New Records of Hawaiian Flowering Plants Primarily from the United States National Herbarium

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During preparation of the *Manual of the flowering plants of Hawai'i* (Wagner *et al.* 1990), only portions of the United States National Herbarium (US) collection of Hawaiian material were examined. Recent curation of the Hawaiian collections at US has uncovered several collections earlier than those reported in the *Manual*, as well as several new island records, including many of the records reported below. Although they are new records in the sense that they have not previously been documented in the literature, most are not recent collections.

Amaranthaceae

Amaranthus viridis L. **New island record**

The following collection represents a new island record of this species for Laysan. It was previously known from the main islands of Kaua'i, O'ahu, Lana'i, Maui, Kaho'olawe, and Hawai'i, as well as the Northwestern Hawaiian Islands of Kure Atoll and Ka'ula (Wagner *et al.* 1990: 189).

Material examined. LAYSAN: May 1902, *Snyder s.n.* (US).

Asteraceae

Reichardia picroides (L.) Roth **New island record**

The following collection represents a new island record of this species for Moloka'i. It was previously known only from coastal areas of O'ahu, where it was first collected in 1909 (Wagner *et al.* 1990: 352).

Material examined. MOLOKA'I: about 2 km WSW of Kalani, Momomi sand strip, Kaluakoi, directly S of Ka'a, on eroded calcareous sandstone, 22 Feb 1948, *Fosberg 29563* (BISH, K, NY, US).

Buddleiaceae

Buddleia davidii Franch. **New naturalized record**

This species, cultivated in the Hawaiian Islands, is now at least sparingly naturalized.

Material examined. KAUA'I, Waimea Dist., Koke'e State Park, by cabins just S of park headquarters, along Highway 550; secondary forest and plantings in remnant mixed mesophytic forest with *Acacia koa* and *Metrosideros polymorpha*, originally planted and now sparingly naturalized along roadside in secondary vegetation, 1158 m, 28 Mar 1994, *Lorence and Flynn 7452* (US).

Fabaceae

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

Wagner *et al.* (1990: 683) noted that this species probably occurs on all of the main islands but had not been documented from Moloka'i; the following collection provides that documentation.

Material examined. MOLOKA'I: Ho'olehua, Plant Materials Center of Hawai'i, used as a pasture plant, 110 m, 9 Oct 1990, *Hughes s.n.* (BISH).

Medicago polymorpha L. **New island record**

The following collection represents a new island record of this species for Moloka'i. It was previously known from Kaua'i, O'ahu, Lana'i, Maui, and Hawai'i (Wagner *et al.* 1990: 684).

Material examined. MOLOKA'I: Ho'olehua, in waste field, not uncommon, 4 Apr 1928, *Degener 3514* (US).

Melilotus alba Medik. **New island record**

As noted by Degener on the specimen label, the following collection represents a new island record for Moloka'i. It was previously known only from Midway Atoll and Hawai'i (Wagner *et al.* 1990: 686).

Material examined. MOLOKA'I: Maunahui, 8 Apr 1928, *Degener 11095* (US).

Najadaceae

Najas marina L. **New state record**

The first report of *Najas* for the Hawaiian Islands was by Chamisso (1829: 499), whose collection Hillebrand (1888) also cited (as *N. major* All., a synonym of *N. marina* L.). Since no modern researcher has seen a Chamisso collection of *Najas* from O'ahu, and since it has not been collected since, St. John (1973) thought that it was probably an erroneous record. A specimen of *N. marina* L. from O'ahu has been found at US, with the collector given as simply "Limu woman," and the common name of the plant as *limu kala wai*. Although it cannot be determined with certainty, we hypothesize that there was a population of *N. marina* L. around Waikiki prior to the construction of the Ala Wai Canal. When the canal was built during the 1920s (Glenn & McMurtry 1995) and the wetlands around Waikiki drained, the *Najas* population died out. The following collection represents the first verified record of *N. marina* L. for the state.

Material examined. O'AHU: Honolulu, Waikiki, 29 Apr 1905, *Limu woman 269* (on a Flora of Hawaii, U.S. Department of Agriculture, Hawaii Experiment Station label) (US).

Scrophulariaceae

Hebe speciosa (A. Cunn.) Cockayne & Allan **New naturalized record**

This cultivated species, mentioned by Wagner *et al.* (1990: 1235) as persisting vegetatively or perhaps escaping, is here reported as at least previously naturalized on Hawai`i.

Material examined. HAWAI'I: Hawaii Volcanoes National Park, Kilauea Volcano, near Park Headquarters, well established in densely grassy waste ground, 1220 m, 20 Sep 1965, *Fosberg 47737* (US).

Urticaceae

Pilea microphylla (L.) Liebm. **New island record**

The following collections represent a new island record of this species for Midway Atoll. It is thought to occur on all of the main islands, but has been documented only from Kaua'i, O'ahu, Maui, and Hawai'i (Wagner *et al.* 1990: 1306).

Material examined. MIDWAY ATOLL: Eastern Island, S of the E-W runway, 25 May 1964, *Long 1748* (US); at edge of runway in SW corner of island, 12 Aug 1964, *Lamoureux 2765* (US).

Violaceae

Viola odorata L. **New island record**

This species, reported by Wagner *et al.* (1990: 1332) as apparently naturalized on Lana'i and Kaua'i, is here reported as apparently naturalized on Hawai'i.

Material examined. HAWAI'I: Hawaii Volcanoes National Park, Thurston Lava Tube, Kilauea, well-established patches in *Metrosideros-Cibotium* forest, spreading by creeping rhizomes, 1220 m, 20 Mar 1965, *Fosberg 46053* (US).

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Pathogenic Organisms of Penaeid Shrimp in the Hawaiian Islands

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Although many of the pathogens of penaeid shrimp in Hawaii have been introduced through the importation of penaeid species, some of the most common pathogens are ubiquitous in the environment. The objective of this work is to review the current pathogens of penaeid shrimp in Hawaii and to mention a few potential pathogens that may be introduced in the future.

Viruses

Infectious hypodermal and hematopoietic necrosis virus (IHHNV)

HHNV was first documented in *Penaeus stylirostris* Stimpson and *P. vannamei* Boone imported into Hawaii in 1983 (Lightner *et al*. 1983a). This virus is a single stranded DNA-containing parvovirus that has been associated with "runt-deformity syndrome" (RDS) in *P. vannamei* and severe mortalities in *P. stylirostris*. Juvenile shrimp with RDS display deformed rostrums, wrinkled antennal flagella, cuticular roughness, and other cuticular deformities (Kalagayan *et al*. 1990, Bell & Lightner 1984).