

New Hawaiian Plant Records for 2002–2003

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These previously unpublished Hawaiian plant records report 7 new state records, 12 new island records, 2 new naturalized records, and 3 nomenclatural and taxonomic changes that affect the flora of Hawai‘i. These records supplement information published in Wagner *et al.* (1990, 1999) and in the *Records of the Hawaii Biological Survey* for 1994 (Evenhuis & Miller, 1995), 1995 (Evenhuis & Miller, 1996), 1996 (Evenhuis & Miller, 1997), 1997 (Evenhuis & Miller 1998), 1998 (Evenhuis & Eldredge, 1999), 1999 (Evenhuis & Eldredge, 2000), 2000 (Evenhuis & Eldredge, 2002), and 2001–2002 (Evenhuis & Eldredge, 2003). All identifications were made by the authors except where noted in the acknowledgments, and all supporting voucher specimens are on deposit at BISH except as otherwise noted.

Amaranthaceae

Amaranthus graecizans L.

New state record

Amaranthus graecizans is an annual, prostrate or rarely ascending herb native to the western half of North America but naturalized elsewhere. In the key to the amaranths in Wagner *et al.* (1999: 186), the plant would key out to *A. dubius* but differs from that species in that it has three stamens and tepals instead of five.

Material examined. O‘AHU: Honolulu, Kalihi area, 1313 Kamehameha IV Rd, weed growing on a lawn in full sun, 7 Aug 1985, *J. Lau 1304*.

Apocynaceae

Alstonia macrophylla Wall. ex G. Don

New island record

Although grown in botanical gardens on the islands of Kaua‘i and O‘ahu and sparingly cultivated in gardens on the island of Hawai‘i, the species had become naturalized only in the Waiākea, Hilo, and Pepe‘ekea areas of Hawai‘i Island (Wagner *et al.*, 1997: 51). The following collection is the first documented naturalized plant on the island of O‘ahu.

Material examined. O‘AHU: Off Likelike Hwy, growing with *Dicranopteris linearis*, *Schefflera actinophylla*, *Psidium cattleianum*, 750–1000 ft, 11 Apr 2003, *D. Souza s.n.* (BISH 695057).

Araceae

Xanthosoma robustum Schott

Nomenclatural change

[Syn. *X. roseum* Schott]

Previously the name *X. roseum* was provisionally taken up for a naturalized aroid species found on Kaua‘i and O‘ahu (Staples & Woolliams, 1997). Additional gatherings showed the species was also naturalized on Maui (Oppenheimer & Bartlett, 2000: 2) and Hawai‘i (Imada *et al.*, 2000: 10). While a comprehensive revision of *Xanthosoma* has yet to be published and species concepts remain vague, a worldwide checklist of aroid taxa has unambiguously taken up a different name for the species (Govaerts & Frodin, 2002).

Asteraceae***Pseudognaphalium attenuatum* (DC.)****New state record**

A. Anderb.

In a recent paper reporting new records of *Pseudognaphalium* for the United States (Nesom, 2001), a new state record was included for the Hawaiian Islands of a naturalized Mexican species. There is no duplicate of the cited voucher specimen in the Bishop Museum, so we repeat the documentation here to call it to the attention of local botanists.

Material cited. **HAWAII:** Ka'ū distr., near Kohala Blvd., *makai* of the Belt Rd, Kahuku, ubiquitous at 1500 ft in small sterile *kīpuka*, 10 Jan 1981, O. & I. Degener 35082 (GH, MO, SMU, TEX).

Senecio madagascariensis* Poir.*New island record**

This aggressive weed has previously been documented as naturalized on three islands: Kaua'i and Hawai'i (Lorence *et al.*, 1995: 24), and Maui (Starr *et al.*, 1999: 11; Oppenheimer & Bartlett, 2002: 4). The collections below document its presence on O'ahu. The species probably was inadvertently introduced to O'ahu as a contaminant in grass seed spread along road banks.

Material examined. **O'AHU:** Along Hwy 50 headed west before Hulē'ia Stream bridge, mostly located toward top of embankment on *makai* side of highway, 21°57'N, 159°25'W, ca 400 ft, 6 Feb 2001, D. Arakaki, *s.n.* (BISH 668939); Schofield Barracks, lower Wai'eli Gulch, Firing Point Halo, covering 1/2 acre with many juveniles and seedlings, 400 ft, Feb 2003, K. Kawelo *s.n.* (BISH 695026); Schofield Barracks, South Range, Firing Point Halo, in an area ca 20 m × 30 m, probably from camping and military equipment from the Big Island, 1000 ft, Feb 2003, K. Kawelo *s.n.* (BISH 695028).

Campanulaceae***Wahlenbergia* Schrader ex Roth**

While preparing specimens in the BISH Hawaiian collection for data entry, a discrepancy was noticed between the annotation labels on the material of *Wahlenbergia* and the name used in the Manual (Wagner *et al.*, 1990, 1999) as well as in-house curatorial aids. While the Manual uses the name *Wahlenbergia gracilis* (G. Forst.) A. DC., nearly all the vouchers had been annotated by Tom Lammers in 1992 or 1994 as *W. marginata* (Thunb.) A. DC. Consultation with Lammers (pers. comm. 2002) revealed that a recent partial revision (Pettersen, 1997) had changed taxonomic concepts for the widespread Pacific species, in part due to careful study of type specimens for the names involved in New Zealand. Comparison of the BISH specimens immediately disclosed that two quite distinctive morphologies were represented, and these correspond to Pettersen's taxonomic concepts for both *W. gracilis* and *W. marginata*. The following key is adapted from Pettersen's account. Selected specimen citations are provided to document the distribution for *W. marginata* in the Hawaiian Islands.

Key to *Wahlenbergia*

1. Corolla rotate, 10–20 mm in diameter; calyx teeth longer than sinus between corolla lobes *W. marginata*
1. Corolla deeply campanulate, 5–10 mm in diameter; calyx teeth shorter than sinus between corolla lobes *W. gracilis*

***Wahlenbergia gracilis* (G. Forst.) A. DC. Taxonomic clarification**

Native to New Caledonia, Norfolk Island, and Lord Howe Island (Pettersen, 1997); specimens from 'Eua, Tonga, may possibly belong here also. This species has tiny, paler blue-violet, long-tubed flowers, with the corolla tube distinctly visible above the calyx lobes when viewed from the side. Hawaiian specimens are smaller and more delicate in all parts, with stems that are erect to sprawling and fruit capsules that are campanulate and broad in comparison to their length.

Most of the Hawaiian specimens in BISH belong to this species and the distribution remains as it was published in the Manual: Moloka'i, Lāna'i, Maui, and Hawai'i (Wagner *et al.*, 1990, 1999).

***Wahlenbergia marginata* (Thunb.) A. DC. New state record**

Native to Japan (Honshu), where it extends as far as 37°N (Pettersen, 1997). The plants widespread in the Pacific and Asia that have been called *W. marginata* have not been evaluated taxonomically and may not be the same as the Japanese taxon (Pettersen, 1997). This species typically has a bright blue-violet corolla, saucer-shaped with 5 spreading, elliptic lobes that present a star-like pattern when viewed from above. Hawaiian plants are distinctly larger in all parts than *W. gracilis*, with more erect, coarser stems, and fruit capsules that are slenderly elongate and visibly ridged lengthwise.

Material examined. **HAWAII:** Hāmākua Distr, Pa'auhau *ahupua'a*, NW slopes of Mauna Kea, ca 0.7–0.1 km N of 'Auwaiakeakua Gulch, 6700 ft, 21 Jan 1980, *P.K. Higashino & C. Crivellone PKH 9520*; North Hilo Distr, Pu'u Huluhulu, near Saddle Rd, 6700 ft, 14 Oct 1981, *L.W. Cuddihy & J. Davis 903*; South Hilo Distr, along Saddle Rd in front of Mauna Kea State Park, 35 miles W of Hilo, 2000 m, 14 Mar 1988, *D.H. Lorence et al. 5900*; ca 0.1 mile SE of Mauna Kea State Park, off Saddle Rd, 6500 ft, *R. Gustafson 2743*; South Kohala Distr, Saddle Rd (Hwy 200), at mile marker 43, 1670 m, 7 Aug 1987, *T. Flynn & D. Lorence 2288*; Pōhakuloa Military Camp, on Mauna Kea NW of Pōhakuloa Gulch, 1950 m, 17 Nov 1982, *W.L. Wagner & F.R. Warshauer 4674*; Pu'u Lā'au, near hunter's cabin, 7450 ft, 18 Jan 1975, *D. Herbst 5214*; Ahumoa, 6900 ft, 21 May 1975, *D. Herbst 5340*.

Chenopodiaceae***Salsola tragus* L.****New island record**

Previously known from Maui (Oppenheimer & Bartlett, 2002: 5), Kaho'olawe (Herbst & Wagner, 1999: 19), and Hawai'i (Wagner *et al.*, 1999: 540). The collection cited below documents its presence on O'ahu.

Material examined. **O'AHU:** On former sugarcane fields, between Renton Rd and Farrington Hwy, site of Aloun Farms, in scrub vegetation, plants 1–2 ft tall, reproducing, widely scattered in small numbers, 18 Jun 2003, *W. Char & C. Morden s.n.* (BISH 695053).

Commelinaceae***Palisota bracteosa* C. B. Clarke****New naturalized record**

This herbaceous, shade-loving species has been cultivated as an ornamental on O'ahu since the early 1950s and has now begun to escape from cultivation in at least two widely separated locations, both near botanical gardens. Plants were found scattered in shady understory on steep slopes above planted areas in the Lyon Arboretum; the Waimea Arboretum voucher was collected from the humus-filled crotch of a monkeypod tree about eight feet above the ground. The fleshy, bright red fruit may be attractive to rats or birds, which are effectively dispersing the seeds from plantings into surrounding areas (D.

Orr, pers. comm.). *Palisota* was not included in the list of potentially invasive species of cultivated plants in Hawai'i (Staples *et al.*, 2000), but it should be monitored closely for its potential to invade shady, mesic forest habitats.

In the key to species of *Palisota* found in the second edition of the *Flora of West Tropical Africa* (Brenan, 1968: 33, 35), *P. bracteosa* is distinguished as follows: rosette-forming herb of the forest floor; inflorescence peduncle not or scarcely tomentose; inflorescence with conspicuous ovate bracts 5–10 mm broad, bract margins long-ciliate; leaf blade elliptic to oblanceolate or narrowly obovate, ca 25–40 cm long and 5.5–14 cm wide, gradually cuneate at the base, sessile or with a petiole to 25 cm long; flowers white (or pinkish white); fruits pilose, beaked, bright red.

Material examined. O'AHU: Honolulu Distr, Mānoa Valley, above Lyon Arboretum, on slope between 'Aihualama Stream and 'Aihualama Trail, in wet, shaded understory of *Psidium cattleianum*-dominated forest, 21 Jul 2001, C. Imada, K. Kawelo & D. Orr 2001-51.

Crassulaceae

Kalanchoe crenata (Andrews) Haw.

New state record

This is the first naturalized record for this African species in the Hawaiian Islands, although it was known in cultivation as an ornamental. Native throughout much of sub-Saharan Africa (Fernandes, 1983), *K. crenata* is a polymorphic taxon with an extensive synonymy. It is also believed to be naturalized in tropical America, India, and Malaysia. Distinctive features are the (usually) erect stems to 1 m long; opposite, crenulate leaves with distinct petioles; and spreading panicles of yellow, orange, salmon, brick, or red flowers with corolla tube longer than the lobes and anthers borne at the mouth of the corolla tube. Plants are often totally glabrous or there may be glandular indumentum on the inflorescence and flowers.

Material examined. O'AHU: Mākuā Valley, on rocky ledges, north-facing slopes of lower 'Ōhikilolo Ridge, plants seen over an area approximately 50 ft by 50 ft, but may extend farther, ca 200 ft, 7 May 2002, K. Kawelo, J. Rohrer & J. Beachy s.n. (BISH 687840).

Cyperaceae

Rhynchospora radicans subsp.

New island record

microcephala (Bert. ex Spreng.) W. Thomas

This taxon was recently reported as a new state record based upon a collection from the island of Hawai'i (Strong & Wagner, 1997: 46). The authors speculated that the species probably was inadvertently introduced by humans, as it was growing in cultivated land rather than near areas visited by waterfowl. On Maui the species appears to be much more abundant, more widely distributed, and in wetland areas where it potentially could have been brought from its native areas in Central or western South America by migrating shorebirds, such as the Pacific Golden Plover. It is more likely that the sedge was introduced to Maui, where it later could have been carried to Hawai'i Island.

Material examined. MAUI: Hāna Forest Reserve, Hāna Ranch lands mauka of Keaka'amanu, boggy area dominated by grasses, sedges, and low-growing herbs, common in the wetland, ca 1000 ft, 11 Nov 2002, C. Imada, M. LeGrande, S. Jansen & J. Crummer 2002-77; Hāna Forest Reserve, Hāna Ranch lands, slopes makai and to the north of Pu'u Kī, moist rocky gulch floor in disturbed *Psidium cattleianum* forest, common sedge rooted in wet substrate, ca 1300 ft, 12 Nov 2002, C. Imada, M. LeGrande & S. Jansen 2002-86.

Fabaceae

***Indigofera hendecaphylla* Jacq.**

New island record

Widespread throughout the Old World tropics, *Indigofera hendecaphylla* was previously known to be naturalized on the islands of Kaua‘i, O‘ahu, Moloka‘i, Maui, and Hawai‘i (Geesink *et al.*, 1999: 675; Starr *et al.*, 2002: 20; Oppenheimer, 2003: 13). The specimen cited below documents that the species also is present on the island of Lāna‘i. In Geesink *et al.* (1999), the species was incorrectly listed as *I. spicata*, a mistake that has since been rectified (Herbst & Wagner, 1999: 21).

Material examined. LĀNA‘I: Lāna‘i City, mauka of Castle and Cooke Conservation headquarters, 20°49'N, 156°55'W, groundcover growing out of asphalt crack in weedy waste area, 22 Jul 2002, C. Imada 2002-42.

Stylosanthes

The *Manual* (Wagner *et al.*, 1999) included a single species of *Stylosanthes*, *S. fruticosa* (Retz.) Alston, as a naturalized element in the Hawaiian flora. A number of collections of *Stylosanthes* received in Bishop Museum between 1990 and 2003 did not fit the description of *S. fruticosa* and proved difficult to key out using the only revision of the entire genus (Mohlenbrock, 1958). Some of these new collections were made from plants cultivated at the USDA Plant Materials Center located on Moloka‘i, and others originated from wild plants growing in pastures, along roadsides, and in other seemingly naturalized places. Requests to legume specialists for identifications of the Hawaiian material were declined; *Stylosanthes* has a reputation as a taxonomically difficult genus with notoriously confused species limits. However, one specialist pointed out to us the publications of Len ‘t Mannetje (‘t Mannetje, 1984), who had worked on the genus for many years from an agricultural perspective. Our attempts to identify the Hawaiian specimens using the keys in ‘t Mannetje (1984) also proved inconclusive. Subsequently, Dr. ‘t Mannetje, now retired, agreed to try and identify the Hawaiian and Pacific material of *Stylosanthes* and the specimens were duly loaned to him for this purpose.

The results were surprising: there are 3 species, one comprising two varieties, of *Stylosanthes* present in the Hawaiian Islands, and none of them is *S. fruticosa*. We enumerate the 4 taxa here and cite voucher material for each, in order to provide a firm, specimen-based foundation for the taxonomic concepts we adopt. A key to identify the Hawaiian taxa of *Stylosanthes* is adapted from ‘t Mannetje (1984). It is essential to have fruiting material to use the key; flowering or sterile specimens cannot be successfully identified. The beak and upper articulation refer to the distal end of the segmented pod.

Key to *Stylosanthes* in Hawai‘i

- 1. Beak of fruit > 0.5 mm long..... *S. scabra*
- 1. Beak of fruit ≤ 0.5 mm long (2).
- 2(1). Beak distinctly coiled; upper articulation and beak glabrous or hairy *S. viscosa*
- 2. Beak uncinat (hooked or J-shaped), minute (uncurled length < 0.5 mm long); upper articulation and beak glabrous (3).
- 3(2). Pods with inconspicuous venation or weakly reticulate; inflorescence with > 4 flowers *S. guianensis* var. *guianensis*
- 3. Pods with conspicuous reticulate venation; inflorescence with up to 20 flowers *S. guianensis* var. *intermedia*

Stylosanthes guianensis* (Aubl.) Sw.*New state record**

This species has not previously been found on any of the Hawaiian Islands. Two varieties are represented among Hawaiian collections: var. *guianensis* and var. *intermedia* (Vogel) Hassler. The following collections document the first known occurrence for var. *guianensis* on Kaua'i and Moloka'i.

Material examined. **KAUAI:** Along Hwy 55, outside of Kilauea between Kilauea and Moloa'a, 25 Oct 1985, *T. Flynn & L. Hume 1328*; Hanalei Valley, Halele'a Forest Res., Hunting Unit C, along trail near end of 'Ōhiki Road, 27 Mar 1986, *T. Flynn & L. Hume 1614*. **MOLOKA'I:** USDA Plant Materials Center, field 8A trial plot, 9 Jul 1990, *M. Evans M-61*; same loc. and date, *M. Evans M-62, M-63*.

***Stylosanthes guianensis* var. *intermedia* (Vogel) Hassler**

Material examined. **MOLOKA'I:** USDA Plant Materials Center, field 7B trial plot, 13 Jul 1990, *M. Evans M-112*.

Stylosanthes scabra* Vogel*Taxonomic change**

[*S. fruticosa* misapplied, sensu Hawaiian authors, not of (Retz.) Alston]

This species has not previously been found on any of the Hawaiian Islands. The following collections document its occurrence on O'ahu, Moloka'i, Lāna'i, and Maui. Three of the cited vouchers (the O'ahu and Lāna'i specimens) were ambiguously identified by 't Mannetje; apparently geographic provenance is required to separate *S. fruticosa* (African, SE Asian origin) from *S. scabra* (South American origin). With cultivated material, this criterion is useless. Wild provenance can only be inferred based on historical research to determine where Hawaiian introductions originated, and that is not known in this case. Because no bona fide specimens of *S. fruticosa* were found among Hawaiian specimens identified by 't Mannetje and *S. scabra* has been confirmed from two other islands, we have applied the name *S. scabra* to O'ahu and Lāna'i material as well.

Material examined. **O'AHU:** along road to summit of Mt Ka'ala, in pasture and along road between two locked gates, 20 Sep 1985, *W. Char & G. Buelow NARS 34*. **MOLOKA'I:** USDA Plant Materials Center, field 7B trial plot, 13 Jul 1990, *M. Evans M-113*; Waiahewahewa Gulch, 500–1000 ft, in gulch bottom, 9 Feb 1973, *N. Pekelo Jr. 24*. **LĀNA'I:** Mahana, not uncommon along Keōmuku Rd, ca 900 ft, 12 Apr 1986, *K. Nagata 3475*; Kaka'alani (near Kō'ele), 1980 ft, growing in clumps along Keōmuku Rd shoulder, 13 Jun 1987, *R. Hobdy 2879*. **MAUI:** Makawao Distr., Hāmākuapoko, naturalized locally at NIFTAL site, 4 May 2002, *H. Oppenheimer & F. Duvall H50209* (BISH, PTBG).

Stylosanthes viscosa* Sw.*New state record**

This species has not previously been found on any of the Hawaiian Islands. The following collections document the first known occurrence for *S. viscosa* on O'ahu and Maui. The first Starr specimen cited below, which has no fruits, was not identified to species by 't Mannetje; a later collection with legumes from the same locality was confirmed as *S. scabra*. We are calling both Starr specimens *S. scabra*.

Material examined. **O'AHU:** Ko'olauloa Distr, between Pūpūkea and Paumalū, in open, sunny sites, ca 500 ft, 5 Dec 1987, *K. Nagata & W. Takeuchi 3714*. **MAUI:** Wailuku Distr, Kahakuloa, Po'elua Bay, along hwy near Kahakuloa GMA/Po'elua Hunter Creek Station, 280 ft, 7 Oct 1999, *H. Oppenheimer H109904*; Papanalahoā, roadside on seaward (*makai*) side of road, 200 ft, 29 Jan 2000, *F. Starr & K. Martz 000129-1*; same loc., 280 ft, 29 Apr 2000, *F. Starr et al. 000429-1*.

Malvaceae***Sida cordifolia* L.****New island record**

This species was formerly known from low elevation, dry, disturbed areas at Kaupō, East Maui; on the Kona coast, Hawai'i; and in the Waimea and Kōloa Districts of Kaua'i (Bates, 1999: 897, Lorence *et al.*, 1995: 41). The following specimen documents its presence on O'ahu.

Material examined. **O'AHU:** Kunia, Pōhākea Ranch, 21°27'N, 158°4'W, upright herb 2 ft tall growing in Guinea grass, *Schinus*, *Grevillea*, *koa haole* scrub, 1200 ft, 25 Nov 2002, *W. Char*, *S. Ching-Harbin* & *M. LeGrande s.n.* (BISH 690736).

Molluginaceae***Mollugo cerviana* (L.) Ser.****New island record**

Previously known from low, dry areas on the island of Hawai'i, where it is well established on the northwestern side of the island, especially in the South Kohala District (Wagner *et al.*, 1999: 922). The following collection documents its presence on the island of O'ahu.

Material examined. **O'AHU:** Kahuku, next to abandoned airstrip, close to Marconi Rd, 21°42'N, 157°58'W, 10 ft, 25 May 2001, *F.R. Warshauer 5180*.

Plantaginaceae***Plantago debilis* R. Br.****New island record**

Although *Plantago debilis* has been naturalized in Hawai'i for at least 60 years, it has not been collected outside Honolulu and at that in only three localities (Wagner *et al.*, 1999: 1051). Based on the collection cited below, it is now known also from the Big Island.

Material examined. **HAWAI'I:** Hilo, in rough lawn, rosette-forming herbs with erect scapes, common in this habitat, 3 Jun 1991, *W.R. Sykes 362/91*.

Poaceae***Digitaria divaricatissima* (R. Br.) Hughes****New naturalized record**

Native to New South Wales, Queensland, and Victoria, Australia, *Digitaria divaricatissima* previously was reported from a single collection made by E.Y. Hosaka (3611, US) on Hawai'i Island in 1950 (O'Connor, 1999: 1530). Three years later the species was again collected on the island (listed below). The species has recently been collected on Lāna'i.

Material examined. **LĀNA'I:** Halulu Gulch, northeastern part of island, 20°53'N, 156°54'W, ca 700 ft, rare grass on dry, rocky slopes, growing with *Chamaecrista*, *Waltheria*, *Sida fallax*, lantana, other introduced grasses, 22 Jul 2002, *C. Imada*, *C. Puttock*, *D. Stokes*, *S. Kahihikolo* & *B. Plunkett 2002-39*. **HAWAI'I:** S. Kohala Distr, Ke'āmuku, Parker Ranch, very rare in dry pasture, Apr 1953, *Y. Kimura s.n.* (BISH 706198).

Eragrostis elongata* (Willd.) Jacq.*New island record**

Previously documented from the islands of Kaua'i, Moloka'i, and Hawai'i (Oppenheimer, 2003: 21), the species has since been found on O'ahu.

Material examined. **O'AHU:** Ko'olau Mts, Kawailoa Training Area, Pu'u Kapu helicopter landing zone, along Drum Rd (near 'Ōpae'ula and Kawainui Rds), only one plant seen, 1250 ft, 26 Feb 2003, *K. Kawelo et al., s.n.* (BISH 695029); Ko'olau Mts, military LZ west of Poamoho trailhead, on *pu'u* that is marked 1652 ft on USGS topo map, hundreds of healthy reproductive individuals seen at this time with immature fruit, doesn't look invasive, 10 Mar 2003, *K. Kawelo*, *J. Rohrer* & *J. Beachy s.n.* (BISH 695030).

Festuca arundinacea* Schreb.*New island record**

Previously known from Kaua'i (Wagner *et al.*, 1997: 60), East Maui (Oppenheimer, 2003: 21), and Hawai'i (O'Connor, 1999: 1547), *Festuca arundinacea* also is naturalized on O'ahu.

Material examined. **O'AHU:** Wai'anae Mts, Mt Ka'ala, present along Ka'ala fence line portion near the road, along both road to FAA chain link enclosure and to the radio towers, 4000 ft, 7 May 2003, K. Kawelo *s.n.* (BISH 704671).

Schizachyrium condensatum* (Kunth) Nees*New island record**

Previously documented from the island of Hawai'i (O'Connor, 1999: 1590), where it is common in Hawai'i Volcanoes National Park but recently found more commonly on other parts of the island. Otto and Isa Degener (1983: 128) report that it was first introduced in 1932 on O'ahu, however there is no documentation backing this statement.

Material examined. **O'AHU:** H-3 Freeway, Honolulu side near entrance, dense growth along ca. 300 ft stretch of highway, along both toward and Kāne'ohe sides, very little beyond, 21° 24' N, 157° 50' W, 1000 ft, 8 May 2002, K. Kawelo, J. Rohrer & J. Beachy *s.n.* (BISH 687841).

Setaria sphaelata* (Schum.) Stapf &*New island record**

C.E. Hubb. ex M.B. Moss

First reported from the island of Maui as a naturalized species in Hawai'i (Starr *et al.*, 2002: 23), *Setaria sphaelata* has now been documented from three additional islands: Kaua'i, O'ahu, and Hawai'i.

Material examined. **KAUA'I:** Hanalei National Wildlife Refuge, uncommon weedy grass on bank of dried pond, 12 Jul 2002, C. Imada & T. Perkins 2002-11. **O'AHU:** On roadcut above the H-3 Freeway between the Kāne'ohe and Kailua exits, above the Ho'omaluhia Botanical Garden, growing along 1 to 2 miles of the highway, 21°23'N, 157°48'W, 250 ft, 22 May 2002, K. Kawelo & J. Rohrer *s.n.* (BISH 687842). **HAWAI'I:** Honoka'a Sugar Company, 18 May 1979, R. Kami *s.n.* (BISH 427545, 516906).

ACKNOWLEDGMENTS

We thank the following taxonomic specialists for identifications: U. Eliasson (GB, Amaranthaceae), T. Lammers (OSH, *Wahlenbergia*), and L. 't Mannetje (WAG, *Stylosanthes*). Tim Flynn, Hank Oppenheimer, Forest Starr, and Kim Starr graciously allowed us to include their *Stylosanthes* collections in this paper, making it possible to assemble all relevant voucher specimens for each taxon.

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