



Presidio Clarkia  
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## Sacramento Fish & Wildlife Office

### Species Account

#### **PRESIDIO CLARKIA** **(Clarkia franciscana)**

**CLASSIFICATION:** **Federal Endangered Species** (*Federal Register* [60:6671](#) (pdf); February 3, 1995).

**CRITICAL HABITAT:** None designated.

**RECOVERY PLAN:** [Recovery Plan for Serpentine Soil Species of the San Francisco Bay Area, September 30, 1998 \(pdf format\)](#)

#### DESCRIPTION:

Presidio clarkia (*Clarkia franciscana*) is a slender, erect, herbaceous annual of the evening-primrose family (Onagraceae). It grows to 16 inches tall with few, very small and narrow leaves. The lavender-pink petals have a lighter basal portion and a reddish-purple basal spot. The slender capsule is 1-2 inches long.

Presidio clarkia can be distinguished from reddened clarkia (*Clarkia rubicunda*), also known as ruby chalice fairyfan, a related species that may occur in the same area, by the fact that its petals have irregular teeth on their apex margin (reddened clarkia has petals rounded at the apex). See Hickman (1993) for a detailed description of both species.

#### DISTRIBUTION:

Presidio clarkia is restricted to grassland communities on serpentine soils in San Francisco and Alameda counties. Two populations are known from the San Francisco Presidio. Three are known from the Oakland Hills in Alameda County, all from within 0.5 mile of each other. Total plant numbers fluctuate greatly; the upper limit reported in recent years is approximately 8,000 plants.

Serpentine soils are formed from weathered volcanic (ultramafic) rocks such as serpentinite, dunite, and peridotite. These soils provide a harsh environment for plant growth. Several factors contribute to the inhospitability of serpentine soils to plant growth including: 1) a low calcium-magnesium ratio; 2) lack of essential nutrients such as nitrogen, potassium, and phosphorous; and 3) high concentrations of heavy metals (mineral toxicity). However, species such as *Presidio clarkia* have adapted to serpentine soils and require them to survive.

#### SPECIAL CONSIDERATIONS:

The Presidio populations are threatened by habitat degradation. Pedestrian and mountain bicycle traffic on and near trails threatens the habitat. The species is also threatened by road maintenance (mowing) at the Presidio. Mowing of grasslands before *Presidio clarkia* has set seed also threatens the populations. Populations at the Presidio also are threatened by the encroachment of nonnative plant species, including cape ivy (*Senecio mikanioides*), iceplant (*Carpobrotus* spp.), blackberries (*Rubus* spp.), and by natives planted outside their natural range, such as Monterey pine (*Pinus radiata*).

The three populations of *Clarkia franciscana* in Alameda County are all threatened by nonnative species such as pampas grasses (*Cortaderia selloana* and *C. jubatum*) and French broom (*Genista monspessulanus*).

This species was listed as endangered by the California Department of Fish and Game in November 1978. The California Native Plant Society has placed it on List 1B (rare or endangered throughout its range).

#### REFERENCES FOR ADDITIONAL INFORMATION:

Gottlieb, L.D., and S.W. Edwards. 1992. An electrophoretic test of the genetic independence of a newly discovered population of *Clarkia franciscana*. *Madroño* 39(1):1-7.

Lewis, H., and P.H. Raven. 1958. *Clarkia franciscana*, a new species from central California. *Brittonia* 10(1):7-13.

Roof, J.B. 1971. Summer wildflowers: the clarkias. *Four Seasons* 4(1):2-6.

U.S. Fish and Wildlife Service. 1995. Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for Ten Plants and Threatened Status for Two Plants From Serpentine Habitats in the San Francisco Bay Region of California. Portland, Oregon.

U.S. Fish and Wildlife Service. 1998. Recovery Plan for Serpentine Soil Species of the San Francisco Bay Area. Portland, Oregon.

[General Information about California Plants](#)

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Prepared by [Endangered Species Div.](#), [Sacramento Fish & Wildlife Office](#), [U.S. Fish & Wildlife Service](#)

Contact us: Sacramento Fish and Wildlife Office, 2800 Cottage Way, Room W-2605, Sacramento, California 95825

Phone (916) 414-6600 ~ FAX (916) 414-6713

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