

shorter than the sepals (Wagner *et al.* 1999).

Little is known about the life history of this species. Its flowering cycles, pollination vectors, seed dispersal agents, longevity, specific environmental requirements, and limiting factors are unknown (Service 1996a).

The historical range of *Silene lanceolata* includes five Hawaiian Islands: Kauai, Oahu, Molokai, Lanai, and Hawaii. *Silene lanceolata* is presently found on the islands of Molokai, Oahu, and Hawaii. On Molokai, one occurrence of approximately 100 individuals was found in 1987 on private land near Puu Kolekole (GDSI 2000; Service 1996a; K. Wood, *in litt.* 1999).

On Molokai, *Silene lanceolata* grows on gulch slopes, ridge tops, and cliffs in dry to mesic shrubland between 581 and 1,043 m (1,906 and 3,421 ft) in elevation. Associated native plant species include *Bidens menziesii*, *Carex wahuensis*, *Diospyros sandwicensis*, *Dodonaea viscosa*, *Dubautia linearis*, *Leptecophylla tameiameia*, *Metrosideros polymorpha*, or *Schiedea* spp. (NCN) (Service 1996a; J. Lau, *in litt.* 2001; K. Wood, *in litt.* 1999).

Habitat destruction by feral ungulates (goats and pigs), wildfires, and competition by invading non-native plants are immediate threats to *Silene lanceolata* on Molokai (Service 1996a, 57 FR 46325).

*Solanum incompletum* (popolo ku mai)

*Solanum incompletum*, a short-lived perennial member of the nightshade family (Solanaceae), is a woody shrub. Its stems and lower leaf surfaces are covered with prominent reddish prickles or sometimes with yellow fuzzy hairs on young plant parts and lower leaf surfaces. This species differs from other native members of the genus by being generally prickly and having loosely clustered white flowers, curved anthers about 2 mm (0.08 in) long, and berries 1 to 2 cm (0.4 to 0.8 in) in diameter (Symon 1999).

Little is known about the life history of *Solanum incompletum*. Its flowering cycles, pollination vectors, seed dispersal agents, longevity, specific environmental requirements, and limiting factors are unknown (59 FR 56333).

Historically, *Solanum incompletum* was known from Lanai, Maui, and the island of Hawaii. According to David Symon (1999), the known distribution of *Solanum incompletum* also extended to the islands of Kauai and Molokai. Currently, the species is only known from the island of Hawaii. It is unclear

when the last individual was collected on Molokai (HINHP Database 2000).

Nothing is known of the preferred habitat of or native plant species associated with *Solanum incompletum* on the island of Molokai.

Nothing is known of the threats to *Solanum incompletum* on Molokai.

*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 non-succulent annual with an umbrella-shaped inflorescence (Constance and Affolter 1999).

Little is known about the life history of *Spermolepis hawaiiensis*. Its flowering cycles, pollination vectors, seed dispersal agents, longevity, specific environmental requirements, and limiting factors are unknown (Service 1999a).

Historically, *Spermolepis hawaiiensis* was known from Kauai, Oahu, Lanai, and the island of Hawaii. Currently, it is found on Kauai, Oahu, Molokai, Lanai, Maui, and the island of Hawaii. On Molokai, there is one known occurrence with approximately 600 individuals on privately owned land in Kamalo (GDSI 2000, HINHP Database 2000, Service 1999a, 59 FR 56333).

On Molokai, *Spermolepis hawaiiensis* is known from ridge crests and gulch slopes in dry to mesic shrublands at elevations between 432 and 972 m (1,416 and 3,188 ft). Associated plant species include *Dodonaea viscosa*, *Leptecophylla tameiameia*, or *Metrosideros polymorpha* (J. Lau, *in litt.* 2001).

The primary threats to *Spermolepis hawaiiensis* on Molokai are habitat degradation by feral goats; competition with various non-native plants, such as *Lantana camara*, *Melinis minutiflora*, and grasses; and habitat destruction and extinction due to natural environmental events, such as erosion, landslides, and rockslides due to natural weathering (Service 1999a, 59 FR 56333).

*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, which 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, which may or may not be slightly inflated (Geesink *et al.* 1999).

Little is known about the life history of this species. Its flowering cycles, pollination vectors, seed dispersal agents, longevity, specific environmental requirements, and limiting factors are unknown (Service 1999a).

Historically, *Vigna o-wahuensis* was known from Niihau, Oahu, Molokai, Lanai, Kahoolawe, Maui, and the island of Hawaii. Currently, it is known from the islands of Molokai, Lanai, Kahoolawe, Maui, and the island of Hawaii. On Molokai, 2 occurrences with approximately 16 individuals occur on privately owned lands at Onini Gulch and Makolelau (GDSI 2000, HINHP Database 2000, Service 1999a).

On Molokai, *Vigna o-wahuensis* occurs in dry to mesic grassland and shrubland between 516 and 1,041 m (1,692 and 3,414 ft) in elevation. Associated plant species include *Chenopodium oahuense*, *Cyperus laevigatus* (makaloa), *Dodonaea viscosa*, *Eragrostis variabilis*, *Heteropogon contortus*, *Ipomoea* sp. (morning glory), *Leptecophylla tameiameia*, *Scaevola sericea*, *Sida fallax*, or *Vitex rotundifolia* (pohinahina) (Geesink *et al.* 1999, HINHP Database 2000, Service 1999a).

The primary threats to *Vigna o-wahuensis* on Molokai are competition with various non-native plant species and a risk of extinction due to random environmental events (primarily fire) and/or reduced reproductive vigor because of the small number of existing occurrences and individuals (Service 1999a, 59 FR 56333).

*Zanthoxylum hawaiiense* (ae)

*Zanthoxylum hawaiiense*, a long-lived perennial in the rue family (Rutaceae), is a medium-sized tree with pale to dark gray bark and lemon-scented leaves. It is distinguished from other Hawaiian members of the genus by several characteristics: three leaflets all of similar size, one joint on the lateral leaf stalk, and sickle-shape fruits with a rounded tip (Stone *et al.* 1999).

Little is known about the life history of this species. Its flowering cycles, pollination vectors, seed dispersal agents, longevity, specific environmental requirements, and limiting factors are unknown (Service 1996b).

Historically, *Zanthoxylum hawaiiense* was known from the islands of Kauai, Molokai, Lanai, Maui, and the island of Hawaii. Currently, *Zanthoxylum hawaiiense* is found on Kauai, Molokai, Maui, and the island of Hawaii. On Molokai, the four occurrences with a