

*Endangered, Threatened, Rare,  
and Special Plants*



*Tulare County, California*

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## INTRODUCTION

California has over 5800 species of native flowering plants, needled evergreens (pine, cedar, etc.), ferns, and species related to ferns. This concentration of so many plant species is found nowhere else on the North American continent. Another unique feature of California's plants is that about 24 percent of the native species are classified as endemic (plants that are restricted to a particular locality or habitat within the state). California has approximately 1000 plant species that have been introduced or escaped from gardens or agriculture fields.

California's unique climate, diverse topography, and varied geological formations have provided the environment for such a large number of plant species. Plants grow from sea level to above timberline. They are found from subtropical to desert conditions and from deep rich valley soils to rocky outcroppings. The condition that makes California unique in the large number of plant species and the large percentage of endemic species also provides the potential for a large number of endangered species.

This publication was written to help landowners become aware of the number of "special" plant species in the southern San Joaquin Valley. It will also help landowners become familiar with the endangered, threatened, and rare plant species. Landowners, equipped with this knowledge, can become aware of these species on their land and make the necessary adjustments in their management practices to accommodate these special plant species. Also, if landowners know there is an endangered, threatened, or rare species on their land, they can prevent destroying a population.

The publication is not intended to be used for positive identification of species shown. Landowners should use the expertise of a highly trained plant taxonomist for positive identification of plants of concern. Many plant species look alike to the untrained eye. The trained professional can make the distinction between a rare species and a very common species that looks similar.

Rare plant studies have been the focus of the California Native Plant Society since its beginning. In 1968, G. Ledyard Stebbins started a card file on plants with a distribution of less than 100 miles. In 1980, the California Native Plant Society, in cooperation with the Natural Diversity Data Base, developed its "species-of-concern" list. By 1981, the Nature Conservancy, which had until then staffed the California NDDDB, transferred the project to the Department of Fish and Game. The NDDDB contains current information on the endangered, rare, and threatened species, as well as other species of concern. The NDDDB is constantly updated and new records entered. People wanting up-to-date information should contact the California Department of Fish and Game directly.

The information in this publication was taken from the February 15, 1995, NDDDB. The NDDDB contains volumes of information on species of plants that are of concern. The information used

in this publication is limited to: family, scientific name, common name, habitat, listing status for state and federal, and known locations.

California's listing, ranking, and tracking of plant species is conducted under the guidelines of the California Endangered Species Act of 1984. The federal listing, ranking, and tracking of plants is conducted under the Federal Endangered Species Act of 1973. The state and federal endangered species acts define endangered, threatened, and rare a little differently. There is a difference in the status rating system between the two acts. The following is a discussion of the state and federal interpretation of the two acts.

### **California**

**Rare:** a native plant species, although not presently threatened with extinction, is in such small numbers through its range that it may become endangered if its present environment worsens.

**Threatened:** a native plant species or subspecies, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of special protection and management.

**Endangered:** the prospects of survival and reproduction of a native species or subspecies are in immediate jeopardy from one or more causes. Candidate species sometimes refers to sensitive species that have been officially identified for review to be listed as threatened or endangered. This group is protected from taking under the California Endangered Species Act.

### **Federal**

**Endangered:** any species, including subspecies, in danger of extinction throughout all or a significant portion of its range. The U.S. Fish and Wildlife Service considers varieties to be subspecies.

**Threatened:** any species likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

**Proposed endangered and threatened species:** those species for which a proposed regulation has been published in the Federal Register, but not a final rule.

**Category 1:** species for which the U.S. Fish and Wildlife Service currently has on file substantial information indicating the biological vulnerability and threat(s) to support the appropriateness of proposing to list the species as endangered or threatened.

**Category 2:** species for which information, now in the possession of the U.S. Fish and Wildlife Service, indicates that proposing to list them as endangered or threatened species is possibly appropriate; but for which substantial data on biological vulnerability and threat(s) are not currently known or on file to support the immediate preparation of rules.

**Category 3:** plant species that have been petitioned for listing, but did not meet the criteria for listing as endangered or threatened. Category 3 has three subcategories: 3A, extinct; 3B, do not meet the definition of a species; and 3C, too widespread or not threatened at this time.

The above categories will appear in this publication. However, the U.S. Fish and Wildlife Service changed its categories. The changes are listed in the *Federal Register* (Vol. 16, No. 4), February 28, 1996. The changes have moved most Category 1 plant species to simple "candidate" status. Categories 2 and 3 have been dropped from any list but are considered as species of concern. Also, the May 1996 lifting of the moratorium to list endangered species will move some of the proposed candidates to endangered or threatened.<sup>1</sup>

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<sup>1</sup>In the most recent candidate notice of review (FR: 7596) the Service announced its decision to discontinue the list of Category 2 candidates to reduce confusion about the conservation status of these species and to clarify that the Service does not regard these species as candidates for listing. The Service remains concerned about these species and will continue to work with other Federal and State agencies, knowledgeable scientists, public and private natural resource interests to identify candidate species.

Personal comments by Jan Knight, U.S. Fish and Wildlife Service.



***ERYNGIUM SPINOSEPALUM***  
 SPINY-SEPALED BUTTON-CELERY  
 Apiaceae (carrot) Family



**Ranking**

Federal: Category 2  
 Change: None, 2/28/96  
 State: None

**Description**

Life Cycle: Biennial to perennial  
 Flowers: Greenish white to white tiny flowers in spiny heads  
 Height: 12-30 inches  
 Growth: Erect; branched herb

**Habitat**

General: Vernal pools, valley grassland  
 Microhabitat: Not available at this time

**Known Locations**

Township	Range	Section
T15S	R25E	S16 SW Qtr
T16S	R25E	S34 SE Qtr
T17S	R27E	S26 N Qtr
T17S	R28E	S34 NW Qtr
T17S	R28E	S23 SE Qtr
T17S	R26E	S02 SW Qtr
T17S	R27E	S14 SW Qtr
T18S	R27E	S21 SE Qtr
T19S	R26E	SUN XX Qtr
T19S	R27E	S05 SE Qtr

***OREONANA PURPURASCENS***

PURPLE MOUNTAIN PARSLEY

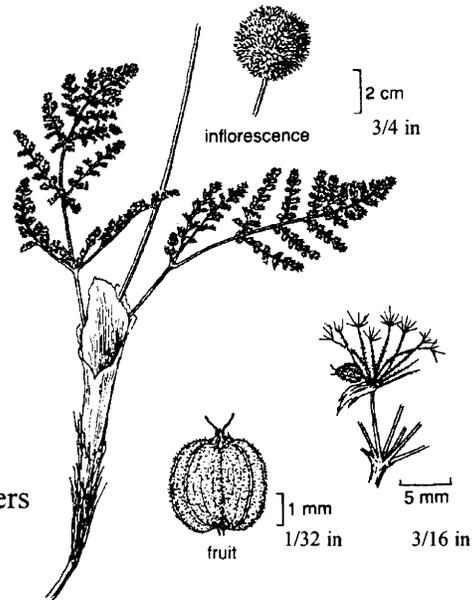
Apiaceae (carrot) Family

**Ranking**

Federal: Category 3c  
Change: None, 2/28/96  
State: None

**Description**

Life Cycle: Perennial  
Flowers: Tiny purple and white flowers  
in spherical inflorescence  
Height: 1/3-1 inch  
Growth: Erect herb



**Habitat**

General: Subalpine coniferous forest, upper montane coniferous forest  
Microhabitat: Open, metamorphic ridgetops in red fir forest, about 7500-9000 feet

**Known Locations**

Township	Range	Section
T14S	R29E	S15 NE Qtr
T14S	R29E	S23 SW Qtr
T14S	R30E	S19 NW Qtr
T14S	R29E	S26 SE Qtr
T14S	R29E	S15 SW Qtr
T14S	R29E	S23 NE Qtr
T14S	R29E	S22 NE Qtr
T14S	R29E	S14 NW Qtr
T14S	R29E	S24 S Qtr
T18S	R31E	S29 E Qtr
T18S	R30E	SUN XX Qtr
T18S	R31E	S07 XX Qtr
T19S	R31E	S21 SE Qtr

(continued)

***OREONANA PURPURASCENS* (continued)**

PURPLE MOUNTAIN PARSLEY

Apiaceae (carrot) Family

**Known Locations**

Township	Range	Section
T19S	R30E	S01 SWQtr
T19S	R31E	S22 SW Qtr
T19S	R31E	S27 NW Qtr
T20S	R31E	S10 N Qtr
T20S	R31E	S03 NE Qtr
T21S	R31E	S14 SW Qtr
T21S	R32E	S31 SW Qtr
T21S	R32E	S19 XX Qtr
T21S	R32E	S30 NE Qtr
T21S	R32E	S10 NW Qtr
T21S	R31E	S14 E Qtr
T21S	R31E	S36 SE Qtr
T21S	R32E	S31 NE Qtr

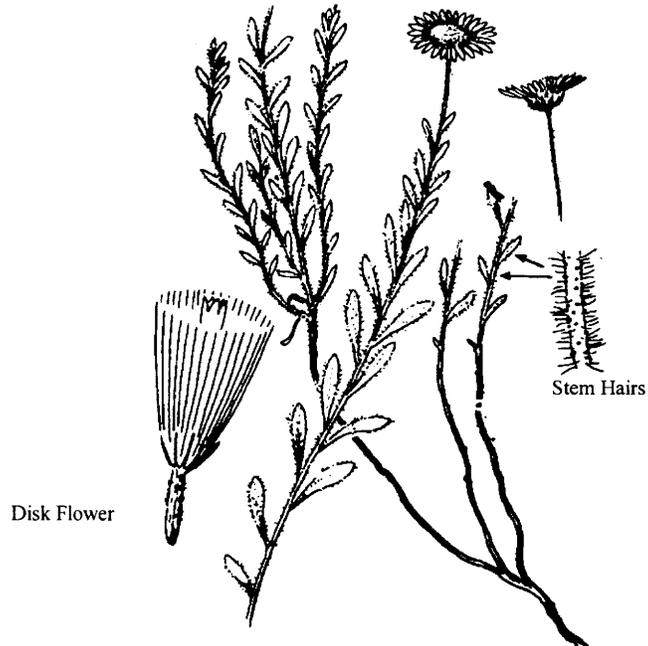
# *ERIGERON AEQUIFOLIUS*

HALL'S DAISY

Asteraceae (sunflower) Family

## Ranking

Federal: Category 3c  
Change: None, 2/28/96  
State: None



## Description

Life Cycle: Perennial  
Flowers: Center yellow with outer blue petals  
Height: 4-8 inches  
Growth: Ascending to erect herb from woody base

## Habitat

General: Broadleaved upland forest, lower montane coniferous forest  
Microhabitat: On dry rock outcrops in granite walls and canyons, 6000-7000 feet

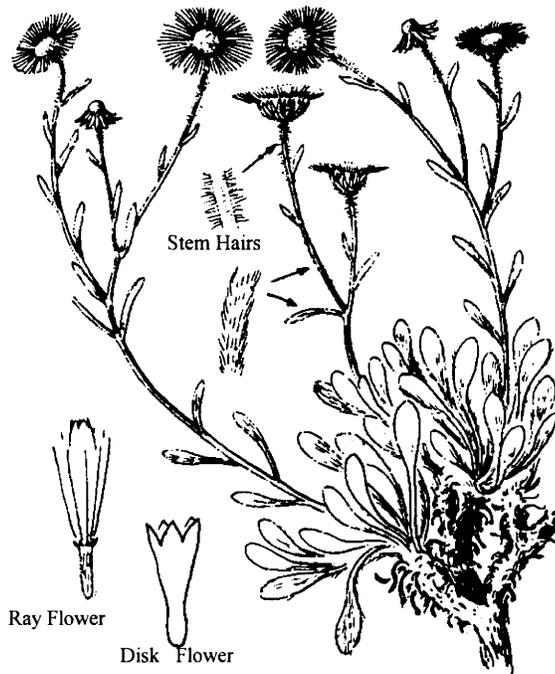
## Known Locations

Township	Range	Section
T18S	R33E	S21 NE Qtr
T20S	R33E	S08 XX Qtr
T20S	R32E	S18 NW Qtr
T21S	R32E	S13 NE Qtr

***ERIGERON MULTICEPS***  
 KERN RIVER DAISY  
 Asteraceae (sunflower) Family

**Ranking**

Federal: Category 2  
 Change: None, 2/28/96  
 State: None



**Description**

Life Cycle: Perennial  
 Flowers: Tiny flowers in head, the center flowers yellow, the outer ones purple to white  
 Height: 5-8 inches  
 Growth: Low growing herb with decumbent to ascending branches

**Habitat**

General: Dry meadows  
 Microhabitat: River banks and dry meadow borders

**Known Locations**

Township	Range	Section
T19S	R33E	SUN XX Qtr
T20S	R33E	S14 XX Qtr
T21S	R35E	S17 W Qtr
T21S	R35E	S21 XX Qtr

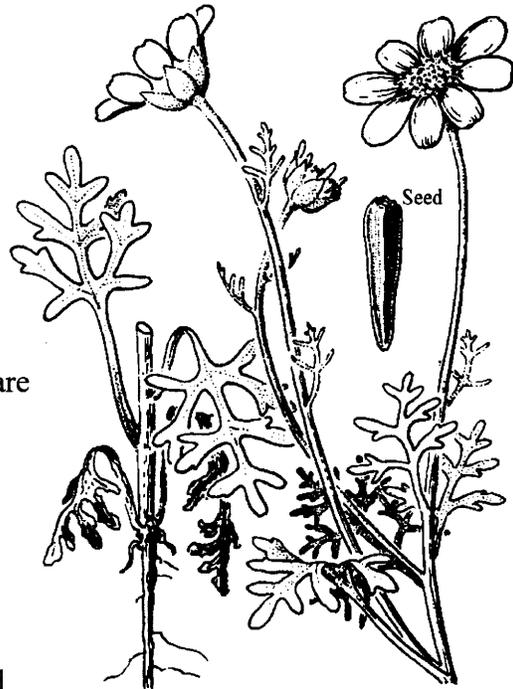
***PSEUDOBABIA PEIRSONII***  
 SAN JOAQUIN ADOBE SUNBURST  
 Asteraceae (sunflower) Family

**Ranking**

Federal: Proposed  
 State: Endangered

**Description**

Life Cycle: Annual  
 Flowers: Center and petals of flower are yellow  
 Height: 8 inches-2 feet  
 Growth: Erect herb branching above the base



**Habitat**

General: Valley and foothill grassland  
 Microhabitat: Grassy valley floors and rolling foothills in heavy clay soil, 500-2500 feet

**Known Locations**

Township	Range	Section
T16S	R24E	S17 XX Qtr
T19S	R27E	S06 XX Qtr
T20S	R27E	S07 XX Qtr
T20S	R24E	S11 XX Qtr
T21S	R28E	S34 NE Qtr
T21S	R28E	S19 E Qtr
T21S	R28E	S18 NW Qtr
T21S	R28E	S26 NW Qtr
T21S	R29E	S30 SW Qtr
T21S	R28E	S08 S Qtr
T21S	R28E	S07 W Qtr
T21S	R27E	S11 SE Qtr
T21S	R27E	S12 SE Qtr
T21S	R27E	S13 SW Qtr
T23S	R28E	S26 SE Qtr
T23S	R28E	S35 SE Qtr
T23S	R28E	S28 S Qtr
T24S	R27E	S17 SW Qtr
T24S	R27E	S34 NW Qtr

***RAILLARDIOPSIS MUIRII***

MUIR'S RAILLARDELLA  
Asteraceae (sunflower) Family

**Ranking**

Federal: Category 3c  
Change: None, 2/28/96  
State: None



**Description**

Life Cycle: Perennial  
Flowers: Yellow flowers in narrow heads  
Height: Less than 2 feet  
Growth: Herb from woody rhizome, the stems often matted, ascending to erect

**Habitat**

General: Chaparral lower montane coniferous forest, upper montane  
Microhabitat: Crevices of granite ledges and dry, sandy soils, 4000-7000 feet

**Known Locations**

Township	Range	Section
T15S	R30E	S34 E Qtr
T16S	R30E	S04 S Qtr
T16S	R30E	S01 N Qtr
T16S	R31E	S02 NW Qtr
T24S	R32E	S10 S Qtr
T24S	R34 E	S12 SW Qtr

***HACKELIA SHARSMITHII***  
 SHARSMITH'S STICKSEED  
 Boraginaceae (borage) Family

**Ranking**

Federal: Category 3c  
 Change: None, 2/28/96  
 State: None

**Description**

Life Cycle: Perennial  
 Flowers: Small pale blue flowers with yellow centers  
 Height: 4-12 inches  
 Growth: Erect herb



**Habitat**

General: Subalpine coniferous forest, alpine boulder and rock fields  
 Microhabitat: Cracks, crevices in granite cliffs, large boulder talus, 9,000-12,000 feet

**Known Locations**

Township	Range	Section
T13S	R33E	S35 SW Qtr
T14S	R33E	S25 SE Qtr
T16S	R33E	S13 N Qtr
T16S	R33E	S12 NW Qtr
T16S	R34E	S07 NE Qtr
T16S	R34E	S34 N Qtr
T16S	R34E	S33 NE Qtr
T16S	R33E	S26 N Qtr
T16S	R34E	S04 SW Qtr
T16S	R34E	S36 SE Qtr
T16S	R34E	S35 NW Qtr
T17S	R34E	S08 SE Qtr
T17S	R34E	S09 S Qtr
T19S	R36E	S30 SE Qtr

**ARABIS DISPAR**

PINYON ROCK CRESS

Brassicaceae (mustard) Family

**Ranking**

Federal: None

State: None



**Description**

Life Cycle: Perennial  
Flowers: Small purple flowers with four petals  
Height: 4-10 inches  
Growth: Herb, several stemmed from woody base

**Habitat**

General: Joshua tree woodland, pinyon juniper woodland, creosote bush scrub  
Microhabitat: Granitic, gravelly slopes and mesas between 4000-8000 feet. Often under desert shrubs which support it as it grows

**Known Locations**

Township	Range	Section
T23S	R35E	SUN XX Qtr
T24S	R35E	SUN XX Qtr

**CAULANTHUS CALIFORNICUS**

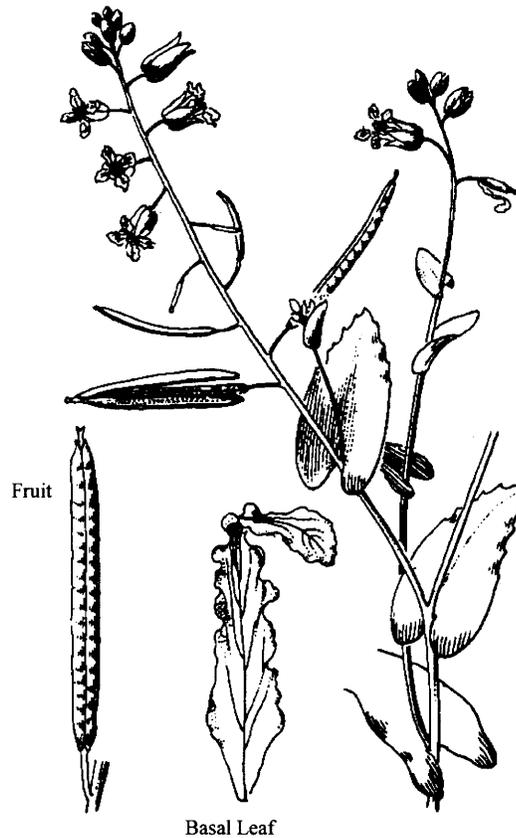
CALIFORNIA JEWELFLOWER

Brassicaceae (mustard) Family

**Ranking**

Federal: Endangered

State: Endangered



**Description**

Life Cycle: Annual

Flowers: Small flowers, four white petals with purple veins

Height: 8-16 inches

Growth Form: Herb, decumbent to erect, often much branched

**Habitat**

General: Chenopod scrub, valley and foothill grassland

Microhabitat: Not available at this time

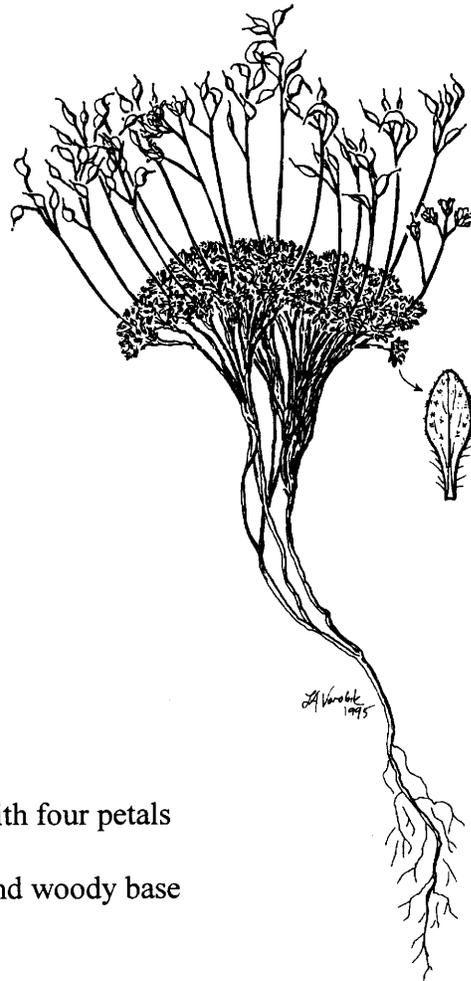
**Known Locations**

Township	Range	Section
T22S	R25E	S13 SE Qtr
T24S	R27E	S07 NW Qtr

***DRABA SHARSMITHII***  
 MT. WHITNEY DRABA  
 Brassicaceae (mustard) Family

**Ranking**

Federal: Category 3c  
 Change: None, 2/28/96  
 State: None



**Description**

Life Cycle: Perennial  
 Flowers: Small yellow flowers with four petals  
 Height: Less than 4 inches  
 Growth: Herb with dense mats and woody base

**Habitat**

General: Alpine boulder and rock field, subalpine coniferous forest  
 Microhabitat: Protected rock crevices, over 1500 feet

**Known Locations**

Township	Range	Section
T13S	R33E	S34 XX Qtr
T14S	R33E	S03 XX Qtr
T16S	R34E	S04 XX Qtr
T16S	R34E	S03 XX Qtr

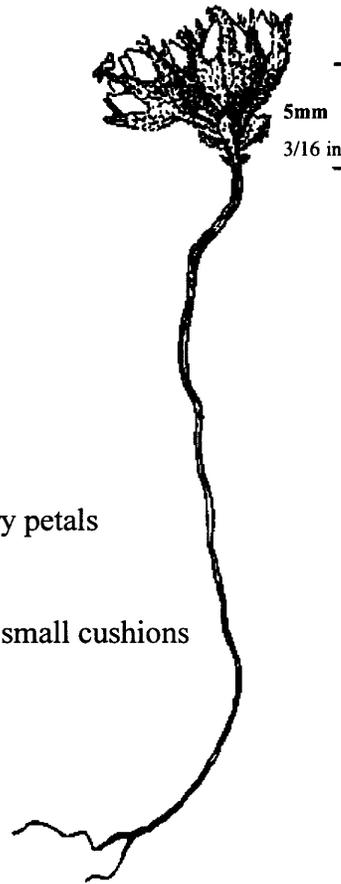
***NEMACLADUS TWISSELMANNII***

TWISSELMANN'S NEMACLADUS

Campanulaceae (bellflower) Family

**Ranking**

Federal: Category 2  
Change: None, 2/28/96  
State: Rare



**Description**

Life Cycle: Annual  
Flowers: Small flowers with white, hairy petals  
in head-like inflorescence  
Height: 1-4 inches  
Growth Form: Herb, the erect stems forming small cushions

**Habitat**

General: Jeffrey pine forest  
Microhabitat: Granitic soils, open ridgetops and gentle slopes, about 7300 feet

**Known Locations**

Township	Range	Section
T23S	R35E	33 SW Qtr

# *ATRIPLEX CORDULATA*

HEARTSCALE

Chenopodiaceae (goosefoot) Family

## Ranking

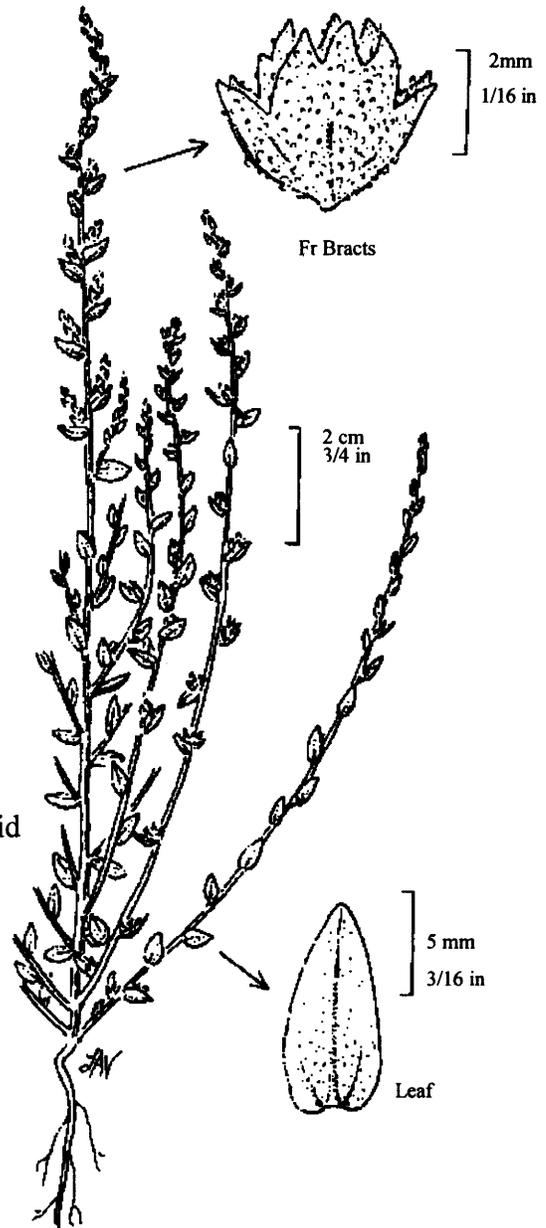
Federal: Category 2  
Change: None, 2/28/96  
State: None

## Description

Life Cycle: Annual  
Flowers: Minute green flowers in small clusters in the leaf axils  
Height: 4-20 inches  
Growth Form: Herb, branches from the base, ascending to erect, leaves and stems greyish, rigid

## Habitat

General: Chenopod scrub, valley and foothill grassland  
Microhabitat: Alkaline flats in the central valley



## Known Locations

Township	Range	Section
T18S	R23E	S24XX Qtr
T22S	R26E	S30 SW Qtr
T23S	R25E	S33 XX Qtr
T24S	R24E	S33 XX Qtr
T23S	R24E	S16 XX Qtr

***ATRIPLEX DEPRESSA***

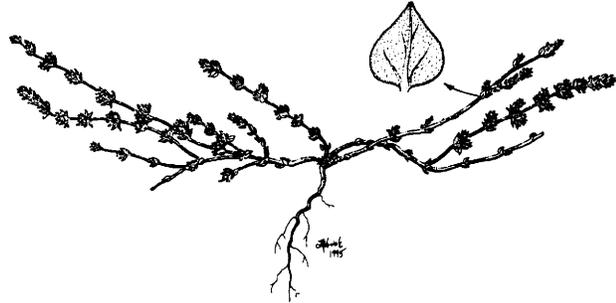
BRITTLESCALE

Chenopodiaceae (goosefoot) Family

**Ranking**

Federal: None

State: None



**Description**

Life Cycle: Annual

Flowers: Minute green flowers in clusters in the leaf axils

Height: Less than 8 inches

Growth Form: Prostrate herb with whitish stems

**Habitat**

General: Chenopod scrub, playas, valley and foothill grassland

Microhabitat: Alkaline or clay soils, under 600 feet

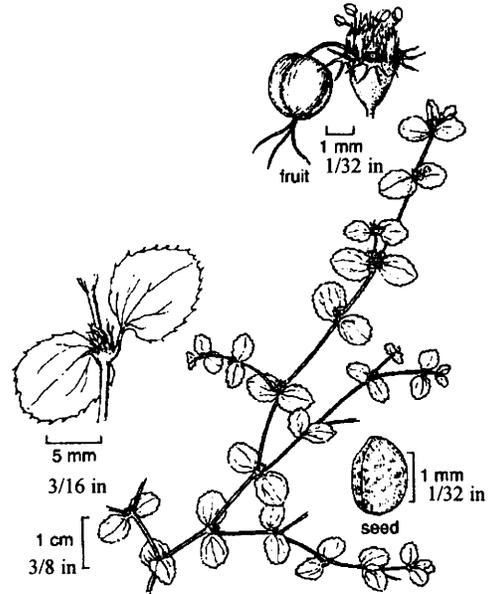
**Known Locations**

Township	Range	Section
T18S	R25E	SUN XX Qtr
T24S	R24E	S33 NW Qtr

***CHAMAESYCE HOOVERI***  
 HOOVER'S SPURGE  
 Euphorbiaceae (spurge) Family

**Ranking**

Federal: Proposed  
 State: None



**Description**

Life Cycle: Annual  
 Flowers: Tiny flowers surrounded by white bracts  
 Height: Stems 2-8 inches long  
 Growth Form: Herb, stems prostrate to decumbent

**Habitat**

General: Vernal Pools  
 Microhabitat: Not available at this time

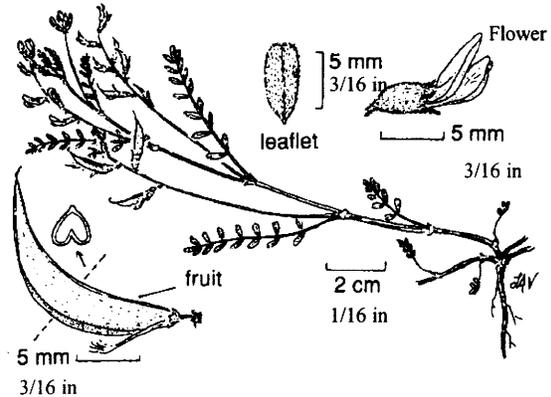
**Known Locations**

Township	Range	Section
T16S	R25E	S34 SE Qtr
T17S	R25E	S18 NE Qtr

***ASTRAGALUS SHEVOCKII***  
 SHEVOCK'S MILKVETCH  
 Fabaceae (legume) Family

**Ranking**

Federal: Category 3c  
 Change: None, 2/28/96  
 State: None



**Description**

Life Cycle: Perennial pea-shaped  
 Flowers: Small cream colored flowers  
 Height: Stems 4-10 inches long  
 Growth Form: Herb, stems decumbent to ascending

**Habitat**

General: Upper montane coniferous forest  
 Microhabitat: Open Jeffrey pine forest, in granitic sand and pine needle tuff, near 6200 feet

**Known Locations**

Township	Range	Section
T19S	R32E	S34 SW Qtr
T19S	R???	SUN XX Qtr
T20S	R32E	S11 NW Qtr
T20S	R33E	S07 NW Qtr
T20S	R33E	S16 NW Qtr
T20S	R33E	S15 SW Qtr

***LUPINUS LEPIDUS* var. *CULBERTSONII***

HOCKETT MEADOWS LUPINE

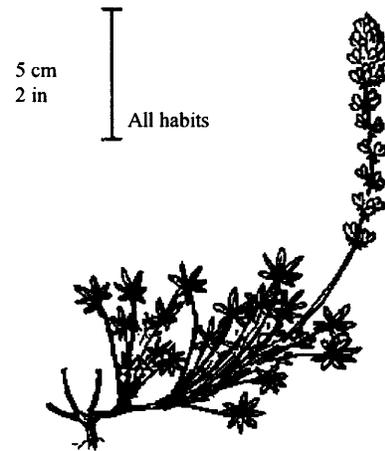
Fabaceae (legume) Family

**Ranking**

Federal: Category 3c

Change: None, 2/28/96

State: None



**Description**

Life Cycle: Perennial

Flowers: Pink, violet, or blue pea-shaped flowers with white or yellow patch on upper petal

Height: 6-16 inches

Growth Form: Herb, stems short, decumbent, forming mats

**Habitat**

General: Meadows

Microhabitat: Not available at this time

**Known Locations**

Township	Range	Section
T16S	R33E	S05 XX Qtr
T18S	R31E	S20 XX Qtr

***LUPINUS PADRE-CROWLEYI***

FATHER CROWLEY'S LUPINE

Fabaceae (legume) Family



**Ranking**

Federal: Category 2  
Change: None, 2/28/96  
State: None

**Description**

Life Cycle: Perennial  
Flowers: Cream-pale yellow pea-shaped flowers  
Height: 20-30 inches  
Growth: Herbs with erect stems form a woolly mat

**Habitat**

General: Great basin scrub, riparian scrub, upper montane coniferous forest  
Microhabitat: Scattered on steep avalanche chutes, in sunny sites, drainages and in valley bottoms, 8,200-10,200 feet

**Known Locations**

Township	Range	Section
T19S	R35E	S36 XX Qtr

***TRIFOLIUM MACILENTUM* var. *DEDECKERAE***

DEDECKER'S CLOVER

Fabaceae (legume) Family

**Ranking**

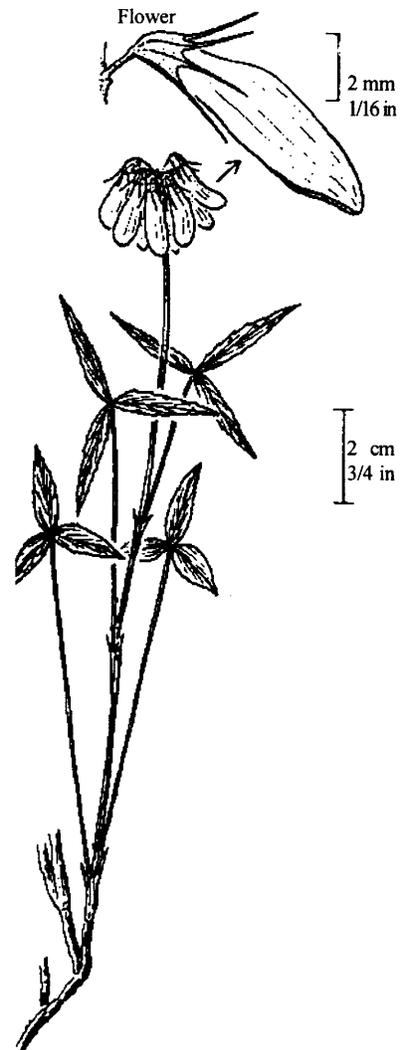
Federal: Category 3c  
Change: None, 2/28/96  
State: None

**Description**

Life Cycle: Perennial  
Flowers: Pea-shaped pink or pale violet flowers  
Height: 8 inches  
Growth Form: Herb, stems ascending

**Habitat**

General: Pinyon Juniper woodland, subalpine coniferous forest, upper montane coniferous forest  
Microhabitat: Gravelly canyons and slopes, cracks in granite rock outcrops and understory of Pinyon pines, 7000-8500 feet



**Known Locations**

Township	Range	Section
T19S	R36E	S30 NE Qtr
T21S	R34E	S30 SE Qtr

***RIBES TULARENSE***

SEQUOIA GOOSEBERRY

Grossulariaceae (gooseberry) Family

**Ranking**

Federal: Category 2  
Change: None, 2/28/96  
State: None



**Description**

Life Cycle: Perennial  
Flowers: Greenish-white flowers  
Height: Less than 6 feet  
Growth Form: Low spreading shrub with 3 spines at each node

**Habitat**

General: Lower and upper montane coniferous forests  
Microhabitat: Between 5000-6000 feet in the Southern Sierra

**Known Locations**

Township	Range	Section
T15S	R29E	S34 SE Qtr
T15S	R29E	S20 SW Qtr
T15S	R29E	S17 SE Qtr
T15S	R29E	S20 NW Qtr
T17S	R30E	S05 XX Qtr
T17S	R29E	S26 SE Qtr
T17S	R29E	S01 XX Qtr

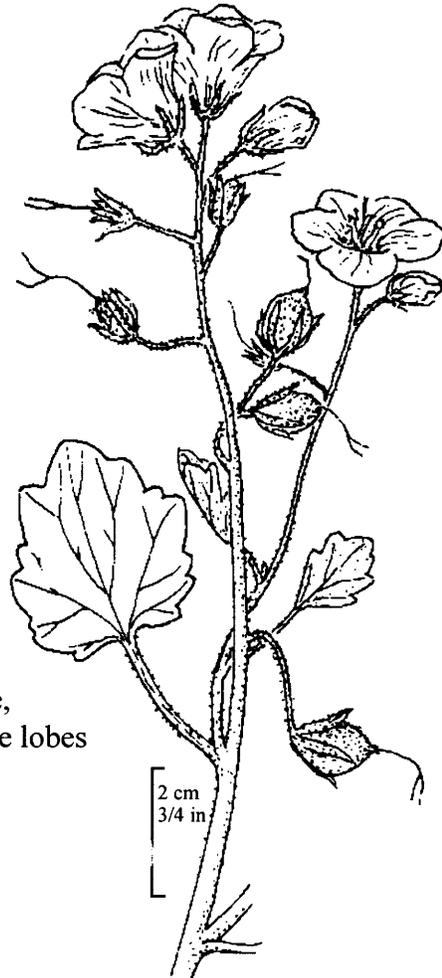
***PHACELIA NASHIANA***  
 CHARLOTTE'S PHACELIA  
 Hydrophyllaceae (waterleaf) Family

**Ranking**

Federal: Category 2  
 Change: None, 2/28/96  
 State: None

**Description**

Life Cycle: Annual  
 Flowers: Bell-shaped flowers with white tube,  
 blue throat with white spots and blue lobes  
 Height: 2-7 inches  
 Growth Form: Herb, ascending to erect



**Habitat**

General: Joshua tree woodland, Mojavean desert scrub, Pinyon and Juniper woodland  
 Microhabitat: Sandy or rocky areas on steep slopes or flats, 2000-7200 feet

**Known Locations**

Township	Range	Section
T24S	R37E	S32 XX Qtr

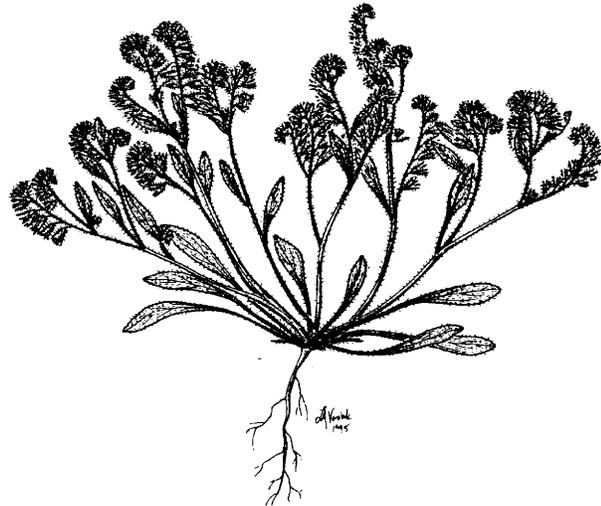
**PHACELIA NOVENMILLENSIS**

NINE MILE CANYON PHACELIA

Hydrophyllaceae (waterleaf) Family

**Ranking**

Federal: Category 2  
Change: None, 2/28/96  
State: None



**Description**

Life Cycle: Annual  
Flowers: Small flowers in curving inflorescence--corollas bell-shaped, lavender  
Height: 2-4 inches  
Growth Form: Herb, ascending to erect

**Habitat**

General: Broadleaved upland forests, Pinyon and Juniper woodland, upper montane coniferous forest  
Microhabitat: Dry disturbed banks, granitic or metamorphic soils, 6500-8300 feet

**Known Locations**

Township	Range	Section
T21S	R36E	S07 XX Qtr
T22S	R34E	SUN XX Qtr
T22S	R34E	SUN XX Qtr
T24S	R36E	SUN XX Qtr
T24S	R36E	SUN XX Qtr
T24S	R37E	SUN XX Qtr
T24S	R37E	S20 NE Qtr
T24S	R37E	S32 XX Qtr

**MONARDELLA LINOIDES** ssp. **OBLONGA**

FLAX-LIKE MONARDELLA

Lamiaceae (mint) Family

**Ranking**

Federal: Category 2  
Change: None, 2/28/96  
State: None



**Description**

Life Cycle: Perennial  
Flowers: Tubular flowers in large head, corollas rose-purple  
Height: 4-20 inches  
Growth Form: Erect herb with many stems from woody base

**Habitat**

General: Lower montane coniferous forest, upper montane coniferous forest  
Microhabitat: On dry slopes of yellow pine forest, decomposed granitic soils, also in roadside disturbed areas, about 7000-8400 feet

**Known Locations**

Township	Range	Section
T23S	R32E	S28 SW Qtr

***SIDALCEA KECKII***

KECK'S CHECKERBLOOM

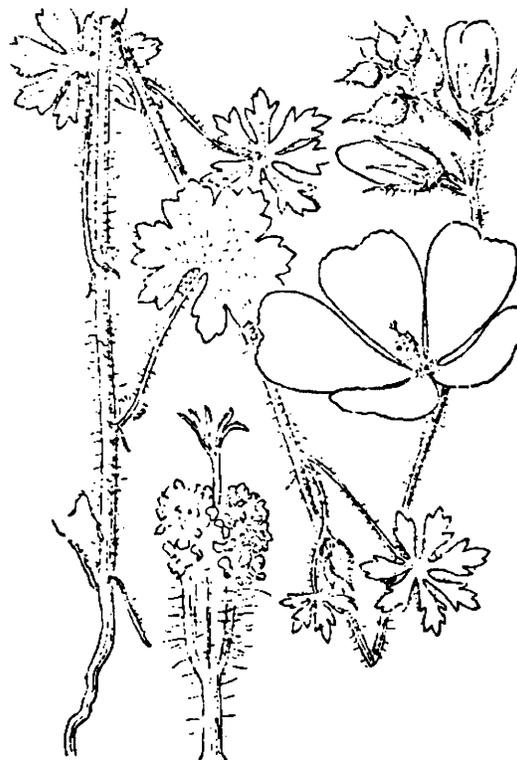
Malvaceae (mallow) Family

**Ranking**

Federal: Category 1  
Change: Candidate, 2/28/96  
State: None

**Description**

Life Cycle: Annual  
Flowers: Small deep pink flowers  
Height: 6-14 inches  
Growth Form: Erect herb



**Habitat**

General: Cismontane woodland  
Microhabitat: Grassy slopes in blue oak woodland, 1200 feet

**Known Locations**

Township	Range	Section
T22S	R28E	S11 NW Qtr
T24S	R29E	S27 SW Qtr

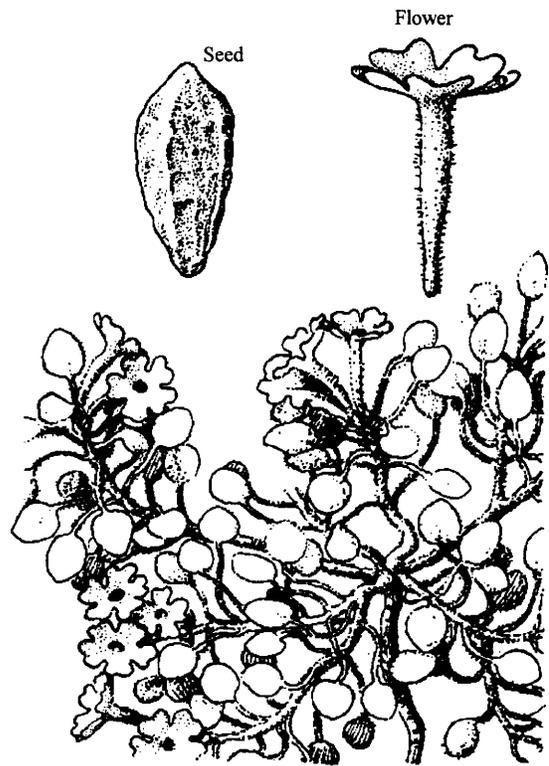
***ABRONIA ALPINA***

RAMSHAW MEADOWS ABRONIA

Nyctaginaceae (four o'clock) Family

**Ranking**

Federal: Category 1  
Change: Candidate, 2/28/96  
State: None



**Description**

Life Cycle: Perennial  
Flowers: Small white to lavender-pink flowers  
Height: Forming mats, 4-8 inches in diameter  
Growth: Mat-forming herb; stems prostrate

**Habitat**

General: Meadows  
Microhabitat: Gravelly margins of meadows

**Known Locations**

Township	Range	Section
T18S	R35E	S30 NW Qtr
T18S	R34E	S24 XX Qtr

**CLARKIA SPRINGVILLENIS**  
 SPRINGVILLE CLARKIA  
 Onagraceae (evening primrose) Family

**Ranking**

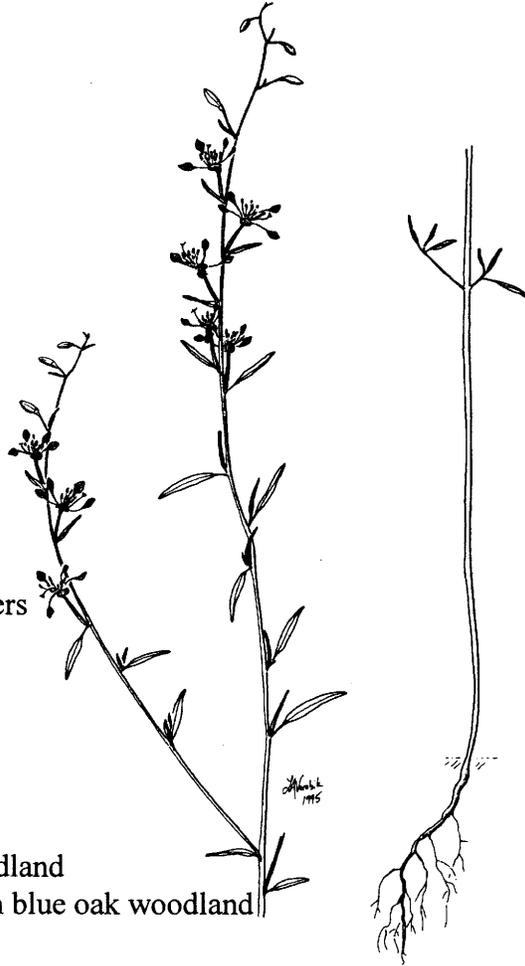
Federal: Category 1  
 Change: Candidate, 2/28/96  
 State: Endangered

**Description**

Life Cycle: Annual  
 Flowers: Small dark red-purple flowers  
 with 4 petals  
 Height: Less than 39 inches  
 Growth Form: Erect herb

**Habitat**

General: Chaparral, cismontane woodland  
 Microhabitat: Road banks and openings in blue oak woodland



**Known Locations**

Township	Range	Section
T17S	R29E	S17 XX Qtr
T19S	R29E	S25 NE Qtr
T20S	R30E	S23 NE Qtr
T20S	R30E	SUN XX Qtr
T20S	R30E	S06 E Qtr
T20S	R30E	SUN XX Qtr
T20S	R29E	S12 NE Qtr
T20S	R30E	S07 NE Qtr
T20S	R31E	SUN XX Qtr
T20S	R29E	S26 E Qtr
T20S	R30E	S07 NW Qtr

**NAVARRETIA SETILOBA**  
 PIUTE MOUNTAINS NAVARRETIA  
 Polemoniaceae (phlox) Family

**Ranking**

Federal: Category 1  
 Change: Candidate, 2/28/96  
 State: None



**Description**

Life Cycle: Annual  
 Flowers: Small, mostly white flowers in dense, spiny heads  
 Height: 4-8 inches  
 Growth Form: Erect herb

**Habitat**

General: Cismontane woodland, Pinyon Juniper woodland, valley and foothill grassland  
 Microhabitat: Red clay soils, other clay soils(?), 5000-7000 feet

**Known Location**

Township	Range	Section
T24S	R30E	S25 SE Qtr.

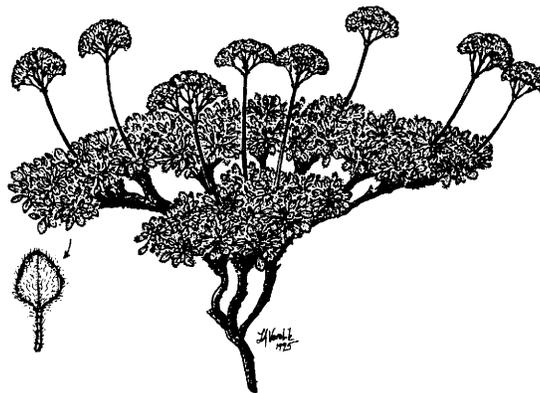
***ERIOGONUM BREEDLOVEI* var. *SHEVOCKII***

THE NEEDLES BUCKWHEAT

Polygonaceae (buckwheat) Family

**Ranking**

Federal: Category 3c  
Change: None, 2/28/96  
State: None



**Description**

Life Cycle: Perennial  
Flowers: Many tiny whitish-reddish flowers in spherical inflorescence  
Height: Less than 4 inches  
Growth Form: Forming mats 4-8 inches in diameter, woody at the base

**Habitat**

General: Pinyon Juniper woodland, upper montane coniferous forest  
Microhabitat: Granitic rock outcrops

**Known Locations**

Township	Range	Section
T20S	R32E	S12 SE Qtr
T21S	R32E	S13 N Qtr
T23S	R35E	S33 NW Qtr
T23S	R34E	S13 SE Qtr
T24S	R34E	S12 SE Qtr
T24S	R35E	S07 NW Qtr
T24S	R32E	S10 SE Qtr
T24S	R35E	S04 SE Qtr
T24S	R36E	S29 NE Qtr
T24S	R37E	S36 SE Qtr
T24S	R37E	S20 XX Qtr

***ERIOGONUM NUDUM* var. *MURINUM***

MOUSE BUCKWHEAT

Polygonaceae (buckwheat) Family

**Ranking**

Federal: Category 2  
Change: None, 2/28/96  
State: None

**Description**

Life Cycle: Perennial  
Flowers: Tiny white, hairy flowers in spherical clusters  
Height: 4 inches-6 feet  
Growth Form: Erect herb from woody base, leaves at base or on lower stem



**Habitat**

General: Chaparral, cismontane woodland, valley and foothill grassland  
Microhabitat: Dry, sandy loam slopes in the Kaweah river drainage, 1800-2400 feet

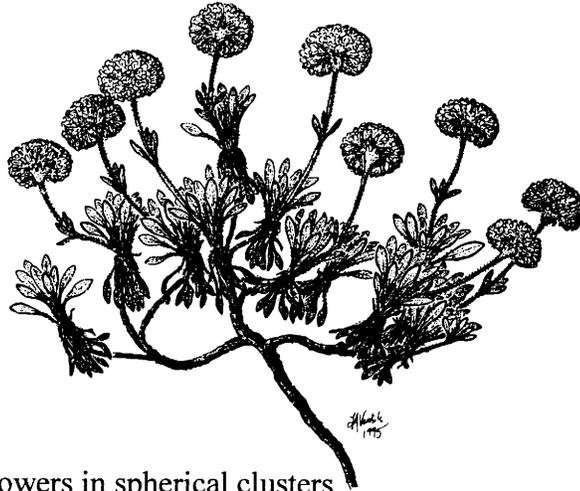
**Known Locations**

Township	Range	Section
T16S	R29E	S23 SW Qtr
T16S	R29E	S24 XX Qtr
T16S	R29E	S11 E Qtr
T16S	R29E	S34 SW Qtr
T16S	R29E	S34 NW Qtr
T17S	R28E	S25 SW Qtr
T17S	R29E	S04 SE Qtr
T17S	R28E	S01 NE Qtr
T18S	R30E	S19 N Qtr
T18S	R30E	S18 SW Qtr

***ERIOGONUM TWISSELMANNII***  
 TWISSELMANN'S BUCKWHEAT  
 Polygonaceae (buckwheat) Family

**Ranking**

Federal: Category 2  
 Change: None, 2/28/96  
 State: Rare



**Description**

Life Cycle: Perennial  
 Flowers: Tiny yellow, hairy flowers in spherical clusters  
 Height: 4-8 inches  
 Growth Form: Herb from loosely matted stems, mats 12-16 inches in diameter

**Habitat**

General: Upper montane coniferous forest  
 Microhabitat: Dry, granitic outcrops, 8000-8200 feet

**Known Locations**

Township	Range	Section
T21S	R32E	S09 NE Qtr
T21S	R32E	S18 SE Qtr
T21S	R32E	S18 SE Qtr
T21S	R31E	S13 SE Qtr
T21S	R31E	S13 W Qtr
T21S	R30E	S15 NW Qtr
T21S	R31E	S24 NE Qtr
T21S	R31E	S14 SW Qtr
T21S	R32E	S30 NW Qtr
T21S	R32E	S30 SW Qtr
T22S	R31E	S01 NE Qtr

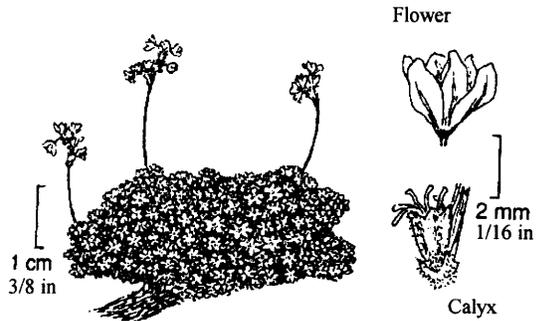
***ERIOGONUM WRIGHTII* var. *OLANCHENSE***

OLANCHA PEAK BUCKWHEAT

Polygonaceae (buckwheat) Family

**Ranking**

Federal: Category 3c  
Change: None, 2/28/96  
State: None



**Description**

Life Cycle: Perennial  
Flowers: Tiny white, pink or rose flowers in small clusters  
Height: 1/2-3 inches  
Growth Form: Herb to sub-shrub, forming dense mats 2-12 inches in diameter

**Habitat**

General: Subalpine coniferous forest  
Microhabitat: Dry, gravelly to rocky places, 11,500 to 11,800 feet

**Known Locations**

Township	Range	Section
T19S	R36E	SUN XX Qtr
T19S	R36E	S19 SE Qtr

# ***DELPHINIUM INOPINUM***

UNEXPECTED LARKSPUR

Ranunculaceae (buttercup) Family

## **Ranking**

Federal: Category 3c

Change: None, 2/28/96

State: None

## **Description**

Life Cycle: Perennial

Flowers: Small white to light blue  
flowers with nectar spur

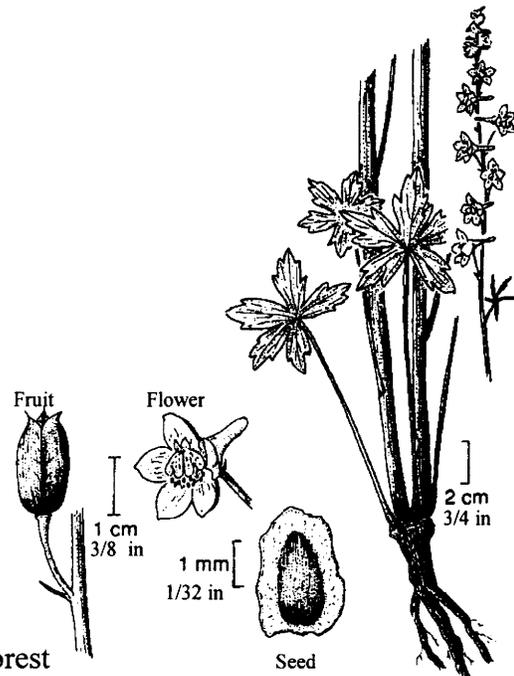
Height: 3-5 feet

Growth Form: Erect herb

## **Habitat**

General: Upper montane coniferous forest

Microhabitat: On open, rocky ridgetops, 5000-8000 feet



## **Known Locations**

Township	Range	Section
T???	R???	SUN XX Qtr
T18S	R32E	S32 NE Qtr
T19S	R31E	S36 NE Qtr
T19S	R32E	S07 NW Qtr
T21S	R32E	S19 NW Qtr
T21S	R32E	S19 NW Qtr
T21S	R32E	S19 NE Qtr
T21S	R32E	S30 NW Qtr
T21S	R 31E	S13 SE Qtr
T21S	R31E	S13 NE Qtr
T21S	R32E	S18 NW Qtr
T21S	R32E	S18 NE Qtr
T21S	R32E	S30 SW Qtr
T21S	R32E	S20 SW Qtr
T21S	R32E	S07 SE Qtr
T21S	R31E	S15 NE Qtr
T21S	R31E	S06 NE Qtr
T24S	R32E	S10 SE Qtr

***DELPHINIUM RECURVATUM***

RECURVED LARKSPUR

Ranunculaceae (buttercup) Family

**Ranking**

Federal: Category 2  
Change: None, 2/28/96  
State: None

**Description**

Life Cycle: Perennial  
Flowers: Small light blue flowers, lower petals white with nectar spur  
Height: 7 inches-3 feet, generally less than 2 feet  
Growth Form: Erect herb

**Habitat**

General: Chenopod scrub, valley and foothill grassland  
Microhabitat: On alkaline soils



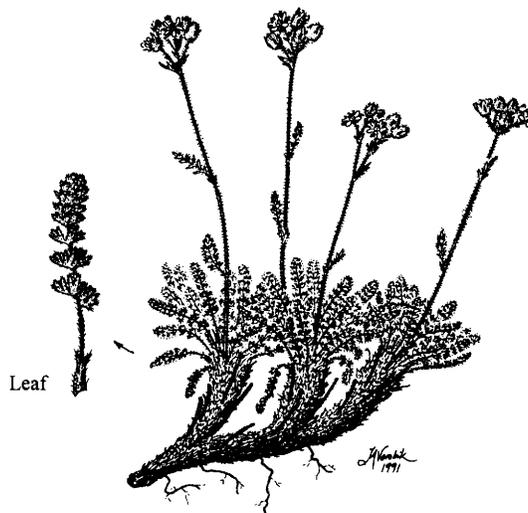
**Known Locations**

Township	Range	Section
T22S	R26E	S30 SW Qtr
T23S	R25E	S21 NW Qtr
T23S	R26E	S32 E Qtr
T24S	R24E	S27 SE Qtr
T24S	R24E	S35 SW Qtr

***HORKELIA TULARENSIS***  
 KERN PLATEAU HORKELIA  
 Rosaceae (rose) Family

**Ranking**

Federal: Category 2  
 Change: None, 2/28/96  
 State: None



**Description**

Life Cycle: Perennial  
 Flowers: Small white flowers in clusters  
 Height: Less than 10 inches  
 Growth Form: Matted herb from woody base

**Habitat**

General: Upper Montane coniferous forest  
 Microhabitat: Metamorphic gravel along an exposed ridge top, 9400 feet

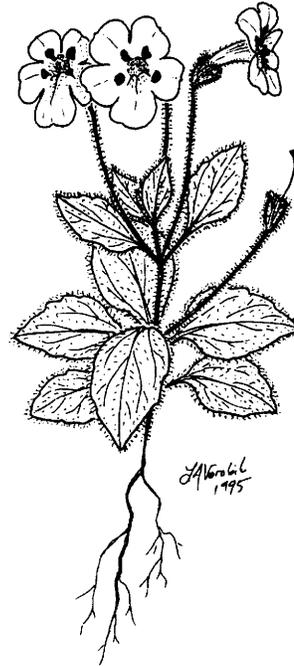
**Known Locations**

Township	Range	Section
T21S	R35E	S17 NE Qtr
T22S	R34E	S12 SE Qtr

**MIMULUS NORRISII**

KAWEAH MONKEYFLOWER

Scrophulariaceae (figwort) Family



**Ranking**

Federal: Category 3c  
 Change: None, 2/28/96  
 State: None

**Description**

Life Cycle: Annual  
 Flowers: Showy yellow tubular flowers with purple-maroon blotch on each corolla lobe  
 Height: 1-6 inches  
 Growth Form: Erect herb

**Habitat**

General: Chaparral, cismontane woodland  
 Microhabitat: Marble outcrops, soil pockets, moss covered ledges, cracks in outcrops, sometimes on S-facing cliffs, above 1970 feet

**Known Locations**

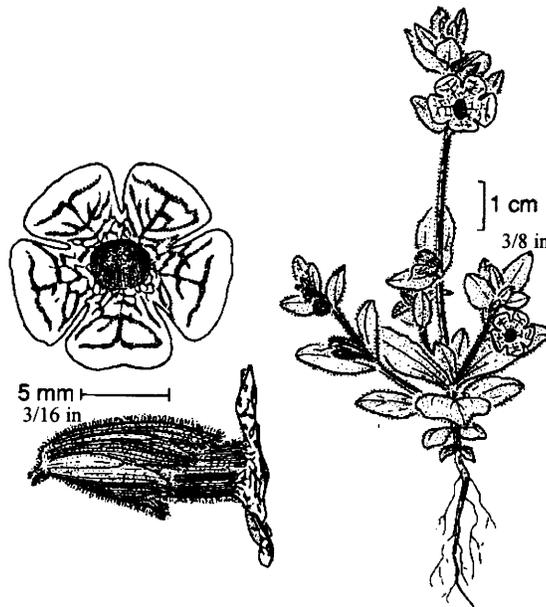
Township	Range	Section
T16S	R29E	S34 W Qtr
T16S	R29E	S27 SW Qtr
T16S	R29E	S23 SW Qtr
T17S	R28E	S01 NE Qtr
T17S	R28E	S25 SW Qtr
T18S	R29E	S16 NE Qtr
T18S	R30E	S19 N Qtr

**MIMULUS PICTUS**

CALICO MONKEYFLOWER  
Scrophulariaceae (figwort) Family

**Ranking**

Federal: Category 3c  
Change: None, 2/28/96  
State: None



**Description**

Life Cycle: Annual  
Flowers: Tubular flowers, the tube dark-brownish maroon, the lobes white with maroon veins  
Height: 3/4 to 15 inches  
Growth Form: Erect herb

**Habitat**

General: Broad leaved upland forest, cismontane woodland  
Microhabitat: In bare ground around gooseberry bushes or around granite rock outcrops, 1000-4000 feet

**Known Locations**

Township	Range	Section
T21S	R28E	SUN XX Qtr
T21S	R28E	S27 NW Qtr

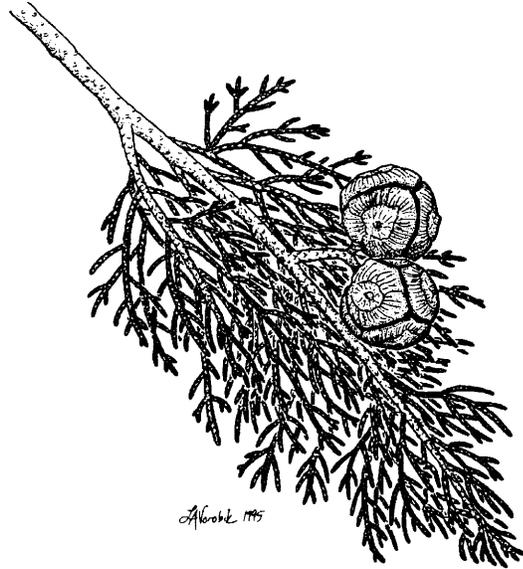
**CUPRESSUS ARIZONICA ssp. NEVADENSIS**

PIUTE CYPRESS

Cupressaceae (cypress) Family

**Ranking**

Federal: Category 3c  
Change: None, 2/28/96  
State: None



**Description**

Life Cycle: Perennial  
Height: 16-80 feet  
Growth: Tree  
Bark: Fibrous--not peeling

**Habitat**

General: Closed cone coniferous forest  
Microhabitat: On dry slopes, 4000-6000 feet

**Known Locations**

Township	Range	Section
T24S	R32E	S07 W Qtr
T24S	R32E	S23 NE Qtr
T24S	R32E	S23 E Qtr
T24S	R32E	S26 NE Qtr
T24S	R32E	S25 NW Qtr
T25S	R33E	S06 NW Qtr

***BRODIAEA INSIGNIS***

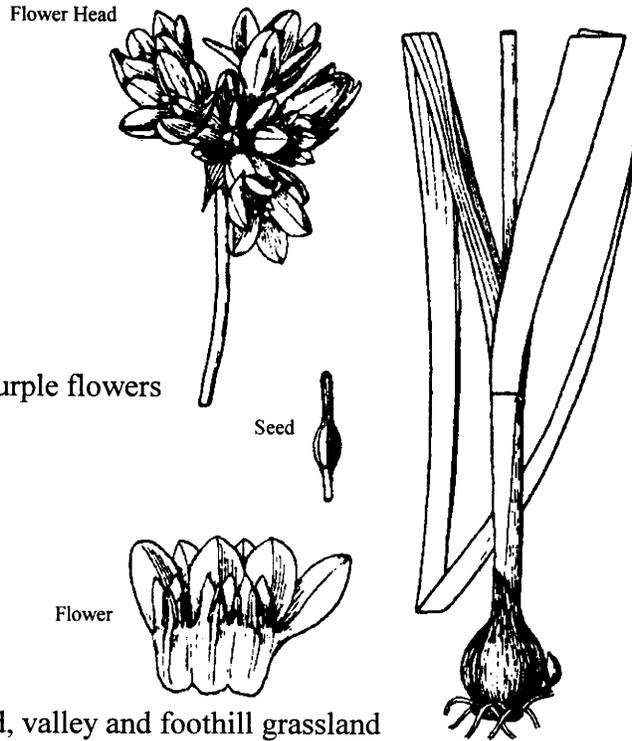
KAWEAH BRODIAEA  
Liliaceae (lily) Family

**Ranking**

Federal: Category 2  
Change: None, 2/28/96  
State: Endangered

**Description**

Life Cycle: Perennial  
Flowers: Showy rose to pink-purple flowers  
in an umbrella  
Height: 3-10 inches  
Growth: Erect herb from bulb



**Habitat**

General: Cismontane woodland, valley and foothill grassland  
Microhabitat: Granitic substates in deep, clayey soils on south-southwest facing slopes, 500-4500 feet

**Known Locations**

Township	Range	Section
T17S	R29E	S32 W Qtr
T17S	R27E	S26 NE Qtr
T17S	R29E	S29 NW Qtr
T17S	R28E	S26 SE Qtr
T17S	R29E	S05 SE Qtr
T18S	R29E	S05 SW Qtr
T18S	R29E	S16 NE Qtr
T18S	R29E	S14 SW Qtr
T18S	R29E	S08 XX Qtr
T18S	R28E	S02 SE Qtr
T18S	R29E	S19 NW Qtr
T18S	R29E	S06 S Qtr
T18S	R29E	S17 SW Qtr
T18S	R28E	S12 SE Qtr
T18S	R29E	S33 NW Qtr
T18S	R29E	S29 SW Qtr
T20S	R30E	S32 NE Qtr

***ERYTHRONIUM PUSATERII***

HOCKETT LAKES FAWN LILY

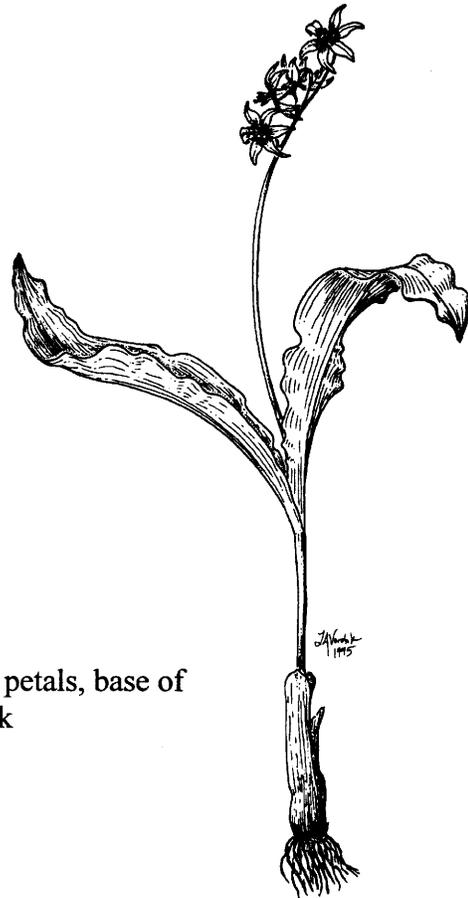
Liliaceae (lily) Family

**Ranking**

Federal: Category 3c  
Change: None, 2/28/96  
State: None

**Description**

Life Cycle: Perennial, bulb  
Flowers: Showy white flowers with six petals, base of each petal yellow aging to pink  
Height: 8-10 inches  
Growth: Erect herb from narrow bulb



**Habitat**

General: Upper montane coniferous forest, meadows  
Microhabitat: Often on rock outcrops, meadows, rocky ledges, 7000-8000 feet

**Known Locations**

Township	Range	Section
T18S	R30E	SUN XX Qtr
T19S	R30E	S12 XX Qtr
T19S	R30E	S19 W Qtr
T20S	R31E	S15 SE Qtr
T20S	R31E	S03 NW Qtr
T21S	R32E	S18 NW Qtr
T21S	R31E	S13 NW Qtr

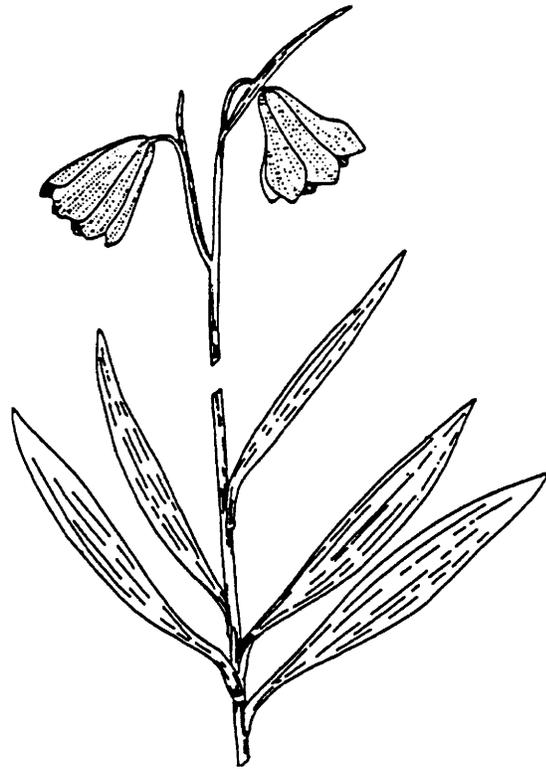
***FRITILLARIA STRIATA***

STRIPED ADOBE-LILY

Liliaceae (lily) Family

**Ranking**

Federal: Category 1  
Change: Candidate, 2/28/96  
State: Threatened



**Description**

Life Cycle: Perennial  
Flowers: Nodding, showy flowers with six petals, pink, white or burgundy, fragrant  
Height: 10-25 inches  
Growth: Erect herb from bulb

**Habitat**

General: Blue oak woodland, valley and foothill grassland  
Microhabitat: Heavy clay adobe soils, 1000-4000 feet

**Known Locations**

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Township	Range	Section
T21S	R27E	S25 XX Qtr
T21S	R28E	S36 SE Qtr
T21S	R28E	S08 SW Qtr
T21S	R28E	S27 SE Qtr
T21S	R27E	S13 NW Qtr

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***ORCUTTIA INAEQUALIS***

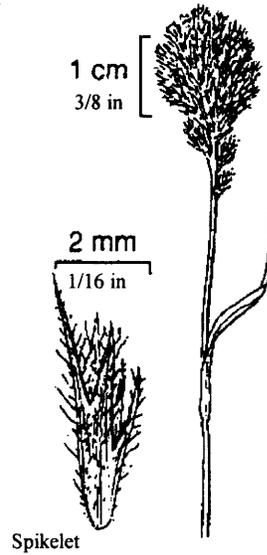
SAN JOAQUIN VALLEY ORCUTT GRASS

Poaceae (grass) Family

**Ranking**

Federal: Proposed

State: Endangered



**Description**

Life Cycle: Annual

Growth: Erect, spreading to form a mat 2 to 6 inches

Height: 2-6 inches

**Habitat**

General: Vernal pools

Microhabitat: Not available at this time

**Known Locations**

Township	Range	Section
T17S	R26E	S03 SE Qtr

***SPHENOPHOLIS OBTUSATA***

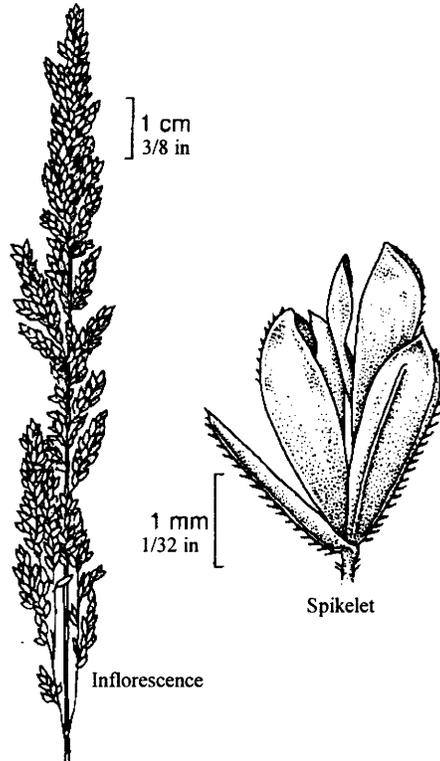
PRAIRIE WEDGEGRASS

Poaceae (grass) Family

**Ranking**

Federal: None

State: None



**Description**

Life Cycle: Perennial

Height: 8-31 inches

Growth: Erect herb

**Habitat**

General: Cismontane woodland, meadows, riparian scrub

Microhabitat: Open, moist sites, along rivers and springs, sometimes on alkaline soil, 950-6500 feet

**Known Locations**

Township	Range	Section
T22S	R 32E	S23 SE Qtr
T22S	R 32E	S36 SW Qtr

***ASPLENIUM SEPTENTRIONALE***

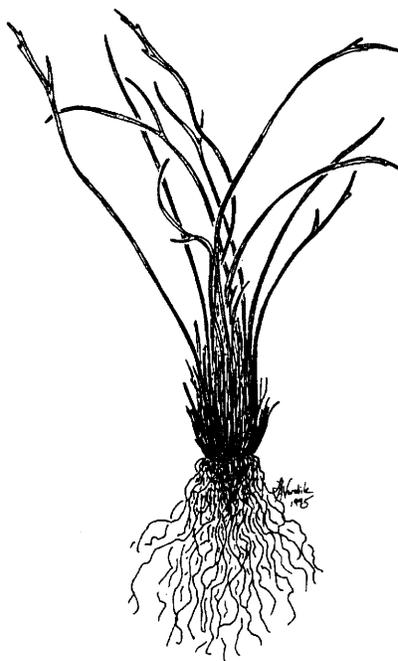
NORTHERN SPLEENWORT

Aspleniaceae (spleenwort) Family

**Ranking**

Federal: None

State: None



**Description**

Life Cycle: Perennial Fern

Height: 3-1/2 inches

Growth: Herb with grass-like leaves from the base, 2-6 inches long

**Habitat**

General: Lower Montane coniferous forest, subalpine coniferous forest, upper montane coniferous forest

Microhabitat: Rock outcrops

**Known Locations**

Township	Range	Section
T17S	R31E	SUN XX Qtr
T17S	R31E	SUN XX Qtr

# GLOSSARY

- Alkaline** — Soils containing high levels of soluble salts.
- Ascending** — Curving or angling upward from base as in the stems of a plant.
- Asteraceae (composital)** Sunflower family — There are two types (ray and disk) of tiny flowers that make up the flower head--this publication treats the head as the flower.
- Bract** — A leaflike structure at the base of a flower.
- Bulb** — Short underground stem and the fleshy leaves or leaf bases attached to and surrounding it, e.g., an onion.
- Bulblet** — Small bulb generally produced at the base of a bulb.
- Chaparral** — A vegetation type made up of thick stands of shrubs.
- Chenopod Scrub** — Scrubland dominated by plants in the goosefoot family.
- Colluvial** — Series of washes in an area.
- Corolla** — Collective term for flower petals.
- Decumbent** — Mostly lying flat on the ground but with tips curving up.
- Disk Flower** — Small tube flowers in the center of a flower head.
- Ephemeral** — Intermittent ephemeral pools or streams that only exist for part of a year or after heavy storms.
- Fruit** — Seed Pod.
- Head** — A dense cluster of small flowers that make up the inflorescence.
- Inflorescence** — The flowering part of a plant, a flower cluster.
- Leaf Axil** — The upper angle between the stems and leaf.
- Montane** — Mountains.
- Nectar Spur** — A spur or projection on the back of a flower that may or may not contain nectar.
- Nodes** — The position on the stem where leaves or branches originate.
- Playas** — The flat, floored bottom of an undrained desert basin.
- Prostrate** — Lying flat on the ground.
- Ray flower** — Showy flowers found on the outside of the asteraceae flower head.
- Stamen** — Male reproductive part of flower.
- Sub alpine** — Below alpine but above mountain.
- Subshrub** — A small shrub.
- Talus** — Rock debris at the base of a cliff or slope.
- Umbel** — The flowers are arranged like an umbrella.
- Vernal Pool** — Ephemeral pool which contains water in the spring.
- Volcanic Tuff** — A rock composed of the finer kinds of volcanic destructus usually more or less stratified.

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