Sida fallax Walp 'ilima
MALVACEAE

Synonyms: *Anoda ovata* Meyen
Sida cordifolia L.
Sida dielli Gray,
Sida fallax var. *kauaiensis* Hochr.
Sida ledyardii St. John

General Description.—*Sida fallax*, known as 'ilima, is an erect to prostrate perennial herb or subshrub that grows to 0.2 to 1.5 m tall. The shrub varies from smooth to densely covered in woolly hairs, the hairs usually stellate. 'Ilima has simple leaves, the blades from 1 to 12 cm long, lanceolate-ovate to oblong or elliptic. The upper surfaces are typically bright green and smooth, or sparsely to densely pubescent, the lower surface densely pubescent. Flowers arise from an axil, solitary or two to seven per node born in the pedicel, at the end branches or in the leaves. Corolla is usually yellow to orange-yellow, sometimes dark maroon at the base. Fruits split into two or more carpels at maturity. Extensive variation in the morphology of this species exists in leaf size and shape, stature, pubescence, and arrangement of its inflorescence (Wagner and others 1990).

Range.—S*ida* is a genus of 125 to 150 species of tropical and subtropical regions of the world, from the Pacific Islands to Hawaii. 'Ilima has a series of similar forms common to all islands but also exhibits morphological variation from island to island. The shrub exists on all the main islands of Hawaii, including the atoll Midway and the pinnacle Nihoa from coastal to subalpine environments.

Ecology.—'Ilima displays numerous ecological types, occurring from sea level to altitudes of 600 m. Beach forms are low growing, dense, spreading mats, while upland types may grow erect and shrub-like (Krauss 1998). Lowland types are typically densely pubescent, while upland types are glabrous. 'Ilima occurs on a variety of substrate, from limestone reefs, dry lava fields, and along sandy and rocky shores. Often 'ilima represents the only ground cover, aside from nonnative species, on arid, rocky coastlines. 'Ilima appears intolerant of wildfire as adult plants typically do not resprout within burned areas. In montane dry shrublands or leeward Hawaii, 'ilima re-established from seed within 4 years of burning (Sherry and others 1999).

Reproduction.—The flower parts are typically in fours or fives and are true flowers with stamen and pistils. The ovules are covered by ovaries. Seeds are brown or black, obovoid, with three angles, 1.7 to 2.2 mm long, minutely pubescent around the raphe. Somatic chromosome number of 2n = 28 has been identified (Wagner and others 1990). It is probably wind pollinated, though the native yellow faced bee species *Hylaeus* has been observed visiting the flowers of ʻilima (Anonymous 2002).

Growth and Management.—Easily grown from seeds, 'ilima makes an excellent xeriscape plant. Seedlings germinate and grow quickly, while cuttings do less well. It requires full sunlight and light to moderate watering. Upland varieties can be susceptible to nematodes, while lowland types are resistant. Leaves may become yellow spotted and chlorotic, and will respond well to fertilizer with micronutrients (Krauss 1998). It does well in sandy or rocky soils.

Benefits.—'Ilima is an important plant to Hawaii and its people. Four separate types of 'ilima were

recognized. These included 'ilima-ku-kala, ilima-lei, 'ilima-ku-kahakai and 'ilima-koli-kukui (Stephens 2000). 'Ilima-ku-kala is the wild tall form found in the mountains. 'Ilima-ku-kahakai is the creeping form found along the coastline. 'Ilima-lei were cultivated by the Hawaiians for use in lei making. 'Ilima-koli-kukui was another cultivar with reddish brown flowers (Stephens 2000). 'Ilima is considered a special flower of the island of Oahu. 'Ilima leis are among the most treasured leis and are difficult to make, requiring over a thousand blossoms. At one time, only royalty were allowed to wear an 'ilima lei (Anonymous 2001). 'Ilima was also used medicinally. The juice squeezed from the flowers was used as a mild laxative for children, and the root bark mixed with flowers was used to treat asthma (Krauss 2000). Buds were chewed to quench thirst on hot, dry days. Stems were used to make baskets. 'Ilima is said to be one of the forms that Laka, the goddess of hula, could take at will (Quensell 2000).

Detrimental Effects.—‘Ilima is known to be host to nonnative rust, *Puccinia heterospora*, which is now becoming established on native plants. Infection may be heavy and conspicuous.

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