

**City of San Diego
Multiple Species Conservation Program**

**Summary of Monitoring Results for
Monardella linoides ssp. *viminea***

June 2004

Introduction

Willowy monardella (*Monardella linoides* ssp. *viminea*) is an endangered plant species that is found along drainages within the County of San Diego. It is a perennial herb that blooms between June and August.

Monitoring for this plant was conducted in June in various locations. The locations, dates, and survey personnel for each survey are given in the table below. The methodology and results of the monitoring are detailed below. In addition, monitoring of the Lopez Canyon population is conducted on an annual basis by the Friends of Los Penasquitos Canyon. The goal of the effort was to continue the annual collection of data for long-term monitoring of willowy monardella under the Multiple Species Conservation Program (MSCP).

Willowy Monardella Surveys, 2004		
Location	Date	Surveyors
Lopez Canyon	June 2, 2004	Randy Rodriguez
Marron Valley	June 9, 2004	Holly Cheong, Khalil Martinez, Betsy Miller
Sycamore Canyon	June 10, 2004	Holly Cheong, Khalil Martinez, Betsy Miller, Chad Kane
Otay Lakes	June 16, 2004	Holly Cheong, Khalil Martinez, Betsy Miller, Chad Kane

Methodology

Monitoring for this species was conducted in accordance with the Biological Monitoring Plan for the Multiple Species Conservation Program (Monitoring Plan), dated January 25, 1996. The location of each sampling site was determined by field level surveys and then depicted on aerial photographs. This plant species tends to grow in groupings, referred to as clumps. Data is provided in terms of clumps and individuals for all sites. Flowering adult plants, non-flowering adult plants, and any dead or dormant plants were counted separately. Photographs were taken at each of the survey sites. All plant locations were surveyed using a sub-meter GPS.

Results

Surveyors counted a total of 172 clumps of plants, which includes 331 flowering individuals, 219 non-flowering individuals, and 1 dead or dormant plants. A description of each site and the number of individuals found at each site is given below.

Marron Valley

Marron Valley is located in the southeast portion of San Diego along the Mexican border (see attached map). This land is part of a City of San Diego conservation bank and has been surveyed extensively by the Conservation Biology Institute (CBI). A management plan for Marron Valley

is currently in draft format. 70 clumps of plants were found along the drainages in Marron Valley. Of these, there were 113 total individuals, 104 flowering individuals, 8 non-flowering individuals and one dead/dormant individual.

Lopez Canyon

Lopez Canyon is located south of Calle Cristobal and Penasquitos Canyon in Mira Mesa (see attached map). This canyon has been highly disturbed by erosion associated with urban runoff. A total of 8 willowy monardella clumps were found within the canyon including 82 total individuals, 20 flowering individuals and 62 non-flowering individuals.

Sycamore Canyon

Sycamore Canyon is located north of MCAS Miramar and east of Santee (see attached map). This canyon is within open space proposed for preservation and is relatively undisturbed. Within Sycamore Canyon a total of 93 monardella clumps were found, including 354 total individuals, 205 flowering individuals and 149 non-flowering individuals.

Otay Lakes

Two individuals within one clump were relocated in 2004. Both individuals were flowering, but the majority of the leaves were brown.

Recommendations

The fires of October 2003 appear not to have affected this species. Both Otay Lakes and Sycamore Canyon populations burned but the plants continued to grow and flower this year. The Otay Lakes population did not look as healthy as the Sycamore Canyon population; however, this could be due to the fact that the Otay Lakes surveys were done a week later and 2004 is a low rainfall year. Several dead or dormant plants were observed in 2002 and the numbers were much lower. This year, many new plants were documented which shows a nice recovery from the effects of low precipitation on the species in 2002.

All plant/clump locations should continue to be recorded using the sub-meter GPS. If additional populations of willowy monardella are found within City of San Diego limits, surveys should also be conducted in those areas. Willowy monardella has also been identified outside of the City of San Diego jurisdiction in Sycamore Canyon in Santee, Cedar Canyon in Chula Vista and on MCAS Miramar. Coordination with other jurisdictions may help determine the regional status of this plant species.

The biology of the willowy monardella should be studied further and if it is determined that the clumps come from one root mass, future surveys may consider all clumps to be one individual plant.

Erosion of drainages adjacent to willowy monardella populations can impact the species. Lopez Canyon is a good example of urban runoff erosion impacting willowy monardella populations.

Future monitoring efforts will document any observed erosion in drainages adjacent to willow monardella populations and recommendations should be made to correct the problem. The City of San Diego installed erosion control devices in Lopez Canyon with funding from the California Department of Fish and Game and the Coastal Conservancy. These erosion control devices, called A-Jacks, are functioning well during low flow rain events and are adequately protecting the monardella from further erosion. The erosion control devices should be monitored annually as required by the California Coastal Commission.

An annual census of willow monardella in drainages subject to high erosion, such as Lopez Canyon, can be very useful for protection of this species. However, given that this species is perennial, annual surveys as required in the biological monitoring plan for the MSCP are not beneficial for the more stable populations. The City of San Diego will work with agency staff to explore the possibility of monitoring the Sycamore Canyon, Marron Valley, and Otay Lakes populations every three years with annual presence/absence monitoring to ensure that the populations are protected from erosion.