Cordylanthus orcuttianus (Orcutt's Bird's Beak)

Introduction

The MSCP Biological Monitoring Plan (1996) does not identify any City of San Diego *Cordylanthus orcuttianus* monitoring locations. The Otay River Valley population has been monitored since 2001 due to the rarity of this species.

Results

Site	Lead Monitor/s	Date	Method*	Result
Otay River Valley	Johnson	June 30, 2005	Permanent Plots, GPS	Permanent Plot Density = 18.83 per m^2 Total Population Area = 684 m^2

*Please see the *City of San Diego MSCP Rare Plant Monitoring: Field Monitoring Methods* manual for a full description of plant monitoring methods and locations.

The *C. orcuttianus* population appears to be relatively stable within the Otay River Valley monitoring area. Like many other monitored species, *C. orcuttianus* may be positively correlated with rainfall. Population counts have not been collected consistently during monitoring from 2001-2005 so a detailed analysis cannot be performed; however, numbers were generally higher in high rain years (2001 and 2003, estimated 1,000+ and 84,747 plants, respectively), and lower in low rain years (2002, when 166 plants were counted).

The monitoring methodology was revised for 2005 based on a site visit in spring 2005 during a site visit with Dr. Kathryn McEachern, who is the lead scientist for the MSCP rare plant monitoring revision. Because *C. orcuttianus* tends to occupy areas immediately adjacent trails or other disturbed areas within the Otay River Valley, Dr. McEachern recommended tracking the species in trail adjacent and non-trail adjacent areas. The revised methdology is detailed in the City's Monitoring Methods manual. The goal of the revised method is to monitor ttrail-adjacent vs. non-trail-adjacent population areas via permanent plot counts.

In addition, all general areas in the valley known to support *C. orcuttianus* were re-visited and mapped using a sub-meter GPS unit in 2005. Population boundaries were substantially the same as those mapped in 2003 (see figure, attached).

Management Recommendations

Primary threats to *Cordylanthus orcuttianus* in the Otay River Valley are mechanized trail widening or other ground disturbance, and invasive species. A number of invasive species occur in the river valley, including *Arundo donax, Tamarix ramosissima, Eucalyptus spp.* Though none of these species are currently in the immediate vicinity of the local *C. orcuttianus* population, they should be addressed throughout the River Valley in order to preclude impacts to this rare species. A proposal has been submitted through the Transnet EMP Funding program for *Arundo donax* and *Tamarix ramosissima* control in the area.

Invasive species noted in the immediate area of the *C. orcuttianus* included *Foeniculatum vulgare* (Common Fennel), *Nicotiana glauca* (Tree Tobacco), *Bromus hordeaceus* (Soft Chess), *Avena barbada* (Slender Wild Oat) and *Brassica nigra* (Black Mustard) . These species should be controlled via mechanical and/or chemical means.

No mechanical grooming of trails or soil disturbing activities should occur in this area.

2005 Population

2003 Population

Approximate Survey Area

Permanent Plot Points

Cordylanthus orcuttianus

Otay River Valley

Survey Date: June 30th, 2005

Source: M. Johnson, J. Garcia, L. Hierl, K. Syverson, C. Ford

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2005 Population

2003 Population

Permanent Plot Points

Cordylanthus orcuttianus

Otay River Valley (west)

Survey Date: June 30th, 2005

Source: M. Johnson, J. Garcia, L. Hierl, K. Syverson, C. Ford

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2005 Population

2003 Population

Permanent Plot Points

Cordylanthus orcuttianus

Otay River Valley (east)

Survey Date: June 30th, 2005

Source: M. Johnson, J. Garcia, L. Hierl, K. Syverson, C. Ford

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Otay River Valley, June 30, 2005

Plot 1 (off trail), facing east

Plot 2 (trail adjacent), facing west

Plot 3 (off trail), facing north

Plot 4 (trail adjacent), facing west