to confirm that these species are successfully established in the state.

Cyperus confertus Sw. **New state record**

Significance. Native to the West Indies, Venezuela, Colombia, and the Galapagos Islands (Koyama 1979), this is the first record of this sedge in the Hawaiian Islands.

Material examined. HAWAII: S Kona, lava field inland of Kapua Bay, 7 Oct 1986, *L. Stemmermann 7125*.

Cyperus cyperoides (L.) Kuntze **New state record**

Significance. Previously known from the tropics & subtropics of Africa, Asia, and Australia, throughout Malesia, & probably introduced in the West Indies (Kern 1974), this is the first record for this sedge in the Hawaiian Islands.

Material examined. HAWAII: Kawaihae, Kohala, 1500 ft, 31 Aug 1936, *E. Y. Hosaka 1558*.

Schoenus apogon Roem. & Schult. **New state record**

Significance. Native from Australia and New Zealand to the Ryukyu Islands & Japan (Kern 1974), this is the first record for this sedge in the Hawaiian Islands.

Material examined. HAWAII: Volcano, near new "3500 ft" road sign, 4 Aug 1976, *O. Degener 35812*.

Euphorbiaceae

Antidesma platyphyllum H. Mann **New island record**
var. ***platyphyllum***

Wagner *et al.* (1990: 600) record the species' distribution as "all of the main islands except Niihau and Kahoolawe ..." and go on to discuss 2 varieties, as follows: *A. platyphyllum* var. *hillebrandii*, known only from Kauai, and var. *platyphyllum*, known from Oahu, Molokai, Lanai, Maui, and Hawaii. The MacDaniels specimen is the first record for var. *platyphyllum* from Kauai.

Material examined. KAUAI: Kalihiwai, E branch, 400 m, 12 Feb 1927, *L. H. MacDaniels 655*.

Fabaceae

Dalea emarginata (Torr. & A. Gray) Shinners **New state record**

Significance. Native from southern Texas to Veracruz, Mexico (Correll & Johnston 1979). The existence of 2 collections made 14 years apart in the vicinity of Honolulu Airport indicates that *D. emarginata* is sparingly naturalized.

Material examined. OAHU: Lagoon Drive, near Honolulu International Airport, landfill, ocean side, specimen label notes first collected in Feb 1977, this specimen collected 25 Jan 1979, *T. Watanabe s.n.;* Honolulu, Hickam Air Force Base, 5 ft, at edge of lawn area near runway at terminal, 12 Feb 1993, *K. Nagata 4263*.

Macroptilium lathyroides (L.) Urb. **New island record**

Significance. Distribution in Wagner *et al*. (1990: 674) probably on all the main islands but not documented for Molokai.

Material examined. MOLOKAI: Hoolehua, Plant Materials Center of Hawaii, 110 m, growing in 1 m high grass patch between windbreaks in lowland dry shrubland, common in area, 9 Oct 1990, *G. D. Hughes s.n.*

Neonotonia wightii (Wight & Arn.) Lackey **New island record, name change**

Significance. Distribution in Wagner *et al*. (1990: 674) limited to Oahu, Maui, Kahoolawe, and Hawaii. Wagner *et al.* (1990: 673–74) treated this naturalized legume under the name *Glycine wightii* (Wight & Arn.) Verdc. and noted that Lackey (1977) had removed the species to a new genus, *Neonotonia.* The rationale for segregating *Neo-*

notonia from *Glycine* was summarized by Hymowitz and Newell (1981) and this taxonomic concept has since gained general worldwide acceptance (Mabberley 1990, Wiersema *et al*. 1990, Lock & Simpson 1991, Arnold & de Wet 1993, Kartesz 1994). We therefore adopt the name *N. wightii* for Hawaiian populations of the species. The following specimen is the first recorded from Kauai.

Material examined. KAUAI: Koloa District, Kalaheo, along Puuwai Rd, ca. 850 ft, naturalized in vacant lot, 9 Mar 1995, *T. Flynn 5730*.

Senna septemtrionalis (Viv.) H. S. Irwin & Barneby **New island record**

Significance. Distribution in Wagner *et al.* (1990: 702) limited to Kauai, Oahu, Molokai, and Maui, with an extension to Hawaii reported in Wagner & Herbst (1995: 21). Lanai was omitted from the distribution reported in the *Manual*, despite the existence of 4 voucher specimens seen by its authors in 1986. This citation corrects the oversight.

Material examined. LANAI: E end mountains, Jun 1913, *C. N. Forbes 277.L;* Koele, 19 Oct 1913, *G. C. Munro 169*, *317;* Koele, 1740 ft, 11 Sep 1928, *G. C. Munro 393*.

Melastomataceae

Dissotis rotundifolia (Sm.) Triana **New island record**

Significance. Distribution in Wagner *et al.* (1990: 907) limited to Oahu, Maui, and Hawaii. Because *D. rotundifolia* is cultivated statewide as an ornamental it is to be expected that it will become naturalized eventually on all inhabited islands. The label for the following voucher specimen indicates the plants were "escaping from adjacent yards."

Material examined. KAUAI: Kawaihau District, ca. 280 ft, near beginning of proposed Wailua Cart Trail, 28 Jan 1992, *T. Flynn 4885*.

Oleaceae

Jasminum fluminense Vell. **New naturalized record**

Significance. Widespread in tropical Africa and extensively naturalized in South America and the West Indies, *J. fluminense* has long been cultivated in Hawaii as an ornamental (Neal 1965). Recent evidence indicates this jasmine is naturalizing in dry disturbed areas of Oahu and the island of Hawaii. In addition to the vouchered records, *J. fluminense* has also been sighted in dry thickets above Hanauma Bay, Oahu. The following collections unambiguously represent naturalized populations. One earlier collection, *Akira Kawasaki s.n*., from the McCandless Ranch on the Big Island dated 30 Oct. 1963, could be the earliest naturalized record for *J. fluminense*; the label does not indicate if the plants were cultivated or not.

Material examined. OAHU: Waimanalo, Bellows Air Force Base, sea level to 1000 ft, probably once planted as an ornamental, common, rapidly spreading, some plants cover 6–7 sq m, 18 Oct 1994, *E. Funk s.n.*; Honolulu, S side of Diamond Head, in gulch, 150 ft, 1 May 1955, *H. St. John 25517*; Honolulu, Waahila Ridge, 300 ft, 17 Oct 1987, *G. Linney 871017-43*. HAWAII: S Kona District, land of Kalahiki, along road to Hookena, 200 ft, 21 Jan 1976, *D. Herbst & G. Spence 5634*; S Kona District, road to Hookena Beach, disturbed roadside, 10 Mar 1988, *W.L. Wagner, C. Imada & W. Takeuchi 5938.*

Passifloraceae

Passiflora foetida L. **New island record**

Significance. Distribution in Wagner *et al.* (1990: 1011) limited to Niihau, Kauai, Oahu, Maui, and Hawaii. During archaeological survey work on Molokai, a specimen was gathered from the dig site that proved to be the first island record. The specimen is unusual in having small leaves that are densely velvety-hairy. The collector noted this was the only plant seen in the area.

Material examined. MOLOKAI: Halena, 50–70 ft, 4 Sep 1993, *Maurice Major s.n.*

Rhamnaceae

Gouania vitifolia A. Gray **Notable rediscovery**

Wagner *et al.* (1990: 1097) speculated that this species had become extinct. Known from just 7 collections, 5 of which came from the Waianae mountains of Oahu, the last place the species was collected this century. In 1990, Joel Lau located living plants in the Waianae Mts. (Obata 1992) which were subsequently vouchered on 2 occasions by John Obata. These vouchers represent 2 distinct populations located in the same area.

Material examined. OAHU: Waianae Range, Waianae Kai, 625 m, NE of the last water tank (reservoir) at the end of the paved road in the forest, in the upper reaches of a sub-gulch, on the gully floor, noted to be a very healthy flowering population estimated to be over 10 plants, 16 Dec 1990, *J. Obata 90-705;* Waianae Range, Waianae Kai, 2300 ft, in a subgulch, NE of the last water tank-facility at the end of a concrete road, 3/4 way up the gully floor, second of 2 known plants, 30 Dec 1990, *J. Obata & R. Hill s.n.*

Rosaceae

Photinia davidiana (Decne.) Cardot **New state record**

Significance. Long known in Hawaii as *"Cotoneaster frigida"* (Neal 1965: 386, St. John 1973: 172), a misidentification, this taxon has recently been correctly identified as a tropical species of *Photinia* native to southern China and northern Vietnam. First collected in 1940 around Nauhi at an elevation of ± 6000 ft, there is now a population "one-half mile or more around Nauhi Camp, Nauhi Gulch, and upper Piha area" [from label *A. Kikuta s.n.*]. A collection from Maui is included here because *P. davidiana* is very likely naturalized there as well, and field collections are needed to establish its status in and near the Kula Forest Reserve.

Material examined. MAUI: E Maui, Kula Forest Reserve, Polipoli Park, 1830 m, Oct 1986, *R. Hobdy 2699;* HAWAII: Hakalau Forest National Wildlife Refuge, 1585 m, Nauhi, naturalized in this area, 25 Aug 1993, *A. Kikuta s.n.*; Nauhi, 6000+ ft, native of the Himalayan region, 1 Mar 1940, *E. L. Caum s.n.*

Rubiaceae

Coprosma rhynchocarpa A. Gray **New island record**

Significance. Distribution in Wagner *et al.* (1990: 1130) limited to Hawaii.

Material examined. MAUI: E Maui, Auwahi District, S slope, 18 Dec 1981, *A. C. Medeiros 191 & 195.*

Psychotria greenwelliae Fosberg **New island record**

Significance. Reported to occur only around Kokee on Kauai in the *Manual* (Wagner *et al.* 1990: 1164), the following collections represent a significant range extension for this species. That *P. greenwelliae* could occur on the Manoa Cliff trail, on the very outskirts

of Honolulu, without being documented until 1990 underscores the need for further field collecting on all islands. The species is now known from both the Waianae and Koolau ranges on Oahu, as well as from Kauai.

Material examined. OAHU: Koolau Range, Manoa Cliff-trail, ca. 1600 ft, E exposed cliff, 22 Jul 1990, *M. Kiehn et al. MK-900722-4/1*; Waianae Range, Waianae Kai-trail, ca. 2000–2400 ft, steep S exposed slopes on the way to the ridge, 23 Sep 1990, *M. Kiehn et al. MK-900923-1/2* & *MK-900923-1/5*.

Rutaceae

Melicope elliptica A. Gray **New island record**

Significance. Previously known from relatively few collections, all confined to the Waianae range on Oahu, or from Maui (Wagner *et al.* 1990: 1188, as *Pelea elliptica)*, the occurrence of *M. elliptica* in mesic forest on Molokai is not surprising. Further collections are desirable to document the extent of the Maui and Molokai populations.

Material examined. MOLOKAI: Land section of Wawaia, Kua Gulch, 712 m, 18 Aug 1991, *J. Lau & J. L. Perry 3418*.

Urticaceae

Urtica urens L. **New island record**

Significance. Previously known only from the island of Hawaii (Wagner *et al.* 1990: 1314) this collection represents a range extension for the burning nettle. The label notes "a patch 9 ft x 12 ft" in extent, that can hopefully be eradicated before it spreads.

Material examined. OAHU: Along access road to Nuuanu Pali State Park, above highway (tunnel), 16 May 1995, *M. Hong s.n.*

Violaceae

Isodendrion pyrifolium A. Gray **Notable rediscovery**

Significance. Last collected in 1870 and presumed to be extinct because it had not been seen alive since (Wagner *et al.* 1990: 1331), the discovery of *I. pyrifolium* on the Kona coast of the Big Island was exciting news in 1991. The proximity of the few plants to the Kailua landfill in a disturbed area is cause for concern.

Material examined. HAWAII: North Kona, Land of Kealakehe, 240 ft, ca. 1/4 mile N of Kailua landfill, in arid, scrubby grassland, 14 Jul 1991, *K. Nagata 4215*.

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Contributions to the Flora of Hawai‘i. V

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Publication of the *Manual of the flowering plants of Hawai‘i* (Wagner *et al*. 1990) has provided a modern accurate account of the angiosperms occurring indigenously and naturalized after introduction by humans directly or indirectly. Collecting efforts after the cut-off date for the *Manual* project (September 1987) have resulted in a substantial number of new distributional records and detection of additional naturalized species. Also,