

known from Kauai (GDSI Database 2001; HINHP Database 2001; Service 1995b; 59 FR 09304; 65 FR 66808; J. Yoshioka, TNCH, pers. comm., 2000).

Solanum sandwicense was found on Oahu on talus slopes and in streambeds in open, sunny areas at elevations between 131 and 1,006 m (430 and 3,300 ft). Associated native plant species included *Pisonia* sp. or *Psychotria* sp. (HINHP Database 2001; Service 1995b; 59 FR 09304).

The major threats to occurrences of *Solanum sandwicense* on Oahu were habitat degradation by feral pigs; competition with the nonnative plant species *Passiflora suberosa*, *Psidium* sp., and *Schinus terebinthifolius*; fire; landslides; and a risk of extinction from naturally occurring events and reduced reproductive vigor due to the small number of existing individuals (HINHP Database 2001; Service 1995b; 59 FR 09304).

Spermolepis hawaiiensis (NCN)

Spermolepis hawaiiensis, a member of the parsley family (Apiaceae), is a slender annual herb with few branches. Its leaves are dissected into narrow, lance-shaped divisions. *Spermolepis hawaiiensis* is the only member of the genus native to Hawaii. It is distinguished from other native members of the family by being a nonsucculent annual with an umbrella-shaped inflorescence (Constance and Affolter 1999).

Flowering cycles, pollination vectors, seed dispersal agents, longevity, specific environmental requirements, and limiting factors of this species are unknown (Service 1999).

Historically, *Spermolepis hawaiiensis* was known from Kauai, Oahu, Lanai, and the island of Hawaii. It is currently known from Molokai and Maui as well as the above four islands. On Oahu, there are 6 known occurrences totaling between 110 and 910 individuals, on Makua-Keaau Ridge and near the entrance of Diamond Head on State, Federal, city, and county lands (EDA Database 2001; GDSI 2001; HINHP Database 2001).

Spermolepis hawaiiensis on Oahu typically grows on steep to vertical cliffs or at the base of cliffs and ridges in coastal dry cliff vegetation at elevations of 25 to 839 m (82 to 2,752 ft). Associated native plant species include *Artemisia australis*, *Bidens* sp.,

Dodonaea viscosa, *Doryopteris* sp., *Heteropogon contortus*, *Santalum ellipticum*, or *Waltheria indica* (HINHP Database 2001; EDA, *in litt.*, 2001).

The primary threats to *Spermolepis hawaiiensis* on Oahu are habitat degradation by feral goats; competition with nonnative plant species such as *Lantana camara*, *Melinis minutiflora*, and various grasses; and habitat destruction and death of plants due to erosion, landslides, and rock slides resulting from natural weathering (HINHP Database 2001; Service 1999; 59 FR 56333).

Tetramolopium lepidotum ssp. *lepidotum* (NCN)

Tetramolopium lepidotum ssp. *lepidotum*, a short-lived perennial member of the aster family (Asteraceae), is an erect shrub 12 to 36 cm (4.7 to 14 in) tall, branching near the ends of the stems. Leaves are lance-shaped and wider at the leaf tip. This taxon can be distinguished from the other extant species on Oahu by its bisexual disk flowers and its inflorescence of 6 to 12 heads (Lowrey 1999).

Tetramolopium lepidotum ssp. *lepidotum* produces flowers and fruit from April through July. Little else is known about its flowering cycles, pollination vectors, seed dispersal agents, longevity, specific environmental requirements, and limiting factors (Service 1995b; 59 FR 09304).

Historically, *Tetramolopium lepidotum* ssp. *lepidotum* was known from Lanai and nearly the entire length of the Waianae Mountains, from Makua Valley to Cachexia Ridge, on Oahu. It is now known only from Oahu. A total of 5 occurrences of approximately 15 individual plants are currently known from Federal, State, and private lands on Mauna Kapu, Ekahanui-Lualualei summit, Waianae Kai, and Puu Hapapa. TNCH has outplanted three individuals in a fenced exclosure within Honouliuli Preserve. These plants have since died, yet two healthy individuals have sprouted near the exclosure (EDA Database 2001; GDSI 2001; HINHP 2001; Lowrey 1999; Service 1998b; 56 FR 55770).

Tetramolopium lepidotum ssp. *lepidotum* typically grows on grassy ridge tops, slopes, or cliffs in windblown dry forests at elevations of 330 to 1,157 m (1,082 to 3,795 ft).

Associated native species include *Bidens* sp., *Carex wahuensis*, *Eragrostis* sp., or *Metrosideros polymorpha* (HINHP Database 2001).

The major threats to *Tetramolopium lepidotum* ssp. *lepidotum* on Oahu are competition from the nonnative plant species *Andropogon virginicus*, *Melinis minutiflora*, and *Schinus terebinthifolius*; habitat degradation and predation by feral goats and pigs; fire; and a risk of extinction and/or reduced reproductive vigor due to the small number of occurrences and individuals (HINHP Database 2001; Service 1998b; 56 FR 55770).

Vigna o-wahuensis (NCN)

Vigna o-wahuensis, a member of the pea family (Fabaceae), is a slender, twining, short-lived perennial herb with fuzzy stems. Each leaf is made up of three leaflets that vary in shape from round to linear. This species differs from others in the genus by its thin yellowish petals, sparsely hairy calyx, and thin pods that may or may not be slightly inflated (Geesink *et al.* 1999).

Flowering cycles, pollination vectors, seed dispersal agents, longevity, specific environmental requirements, and limiting factors of this species are unknown (Service 1999).

Historically, *Vigna o-wahuensis* was known from Niihau, Oahu, Molokai, Lanai, Kahoolawe, Maui, and the island of Hawaii. Currently, *V. o-wahuensis* is known from the islands of Molokai, Lanai, Kahoolawe, Maui, and Hawaii. There are no currently known occurrences on Oahu. The last collection on Oahu was made in 1938 on the Mokulua Islets and North Islet (HINHP Database 2001).

Vigna o-wahuensis on Oahu occurred on open dry fossil reef, climbing over shrubs and grasses on limestone deposit, and on fairly steep slopes from sea level to 609 m (0 to 1,998 ft) in elevation. The associated native plant species on Oahu are unknown (HINHP Database 2001).

Nothing is known of the threats for *Vigna o-wahuensis* on Oahu (Service 1999).

A summary of occurrences and landownership for the 101 plant species reported from the island of Oahu is given in Table 1.