

FERRIS'S MILK-VETCH

Astragalus tener var. *ferrisae*

USFWS: Species of Concern

CDFG: None

CNPS: List 1B

Species Account

Status and Description. Ferris's milk-vetch (*Astragalus tener* var. *ferrisae*) is a Federal Species of Concern and a CNPS List 1B species. It is a 6 to 26 cm tall, delicate annual herb in the pea family (Fabaceae). The leaves are 2 to 6 cm long, pinnately compound with 7 to 17 well-separated leaflets that are 3 to 15 mm long and lanceolate to obovate in shape. The inflorescence of Ferris's milk-vetch consists of 2 to 12 pink-purple pea-flowers. The fruits are 2.5 to 5 cm long legumes (peapods) on short, stalk-like bases. This species is distinguished from *Astragalus tener* var. *tener*, another List 1B species occurring in Solano County, by its long, very incurved peapods (Baldwin 2012).

Range and Distribution. Ferris's milk-vetch occurred in the north Central Valley, from Solano County north to Glenn and Butte counties (CNPS 2011). It was thought to be extinct until it was rediscovered in Butte Sink, WA, in 1989. Although the CNDDDB lists nine of the eighteen historical occurrences as "presumed extant", only two have been confirmed extant since 1996 (USFWS 2005). The confirmed extant occurrences are in Saxon Station in Yolo County and at the Gray Lodge Waterfowl Management Area in Butte County. The other occurrences that are presumed extant are in Colusa, Glenn, Solano and Sutter Counties (CNPS 2011).

Habitat and Ecology. Ferris's milk-vetch grows in vernal mesic meadows and mildly alkaline flats in valley and foothill grassland, usually on dry, heavy clay or adobe soil at elevations ranging from 6 to 46 meters. It is an annual but the conditions necessary for seed germination are unknown. It flowers April through May (CNDDDB 2011, CNPS 2011). Plant species associated with Ferris's milk vetch have rarely been reported, but could include hairy checker-mallow (*Sidalcea hirsuta*), bog bulrush (*Scirpus mucronatus*), blunt spikerush (*Eleocharis obtusa*) and Lemmon's canary (*Phalaris lemmonii*), as well as non-native grasses and forbs (USFWS 2005).

Population Levels and Occurrence in Plan Area. Ferris's milk-vetch would occur in the low mesic areas within the vernal pool vegetation areas of the the Plan Area's Valley Grasslands and Vernal Pools Natural Community. The only record of Ferris's milk-vetch in Solano County is from a 1962 herbarium collection from a site located approximately seven miles southeast of Dixon. Habitat for this plant still exists, however, no plants were observed during surveys in 2002 (CNDDDB 2011). No data are available on the population size at this site (CNDDDB 2011, CNPS 2011). There is a nearby record from the Glide Tule Ecological Reserve in Yolo County, immediately adjacent to the Plan Area. This population consisted of approximately 12 plants during a 2003 survey, but supported approximately 2000 plants during the 2007 growing season.(CNDDDB 2011)

Threats to the Species. Much of the historical habitat of Ferris's milk-vetch has been converted to agriculture (CNPS 2011), thus the likelihood of Ferris's milk-vetch occurring in Solano County has been greatly reduced. Small population size is also a threat for all extant occurrences, which ranges in size from 10 to 400 individuals during the 1990s; growing plants have been absent from all except one population over the past several years (Silveira *in litt.* 2000). An additional threat is the decline of

pollinators. Currently, five occurrences are afforded some protection by virtue of their location on public land, but no particular conservation efforts have been undertaken in those areas (USFWS 2005).

Literature Cited

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