New Plant Records from Midway Atoll for 1999

Forest Starr and Kim Martz (United States Geological Survey - Biological Resources Division, P.O. Box 369, Makawao, HI 96768)

The following contributions include new island records and a new state record of plants located on Midway Atoll, Northwestern Hawaiian Islands, Hawai‘i. Voucher specimens are housed in the Bishop Museum, Honolulu (BISH).

Aizoaceae

*Tetragonia tetragonioides* (Pallas) Kuntze New Island Record

Native to New Zealand, Tasmania, Australia, Japan, and South America; in Hawai‘i, *T. tetragonioides* (New Zealand spinach) is known from scattered coastal sites on Ni‘hoa, Kaua‘i, O‘ahu, Maui, and Hawai‘i (Wagner et al. 1990, Oppenheimer et al. 1999). On Midway, it is restricted to two very small patches on Sand Island. It was found near the Dump Pond and near the cart trail on South Beach. This collection represents a new island record for Midway Atoll.

**Material examined.** MIDWAY ATOLL: Sand Island, Dump Pond, small patch of plants on roadside, Ramachandran Sudharshan collector, 10 May 1999, Starr & Martz 990510-5 (BISH).

Cucurbitaceae

*Coccinia grandis* (L.) Voigt New Island Record

Native to Africa, Asia, and Australia; in Hawai‘i, *C. grandis* (ivy gourd) is naturalized and rapidly spreading on O‘ahu, Maui, and Hawai‘i (Starr et al. 1999, Wagner et al. 1990). On Midway, it was collected on Sand Island from a single vine that was brought in as seed from Thailand to be grown for its edible qualities. This collection represents a new island record for Midway Atoll.

**Material examined.** MIDWAY ATOLL: Sand Island, in vegetable garden sprawling on fence and spreading beyond, 29 April 1999, Starr & Martz 990429-18 (BISH).

*Momordica charantia* L. New Island Record

Native from tropical Africa to Australia; in Hawai‘i, *M. charantia* (balsam pear, bitter melon) is reported as widely naturalized in disturbed sites on all of the main islands (Wagner et al. 1990). On Midway, this plant was commonly cultivated and often escaped the confines of the garden. This collection represents a new island record for Midway Atoll.

**Material examined.** MIDWAY ATOLL: Sand Island, spreading from residential vegetable garden, 21 April 1999, Starr & Martz 990421-11 (BISH).

Malvaceae

*Sida rhombifolia* L. New Island Record

A polymorphic, pantropical weed; in Hawai‘i, *S. rhombifolia* (Cuba jute) is naturalized in disturbed areas, on all of the main islands (Wagner et al. 1990). On Midway, this plant was restricted to a few individuals on Sand Island near the sea plane hangar. This collection represents a new island record for Midway Atoll.


Poaceae

*Bothriochloa pertusa* (L.) A. Camus New Island Record

Native to the Paleotropics; in Hawai‘i, *B. pertusa* (pitted beardgrass) is naturalized in open, disturbed sites such as pastures, savannas, and along roadsides on all of the main islands (Wagner et al. 1990). On Midway, it is localized, and was found only on Sand Island in the mowed lawns on either side of the runway near the water catchment pond. This collection represents a new island record for Midway Atoll.

**Material examined.** MIDWAY ATOLL: Sand Island, collected from lawn near water catchment pond, 7 May 1999, Starr & Martz 990507-4 (BISH).

*Cenchrus ciliaris* L. New Island Record

Native to Africa and tropical Asia; in Hawai‘i, *C. ciliaris* (buffelgrass) is reported from dry areas and sandy soil in a wide variety of habitats on all of the main islands except Ni‘ihau (Wagner et al. 1990). On
Midway, a few dozen patches were discovered on Sand Island in a grassy lawn area near the sea plane ramp by Turtle Beach. This collection represents a new island record for Midway Atoll.

**Material examined.** MIDWAY ATOLL, Sand Island, naturalized in grassy lawn near Turtle Beach, 27 April 1999, Starr & Martz 990427-1 (BISH).

**Chloris virgata** Sw.  New Island Record
Native to the neotropics, now widely naturalized; in Hawai‘i, *C. virgata* (feather fingergrass) is naturalized and common along roadsides and dry pastures on Kure Atoll and all of the main islands except Ni‘ihau and O‘ahu (Wagner et al. 1990). On Midway, restricted to a few plants in a lawn near the NW corner of the inner harbor. This collection represents a new island record for Midway Atoll.

**Material examined.** MIDWAY ATOLL, Sand Island, from a lawn near the NW corner of the inner harbor, 7 May 1999, Starr & Martz 990507-5 (BISH).

**Chloris divaricata** R. Br.  New Island Record
Native to New Caledonia and Australia; in Hawai‘i, *C. divaricata* (stargrass) is naturalized and common in lawns and dry, disturbed areas of all the main islands except Moloka‘i and Hawai‘i (Wagner et al. 1990). On Midway, this species is restricted to a few dozen plants on Sand Island in a clearing in the forest near rusty bucket. This collection represents a new island record for Midway Atoll.

**Material examined.** MIDWAY ATOLL, Sand Island, collected from a clearing in the ironwoods (*Casuarina equisetifolia*) near rusty bucket, 8 May 1999, Starr & Martz 990508-1 (BISH).

**Leptochloa uninervia** (K. Presl) Hitchc. & Chase  New Island Record
Native to warmer regions of the Americas; in Hawai‘i, *L. uninervia* was first collected on O‘ahu in 1967, is reported from Kaua‘i, O‘ahu, Moloka‘i, and Hawai‘i by Wagner et al. (1990), and has been observed by the authors on Maui. On Midway, a single plant was found on Sand Island in an open, moist site on a hill near the underground hospital. This collection represents a new island record for Midway Atoll.

**Material examined.** MIDWAY ATOLL, Sand Island, on a hill in a grassy, moist site, 7 May 1999, Starr & Martz 990507-3 (BISH).

**Paspalum setaceum** Michx.  New State Record
Native to Mexico and the southeastern U.S.; in the Pacific, *P. setaceum* was first recorded from the Marshall Islands in 1956, and was later known from American Samoa, Guam, and the Carolines (Whistler 1994). More recently, it was observed on Wake in 1994 by Derral Herbst. Previously unknown from Hawai‘i, on Midway it is one of the most common species on the island, occurring wherever there are lawn areas. This collection represents a new state record.

**Material examined.** MIDWAY ATOLL, Sand Island, common grass collected from fuel farm, 22 June 1999, Starr & Martz 990622-1 (BISH).

**Acknowledgements**
We thank the staff of Bishop Museum / Herbarium Pacificum particularly George Staples, Derral Herbst, and Chris Puttock, for determination, verification, and archival of vouchers. We also thank Marie Bruegmann for providing information on previous botanical surveys, Robert Shallenberger, Ken Neithammer, and Nancy Hoffman for logistical support while on Midway Atoll, and Lloyd Loope and USGS-BRD for financial support to make the writing of this paper possible.

**Literature Cited**

