

LEGENERE

Legenere limosa

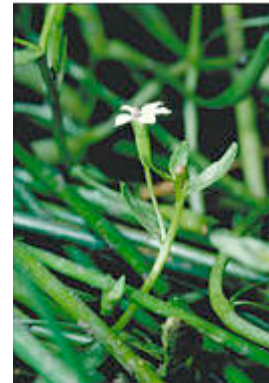
USFWS: Species of Concern

CDFG: None

CNPS: List 1B

Species Account

Status and Description. *Legenere (Legenere limosa)* is a federal Species of Concern and a CNPS List 1B species. *Legenere* is an emergent aquatic, or terrestrial, annual herb in the bellflower family (Campanulaceae). When the waterbody has dried out, its 10 to 30 cm long, delicate stems trail along the ground. The small, 2 to 10 mm long, narrow leaves support flowers in the upper axils. The flower consists of an elongate inferior ovary, five triangular sepals, and a white, two-lipped corolla, about 5 mm long. The entire flower (including the ovary) is less than 1 cm long (Baldwin 2012).



Range and Distribution. *Legenere* has 54 occurrences that are presumed to be extant, including 10 in Solano County near Dozier. There are 22 occurrences in Sacramento County, including 9 in the vicinity of Elk Grove and 6 in the vicinity of Mather Air Force Base (CNDDDB 2011, USFWS 2005). Other Counties where this species is presumed to remain are Alameda, Santa Clara, Sonoma, Lake, Napa, Placer, San Joaquin, San Mateo, Shasta, Tehama and Yuba (CNPS 2011, CNDDDB 2011).

John Game

Habitat and Ecology. *Legenere* grows in a variety of habitats including vernal pools, vernal marshes, artificial ponds, and floodplains of intermittent streams (USFWS 2005). Occupied vernal pool types include Northern Basalt Flow, Northern Claypan, Northern Hardpan, Northern Volcanic Ashflow, and Northern Volcanic Mudflow (Sawyer and Keeler-Wolf 1995). *Legenere* grows in shallower areas of pools (often less than 20 centimeters deep), although pool ranges from 4 cm to 38 cm have been recorded. Pool size ranges from 4 to 41 hectares, with an average of 2.76 hectares. Soils underlying occupied pools are typically shallow, acidic clays with few stones (Barbour et al. 2007, Holland 1984). *Legenere* occurs at elevations ranging from 3 meters in Solano County to 1,024 meters in Alameda County (CNDDDB 2005). The surrounding plant community may be grassland, open woodland, or hardwood forest containing oaks (*Quercus* spp.) or California buckeye (*Aesculus californica*). Plant species most commonly associated with *legenere* are smooth goldfields (*Lasthenia glaberrima*) and creeping spikerush (*Eleocharis macroctachya*), and to a lesser extent other rare plants such as Bogg's Lake hedge-hyssop (*Gratiola heterosepala*) and dwarf downingia (*Downingia pusilla*) (USFWS 2005). Due to its small, delicate stature, *legenere* is often difficult to locate in dense vernal pool vegetation. It blooms April through June (Baldwin 2012, CNDDDB 2011, CNPS 2011).

Population Levels and Occurrence in Plan Area. In the Plan Area, *legenere* grows in vernal pool bottoms and along ephemeral drainages within the Valley Floor Grasslands and Vernal Pool Natural Community. At least 14 populations of *legenere* are reported from the Jepson prairie and vicinity portions of the Plan Area, including Jepson Prairie Preserve, Calhoun Cut Ecological Reserve, and private property in the Dozier vernal pool area. There is one population reported from near Denverton. Two historic records of populations near Elmira and Suisun Station are considered

extirpated as a result of residential development (LSA 2003 field visit). (See the Species Occurrences map)

Threats to the Species. The vernal pool habitat of *legenere* is primarily threatened by grazing, development, non-native plants, and road widening (CNPS 2011). Of the six occurrences of *legenere* known to be extirpated, two were destroyed by conversion to agriculture, one by changes in hydrology, two by urban development, and one by unknown causes (Holland 1984). About one third of extant occurrences are in areas slated for commercial or residential development and more than one third of extant occurrences are subject to livestock grazing, although not all grazed populations are declining (Holland 1984, CNDDDB 2011). Competition from (*Phlya nodiflora*) is a threat at one Solano County site (CNDDDB 2011). If insects are involved in pollinating *legenere*, then a decline in insect populations also poses a potential threat. Eighteen occurrences of *legenere* are (or were) on nature preserves or publicly owned lands. In Solano County, five occurrences of *legenere* are protected on Jepson Prairie Preserve and two occurrences are protected on the Calhoun Cut Ecological Reserve (USFWS 2005).

Literature Cited

- Barbour, M.G., Solomeshch, A.I., Buck, J.J. 2007. *Classification, Ecological Characterization, and Presence of Listed Plant Taxa of Vernal Pool Associations in California*. United States Fish and Wildlife Service, Sacramento, California and University of California Davis, Davis, California.
- California Native Plant Society (CNPS). 2011. *Electronic Inventory of Rare and Endangered Plants of California*. Sacramento, California.
- California Natural Diversity Data Base. 2011. Natural Heritage Division. California Department of Fish and Game, State of California.
- Baldwin, B.G., D.H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D.H. Wilken, editors. 2012. *The Jepson Manual: Vascular Plants of California*, second edition. University of California Press. Berkeley, California.
- Holland, R. F. 1984. Endangerment status of *Legenere limosa* (Greene) McVaugh in California. Unpublished report, Orangevale, California. 46 pages.
- Jepson Prairie Docent Program (Jepson Prairie). 1998. *Jepson Prairie Preserve Handbook*.
- Personal Observation. LSA Associates, Inc. 2003.
- Sawyer, J. O., and T. Keeler-Wolf. 1995. A manual of California vegetation. California Native Plant Society, Sacramento, California. 471 pages.
- U.S. Fish and Wildlife Service (USFWS). 2005 Recovery plan for vernal pool ecosystems of California and Southern Oregon. Portland, OR.