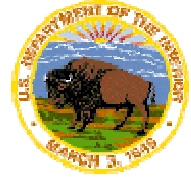




U.S. Fish & Wildlife Service  
Sacramento Fish & Wildlife Office



Species Account  
MANY-FLOWERED NAVARRETIA  
*Navarretia leucocephala* ssp. *plieantha*

CLASSIFICATION: ENDANGERED

Federal Register Notice 62:33029; June 18, 1997

[http://ecos.fws.gov/docs/federal\\_register/fr3091.pdf](http://ecos.fws.gov/docs/federal_register/fr3091.pdf)  
(83 KB)

STATE LISTING STATUS AND CNPS CODE:

This species was listed as endangered by the California Department of Fish and Game in November 1979. The California Native Plant Society has placed it on List 1B (rare or endangered throughout its range).

CRITICAL HABITAT: None designated

RECOVERY PLAN: Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon; December 15, 2005.

[www.fws.gov/sacramento/es/recovery\\_plans/vp\\_recovery\\_plan\\_links.htm](http://www.fws.gov/sacramento/es/recovery_plans/vp_recovery_plan_links.htm)

5-YEAR REVIEW: Completed January 2009. No change.

[http://ecos.fws.gov/docs/five\\_year\\_review/doc2391.pdf](http://ecos.fws.gov/docs/five_year_review/doc2391.pdf)

DESCRIPTION



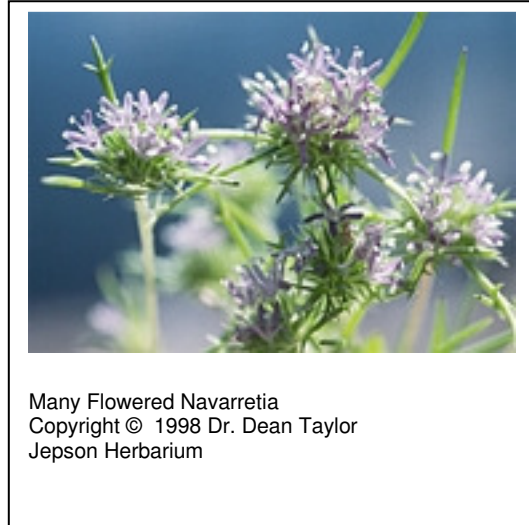
Many-Flowered Navarretia  
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Many-flowered navarretia (*Navarretia leucocephala* ssp. *plieantha*) is a prostrate annual herb in the phlox family (Polemoniaceae). This plant forms small mats that can range from 2-8 inches wide. The leaves are about 1 inch long, linear and have a few lobes.

The plant flowers in May to June. The flowers are clustered in a head at the end of stems. The head is composed of 20-50 white to blue flowers.

Many-flowered navarretia grows with and can be easily confused with several other navarretias. Among the closely related ones are the endangered few-flowered navarretia (*Navarretia leucocephala* ssp. *pauciflora*) and Baker's navarretia (*Navarretia leucocephala* spp. *bakeri*).

Many-flowered navarretia forms hybrids with few-flowered navarretia. The hybrids do not fit well into any established subspecies. See Hickman (1993) in General Information about



California Plants, below, for a detailed description of the various subspecies of *Navarretia leucocephala*.

#### DISTRIBUTION

Many-flowered navarretia is found in dry meadows, along the margins of volcanic ash vernal pools and lakes and in open wet ground in forest openings. Only a few locations of this species are known from Lake and Sonoma counties. The plant grows in a 400 square mile area, at elevations from 1,800 to 2,800 feet.

U.S.G.S. 7.5 Minute Quads: Kenwood (501A)\* 3812245, Santa Rosa (501B) 3812246, Mark West Springs (517C) 3812256, Healdsburg (518D) 3812257, Clearlake Highlands (533B) 3812286, Whispering Pines (533C) 3812276, Middletown (533D) 3812275, Kelseyville (534A) 3812287 (\* Presumed extirpated)

#### THREATS

The primary threats to vernal pool species are activities that result in the direct destruction of the plants and their habitats or hydrologic changes in their vernal pool habitats. Damage or destruction of vernal pool habitat happens quickly and easily due to the extremely crumbly nature of the soil and the dependency of the pool upon an intact durapan or impermeable subsurface soil layer. Attempted drainage of a pool in Lake County containing many-flowered navarretia resulted in the invasion of two competitive weeds, yellow star-thistle (*Centaurea solstitialis*) and medusahead (*Taeniatherum caput-medusa*).

Off-highway vehicle use has resulted and continues to result in the destruction of plants and habitat at four population sites in Lake County. The California Department of Fish and Game has provided fencing at the Loch Lomond site to prevent off-highway vehicle entry into the area.

#### REFERENCES FOR ADDITIONAL INFORMATION

##### [General references about California plants](#)

[www.fws.gov/sacramento/es/plant\\_spp\\_accts/plant\\_references.htm](http://www.fws.gov/sacramento/es/plant_spp_accts/plant_references.htm)

McCarten, N. 1985. A survey of *Navarretia pauciflora* and *Navarretia plieantha* (Polemoniaceae): Two rare endemics plant species from the vernal pools of the California North Coast Ranges. Endangered Plant Program, Dept. Fish and Game.

For larger images and permission information see CalPhotos <http://calphotos.berkeley.edu/>.

#### VERNAL POOLS:

Vernal pools are a unique kind of wetland ecosystem. Central to their distinctive ecology is their ephemeral nature. Vernal pools fill with water temporarily, typically during the winter and spring, and then disappear until the next rainy season.

In California, where extensive areas of vernal pool habitat developed over a long geological timeframe, unique suites of plants and animals have evolved that are specially adapted to the unusual conditions of vernal pools. Fish and other predators are among species that have been excluded evolutionarily by annual filling and drying cycles of vernal pools.

The prolonged annual dry phase of the vernal pool ecosystem also has prevented the establishment of plant species typical of more permanent wetland ecosystems.

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Last updated February 22, 2010