RECORDS OF THE HAWAII BIOLOGICAL SURVEY FOR 1994
Part 2: Notes[1]

This is the second of two parts to the *Records of the Hawaii Biological Survey for 1994* and contains the notes on Hawaiian species of plants and animals including new state and island records, range extensions, and other information. Larger, more comprehensive treatments and papers describing new taxa are treated in the first part of this volume [*Bishop Museum Occasional Papers* 41].

New Hawaiian Plant Records. I

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Amaranthaceae

Achyranthes mutica A. Gray

Significance. Considered extinct and previously known from only 2 collections: supposedly from Hawaii Island 1779, *D. Nelson s.n.*; and from Kauai between 1851 and 1855, *J. Remy 208* (Wagner *et al*., 1990, *Manual of the Flowering Plants of Hawai'i*, p. 181).

Material examined. HAWAII: South Kohala, Keawewai Gulch, 975 m, gulch with pasture and relict Koaie, 10 Nov 1991, *T.K. Pratt s.n.*; W of Kilohana fork, 1000 m, on sides of dry gulch ca. 20 plants seen above and below falls, 350 °N aspect, 16 Dec 1992, *K.R. Wood & S. Perlman 2177* (BISH).

Caryophyllaceae

Silene lanceolata A. Gray

Significance. **New island record** for Oahu. Distribution in Wagner *et al*. (1990: 523, *loc. cit.*) limited to Kauai, Molokai, Hawaii, and Lanai. Several plants were later noted by Steve Perlman and Ken Wood from Makua, Oahu in 1993.

Material examined. OAHU: Waianae Range, Ohikilolo Ridge at ca. 700 m elevation, off ridge crest, growing on a vertical rock face, facing northward and generally shaded most of the day but in an open, exposed face, only 1 plant noted, 25 Sep 1992, *J. Obata & R. Fenstemacher s.n.* (BISH).

New Hawaiian Plant Records. II

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All observations and identifications were made by the author unless otherwise noted.

Amaranthaceae

Amaranthus viridis L.

Previous knowledge: First record in 1819 (St. John & Titcomb 1983). Hawaiian

1. All notes in this volume constitute Contribution No. 1995-006 to the Hawaii Biological Survey

Archipelago distribution Midway Atoll (Wagner & Herbst, this volume), Kure Atoll, Kaula, Kauai, Oahu, Lanai, Maui, Kahoolawe, and Hawaii. The world distribution is widespread in the tropics and subtropics (Wagner *et al.* 1990: 189).

Significance: First collection on Molokai at the USDA Plant Materials Center in Hoolehua in 1990 (*Hughes s.n.*, BISH). This naturalized species is common in disturbed lowland areas, roadsides, agricultural areas, and lawns on Molokai. Identification confirmed by D.R. Herbst.

Asteraceae

Bidens alba (L.) DC

Previous knowledge: First collected on Oahu in 1958 (*Pearsall s.n.*, BISH). Hawaiian Archipelago distribution Kure Atoll, Midway Atoll, Kauai, Oahu, Maui, Kahoolawe, and Hawaii. Native from Florida through South America and the West Indies (Wagner *et al.* 1990: 270).

Significance: **New island record** for Molokai in upper Kalamaula Game Management Area in 1992 (*Hughes 42*, BISH). This species is sparingly naturalized to at least 410 m elevation at least in the *Eucalyptus* plantations of Molokai Forest Reserve and in Mapulehu on the E end on disturbed, dry ridges in lowland areas. Identification confirmed by D.R. Herbst.

Erigeron karvinskianus DC

Previous knowledge: First collection was on Oahu in 1911 (*Forbes 1700.O*, BISH). Hawaiian Archipelago distribution Kauai, Oahu, Maui, and Hawaii. Native to neotropics from Mexico to Venezuela, Chile, and the Antilles (Wagner *et al.* 1990: 315).

Significance: **New island record** for Molokai in upper Makanalua Valley in 1992 (*Hughes 36*, BISH). This species was previously cultivated and has become sparingly naturalized in wet montane forest and along stream beds to at least 750 m elevation from Makanalua E into Kamakou Preserve. Identification confirmed by D.R. Herbst.

Brassicaceae

Cardamine flexuosa With.

Previous knowledge: First collected on Hawaii in 1840–1841 (*U.S. Expl. Exped., s.n.*, US). Hawaiian Archipelago distribution Kauai, Oahu, Maui, and Hawaii. Native to Eurasia (Wagner *et al.* 1990:403).

Significance: **New island record** for Molokai in Makanalua Valley in 1992 (*Hughes s.n.*, BISH). This species was previously cultivated and has become sparingly naturalized in wet montane forest and along stream beds to at least 750 m elevation from Makanalua E into Kamakou Preserve.

Cactaceae

Opuntia ficus-indica (L.) Mill.

Previous knowledge: Pope (1929) indicated that this species, the most commonly encountered escaped cactus in Hawaii, probably was introduced from Acapulco, Mexico, by Don Francisco Paula de Marin prior to 1809. Hawaiian Archipelago distribution Kauai, Oahu, Maui, Kahoolawe, and Hawaii. Native range unknown (Wagner *et al.* 1990: 420).

Significance: First collected on Molokai in 1992 (*Hughes s.n.*, BISH). This natural-

ized species is common throughout the island in lowland dry to mesic communities and can be found up to 750 m elevation. According to old-timers, this species is in decline relative to its abundance earlier in this century.

Campanulaceae

Cyanea dunbarii Rock

Previous knowledge: Known from the type [*Rock 13119* (coll. Dunbar), BISH, L] and 2 sterile specimens (*Rock 13115*, *14038*, BISH) collected in 1918 at Waihanau, Molokai. Hawaiian Archipelago presumed extinct (Wagner *et al.* 1990:448).

Significance: This Molokai endemic species was **rediscovered** in Mokomoko Gulch in 1992 (*Hughes 109*, US) by G.D. Hughes, J.Q.C. Lau, and J.L. Perry. There were at least 5 individuals on a steep gulch wall in diverse mesic forest below the old Kapuna Springs dam at 650 m elevation.

Cyanea procera Hillebr.

Previous knowledge: Last collected in 1938 (*Cranwell 3514*, BISH, GB). Hawaiian Archipelago presumed extinct (Wagner *et al.* 1990: 460).

Significance: At least 4 separate populations of this Molokai endemic survive from 900–1100 m elevation: One individual in upper Waikolu Falls (E. Misaki & E. Pawn, pers. comm.); 2 in a gulch below the W side of Puu o Kaeha found in 1987 (*Lorence 5646*, PTBG); 5 in a spur gulch off of the Kawela intake trail in 1992; and 3 in an upper tributary of E Kawela gulch found in 1992 (*Hughes 431*, US). Three of the populations occur on the sides of stream beds in wet montane forest. Identification confirmed by T. Lammers.

Caryophyllaceae

Vaccaria hispanica (Mill.) Rauschert

Previous knowledge: Native to southern Europe, and naturalized in the eastern United States. Apparently, its seeds can be included in wild bird seed mixtures and spread in that manner.

Significance: **New state record.** First collected on Molokai in 1992 (*Hughes 42*, BISH). Collected in *Bidens menziesii* lowland mesic shrubland at 700 m elevation, Kamiloloa Heights. This collection was of the only observed individual along a roadside, and should not presently be considered naturalized. Specimen identified by G. Staples.

Cyperaceae

Cyperus gracilis R. Br.

Previous knowledge: Popularized by Lester McCoy about 1925 in Honolulu as a groundcover in shaded sites (Degener & Greenwell 1947). Hawaiian Archipelago distribution at least Kauai, Oahu, and Maui. Native to Australia and New Caledonia (Wagner *et al*. 1990: 1396).

Significance: **New island record** for Molokai in the Ka Pua Lei Ranch area near Kamalo in 1992 (*Hughes 13*, US). This naturalized species is common in lawns, along roadsides, and in disturbed areas on the E end of Molokai. Identification confirmed by W.L. Wagner and M. Strong.

Cyperus haspan L.

Previous knowledge: First collected on Kauai in 1957 (*Stone 1665,* BISH). Hawaiian Archipelago distribution Kauai, Maui, and Hawaii. Native to subtropical and tropical regions worldwide (Wagner *et al.* 1990: 1398).

Significance: **New island record** for Molokai on the Wailau Trail in 1992 (*Hughes 15*, BISH). This naturalized species is occasional in very wet forest areas on eastern Molokai to at least 800 m elevation, and common in Pelekunu valley along the main stream to at least 300 m elevation. There appears to be some confusion with regard to the specific epithet. Wagner *et al.* (1990: 1398) stated that Linnaeus misread the vernacular name "halpan" as "haspan," and that the correct epithet should be "halpan" as published in *The Manual of the flowering plants of Hawai'i*. However, M. Strong, a sedge specialist at the Smithsonian Institution, identified the 1992 collection as *haspan,* the name published by Linnaeus. Identification confirmed by W.L. Wagner & M. Strong.

Cyperus rotundus L.

Previous knowledge: First observed about 1850 (Hillebrand 1888). Hawaiian Archipelago distribution Kure Atoll, Midway Atoll, Niihau, Kauai, Oahu, Lanai, Maui, and Hawaii. A cosmopolitan weed worldwide (Wagner *et al.* 1990: 1399).

Significance: **New island record** for Molokai near Kaunakakai town in 1992 (*Hughes 14*, US). This naturalized species is common in lawns and disturbed lowland sites. Identification confirmed by W.L. Wagner and M. Strong.

Gahnia beecheyi H. Mann

Previous knowledge: Occurring in open sites or on ridges in mesic forest and occasionally wet forest, 300–1370 m, on Kauai, Oahu, Lanai, Maui, and Hawaii (Wagner *et al.* 1990: 1409).

Significance: This Hawaiian endemic was recently collected on Molokai on the eastern side of Honolilolilo, 1100 m, in Kamakou Preserve in 1992 (*Hughes 94*, US), and was previously collected by Degener on Molokai (Robynn Shannon, pers. comm., US). A second population was found near Pelekunu rim off of transect 5 established in 1980 by the USFWS forest bird survey. Identification confirmed by W.L. Wagner and M. Strong.

Mariscus meyenianus (Kunth) Nees

Previous knowledge: First collected on Kauai in 1922 (*Skottsberg 1006*, BISH). Hawaiian Archipelago distribution Kauai and Oahu. Native to the Neotropics from the West Indies, Brazil and adjacent Uruguay, Paraguay, and northern Argentina (Wagner *et al.* 1990: 1421).

Significance: **New island record** for Molokai at the Waikolu Lookout picnic area, 960 m, in 1992 (*Hughes 338*, US). It is sparingly naturalized along the Molokai forest road in wet montane forest. Identification confirmed by W.L. Wagner and M. Strong.

Euphorbiaceae

Chamaesyce prostrata (Aiton) Small

Previous knowledge: First collected on Oahu in 1909 (*Forbes 1023.O,* BISH). Hawaiian Archipelago distribution Midway Atoll, Kauai, Oahu, Lanai, Maui, Kahoolawe, and Hawaii; perhaps more widespread. Native from southern United States to South

America, the West Indies, and the Paleotropics (Wagner *et al.* 1990: 613).

Significance: **New island record** for Molokai in Kalamaula Game Management Area, 30 m, in 1992 (*Hughes 8*, US). This naturalized species is common in mixed Kiawe/Haole koa lowland shrubland, *Cenchrus ciliaris* lowland grassland, and other dry, disturbed sites. Identification confirmed by W.L. Wagner.

Fabaceae

Acacia mearnsii De Wild.

Previous knowledge: Collected in 1928 (*Munro 313*, BISH). Hawaiian Archipelago distribution Kauai, Oahu, Lanai, Maui, and Hawaii. Native to New South Wales and Tasmania, Australia (Wagner *et al.* 1990:642).

Significance: **New island record** for Molokai (*Hughes 51*, US). Distributed at least from Kakalahale to Onini, below 850 m, rapidly spreading, forming monotypic stands, and displacing native species. Identification by W.L. Wagner.

Aeschynomene paniculata Willd. ex Vog.

Previous knowledge: Unknown in Hawaiian Archipelago. Native distribution the Neotropics.

Significance: **New state record.** Collected on Molokai on Kakalahale ridge, 680 m, in 1990 (*Hughes s.n.*, BISH). This species is sparingly naturalized in secondary lowland forest dominated by *Grevillea robusta* A. Cunn. ex R. Br. and *Melinus minutiflora* P. Beauv.

Chamaecrista nictitans (L.) Moench var. ***glabrata*** (Vogel) H. Irwin & Barneby

Previous knowledge: In cultivation prior to 1871 (Hillebrand 1888). First naturalized collection in 1895 (*Heller 1969*, BISH). Hawaiian Archipelago distribution all the main islands except Molokai. Native to the Neotropics and now widely naturalized (Wagner *et al.* 1990: 656).

Significance: **New island record** for Molokai in Kalamaula Game Management Area, 125 m, in 1990 (*Hughes s.n.*, BISH). This naturalized species is common and widespread in all lowland areas. Identification confirmed by D.R. Herbst.

Crotalaria incana L.

Previous knowledge: First collected on Oahu in 1895 (*Heller 1966*, BISH). Hawaiian Archipelago distribution Midway Atoll and all the main islands except Molokai. Widespread in the tropics and subtropics (Wagner *et al.* 1990: 660).

Significance: **New island record** for Molokai in Kalamaula Game Management Area, 125 m, in 1990 (*Hughes s.n.*, BISH). This naturalized species is common in lowland areas and is fire adapted. Identification confirmed by D.R. Herbst.

Desmodium tortuosum (Sw.) DC

Previous knowledge: First collected on Maui in 1913 (*Collector unknown s.n.*, BISH). Hawaiian Archipelago distribution Kauai, Oahu, Maui, Kahoolawe, and Hawaii. Native to tropical and subtropical America; now widely naturalized in the Paleotropics (Wagner *et al.* 1990: 669).

Significance: **New island record** for Molokai in the area of Makolelau, 700 m, in 1992 (*Hughes s.n.*, BISH, *Hughes 28*, US). This species is sparingly naturalized and was

collected on a dirt road in mixed native shrub/Haole koa lowland shrubland. Identification by W.L. Wagner.

Glycine wightii (Wight & Arnott) Verdc.

Previous knowledge: First collected on Hawaii in 1975 (*Herbst & Ishikawa 5515*, BISH). Hawaiian Archipelago distribution at least Oahu, Maui, Kahoolawe, and Hawaii. Native to Central and South America and the West Indies, now widely naturalized. Cultivated as a fodder plant (Wagner *et al.* 1990).

Significance: **New island record** for Molokai in Kalamaula Game Management Area in 1990 (*Hughes s.n.*, BISH). For a relatively new introduction, this plant has come to dominate large sections of secondary lowland habitat in western and central Molokai including Moomomi, Hoolehua, and Kaunakakai. This vine can produce a very large amount of seed, and forms a blanketlike layer on top of other vegetation that smothers and displaces other species. It has been observed climbing on top of 15 m-high kiawe trees along the Molokai forest road. Identification confirmed by D.R. Herbst.

Indigofera suffruticosa Mill.

Previous knowledge: Introduced from Java in 1836 for cultivation (Hillebrand 1888). First recorded by Nelson in 1779 (St. John 1978). Hawaiian Archipelago distribution probably on all the main islands but not documented from Molokai. Pantropical, but presumably of Neotropical origin, formerly used for indigo production (Wagner *et al.* 1990: 676).

Significance: **New island record** for Molokai in Kalamaula Game Management Area, 125 m, in 1990 (*Hughes s.n.*, BISH). This naturalized species is common throughout all lowland areas on Molokai. Identification confirmed by D.R. Herbst.

Prosopis pallida (Humb. & Bonpl. ex Willd.) Kunth

Previous knowledge: A single seed from the Royal Gardens in Paris was grown on the Catholic Mission grounds on Fort Street, Honolulu, by Father Bachelot in 1828. All trees of this species in Hawaii derived from this source. Hawaiian Archipelago distribution Midway Atoll and all the main islands, but not documented from Niihau or Molokai. Native to Peru, Colombia, and Ecuador (Wagner *et al.* 1990: 693).

Significance: **New island record** for Molokai. Collected in Kaunakakai in 1990 (*Hughes s.n.*, BISH). kiawe dominates the dry, lowland and coastal areas of Molokai. Identification confirmed by D.R. Herbst.

Geraniaceae

Erodium sp.

Previous knowledge: Unknown to Hawaiian Archipelago. Unknown native origin.

Significance: **New state record.** First collected on Molokai in Kalamaula Game Management Area, 200 m, in 1992 (*Hughes 40*, BISH). D.R. Herbst (pers. comm.) states that it somewhat resembles *E. moschatum* L'Hér. of New Zealand. Sparingly naturalized in mixed Kiawe/Haole koa lowland shrubland and *Cenchrus ciliaris* L. lowland grassland.

Melastomataceae

Pterolepis glomerata (Rottb.) Miq.

Previous knowledge: First collected on Oahu in 1949 (*Greenwell s.n.*, BISH). Hawaiian Archipelago distribution Kauai, Oahu, and Hawaii. Native to tropical regions of eastern South America from Santa Catarina, Brazil, N to the Lesser Antilles (Wagner *et al*. 1990: 913).

Significance: **New island record** for Molokai on the Wailau Trail, 800 m, in 1992 (*Hughes 18*, US). Apparently only sparingly naturalized in wet mesic forest in disturbed areas. Identification by W.L. Wagner.

Meliaceae

Melia azedarach L.

Previous knowledge: Widely cultivated in Hawaii prior to 1871 (Hillebrand 1888). Hawaiian Archipelago distribution documented from all of the main islands except Molokai and Kahoolawe. Native to southwestern Asia (Wagner *et al.* 1990: 918).

Significance: **New island record** for Molokai in Kalamaula Game Management Area, 350 m, in 1992 (*Hughes 43*, BISH). Naturalized in lowland gulches and disturbed areas. This species is known to contain toxins and is of current interest for medicinal properties (J. Edmonds, pers comm., Oxford Forestry Institute). Identification confirmed by D.R. Herbst.

Moraceae

Ficus microcarpa L. f.

Previous knowledge: Cultivated at least since the early 1900s, but it could not have become naturalized prior to 1938 when its pollinating wasp was introduced. Hawaiian Archipelago distribution Oahu, Maui, and Hawaii, but probably on all of the main islands. Native from Sri Lanka to India, southern China, Ryukyu Islands, Australia, and New Caledonia (Wagner *et al.* 1990:926).

Significance: **New island record** for Molokai in Kalamaula Game Management Area, 310 m, in 1992 (*Hughes 62*, BISH). Naturalized in gulches in disturbed lowland areas of Molokai. Identification confirmed by W.L. Wagner.

Passifloraceae

Passiflora edulis Sims

Previous knowledge: Introduced prior to 1871, by which time it had already become naturalized on E Maui (Hillebrand 1888). Hawaiian Archipelago distribution Kauai, Oahu, Lanai, Maui, and Hawaii. Native to Brazil, widely cultivated for the succulent aril, which is used to make passion fruit juice (Wagner *et al.* 1990: 1010).

Significance: **New island record** for Molokai. It was observed growing around houses on at least the eastern end of the island. It also is naturalized at least from Upper Kalamaula to Puu Kauwa plantation areas in 1992 (*Hughes 107*, BISH).

Poaceae

Andropogon virginicus L.

Previous knowledge: First collected in 1924 (*Lee 65*, BISH). Hawaiian Archipelago distribution Oahu and Hawaii. Native to eastern North America, now extending into Central America (Wagner *et al.* 1990: 1497).

Significance: **New island record** for Molokai. It was collected on the Molokai Forest Rd near upper reservoir in 1991 (*Hughes s.n.*, BISH). This invasive grass, carried long distances by the strong trade winds, quickly colonizes disturbed mesic shrubland and dominates many disturbed areas from Kalae to Kamalo, from 600–1000 m on the southern aspect of eastern Molokai. First collected on Maui in 1980 (*Higashino 9360*, BISH) on USFWS transect 3 at 1100 m elevation. It seems sparingly naturalized in dieback forest on windward E Maui. However, at least on W Maui in 1993, it was observed to be dominating disturbed areas of lowland mesic shrubland in Kapunakea Preserve.

Axonopus fissifolius (Raddi) Kuhlm.

Previous knowledge: First collected in 1913 (*McClellan s.n.*, BISH). Hawaiian Archipelago distribution Kauai, Oahu, Lanai, Maui, and Hawaii. Native to subtropical North America and the Neotropics where it is used as a pasture grass (Wagner *et al.* 1990: 1502).

Significance: **New island record** for Molokai in the vicinity of Puu Kolekole in 1992 (*Hughes 374*, US). This popular lawn grass is naturalized in upper elevations from 800–1100 m at least along roads, trails, and forest plantations in Molokai Forest from the upper reservoirs, along the forest road, Puu Kauwa, Kahanui, Waikolu lookout, Puu Kaulahuki, Kupaia, Upper Kawela, and Puu Kolekole areas.

Chloris gayana Kunth

Previous knowledge: First collected on Lanai in 1913 (*Forbes 181.L*, BISH). Hawaiian Archipelago distribution Niihau, Oahu, Lanai, Maui, and Hawaii. Native to Africa, and naturalized throughout the Neotropics (Wagner *et al.* 1990:1515).

Significance: **New island record** for Molokai on Kapaakea ridge in 1992 (*Hughes 367*, US). This species is naturalized at least in the mixed Kiawe/Haole koa lowland shrublands and *Cenchrus ciliaris* lowland grasslands from Kalamaula Game Management Area to Kaunakakai gulch from 50–400 m.

Dichanthium annulatum (Forssk.) Stapf

Previous knowledge: First collected on Oahu in 1940 (*Hosaka 2525*, BISH). Hawaiian Archipelago distribution Oahu. Native from northern Africa through the Middle East to India and Indonesia (Wagner *et al.* 1990: 1528).

Significance: **New island record** for Molokai. Collected in Hoolehua in 1992 (*Hughes 317*, US). This species is apparently sparingly naturalized along roadsides.

Eragrostis amabilis (L.) Wight & Arnott [syn. *E. tenella* (L.) P. Beauv. ex Roem. & Schult.]

Previous knowledge: First collected on Oahu in 1895 (*Heller 1962*, BISH). Hawaiian Archipelago distribution Midway Atoll, Niihau, Oahu, Maui, Kahoolawe, and Hawaii.

Native to the Paleotropics, now widely distributed throughout the tropics (Wagner *et al.* 1990: 1545). Nomenclature and identification from Dr. Paul Peterson.

Significance: First collected on Molokai above the cliffs W of Moomomi (*Hughes 457*, US). This species is sparingly naturalized in disturbed lowland observed to at least 150 m elevation.

Pennisetum clandestinum Chiov.

Previous knowledge: First collected on Hawaii in 1938 (*Hosaka 2181*, BISH). Hawaiian Archipelago distribution Oahu, Lanai, Maui, and Hawaii. Native to tropical Africa, now widely cultivated and naturalized (Wagner *et al.* 1990: 1579).

Significance: **New island record** for Molokai in 1992 (*Hughes 335*, US). This species is the most common grass used for fodder and has naturalized island-wide to 1100 m elevation. This grass species out-competes many native species for space and light. In natural areas it is established at least in upper Kalamaula, Waikolu lookout Puu Kaulahuki plantation area, Kamoku flats, Makakupaia, and Makolelau areas.

Rosaceae

Rubus argutus Link

Previous knowledge: First collected in 1904 on Hawaii by O. Kuntze (Degener, 1938). Hawaiian Archipelago distribution Kauai, Oahu, Maui, and Hawaii. Native to central and eastern United States (Wagner *et al.* 1990: 1107).

Significance: **New island record** for Molokai in 1992 (Hanalilolilo, 1120 m,*Hughes 9*, BISH). This species is naturalized sporadically in wet forest on Molokai from 700–1120 m from Hanalilolilo to eastern Kawela. It is recognized as a serious threat to native vegetation because it forms dense thickets and spreads rapidly, apparently by birds.

Solanaceae

Brugmansia candida Pers.

Previous knowledge: Probably first brought to Hawaii from Rio de Janeiro on the frigate *Blonde* in 1825 (Degener 1932). Hawaiian Archipelago distribution Kauai, Oahu, Maui, and Hawaii. Native to Peru and widely cultivated as an ornamental (Wagner *et al.* 1990: 1253).

Significance: **New island record** for Molokai in Pelekunu Valley in Pilipililau stream in 1992 (*Hughes 6*, US). This species is naturalizing from a historic homesite down the stream bed. It apparently likes very wet conditions.

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New Hawaiian Plant Records. III

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Asteraceae

Bidens campylotheca Schultz-Bip. subsp. ***pentamera*** (Sherff) Ganders & Nagata.

MAUI: A population of about 20 plants of *Bidens campylotheca* subsp. *pentamera* was found in Papalaua Gulch on West Maui at an elevation of about 885 m. This represents a range extension of the taxon to West Maui. It was previously known only from East Maui [Ganders, F.R. & K.M. Nagata, 1990, p. 273. *In*: Wagner, W.L. *et al*., *Manual of the flowering plants of Hawai'i*. Univ. Hawaii Press & Bishop Museum Press, Honolulu]. The new West Maui population is in mesic forest, whereas the East Maui populations are in wet forests.

Material examined. 13 Mar 1988, det. F. R. Ganders, 28 Dec 1990, *J. Lau 3210* (BISH).

Rhamnaceae

Colubrina oppositifolia Brogn. ex H. Mann.

MAUI: *Colubrina oppositifolia* was recently found on West Maui in the land section of Honokowai at 500 m. Only a single tree has been located (P. Bily, pers. comm., 1995). This find represents the first record of a naturally-occurring plant of *C. oppositifolia* on the island of Maui. The species was previously recorded only from the islands of Oahu and Hawaii (Wagner *et al*. 1990, *loc. cit*., p.1094).

Material examined. 1 Dec 1992, det. J. Lau, 12 Jan 1995, *P. Bily & T. Cashman s.n.* (BISH).

New Hawaiian Plant Records. IV

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New records of naturalized plant species and the spread of several established alien species have been documented in 2 prior publications (Nagata 1987, 1988). Similar information on several additional species are here presented. These records are updates to Wagner *et al*. (1990).

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