

New plant records from Maui, Kaho‘olawe, and Kaua‘i¹

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The following contributions include new island, state, and high elevation records from Maui, Kaho‘olawe, and Kaua‘i. All records are for nonindigenous species. Images of the material examined can be seen at www.starrenvironmental.com. Voucher specimens and collections mentioned in the text are housed in Bishop Museum’s *Herbarium Pacificum* (BISH), Honolulu, Hawai‘i.

Amaranthaceae

Achyranthes aspera L. var. *aspera*

New island record

Achyranthes aspera var. *aspera*, commonly called Devil’s horsewhip for its thorny, whip-like seedheads, was previously reported as naturalized on the islands of O‘ahu, Moloka‘i, and Hawai‘i (Wagner *et al.* 1999; Staples *et al.* 2002). On Maui, a single seeding plant was found in Spreckelsville, which was pulled up and bagged. Follow-up surveys have not yet detected additional plants.

Material examined. MAUI: East Maui, Spreckelsville, Stable Rd, along bike path in dry coastal urban area, growing with *Leucaena leucocephala* and *Megathyrsus maximus*, 15 ft [49 m], 16 Jun 2013, Starr & Starr 130116-01.

Alternanthera pungens Kunth

New island & new elevation record

Previously reported from all the main Hawaiian islands except Ni‘ihau and Kaho‘olawe (Imada 2012), this prostrate, spiny plant was found near the coast of Kaho‘olawe in the Honokanai‘a Basecamp area. Also, a collection from near the summit of Haleakalā at the Lelewi Overlook parking lot represents a new high elevation record. In both areas there were only a few plants observed, all of which were removed. However, follow-up surveys found additional plants germinating from a seed bank.

Material examined. KAHO‘OLAWA: Honokanai‘a, around quarters in base camp in dry coastal site, few plants in 2 spots by the same building, growing with *Prosopis pallida* and *Cenchrus ciliaris*, 33 ft [10 m], 18 Dec 2013, Starr & Starr 131218-01. MAUI: East Maui, Haleakalā National Park, Lelewi, in crack near parking lot, in subalpine shrubland with *Dubautia menziesii* and *Sophora chrysophylla*, 8812 ft [2686 m], 1 Aug 2013, Starr & Starr 130801-06.

Asteraceae

Matricaria discoidea DC.

New state record

This diminutive herb, commonly known as pineapple weed and wild or false chamomile, is native to North America and northeastern Asia and has become a cosmopolitan weed in disturbed areas such as roadsides and footpaths. Plants are edible and can be used to make an aromatic tea (Wikipedia 2014). About a dozen small plants were recently found at the summit parking area of Haleakalā National Park near the parking lot and walking path. All plants have been pulled since being discovered, though it continues to germinate from

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a seed bank. This is one of a half dozen temperate species with a climate match to the summit area of Haleakalā that have been detected during recent plant surveys along roads and parking areas of Haleakalā National Park. Pineapple weed is described as “Plant (1)10–30(50) cm; sweet-scented. Stem: generally branched from base. Leaf: \leq 5 cm, glabrous, sessile. Inflorescence: heads generally \pm 1 cm diam, conic, shattering at maturity. Ray flower: 0. Disk flower: corolla 1–2 mm. Fruit: 3–5-veined, with narrow brown glands extending down to \pm bottom of fruit; tip truncate; pappus 0 or crown \pm entire” (Keil 2013).

Material examined. MAUI: East Maui, Haleakalā National Park, summit, about a dozen plants in crack of parking lot/walkway border, in subalpine sparse shrub/grassland along with *Dubautia menziesii*, *Deschampsia nubigena*, *Argyroxiphium sandwicense* subsp. *macrocephalum*, 9990 ft [3045 m], 1 Aug 2013, *Starr & Starr 130801-01*.

Cyperaceae

Cyperus aggregatus (Willd.) Endl.

New state record

Inflatedscale flatsedge was found growing in lawns in Olinda, Maui. It looks a bit like *C. hillebrandii*, which occurs in nearby gulches. Described as “Herbs, perennial, cespitose, rhizomatous. Culms trigonous, 20–100 cm \times 0.8–2.5 mm, glabrous. Leaves 5–10, V-shaped to flanged V-shaped, 10–70(–90) cm \times 2–7 mm, margins and midribs scabridulous or glabrous. Inflorescences: spikes 1(–6), densely cylindric, 6–30 \times 5–11 mm; rays 3–12, 0.4–5(–7) cm; rays and rachis glabrous; usually only 1–2 spikes of inflorescence on elongate rays, other spikes sessile or nearly so; bracts 4–7, horizontal to slightly ascending, 1–16 cm \times 0.5–4 mm; rachilla deciduous, wings persistent, 0.5 mm wide. Spikelets 20–80, ellipsoid, roughly quadrangular, 3–5 \times 1–1.4 mm; floral scales 1–2(–4), appressed, stramineous to golden brown, often red-speckled, medially greenish, 9-ribbed, elliptic to ovate, 2.4–3.4 \times 1.8–2.6 mm, apex obtuse. Flowers: anthers 0.4–0.6 mm; styles 0.7–1.1 mm; stigmas 1.4–2.1 mm. Achenes dark brown to reddish brown, sessile, broadly ellipsoid, 1.8–2.1 \times 0.8–1 mm, apex apiculate, surfaces glabrous to finely punctulate” (Tucker *et al.* 2002).

Material examined. MAUI: East Maui, Olinda, Hawea Pl, growing in lawns, in association with *Cenchrus clandestinus* and *Eucalyptus* spp., 2700 ft [823 m], 28 Jan 2011, *Starr & Starr 110128-01*; *loc. cit.*, 10 Sep 2011, *Starr & Starr 110910-01*.

Polygonaceae

Polygonum aviculare L.

New elevation record

Naturalized on Maui and Hawai‘i (Wagner *et al.* 1999), prostrate knotweed is established at Haleakalā National Park's maintenance baseyard at about 6800 ft [2073 m], and is now also found at the summit of Haleakalā, establishing a new high elevation record. This sprawling, mat-forming herb is most abundant on the septic system at the Haleakalā Visitor Center at 9730 ft [2966 m], but is also sparingly present in cracks in the parking lot below the Red Hill Summit Building at 9993 ft [3046 m].

Material examined. MAUI: East Maui, Haleakalā National Park, visitor center, in cinder area next to recycle bin, in association with *Dubautia menziesii*, *Deschampsia nubigena*, *Argyroxiphium sandwicense* subsp. *macrocephalum*, and *Galium* sp., 9730 ft [2966 m], 23 Jul 2013, *Starr & Starr 130723-04*; Haleakalā National Park, summit, in crack near parking lot, in association with the same species mentioned above, 9993 ft [3046 m], 1 Aug 2013, *Starr & Starr 130801-04*.

Sapindaceae***Cupaniopsis anacardioides* L. New island record**

Carrot wood is occasionally planted as an ornamental tree in Hawai'i and was first reported in the state as naturalized on O'ahu (Frohlich & Lau 2010), and then on Maui (Starr & Starr 2011). During recent surveys of Kīlauea Point National Wildlife Refuge (NWR) on Kaua'i, it was also found as naturalized, with a wide distribution along the coastal scrub portions of the refuge, including many seedlings and saplings, and a few larger trees. No obvious source or parent trees could be located during brief searches of nearby areas.

Material examined. **KAUAI:** Kīlauea, Kīlauea Point NWR, windward lowland coastal scrub from Kīlauea Point to Crater Hill, seedlings to fruiting trees in the understory and openings in canopies of *Casuarina equisetifolia*, *Schinus terebinthifolius*, and *Pandanus tectorius*, in association with *Leucaena leucocephala* and *Lantana camara*, 150 ft [45 m], 20 Mar 2013, *Starr & Starr 130320-01*.

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