City of San Diego
Multiple Species Conservation Program

Summary of Monitoring Results for *Muilla clevelandii*

April 2004

Introduction

San Diego goldenstar (*Muilla clevelandii*) is a rare plant species associated with grassland areas. Monitoring for this plant was conducted on April 16, 2004 at Otay Lakes and Marron Valley (see attached maps) by City of San Diego staff Keith Greer, Holly Cheong, Betsy Miller, and Jan Atha. Monitoring for this species began in 2001 and has been conducted annually (McMillan Biological Consulting and Conservation Biology Institute, 2001; Wildlife Research Institute, 2002). The methodology and results of the monitoring are detailed below. The goal of the effort was to continue the annual collection of data for long-term monitoring of San Diego goldenstar under the MSCP.

Methodology

Monitoring for this species was conducted in accordance with the Biological Monitoring Plan for the MSCP (Monitoring Plan), dated January 25, 1996. The location of each sampling site were determined by field level surveys and then depicted on aerial photographs. At Otay Lakes, sixteen transects were randomly allocated with varying lengths throughout the population. The belt transect method was used to estimate the size of the Otay Lakes population. Plants were counted within 0.5 meter on either side of the transect (1 meter wide total). At Marron Valley, six transects were randomly allocated with the standard length of 130 feet. The belt transect method described below was also used at Marron Valley.

Results

Surveyors estimated a total of 27,281 plants (1,653 non-flowering and 25,628 flowering) at Marron Valley. 40,936 individuals (2,335 non-flowering and 38,601 flowering) were estimated at Otay Lakes.

Recommendations

In accordance with the current Monitoring Plan, San Diego goldenstar should be monitored once every two years. Additional site surveys will need to be completed for Del Mar Mesa in 2005. It is recommended that surveys also be repeated for Otay Lakes and Marron Valley, if possible, so surveys can be completed within the same year. The Mission Trails (MTRP) population was surveyed in 2003 by Scott McMillan. He only observed six individuals within the population. In 2001, he observed twelve individuals. In 2002, no San Diego goldenstar was detected at any sites. The MTRP co-occurs with common goldenstar (*Bloomeria crocea*) which only can be distinguished from San Diego goldenstar by examining the stamens of the flowers. Given the small size of the MTRP and the amount of effort it takes to distinguish San Diego goldenstar from common goldenstar, it is recommended that this populaton no longer be included in the survey effort.

References

McMillan Biological Consulting and Conservation Biology Institute. 2001 MSCP Rare Plant Survey and Monitoring Report. 2001.

Ogden Environmental. Biological Monitoring Plan for the Multiple Species Conservation Program. 1996.

Wildlife Research Institute. 2002 MSCP Rare Plant Survey and Monitoring Report. 2002.