U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office
Species Account
METCALF CANYON JEWELFLOWER
Streptanthus albidus ssp. albidus

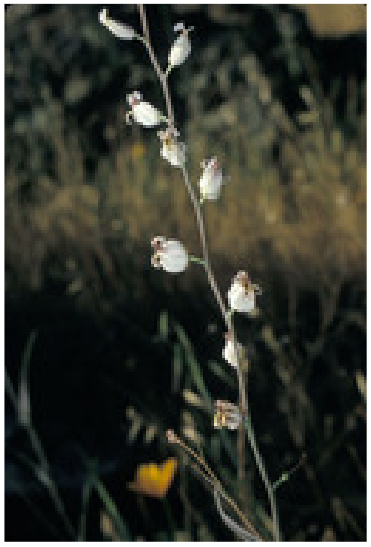
CLASSIFICATION: Endangered
Federal Register Notice 60:6671; February 3, 1995
http://ecos.fws.gov/docs/federal_register/fr2779.pdf (125 KB)

The California Native Plant Society has placed this species on List 1B (rare or endangered throughout its range). Although the species has not been officially listed by the State of California, the Department of Fish and Game considers it to be "very threatened."

CRITICAL HABITAT: Not designated

RECOVERY PLAN: Final
Recovery Plan for Serpentine Soil Species of the San Francisco Bay Area; September 30, 1998.
http://ecos.fws.gov/docs/recovery_plan/980930c_v2.pdf (22 MB)

5-YEAR REVIEW: Started March 25, 2009
http://www.fws.gov/policy/library/E8-4258.html



Metcalf Canyon Jewelflower
© 1994 Robert E. Preston, Ph.D.

DESCRIPTION

Metcalf Canyon Jewelflower
© 2004 Janell Hillman

Metcalf Canyon jewelflower (*Streptanthus albidus* ssp. *albidus*) is an annual herb of the mustard family (Brassicaceae), which reaches up to 1 meter (3 feet) in height. It has bristly hairs at the base, and pale green strongly glaucous (waxy or powdery) stem and leaves.

Flowers, which bloom between April and June, are borne on leafless terminal stems. Sepals are white to yellow to whitish-green. The upper three are fused, with the lower (fourth) sepal free and spreading. Four petals, 8-11 mm (0.3-0.4 inch) long, are whitish with light purple veins. Erect flattened pods are 3 to 8 cm (1 to 3 inches) long.

The only *Streptanthus* species likely to grow in the same area as Metcalf Canyon jewelflower is its close relative - uncommon or most beautiful jewelflower (*S. a.* ssp. *peramoenus*), which is distinguished by its dark purple sepals.

See Hickman (1993) in General Information about California Plants, below, for a detailed description of these species.

SERPENTINE SOIL 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

1) 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, serpentine plant species have adapted to serpentine soils and require them to survive.

See the recovery plan (above) for more information about serpentine soil species.

Contact the Coastal Branch of our office (formerly the Coast-Bay-Delta Branch) at 916-414-6625 for consultations concerning serpentine soil species.

The Bay Checkerspot Butterfly PDF | RTF is an insect that depends on serpentine soil plants, primarily dwarf plantain (*Plantago erecta*).

DISTRIBUTION

The species always has been rare. It only grows on serpentine outcrops with little soil development. It can be locally abundant but its range is limited, extending less than 20 miles from San Jose south to Anderson Lake, which lies northeast of Morgan Hill. Furthermore, the serpentine outcrops on which Metcalf Canyon jewelflower grows are patchily distributed and comprise only a small percentage of the area within its range. Nine populations and a total of 20,000 to 25,000 plants have been recorded.

U.S.G.S. 7 ½ Minute Quads: Mount Sizer (406A)* 3712125, Morgan Hill (406B) 3712126, Gilroy (406D) 3712115, Santa Teresa Hills (407A)* 3712127, Los Gatos (407B) 3712128, Lick Observatory (426C) 3712136, San Jose East (427D) 3712137

THREATS

Trash dumping, residential development and off-road vehicles threaten Metcalf Canyon jewelflower. Serpentine outcrops in the San Francisco Bay area are limited. Twenty percent of those outcrops have already been eliminated as plant habitat due to development.

Serpentine habitats also have been fragmented by the construction of roads. Habitat fragmentation increases the risks of extinction due to chance events such as fire, flood, landslide, pest or disease outbreaks, severe drought, or other natural or human-caused disaster.

REFERENCES FOR ADDITIONAL INFORMATION

General references about California plants
www.fws.gov/sacramento/es/plant_spp_accts/plant_references.htm

Kruckeberg, A.R. 1984a. California serpentines: Flora, vegetation, geology, soils, and management problems. University of California Press, Berkeley, California. 180 pp.

_____. 1984b. The flora on California's serpentine. Fremontia 11(5): 3-10.

Credits: Robert E. Preston, Ph.D. and Janell Hillman. For larger images and permission information see CalPhotos http://calphotos.berkeley.edu/.

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825
Phone (916) 414-6600
FAX (916) 414-6713

Last updated September 22, 2009