

owned seabird sanctuary (GDSI 2001; HINHP Database 2001; Service 1999; 59 FR 56333; R. Hobdy *in litt.* 2000).

Sesbania tomentosa is found on windswept slopes, sea cliffs, and cinder cones in *Scaevola taccada* coastal dry shrublands at elevations between 0 and 608 m (0 and 1,993 ft) and containing one or more of the following associated native plant species: *Bidens* spp.; *Diospyros sandwicensis*; stunted *Dodonaea viscosa*; *Jacquemontia ovalifolia* ssp. *sandwicensis* (pauohiika); *Melanthera integrifolia*; or *Sida fallax* (HINHP Database 2001; Service 1999; 59 FR 56333; R. Hobdy, pers. comm., 2001).

The primary threats to *Sesbania tomentosa* on Maui are habitat degradation caused by competition with various nonnative plant species such as *Lantana camara*, *Waltheria indica* (uhaloa), and various grass species; grazing and trampling by feral cattle; lack of adequate pollination; seed predation by rats, mice and, potentially, nonnative insects; fire; and destruction by off-road vehicles and other human disturbances. Threats to *S. tomentosa* on Kahoolawe include habitat degradation caused by competition with various nonnative plant species, erosion, and trampling by cats and seabirds (Service 1999; 59 FR 56333; P. Higashino, pers. comm., 2000).

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*. Flowering cycles, pollination vectors, seed dispersal agents, longevity, specific environmental requirements, and limiting factors are unknown (Service 1999; 59 FR 56333).

Historically, *Solanum incompletum* was known from Lanai, scattered locations on 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, *S. incompletum* is only known from the island of Hawaii (HINHP Database 2001; Service 1999; 59 FR 56333).

Nothing is known of the preferred habitat of, or native plant species associated with, *Solanum incompletum* on the island of Maui (Service 1999; 59 FR 56333; R. Hobdy, pers. comm., 2001), and nothing is known of the threats to *Solanum incompletum* on the island of Maui (Service 1999; 59 FR 56333).

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*. Flowering cycles, pollination vectors, seed dispersal agents, longevity, specific environmental requirements, and limiting factors are unknown (Service 1999; 59 FR 56333).

Historically, *Spermolepis hawaiiensis* was known from the islands of Kauai, Oahu, Lanai, and Hawaii. Currently, it is extant on Kauai, Oahu, Molokai, Lanai, Maui, and Hawaii. On Maui, there are five known occurrences with hundreds to thousands of individuals on State (Lihau section of West Maui NAR and Kanaio NAR) and privately owned lands within the West Maui Mountains Watershed Partnership in Puu Hipa, south of Kanaha Stream, Olowalu, and Kanaio (GDSI 2001; HINHP Database 2001; Service 1999; 59 FR 56333; Charles Chimera, USGS-BRD, pers. comm., 2000).

Spermolepis hawaiiensis on Maui is known from shady spots in *Dodonaea viscosa* lowland dry shrubland at elevations between 221 and 742 m (725 and 2,434 ft) and containing one or more of the following associated native species: *Diospyros* spp.; *Eragrostis variabilis*; *Erythrina sandwicensis*; *Gouania hillebrandii*; *Heteropogon contortus*; *Melanthera lamarum*; *Myoporum sandwicense*; *Pleomele* spp.; *Santalum ellipticum*; *Sida fallax*; or *Wikstroemia* spp. (HINHP Database 2001; Service 1999; 59 FR 56333; C. Chimera, pers. comm., 2000; R. Hobdy, pers. comm., 2001).

The primary threats to *Spermolepis hawaiiensis* on Maui are habitat degradation by feral goats, pigs, cattle, and axis deer; competition with various nonnative plants, such as *Lantana camara* and *Melinis repens*; fire; erosion, landslides, and rock slides

caused by natural weathering, which result in the death of individual plants as well as habitat destruction (Service 1999; 59 FR 56333).

Tetramolopium arenarium (NCN)

Tetramolopium arenarium is a short-lived perennial and an upright, branched shrub in the sunflower family (Asteraceae). Alternate leaves are lance-shaped, hairy, glandular, and gray-green. This species is separated from other species of the genus in the Hawaiian Islands by several characters: Upright habit; number of heads per flower cluster; presence and type of glands and hairs; size of male ray flowers; number and color of bisexual disk flowers; and fruit shape and pubescence. Three infra-specific taxa are recognized: *Tetramolopium arenarium* ssp. *arenarium* var. *arenarium* (from Maui and Hawaii); *T. arenarium* ssp. *arenarium* var. *confertum* (from Hawaii); and *T. arenarium* ssp. *laxum* (from Maui). These taxa are distinguished by a combination of characters.

Tetramolopium arenarium ssp. *arenarium* var. *confertum* and *T. arenarium* ssp. *laxum* have not been seen the late 1800s (Lowrey 1999).

Little is known about the life history of *Tetramolopium arenarium*. Flowering cycles, pollination vectors, seed dispersal agents, longevity, specific environmental requirements, and limiting factors are unknown (Service 1996a; 59 FR 10305).

Tetramolopium arenarium was historically known from the islands of Maui and Hawaii. The species was considered extinct until *T. arenarium* ssp. *arenarium* var. *arenarium* was recently rediscovered on the island of Hawaii. Both subspecies were last seen on Maui in the late 1800s (GDSI 2001; HINHP Database 2001; Service 1996a; 59 FR 10305).

Nothing is known about the preferred habitat of or native species associated with *Tetramolopium arenarium* on Maui (Service 1996a; 59 FR 10305; R. Hobdy, pers. comm., 2001), and nothing is known of the threats to *Tetramolopium arenarium* on the island of Maui (Service 1996a; 59 FR 10305).

Tetramolopium remyi (NCN)

Tetramolopium remyi, a short-lived perennial member of the sunflower family (Asteraceae), is a many branched, decumbent (reclining, with the end ascending) or occasionally erect shrub up to about 38 cm (15 in) tall. The stems, leaves, flower bracts, and fruit are covered with sticky hairs. *Tetramolopium remyi* has the largest flower heads in the genus. Two other