

events (e.g., landslides or hurricanes) and/or reduced reproductive vigor, due to the small number of individuals in the only known population. Based on observations that indicate that introduced snails and slugs may consume seeds and seedlings, it is likely that introduced molluscs also represent a major threat to this species (Service 1999; 61 FR 53108).

*Sesbania tomentosa* (ohai)

*Sesbania tomentosa*, a member of the pea family (Fabaceae), is typically a sprawling short-lived perennial shrub, but may also be a small tree. Each compound leaf consists of 18 to 38 oblong to elliptic leaflets which are usually sparsely to densely covered with silky hairs. The flowers are salmon colored, tinged with yellow, orange-red, scarlet or, rarely, pure yellow coloration. *Sesbania tomentosa* is the only endemic Hawaiian species in the genus, differing from the naturalized *S. sesban* by the color of the flowers, the longer petals and calyx, and the number of seeds per pod (Geesink *et al.* 1999).

The pollination biology of *Sesbania tomentosa* has been studied by David Hopper, University of Hawaii. His findings suggest that although many insects visit *Sesbania* flowers, the majority of successful pollination is accomplished by native bees of the genus *Hylaeus*, and that populations at Kaena Point on Oahu are probably pollinator-limited. Flowering at Kaena Point is highest during the winter-spring rains, and gradually declines throughout the rest of the year. Other aspects of this plant's life history are unknown (Service 1999).

Currently, *Sesbania tomentosa* occurs on six of the eight main Hawaiian Islands (Kauai, Oahu, Molokai, Kahoolawe, Maui, and Hawaii) and in the Northwestern Hawaiian Islands (Nihoa and Necker islands). Although once found on Niihau and Lanai, it is no longer extant on those islands. On Kauai, *S. tomentosa* is known from one occurrence, with 11 individuals, on State-owned land at Polihale State Park (GDSI 2000; HINHP Database 2000; 59 FR 56333).

*Sesbania tomentosa* is found on sandy beaches, dunes, or pond margins at elevations between 0 and 212 m (0 and 694 ft). It commonly occurs in coastal dry shrublands or mixed coastal dry cliffs with the associated native plant species *Chamaesyce celastroides*, *Cuscuta sandwichiana* (kauna'oa), *Dodonaea viscosa*, *Heteropogon contortus*, *Myoporum sandwicense*, *Nama sandwicensis*, *Scaevola sericea*, *Sida fallax*, *Sporobolus virginicus*, *Vitex rotundifolia*, or *Waltheria indica*

(HINHP Database 2000; Service 1999; K. Wood, pers. comm., 2001).

The primary threats to *Sesbania tomentosa* on Kauai are habitat degradation caused by competition with various nonnative plant species; lack of adequate pollination; seed predation by rats, mice, and, potentially, nonnative insects; fire; and destruction by off-road vehicles and other human disturbances (Service 1999; 59 FR 56333).

*Silene lanceolata* (NCN)

*Silene lanceolata*, a member of the pink family (Caryophyllaceae), is an upright, short-lived perennial plant with stems 15 to 51 cm (6 to 20 in) long, which are woody at the base. The flowers are white with deeply-lobed, clawed petals. This species is distinguished from other Hawaiian *Silene* species by its erect stem, terminal inflorescence, and the length of the calyx, clawed petals, and carpophore (ovary structure) (Wagner *et al.* 1999).

Little is known about the life history of *Silene lanceolata*. Its flowering cycles, pollination vectors, seed dispersal agents, longevity, specific environmental requirements, and limiting factors are unknown (Service 1996; 57 FR 46325).

The historical range of *Silene lanceolata* includes five Hawaiian Islands: Kauai, Oahu, Molokai, Lanai, and Hawaii. *Silene lanceolata* is presently extant on the islands of Molokai, Oahu, and Hawaii. It was last observed on Kauai in the 1850s (GDSI 2000; Service 1996; 57 FR 46325).

Nothing is known of the preferred habitat of or native plant species associated with *Silene lanceolata* on the island of Kauai.

Nothing is known of the threats to *Silene lanceolata* on the island of Kauai.

*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 *S. incompletum* also extended to the islands of Kauai and Molokai. Currently, the species is only known from the island of Hawaii. The reported presence on Kauai may be erroneous (HINHP Database 2000; Christopher Puttock, Bernice P. Bishop Museum, pers. comm., 2001).

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

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

*Solanum sandwicense* (aiakeakua, popolo)

*Solanum sandwicense*, a member of the nightshade family (Solanaceae), is a large sprawling shrub. The younger branches are more densely hairy than older branches and the oval leaves usually have up to 4 lobes along the margins. This short-lived perennial species differs from others of the genus in having dense hairs on young plant parts, a greater height, and lacking prickles (Symon 1999).

Little is known about the life history of *Solanum sandwicense*. Flowering cycles, pollination vectors, seed dispersal agents, longevity, specific environmental requirements, and limiting factors are unknown (Service 1995).

Historically, *Solanum sandwicense* was known from both Oahu and Kauai. Currently, this species is only known from Kauai. On Kauai, this species was historically reported from locations in the Kokee region bounded by Kalalau Valley, Milolii Ridge, and extending to the Hanapepe River. Currently, *S. sandwicense* is only known from eight occurrences of 14 individual plants on private and State lands (Kokee State Park, Kuia NAR, and Na Pali-Kona Forest Reserve) at Kahuamāa Flats, Awaawapuhi Valley, Kumuwela Ridge, Waialae Valley, and Mokuone Stream (GDSI 2000; HINHP Database 2000; Service 1995; 59 FR 9304; K. Wood, *in litt.* 1999; Joan Yoshioka, The Nature Conservancy of Hawaii (TNCH), pers. comm., 2000).

This species is typically found under forest canopies at elevations between 445 and 1,290 m (1,460 and 4,232 ft) in diverse lowland or montane *Acacia koa* or *A. koa*-*Metrosideros polymorpha* mesic forests or occasionally in wet forests. Associated native plant species include *Alphitonia ponderosa*, *Athyrium sandwicensis*, *Bidens* spp.,