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**Edith Read, Survey for Special Status Plant Species, Vista Canyon, Santa  
Clarita, Los Angeles County, California (September 2009)**



**Survey for Special Status Plant Species, Vista Canyon, Los Angeles  
County, California**

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## **SUMMARY**

This report describes results of surveys for special status plant species conducted in 2009. Vegetation and special status plant assessments from previous studies are also updated. Field surveys were conducted in March, April, and May of 2009. These surveys followed a winter in which total rainfall was about average for the region. These conditions, combined with results from previous surveys, provide high confidence in the survey results for special status plant species.

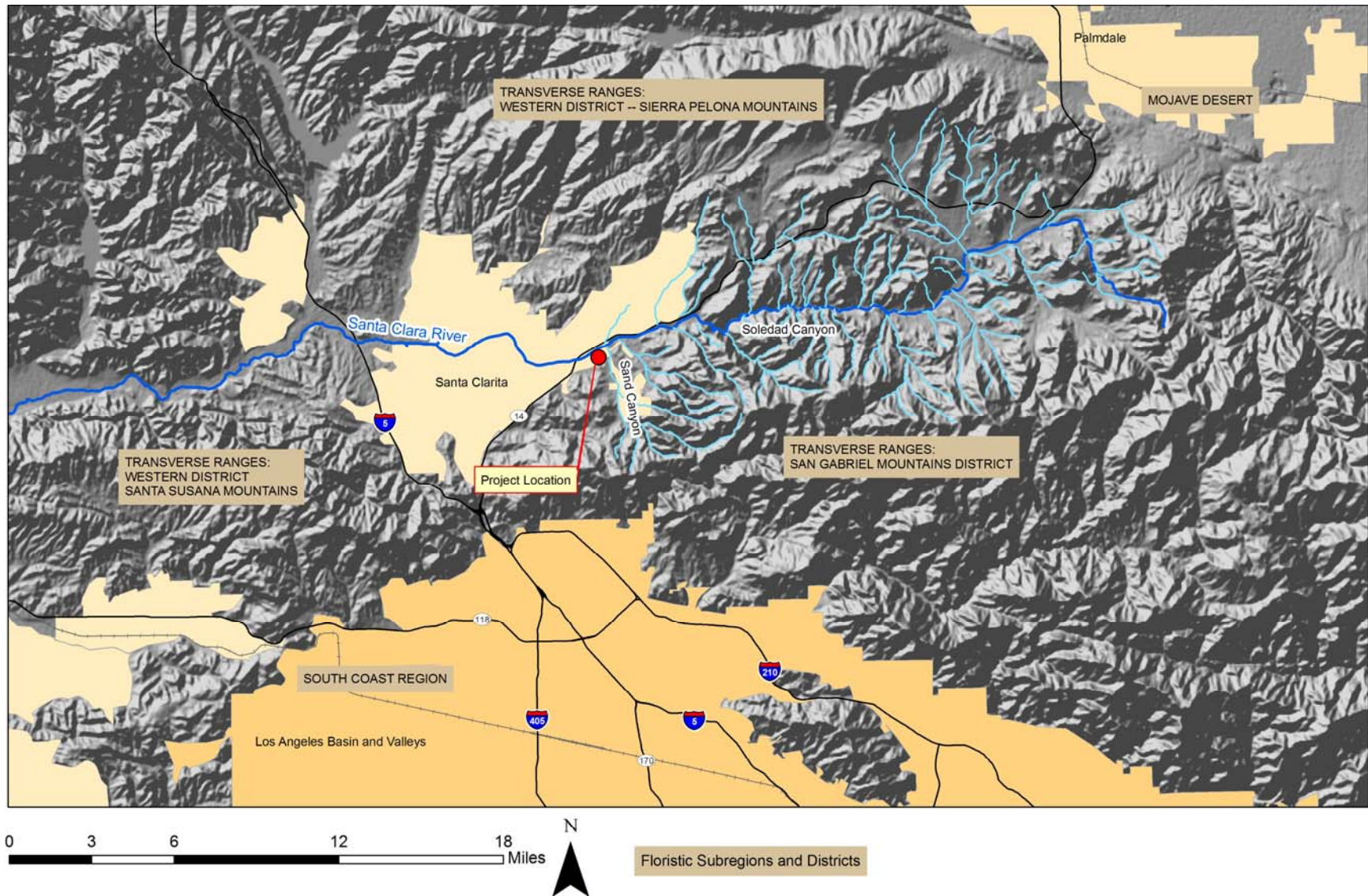
The site of the proposed Vista Canyon project (“site”) is located in the eastern Santa Clarita Valley where ranges of coastal, mountain, and desert plant species intersect along the Santa Clara River and adjacent foothills. Variations in hydrologic regime, geomorphology, and soils across the site contribute to floristic diversity. Native vegetation persists despite a long history of human disturbance that began with conversion of less active parts of the floodplain to agriculture sometime before 1928. Some vegetation types on portions of the site, especially riparian and wetland types, appear to be relatively new and the result of nuisance runoff from adjacent urban development. Areas east and west of the site, on both sides of the floodplain, have been developed, thereby disrupting historical continuity of open space between the San Gabriel and Sierra Pelona mountain ranges along this section of the Santa Clara River.

One special status plant species, slender mariposa lily (*Calochortus clavatus* var. *gracilis*), occurs on the site. This taxon is not listed by federal or state resource agencies as rare, threatened, or endangered, but is considered “fairly threatened” by the California Native Plant Society. The population is restricted to a small hill at the south boundary of the site. This hill, representing the lower elevations of the San Gabriel Mountains, is distinct from other habitats on site due to differences in soil type, slope aspects, and vegetation community.

## **LOCATION AND HABITAT**

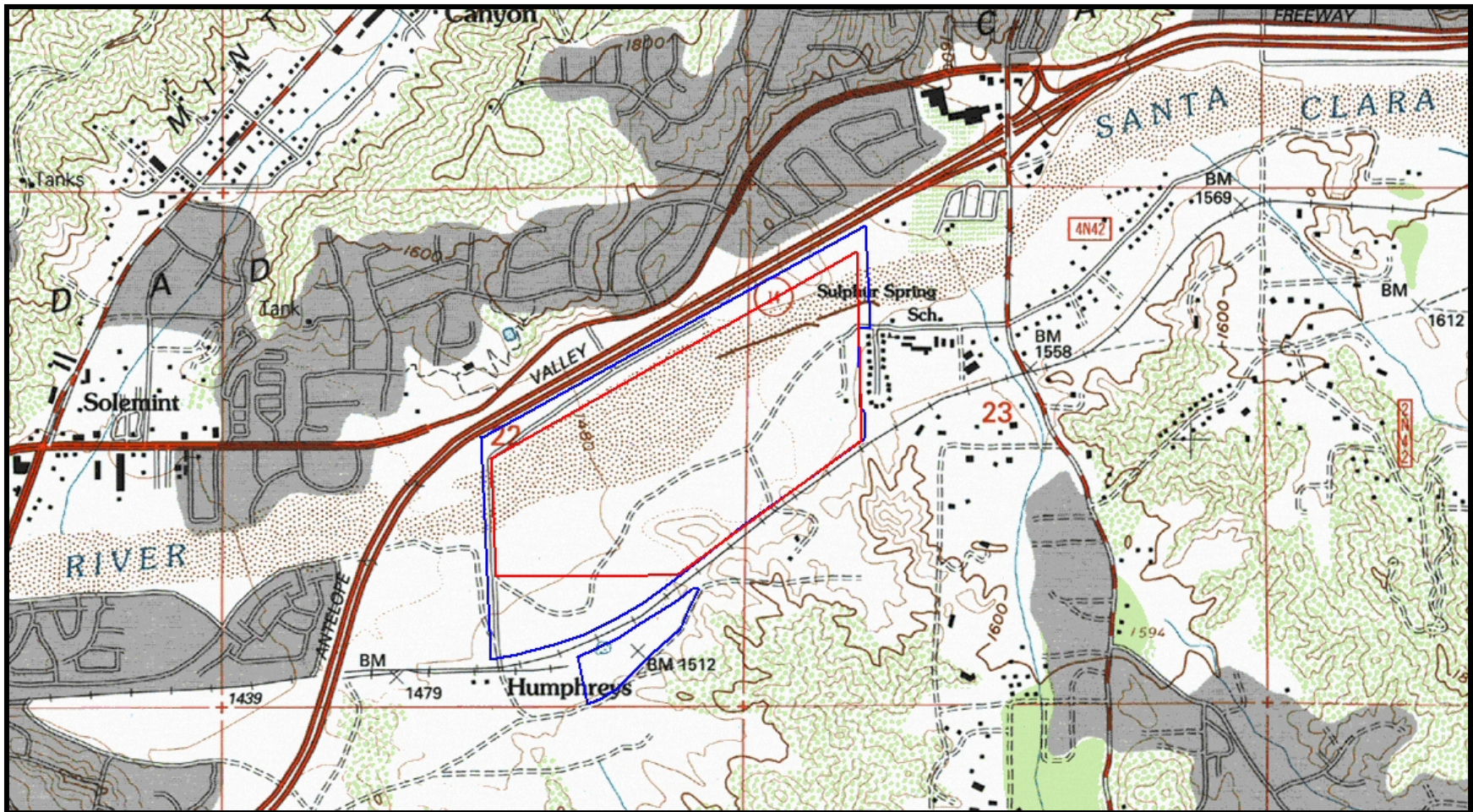
The Vista Canyon project site (“site”) is located on the south side of the Antelope Valley Freeway (SR-14), west of Sand Canyon in Los Angeles County, California. Figure 1 shows the location of the site relative to its watershed and surrounding floristic regions (Hickman, 1993). The U.S. Geological Survey topographic location, which is relevant to searches of rare plant databases, consists of the Mint Canyon 7.5' quadrangle, Township 4 North, Range 15 West, east half of Section 22 and the northwest quarter of Section 23 (Figure 2). Elevation ranges from about 1480 to 1560 feet above mean sea level.

Vegetation communities and flora of the Property were documented previously through field surveys conducted in March, April, and May of 2008. Results of these surveys, as well as wildlife surveys and assessments of stream and other resources, were reported by FBC (2008). The purpose of this report is to update prior survey results with respect to the flora and occurrence of special status plant species on the site.



**Figure 1. Site Location**





Source: USGS 7.5' Quadrangle "Mint Canyon"      — Survey Boundary      — Project Boundary

**Figure 2. Site Topography**

## METHODS

Results of previous field surveys (FBC, 2008) were reviewed. Field surveys in 2009 were conducted by Dr. E. Read on March 19, March 20, March 30, April 23, and May 5. An off-site population of slender-horned spineflower (*Dodecahema leptoceras*), a federal and state listed endangered plant species, was visited throughout the 2008 and 2009 survey periods in order to document phenology and “search image” for surveying for this annual herb on the project site. This population is located in Bee Canyon, within the Santa Clara River watershed upstream of the site. All plant taxa encountered in the surveys were identified to the lowest possible taxonomic level, based on the current flora of California (Hickman, 1993).

## RESULTS

### Vegetation Types

Figure 3 shows vegetation types on site, which slightly modifies and updates the map described in FBC (2008). Updates include small areas of alkali rye (*Leymus triticoides*) and saltgrass (*Distichlis spicata*) grassland, and mixed elderberry-sagebrush-grassland vegetation. As can be seen from Figure 1, the reach of the Santa Clara River that flows through the site has a large watershed that extends east through Soledad Canyon within 10 miles of the Mojave Desert, and is located at the confluence of several floristic subregions and districts. Soils across the property are typical of the region, consisting of river gravel and sandy alluvium in the active part of the river, and loam soil types in the hills and infrequently flooded parts of the floodplain (FBC, 2008). No special soil types such as limestone or serpentine (two types favoring rare endemic plant species) are known to occur. However, the northern and southern hills have different types of loam soils. These differences result from variable sand content, which in turn affects drainage, a factor important to the distribution of plant species.

### Special Status Plants

Appendix 1 provides a list of all plant species identified during the surveys. No federal or state listed rare, threatened, or endangered plant species were observed. Slender-horned spineflower was the primary focus of the surveys because of the proximity of a population upstream in Bee Canyon. That population occurs on an older, inactive part of the floodplain in association with moderately dense alluvial scrub and California juniper (*Juniperus californica*). This type of vegetation does not occur on the site.

One population of a species on the California Native Plant Society (CNPS) list was observed in 2008 and 2009: slender mariposa lily (*Calochortus clavatus* var. *gracilis*). This species is on CNPS list 1B.2, meaning that CNPS considers this species to be “fairly threatened” in California. Figure 4 shows the location of this population on site, which is limited to a small hill at the southern boundary. Figure 5 shows photographs of the flower and surrounding vegetation. A total of 50 flowering individuals were counted in 2009, located primarily on the northeast-facing slopes of the hill.



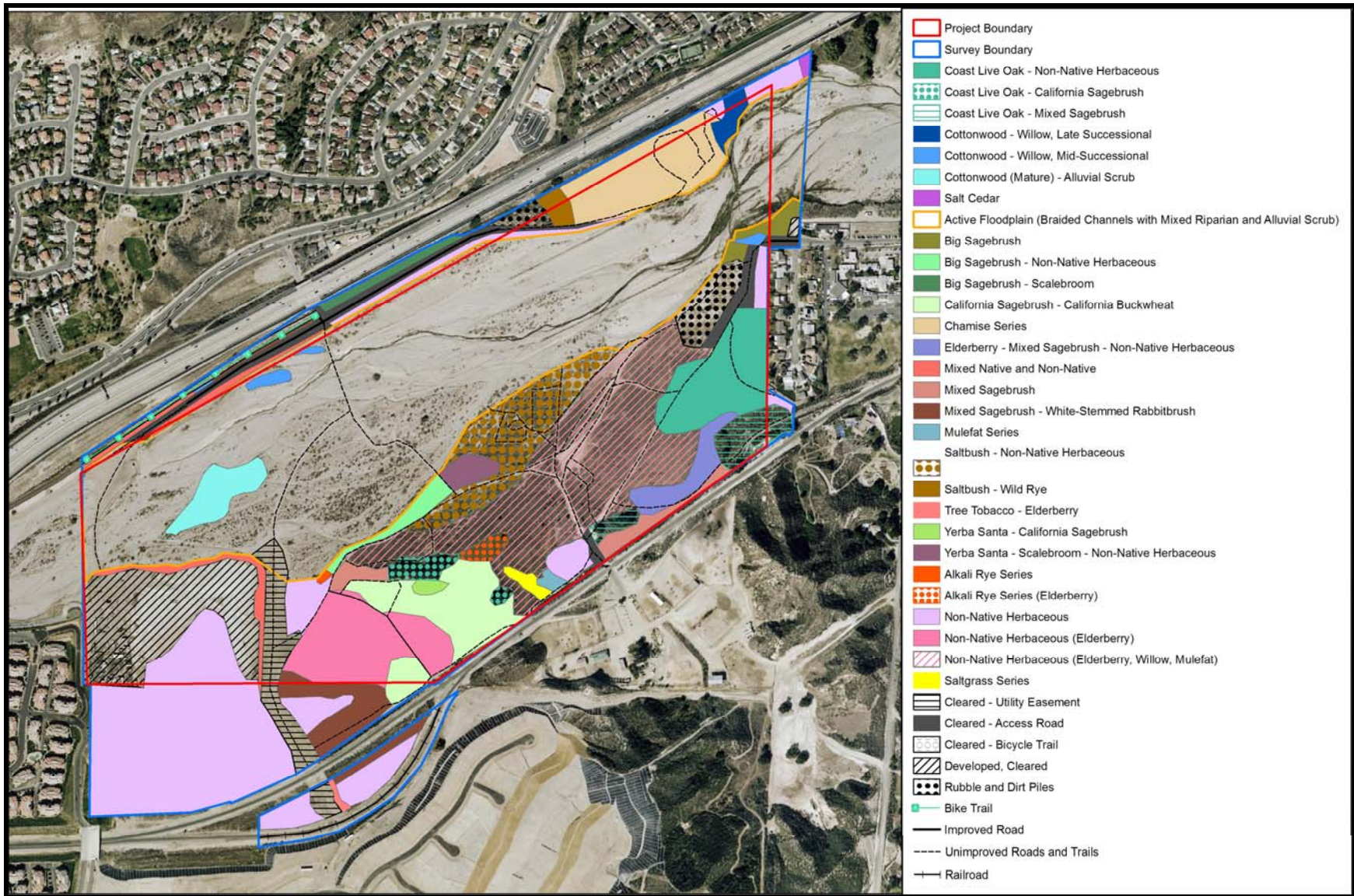


Figure 3. Vegetation Types





— Survey Boundary      — Project Boundary

**Figure 4. Location of Slender Mariposa Lily Population, 2008-2009**





**Figure 5. Slender Mariposa Lily and Habitat**

Appendix 2 summarizes this author's assessment of all other special status plant species known to occur in the project region but not observed on site. This list is based on searches of the California Natural Diversity Database and CNPS Online Inventory of Rare and Endangered Plants of California. No significant changes were made to the earlier assessments reported in FBC (2008), including assessments of slender-horned spineflower, Plummer's mariposa lily (*Calochortus plummerae*), Peirson's morning glory (*Calystegia perisonii*), Davidson's bushmallow (*Malacothamnus davidsonii*), and Mason's neststraw (*Stylocline masonii*). The neststraw species on site was determined to be a species common across central and southern California, everlasting neststraw (*Stylocline gnaphaloides*), but its occurrence on site is limited to the north hill and small young terraces on the floodplain that do not have dense cover of non-native grasses.

## DISCUSSION

Survey results for rare plants can be affected by rainfall. Appendix 3 shows a record of growing season (October-May) rainfall totals available for a station east of the site near Escondido Canyon and Acton. While this station is about 1,000 feet higher in elevation than the site, its rainfall records are the most continuous and lengthy for this region of the Santa Clarita Valley. These records indicate that the 2009 surveys were conducted following a winter that was "average" for rainfall. This information, plus the fact that 2009 was the second consecutive year of plant surveys across the entire site, gives high confidence in the survey results for special status plant species on this site.

### Slender Mariposa Lily (*Calochortus clavatus* var. *gracilis*)

Slender mariposa lily is one of five varieties of "club-haired" mariposa lilies known to occur in California. The slender mariposa variety is distinguished from other varieties mainly on the basis of plant size and subtle features of the flowers. These characters tend to be environmentally influenced and therefore variable, even within a single variety. The California Natural Diversity Database has 19 published occurrence records for the taxon, one of which is upstream of the site at the confluence of Bee Canyon and Soledad Canyon washes. Fewer than 20 plants were observed at that location in 1994. In 2008, this author discovered additional populations of the species in upper Bee Canyon and Spring Canyon, representing a significant increase in numbers of individuals and geographic distribution for the region. More than 200 individuals were observed in those canyons, generally on grassy north-facing slopes in openings between shrubs. It is possible that additional populations occur in other, unsurveyed parts of the project region.

As in the case of most special status plants, little is known regarding the ecology of slender mariposa lily. Flowers and seed pods are supported on slender stems from perennial, underground bulbs. Not all plants flower every year, and herbivores may consume above-ground growth, before flowers appear or seeds are produced (pers. obs.). Therefore the true size of a population can be underestimated in any given year. However, based on field observations in 2008 and 2009, there is high confidence that the population on site is confined



to a small hill at the south boundary. This population is also geographically disjunct (separated) from the populations in Bee and Spring Canyons, and therefore likely to be considered by the California Department of Fish and Game as a new occurrence record for their Natural Diversity Database.

In cultivation, the “club-haired” mariposa lilies are believed to grow best in rocky, gravelly soil with lots of sand (Gerritsen and Parsons, 2007, p. 145). This may explain why the slender mariposa lily population on site is limited to a Saugus loam soil type on a steep slope. Apart from the steep slope gradient, this soil differs from other loam soils on the site in having a slightly greater percentage of sand (45 percent) in the top 15 inches.

## **CONCLUSIONS**

One special status plant species, slender mariposa lily (*Calochortus clavatus* var. *gracilis*), occurs on the site. This taxon is not listed by federal or state resource agencies as rare, threatened, or endangered. The plant species is considered “fairly threatened” by the California Native Plant Society. The population is restricted to a small hill at the south boundary of the site.

## **LITERATURE CITED**

Forde Biological Consultants (FBC), 2008. Biological Assessment: Vista Canyon Ranch, Los Angeles County, California. Prepared for Vista Canyon Ranch LLC and The River Project. Final Report dated August 27, 2008.

Gerritsen, M.E. and R. Parsons, 2007. *Calochortus: Mariposa Lilies and their Relatives*. Timber Press Inc., Portland, Oregon.

Hickman, J.C. (editor), 1993. *The Jepson Manual: Higher Plants of California*. University of California Press, Berkeley and Los Angeles, California.

**APPENDIX 1**

**PLANT SPECIES OBSERVED**

\* Denotes non-native species

**Latin Name**

**Common Name**

**Location**

**PTERIDOPHYTES**

**Selaginellaceae**

*Selaginella bigelovii* Underw.

**FERNS AND FERN ALLIES**

**Spike-Moss Family**

Bigelow's moss fern

north + south hills

**GYMNOSPERMS**

**Cupressaceae**

*Juniperus californica* Carriere

**CONIFERS**

**Cypress Family**

California juniper

north hill

**DICOTS**

**Anacardiaceae**

*Rhus trilobata* Torrey & A. Gray

*Schinus terebinthifolius* Raddi

**Sumac Family**

skunkbrush

Brazilian pepper tree\*

floodplain, bases of hills

disturbed/levee

**Apiaceae**

*Conium maculatum* L.

*Lomatium dasycarpum* (Torrey & A. Gray) J. Coulter & Rose

**Carrot Family**

poison hemlock\*

lace parsnip

floodplain, outside active channel

north+south hills

**Asteraceae**

*Ambrosia psilostachya* DC.

*Artemisia californica* Less.

*Artemisia douglasiana* Besser

*Artemisia dracunculoides* L.

*Artemisia tridentata* Nutt.

*Baccharis pilularis* DC.

*Baccharis salicifolia* (Ruiz Lopez & Pavon) Pers.

*Centaurea solstitialis* L.

*Chaenactis glabriuscula* DC. var. *glabriuscula*

**Sunflower Family**

western ragweed

California sagebrush

mugwort

tarragon

big sagebrush

coyote brush

mule fat

yellow star-thistle \*

yellow pincushion

all areas

all areas

floodplain

floodplain

floodplain, levee banks

floodplain, levee banks

floodplain; active channel

all areas

all areas

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<i>Chrysothamnus nauseosus</i> (Pallas) Britton	rabbitbrush	floodplain
<i>Chrysothamnus nauseosus</i> (Pallas) Britton ssp. <i>albicaulis</i> (Nutt.) H.M. Hall & Clements	white-stemmed rabbitbrush	floodplain, levee banks
<i>Cirsium vulgare</i> (Savi) Ten.	bull thistle*	floodplain
<i>Deinandra fasciculata</i> (DC.) Greene	common tarplant	all areas; mostly on north hill
<i>Encelia actoni</i> Elmer	Acton encelia	south hill
<i>Eriophyllum confertiflorum</i> (DC.) A. Gray	golden-yarrow	north+south hills
<i>Gnaphalium californicum</i> DC.	everlasting	all areas
<i>Helianthus</i> sp.	sunflower	floodplain
<i>Heterotheca grandiflora</i> Nutt.	telegraph weed	all areas
<i>Lasthenia californica</i> Lindley	California goldfields	all areas; mostly on north hill
<i>Lepidospartum squamatum</i> (A. Gray) A. Gray	scale broom	floodplain
<i>Matricaria matricarioides</i> (Less.) Porter	pineapple weed	all areas
<i>Microseris</i> sp.		floodplain
<i>Pseudognaphalium canescens</i> DC W.A. Weber ssp. <i>beneolens</i> (Davidson) Kartesz	Wright's cudweed	south hill
<i>Sonchus oleraceus</i> L.	common sow thistle*	all areas
<i>Stylocline gnaphaloides</i> Nutt.	everlasting nest straw	north hill; parts of floodplain

#### **Boraginaceae**

<i>Amsinkia menziesii</i> (Lehm.) Nelson & J.F. Macbr. var. <i>intermedia</i> (Fischer & C. Meyer)	fiddleneck	all areas
<i>Cryptantha muricata</i> (Hook. & Arn.) Nelson & J.F. Macbr.	popcorn flower	all areas
<i>Heliotropium curassavicum</i> L.	wild heliotrope	floodplain
<i>Pectocarya pencillata</i> (Hook. & Arn.) A. DC.	winged combseed	all areas

#### **Brassicaceae**

<i>Brassica tournefortii</i> Gouan		
<i>Descurainia pinnata</i> (Walter) Britton		
<i>Erysium capitatum</i> (Douglas) E. Greene		
<i>Sisymbrium altissimum</i> L.		

#### **Cactaceae**

<i>Opuntia basilaris</i> Engelm. & J.M. Bigelow var. <i>basilaris</i>		
<i>Opuntia parryi</i> Engelm.		

#### **Caprifoliaceae**

#### **Borage Family**


#### **Mustard Family**

mustard*	all areas
tansy mustard	all areas
western wallflower	all areas
tumble mustard*	all areas

#### **Cactus Family**

beavertail cactus	all areas
cane cholla	all areas

#### **Honeysuckle Family**

*Sambucus mexicana* C. Presl

elderberry

floodplain

### **Chenopodiaceae**

*Atriplex canescens* (Pursh) Nutt.

*Atriplex lentiformis* (Torr.) S. Watson

### **Goosefoot Family**

four-wing saltbush

saltbush

floodplain; levee banks

floodplain; levee banks

### **Convolvulaceae**

*Calystegia occidentalis* (A. Gray) Brummitt ssp. *fulcrata* (A. Gray) Brummitt

### **Morning Glory Family**

chaparral false bindweed

north+south hills

### **Crassulaceae**

*Crassula connata* (Ruiz & Pav.) A. Berger

*Dudleya lanceolata* (Nutt.) Britton & Rose

### **Stonecrop Family**

pygmy stonecrop

lance-leaved dudleya

all areas

north+south hills

### **Cucurbitaceae**

*Marah macrocarpus* (Greene) Greene

### **Cucumber Family**

wild cucumber

south hill

### **Cuscutaceae**

*Cuscuta* cf. *californica* Hook. & Arn.

### **Dodder Family**

dodder

all areas; generally on buckwheat

### **Euphorbiaceae**

*Chamaesyce albomarginata* (Torrey & A. Gray)

*Eremocarpus setigerus* (Hook.) Benth.

*Ricinus communis* L.

*Stillingia linearifolia* S. Watson

### **Spurge Family**

rattlesnake weed

dove weed

castor bean\*

narrow leaved *Stillingia*

all areas

all areas

floodplain

north+south hills

### **Fabaceae**

*Astragalus filipes* A. Gray

*Genista* sp.

*Lotus scoparius* (Nutt.) Ottley

*Lotus strigosus* (Nutt.) E. Greene

*Lupinus bicolor* Lindl.

*Lupinus concinnus* J. Agardh

### **Legume Family**

narrow pod locoweed

broom\*

deerweed, California broom

hairy lotus

miniature lupine

bajada lupine

disturbed artificial terrace

floodplain

all areas

north+south hills

all areas

floodplain

### **Oak Family**

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**Fagaceae***Quercus agrifolia* Nee

live oak

floodplain -- old terraces on south side

**Geraniaceae***Erodium cicutarium* (L.) L'Her.**Geranium Family**

red-stem filaree \*

all areas

**Grossulariaceae***Ribes aureum* Pursh var. *gracillimum* (Cov. & Britton) Jepson**Gooseberry Family**

golden currant

floodplain -- old terraces, bases of hills on south side

**Hydrophyllaceae***Eriodictyon crassifolium* Benth.*Emmenanthe penduliflora* Benth.*Eucrypta chrysanthemifolia* (Benth.) E. Greene var. *chrysanthemifolia**Phacelia ramosissima* Lehm. var. *ramosissima***Water-Leaf Family**

yerba santa

whispering bells

common eucrypta

branching phacelia

floodplain and south hill

north+south hills

north+south hills

all areas

**Lamiaceae***Marrubium vulgare* L.*Salvia apiana* Jepson*Salvia columbariae* Benth.*Salvia mellifera* E. Greene*Trichostema lanatum* Benth.**Mint Family**

horehound \*

white sage

chia

black sage

woolly blue-curls

all areas

south hill

all areas

south hill

**Loasaceae***Petalonyx thurberi* A. Gray ssp. *thurberi***Loasa Family**

Thurber's sandpaper plant

floodplain

**Nyctaginaceae***Mirabilis bigelovii* A. Gray**Four-O'Clock Family**

wishbone bush

all areas

**Onagraceae***Camissonia bistorta* (Torr. & A. Gray) P.H. Raven**Evening-Primrose Family**

sun-cups

all areas

**Papaveraceae***Argemone munita* Durand & Hilg.*Escholtzia californica* Cham.**Poppy Family**

prickly poppy

California poppy

floodplain

all areas



**Plantaginaceae***Plantago erecta* E. Morris**Platanaceae***Platanus racemosa* Nutt.**Polemoniaceae***Eriastrum sapphirinum*(Eastw.) H. Mason*Gilia capitata* Sims*Gilia sinuata* Benth.**Polygonaceae***Chorizanthe staticoides* Benth.*Eriogonum fasciculatum* Benth. var. *fasciculatum**Eriogonum fasciculatum* Benth. var. *foliolosum* (Nutt.) Abrams*Pterostegia drymarioides* Fisch. & C.A. Mey.*Rumex crispus*L.**Portulacaceae***Calandrinia ciliata* (Ruiz Lopez & Pavon) DC*Montia* sp.**Rhamnaceae***Ceanothus cuneatus* (Hook.) Nutt. var. *cuneatus***Rosaceae***Adenostoma fasciculatum*Hook. & Arn.*Cercocarpus betuloides* Torr. & A. Gray**Rubiaceae***Galium angustifolium* Nutt. ssp. *angustifolium***Plantain Family**

California plantain

north hill

**Sycamore Family**

western sycamore

floodplain

**Phlox Family**

sapphire eriastrum

floodplain

bluehead gilia

north+south hills

rosy gilia

north+south hills

**Buckwheat Family**

Turkish rugging

all areas

coastal buckwheat

all areas

California buckwheat

all areas

fairy mist

south hill

curly dock

floodplain

**Purslane Family**

red maids

south hill

south hill

**Buckthorn Family**

buck brush

floodplain; south side

**Rose Family**

chamise

north hill

mountain-mahogany

floodplain; south side

**Bedstraw Family**

narrow-leaved bedstraw

south hill

**Willow Family**

**Salicaceae**

*Populus fremontii*S. Watson  
*Salix exigua*Nutt.  
*Salix goodingii*C. Ball  
*Salix laevigata*Bebb  
*Salix lasiolepis*Benth.

Fremont cottonwood floodplain  
 narrow-leaf willow floodplain  
 Gooding's willow floodplain  
 red willow floodplain  
 arroyo willow floodplain

**Scrophulariaceae**

*Penstemon speciosus* Lindl.

**Figwort Family**  
 showy penstemon north+south hills

**Solanaceae**

*Datura wrightii*Regel  
*Nicotiana glauca*Graham

**Nightshade Family**  
 Jimson weed all areas  
 tree tobacco\* floodplain

**Tamaricaceae**

*Tamarix parviflora* DC.

**Tamarix Family**  
 saltcedar\* floodplain

**MONOCOTS****Liliaceae**

*Bloomeria crocea* (Torr.) Coville  
*Calochortus clavatus* S. Watson var. *gracilis* Ownbey  
*Calochortus splendens*Benth.  
*Calochortus venustus* Benth.  
*Dichelostemma capitatum* (Benth.) A.W. Wood  
*Muilla maritima* (Torrey) S. Watson  
*Yucca whipplei* Torrey

**GRASSES AND ALLIES****Lily Family**

common goldenstar north+south hills  
 slender mariposa lily south hill  
 splendid mariposa lily north hill  
 butterfly mariposa lily north hill  
 blue dicks north+south hills  
 common muilla north hill  
 Whipple's yucca north+south hills

**Poaceae**

*Arundo donax*L.  
*Avena barbata*Link  
*Avena fatua*L.  
*Bromus diandrus*Roth  
*Bromus madritensis*L. ssp. *rubens* (L.) Husnot

**Grass Family**

giant reed\* floodplain  
 slender oat\* all areas  
 common wild oats\* all areas  
 ripgut brome \* all areas  
 red brome\* all areas

*Bromus tectorum* L.  
*Distichlis spicata* (L.) Greene  
*Hordeum murinum* L.  
*Lamarkia aurea* (L.) Moench  
*Leymus condensatus* (C. Presl) A. Love  
*Leymus triticoides* (Buckley) Pilger  
*Melica californica* Scribner  
*Melica imperfecta* Trin.  
*Muhlenbergia microsperma* (DC.) Kunth  
*Muhlenbergia rigens* (Benth.) Hitchc.  
*Schismus barbatus* (L.) Thell.

**Typhaceae**

*Typha domingensis* Pers.

cheat grass, downy brome\*  
 saltgrass  
 foxtail barley \*  
 goldentop\*  
 giant rye  
 creeping wild rye; alkali rye  
 California melic grass  
 California melic  
 littleseed muhly  
 deergrass  
 Mediterranean grass\*

**Cattail Family**

southern cattail

all areas  
 floodplain -- south side on old terrace  
 all areas  
 north+south hills  
 floodplain -- north side  
 floodplain -- south side on old terrace  
 north+south hills  
 north+south hills  
 north+south hills  
 north+south hills  
 floodplain  
  
 floodplain

**APPENDIX 2**

**SUMMARIZED ASSESSMENT OF SPECIAL STATUS PLANTS**

Common and Latin Names	Status			Habitat Association(s)	Elevation Range, Life Form, and Flowering Period	Assessment Summary
	Federal	State	CNPS			
Mt. Pinos onion <i>Allium howellii</i> var. <i>clokeyi</i> Traub	--	--	1B.3	Great Basin scrub, pinyon-juniper woodland	1300-1850m PH(b) April - June	<b>Not Observed</b> ; <i>not expected</i> to occur based on lack of suitable habitat. No <i>Allium</i> species observed during surveys.
Braunton's milk-vetch <i>Astragalus brauntonii</i> Parish	FE	--	1B.1	Closed-cone coniferous forest, chaparral, coastal sage, valley and foothill grassland/ recent burns or disturbed areas- usually carbonate soils.	4-640m PH March-July	<b>Not Observed</b> ; <i>low potential</i> to occur; marginal habitat due to absence of carbonate soils.
Nevin's barberry <i>Berberis nevinii</i> A. Gray	FE	CE	1B.1	Chaparral, cismontane woodland, coastal scrub, riparian scrub, esp. steep north-facing slopes or in low grade sandy washes.	290-1575m SHR March - April	<b>Not Observed</b> ; <i>low potential to occur</i> due to marginal quality habitat on site; observable year-round due to evergreen habit and unique leaf morphology but was not observed during surveys; can be <i>presumed absent</i> from this site.
California filaree (round-leaved filaree) <i>California macrophylla</i> (Hook.&Arn.) <i>Aldas, Navarro, Vargas, Saez &amp; Aedo</i> (formerly <i>Erodium macrophyllum</i> )	--	--	1B.1	Cismontane woodland, valley and foothill grassland, esp. clay soils.	15 – 1200m A(B)H March-July	<b>Not observed</b> ; <i>low potential to occur</i> due to marginal quality habitat and lack of suitable soils.
Slender mariposa lily <i>Calochortus clavatus</i> S. Watson var. <i>gracilis</i> Ownbey	--	--	1B.2	Chaparral, coastal scrub; shaded foothill canyons, often on grassy slopes.	420-760m PH(b) April-June	<b>Present</b> on south hill, north-to-northeast facing slopes



Common and Latin Names	Status			Habitat Association(s)	Elevation Range, Life Form, and Flowering Period	Assessment Summary
	Federal	State	CNPS			
Plummer's mariposa lily <i>Calochortus plummerae</i> Greene	--	--	1B.2	Coastal sage scrub, chaparral, valley and foothill grassland, cismontane woodland, lower montane coniferous forest; rocky and sandy sites, usually of granitic or alluvial material; can be very common after fire.	90-1610m PH(b) May-July	<b>Not Observed</b> ; <i>high potential for occurrence</i> ; habitat types, soils, elevation, all suitable, although site is highly disturbed.
Peirson's morning glory <i>Calystegia peirsonii</i> (Abrams) Brumitt	--	--	4.2	Coastal sage scrub, chaparral, chenopod scrub, cismontane woodland, lower montane coniferous forest; often in disturbed areas along roadsides or in grassy, open areas.	390-1470m PH May-June	<b>Not Observed</b> ; <i>moderate potential for occurrence</i> based on limited habitat present.
Mt. Gleason paintbrush <i>Castilleja gleasonii</i> Elmer	--	CR	1B.2	Lower montane coniferous forest.	1650-1830m PH May-June	<b>Not Observed</b> ; <i>not expected</i> on site due to lack of habitat.
Southern tarplant <i>Centromadia parryi</i> (Greene) Greene ssp. <i>australis</i> (Keck) B.G. Baldwin	--	--	1B.1	Estuary and marsh margins, vernal mesic grasslands, and vernal pools; often in disturbed sites and sometimes in alkaline soils with saltgrass.	0-425m AH May-November	<b>Not Observed</b> ; <i>low potential to occur</i> due to marginal quality habitat.
San Fernando Valley spineflower <i>Chorizanthe parryi</i> Wats. var. <i>fernandina</i> (Wats.) Jeps.	FC	CE	1B.1	Sandy soils, coastal scrub.	0-1035m AH April-June	<b>Not Observed</b> ; <i>low potential to occur</i> due to marginal habitat quality.
White-bracted spineflower <i>Chorizanthe xanti</i> Wats. var. <i>leucotheca</i> Goodm.	--	--	1B.2	Mojavean desert scrub, pinyon-juniper woodland.	300-1200m AH April-June	<b>Not Observed</b> ; <i>not expected</i> on site due to lack of habitat.
Santa Susana tarplant <i>Deinandra minthornii</i> (Jeps.) B.G. Baldwin	--	CR	1B.2	Chaparral, coastal scrub; sandstone outcrops and crevices.	280-760m SHR July-October	<b>Not Observed</b> ; <i>not expected</i> on site due to lack of suitable habitat.

Common and Latin Names	Status			Habitat Association(s)	Elevation Range, Life Form, and Flowering Period	Assessment Summary
	Federal	State	CNPS			
Slender-horned spineflower <i>Dodecahema leptoceras</i> (Gray) Rev. & Hardham	FE	CE	1B.1	Chaparral, alluvial fan sage scrub; flood-deposited terraces and washes.	200-760m AH April-June	<b>Not Observed</b> ; <i>low potential to occur</i> on site due to marginal quality habitat.
San Gabriel bedstraw <i>Galium grande</i> McClat.	--	--	1B.2	Cismontane woodland, chaparral, broadleaf upland forest, lower montane coniferous forest; open chaparral and low open oak forest, on rocky slopes.	425-1200m PH April-June?	<b>Not Observed</b> ; <i>low potential</i> for occurrence on site due to marginal habitat.
Palmer's grappling hook <i>Harpagonella palmeri</i> A. Gray	--	--	4.2	Chaparral, coastal scrub, valley and foothill grassland; clay soil; open grassy areas within shrubland.	15-830m AH March-May	<b>Not Observed</b> ; <i>low potential</i> for occurrence on site due to marginal habitat.
Los Angeles sunflower <i>Helianthus nuttallii</i> T&G. ssp. <i>parishii</i> (Gray) Heiser	--	--	1A*	Marshes and swamps.	5-1675 m PH August-October	<b>Not Observed</b> ; <i>low potential</i> on site – marsh area on north side of floodplain is recent in history, supported by runoff.
Ross' pitcher sage <i>Lepechinia rossii</i> S. Boyd & O. Mistretta	--	--	1B.2	Chaparral; soil derived from fine-grained reddish sedimentary rock.	305-788 m SHR May-June	<b>Not Observed</b> ; <i>not expected</i> on site due to lack of suitable habitat.
Davidson's bush mallow <i>Malacothamnus davidsonii</i> (Rob.) Greene	--	--	1B.2	Coastal scrub, riparian woodland, chaparral; sandy washes.	180-855m SHR June-September	<b>Not Observed</b> ; <i>moderate potential to occur</i> on site due to presence of suitable habitat.
Spreading navarretia <i>Navarretia fossalis</i> Moran	FT	--	1B.1	Chenopod scrub, marshes, playas, vernal pools.	30-1300m AH April-May	<b>Not Observed</b> ; <i>low potential to occur</i> due to marginal habitat.
Short-joint beavertail <i>Opuntia basilaris</i> Engelm.&Bigel. var. <i>brachyclada</i> (Griffiths) Munz	--	--	1B.2	Chaparral, Joshua tree woodland, Mojavean desert scrub, pinyon-juniper woodland, riparian woodland; sandy soil or coarse, granitic loam.	425-1800m SUC May-June	<b>Not Observed</b> ; <i>low potential</i> ; despite dry year, this species would have been detectable if present.

Common and Latin Names	Status			Habitat Association(s)	Elevation Range, Life Form, and Flowering Period	Assessment Summary
	Federal	State	CNPS			
California orcutt grass <i>Orcuttia californica</i> Vasey	FE	CE	1B.1	Vernal pools.	15-660m AH May-June	<b>Not Observed</b> ; <i>not expected</i> due to lack of habitat.
Rayless ragwort <i>Senecio aphanactis</i> Greene	--	--	2.2	Cismontane woodland, coastal scrub; drying alkaline flats.	20-575m AH February-March	<b>Not Observed</b> ; <i>low potential</i> ; last known record from region was "Saugus" (Newhall quadrangle) in 1901.
Mason's neststraw <i>Stylocline masonii</i> Morefield	--	--	1B.1	Chenopod scrub, pinyon-juniper woodland; sandy washes.	100-1200m AH March-May	<b>Not Observed</b> ; moderate potential; habitat suitable but <i>Stylocline</i> species on site identified as the common neststraw, <i>S. gnaphaloides</i> .
Greata's aster <i>Symphotrichum greatae</i> (Parish) G.L. Nesom	--	--	1B.3	Chaparral, cismontane woodland, esp. mesic canyons	800-1500m PH August-October	<b>Not Observed</b> ; <i>low potential</i> to occur due to lack of records for Mint Canyon quadrangle and marginal habitat.

**STATUS KEY:**

Federal

FE: Federally Endangered  
 FT: Federally Threatened  
 FC: Federal Candidate

State

CE: State Endangered  
 CT: State Threatened  
 CR: State Rare

CNPS

List 1A\*: CNPS still lists as presumed extinct in California. This status may be erroneous because species may have been recently rediscovered – however, CNDDDB reports the "rediscovered" population along the south edge of the Santa Clara River floodplain near Newhall may be a new taxon, not *H. nuttallii* ssp. *nuttallii*.

List 1B.1: Rare, threatened, or endangered in California and elsewhere; seriously threatened in California.

List 1B.2: Rare, threatened, or endangered in California and elsewhere; fairly threatened in California.

List 1B.3: Rare, threatened, or endangered elsewhere; rare but currently not very threatened in California;

List 2.2: Rare, threatened, or endangered in California, but more common elsewhere; fairly threatened in California.

List 4.2: Plants of limited distribution; fairly threatened in California.

**LIFE FORM KEY:**

AH: Annual Herb  
 A(B)H: Annual to Biennial Herb  
 PH: Perennial Herb  
 SHR: Shrub  
 SUC: Succulent  
 (b): bulb

**APPENDIX 3**  
**RAINFALL RECORD**

**(Acton Station #040014; used to assess probability of detection for annual plant species)**

