
FLx, "Rare Plant Survey for Helianthus sp.; Castaic Junction" (2002; 2002C)

RARE PLANT SURVEY FOR *HELIANTHUS* SP.

CASTAIC JUNCTION

LOS ANGELES COUNTY, CA

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1. INTRODUCTION

This report documents the results of a rare plant survey conducted at the Castaic Junction site within the Newhall Ranch project area in Los Angeles County, California. The Castaic Junction site lies south of the junction of Highway 126 and Interstate 5 and north of the Santa Clara River. It is bounded on the north by Henry Mayo Road and The Old Road. The survey area extended from the mobile home park in the west to the start of commercial development along The Old Road in the east.

A team of two consultants from FLx (Dr. Anuja Parikh and Dr. Nathan Gale) conducted the rare plant survey on October 19, 2002. The focus of the survey was the Los Angeles sunflower (*Helianthus nuttallii* ssp. *parishii*), which is found in wetland habitats; the survey, therefore, concentrated on the wetter parts of the Castaic Junction site. Upland areas above the Santa Clara River were not examined, since they already had been surveyed for rare plants in Spring 2001. During the current survey, wetland vegetation types and plant species associations were noted and their dominant species were recorded. A list of observed plant species, including rare and commonly occurring plants, was compiled. Plant community descriptions in this report follow Holland (1986) where applicable; species nomenclature follows Hickman (1993).

2. VEGETATION TYPES AND PLANT SPECIES ASSOCIATIONS

The Castaic Junction site lies on a relatively flat terrace above the northern banks of the Santa Clara River. Most of the terrace currently is used for agriculture. The wetter areas of the site, where the survey was conducted, occur in and along the edges of the river floodplain, and the lower reach of a tributary that enters the river from the northeast in the eastern part of the site. The survey area is composed of relatively flat terrain in the main and numerous secondary channels of the river. It also includes the lower terraces and slopes of the riverbanks. In comparison with other reaches of the Santa Clara River and tributary creeks, the river reaches in the Castaic Junction survey area are densely vegetated and often are wet, with standing or flowing water.

Riverwash. Small patches of the riverbed within the survey area are subject to scouring, and these areas have sparse vegetation cover. The soils are sandy riverwash and gravel, and in places form low terraces within the channel. No well-defined plant community is found here, although scattered elements of riparian scrub were observed. Shrub species found in and adjacent to the channel include mule fat (*Baccharis salicifolia*), tamarisk (*Tamarix* sp.), tree tobacco (*Nicotiana glauca*), and giant reed (*Arundo donax*). Other herbaceous plants growing in the channel include white sweetclover (*Melilotus albus*), annual bur-sage (*Ambrosia acanthicarpa*), hairy goldenaster (*Heterotheca sessiliflora* ssp. *fastigiata*), buckwheat (*Eriogonum baileyi*), and foxtail chess (*Bromus madritensis* ssp. *rubens*).

Freshwater Marsh. Relatively extensive wet areas of the main and secondary channels of the Santa Clara River, and the eastern tributary in the Castaic Junction survey area have freshwater marsh vegetation. This community typically is dominated by emergent perennial monocots, often up to 5 m tall and forming closed canopies. Marshes are found on relatively deep organic soils on sites permanently flooded with fresh water (Holland, 1986). Species found in the wettest parts of the survey area are broad-leaved cattail (*Typha latifolia*), bulrushes (*Scirpus americanus*, *S. acutus* var. *occidentalis*, *S. californicus*, *S. pungens*), smartweeds

(*Polygonum hydropiperoides*, *P. punctatum*, *P. pennsylvanicum*), nutsedges (*Cyperus eragrostis*, *C. odoratus*), cocklebur (*Xanthium strumarium*), water cress (*Rorippa nasturtium-aquaticum*), and water speedwell (*Veronica anagallis-aquatica*). With respect to sensitivity status, freshwater marsh has been state-ranked as S2.1 (2,000 to 10,000 acres, very threatened) by the California Natural Diversity Database (CNDDDB).

Mule Fat Scrub. This community mostly is found in linear patches along the main and secondary channels of the Santa Clara River. Additionally, in the southeastern corner of the Castaic Junction site, the terrace above the river has not been converted to fields, although it appears to have been disturbed previously; it now is occupied by mule fat scrub. Mule fat scrub typically is a tall, semi-woody and herbaceous riparian scrub, and is relatively species-poor. An early seral community, it often grades to riparian woodland or forest (Holland, 1986). The dominant species in this community is mule fat (*Baccharis salicifolia*); sandbar willow (*Salix exigua*), tamarisk (*Tamarix* sp.), giant reed (*Arundo donax*), and tree tobacco (*Nicotiana glauca*) also are common. In the riverbed, the understory is sparse or absent, and includes species such as western ragweed (*Ambrosia psilostachya*), salt heliotrope (*Heliotropium curassavicum*), and annual grasses. On the terrace in the southeastern part of the site, the understory of the mule fat scrub is weedy, and includes shortpod mustard (*Hirschfeldia incana*) and horehound (*Marrubium vulgare*). With respect to sensitivity status, mule fat scrub has been state-ranked as S4 (apparently secure) by the CNDDDB.

Southern Willow Scrub. In the eastern portions of the Castaic Junction survey area, much of the Santa Clara River floodplain is dominated by relatively dense, even-aged stands of southern willow scrub. Willow scrub is a broadleaved, winter-deciduous riparian community, typically too dense to allow understory development. It is a relatively early seral community, succeeding to cottonwood-sycamore forests (Holland, 1996). In this portion of the Castaic Junction site, saplings and small trees of arroyo willow (*Salix lasiolepis*) and shining willow (*Salix lucida* ssp. *lasiandra*) are found, with some tree tobacco (*Nicotiana glauca*) at the edges. The understory generally is sparse or absent. With respect to sensitivity status, southern willow scrub has been state-ranked as S2.1 (2,000 to 10,000 acres, very threatened) by the CNDDDB.

Southern Cottonwood-Willow Riparian Forest. This community dominates the central and western portions of the Santa Clara River floodplain in the Castaic Junction survey area. It consists of tall, open, broadleaved, winter-deciduous trees, and is dominated by Fremont cottonwood (*Populus fremontii* ssp. *fremontii*) and willows (*Salix laevigata*, *S. lasiolepis*, *S. exigua*). These species require moist, bare mineral soil for germination and establishment, provided after floodwaters recede; this forest type therefore is found mostly along perennially wet streams (Holland, 1996). Understory plants in this community in the survey area include mule fat (*Baccharis salicifolia*), giant reed (*Arundo donax*), Mexican elderberry (*Sambucus mexicana*), mugwort (*Artemisia douglasiana*), western ragweed (*Ambrosia psilostachya*), and annual grasses. With respect to sensitivity status, southern cottonwood-willow riparian forest has been state-ranked as S3.2 (10,000 to 50,000 acres, threatened) by the CNDDDB.

3. RARE PLANT SPECIES

In June 2002, a sunflower species was found in a marsh on Newhall Ranch property on the south bank of the Santa Clara River, and was thought possibly to be the Los Angeles sunflower (*Helianthus nuttallii* ssp. *parishii*), presumed extinct. Following later field visits in August and September when the plants were flowering, samples were sent for identification to Rancho Santa Ana Botanic Garden, University of California, Berkeley, and to Indiana University. The plants have not been identified conclusively to date as the rare taxon, and may be Nuttall's sunflower (*Helianthus nuttallii* ssp. *nuttallii*) or California sunflower (*Helianthus californicus*). Since the rare plant blooms from August to October, the current survey was conducted in October 2002 to search specifically for the Los Angeles sunflower (*Helianthus nuttallii* ssp. *parishii*) before the end of its blooming period. The survey concentrated on wetland habitats, and other target species potentially occurring in wetlands also were included in the search.

A list of target species for the current survey of the Castaic Junction site is presented in Table 1. In addition to the Los Angeles sunflower (*Helianthus nuttallii* ssp. *parishii*), the species included in the table are those that occur in wetland habitats and are late-blooming species or potentially are identifiable late in the year.

TABLE 1: SENSITIVE PLANT SPECIES POTENTIALLY OCCURRING IN WET AREAS ON THE NEWHALL RANCH PROPERTY

Scientific Name	Common Name	Family	Status* Federal/State/CNPS
<i>Arenaria paludicola</i>	Marsh sandwort	Caryophyllaceae	FE/SE/1B
<i>Berberis nevini</i>	Nevin's barberry	Berberidaceae	FE/SE/1B
<i>Helianthus nuttallii</i> ssp. <i>parishii</i>	Los Angeles sunflower	Asteraceae	-/1A
<i>Juglans californica</i> var. <i>californica</i>	Southern California black walnut	Juglandaceae	-/4
<i>Juncus acutus</i> ssp. <i>leopoldii</i>	Southwestern spiny rush	Juncaceae	-/4
<i>Malacothamnus davidsonii</i>	Davidson's bush mallow	Malvaceae	-/1B
<i>Muhlenbergia californica</i>	California muhly	Poaceae	-/4
<i>Rorippa gambelii</i>	Gambel's watercress	Brassicaceae	FE/ST/1B
<i>Sidalcea neomexicana</i>	Salt spring checkerbloom	Malvaceae	-/2
<i>Thelypteris puberula</i> var. <i>sonorensis</i>	Sonoran maiden fern	Thelypteridaceae	-/2

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 FE = Federal endangered
 SE = State/California endangered
 ST = State/California threatened
 1A = CNPS List 1A, presumed extinct in California
 1B = CNPS List 1B, rare or endangered in California and elsewhere
 2 = CNPS List 2, rare or endangered in California, more common elsewhere
 4 = CNPS List 4, plants of limited distribution

The Los Angeles sunflower (*Helianthus nuttallii* ssp. *parishii*) was not found in the Castaic Junction survey area during the October 2002 surveys. Scattered plants of common sunflower (*Helianthus annuus*) and one plant of slender sunflower (*Helianthus gracilentus*) were observed.

No sensitive plant species were observed in the October 2002 survey of the Castaic Junction site.

4. PLANT SPECIES LIST

Plant species observed in the Castaic Junction survey area are listed below.

FERNS AND FERN-ALLIES

Azollaceae

Azolla filiculoides

Equisetaceae

Equisetum hyemale ssp. *affine*

ANGIOSPERMS

DICOTYLEDONS

Apiaceae

*Apium graveolens**

Oenanthe sarmentosa

Asteraceae

Ambrosia acanthicarpa

Ambrosia psilostachya

Artemisia californica

Artemisia douglasiana

Artemisia dracunculus

Baccharis salicifolia

Conyza canadensis

Euthamia occidentalis

*Gnaphalium luteo-album**

Helianthus annuus

Helianthus gracilentus

Heterotheca grandiflora

Heterotheca sessiliflora ssp. *fastigiata*

Malacothrix saxatilis var. *tenuifolia*

Senecio flaccidus var. *douglasii*

Sonchus asper ssp. *asper**

Xanthium strumarium

Boraginaceae

Heliotropium curassavicum

Brassicaceae

*Brassica nigra**

*Hirschfeldia incana**

*Lepidium latifolium**

Rorippa nasturtium-aquaticum

Cactaceae

Opuntia littoralis

Opuntia prolifera

Caprifoliaceae

Sambucus mexicana

Chenopodiaceae

Atriplex canescens ssp. *canescens*

*Salsola tragus**

Euphorbiaceae

Croton californicus

Fabaceae

Lotus scoparius

*Melilotus albus**

Fagaceae

Quercus agrifolia var. *agrifolia*

Grossulariaceae

Ribes aureum

Lamiaceae

*Marrubium vulgare**

*Mentha Xpiperita**

Salvia mellifera

Stachys albens

Myrtaceae

*Eucalyptus globulus**

Onagraceae

Epilobium ciliatum ssp. *ciliatum*

Ludwigia peploides ssp. *peploides*

Plantaginaceae

*Plantago major**

Platanaceae

Platanus racemosa

Polygonaceae

Eriogonum baileyi

Eriogonum fasciculatum var. *foliolosum*

Polygonum hydropiperoides

*Polygonum pennsylvanicum**

Polygonum punctatum

Rosaceae

Rosa californica

Salicaceae

Populus fremontii ssp. *fremontii*

Salix exigua

Salix laevigata

Salix lasiolepis

Salix lucida ssp. *lasiandra*

Saururaceae

Anemopsis californica

Scrophulariaceae

*Veronica anagallis-aquatica**

Solanaceae

Datura wrightii

*Nicotiana glauca**

Solanum douglasii

Tamaricaceae

Tamarix sp.*

Urticaceae

Urtica dioica ssp. *holosericea*

ANGIOSPERMS

MONOCOTYLEDONS

Cyperaceae

Cyperus eragrostis

Cyperus odoratus

Scirpus acutus var. *occidentalis*

Scirpus americanus

Scirpus californicus

Scirpus pungens

Juncaceae

Juncus mexicanus

Lemnaceae

Lemna minuscula

Poaceae

*Arundo donax**

*Avena barbata**

*Avena fatua**

*Bromus diandrus**

*Bromus hordeaceus**

Bromus madritensis ssp. *rubens**

Distichlis spicata

*Echinochloa crus-galli**

Leptochloa uninervia

Paspalum distichum

*Polypogon monspeliensis**

Typhaceae

Typha domingensis

Typha latifolia

* Non-native plant species

- *? Possible non-native plant species
- † Sensitive plant species

5. REFERENCES

Hickman, J.C. (Editor). 1993. The Jepson Manual, Higher Plants of California. University of California Press, Berkeley, California.

Holland, R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. Unpublished Report. State of California, The Resources Agency, Department of Fish and Game, Natural Heritage Division, Sacramento, California.