

City of San Diego  
Multiple Species Conservation Program

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

July 2000

## Introduction

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

Monitoring for this plant was conducted between May and August in various locations. The locations, dates, and survey personnel for each survey is given in the table below. The methodology and results of the monitoring are detailed below. Additional surveys have also been conducted this year throughout San Diego County (see attached). 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 establish baseline data for long-term monitoring of willowly monardella under the Multiple Species Conservation Program (MSCP).

Willowly Monardella Surveys, 2000		
Location	Date	Surveyors
Marron Valley	May 2000	Patricia Gordon-Reedy, Fred Sproul
Otay Lakes (Buschalaugh Cove)	July 12, 2000	Keith Greer, Holly Boessow, Cindy Burrascano
Lopez Canyon	July 12, 2000	Keith Greer, Holly Boessow, Cindy Burrascano
Sycamore Canyon	July 27, 2000	Keith Greer, Holly Boessow, Cindy Burrascano

## 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 were determined by field level surveys and then depicted on aerial photographs. This plant species tends to grow in groupings, referred to as clumps. Since determining the actual number of separate plant shoots in each clump would be difficult and possibly damaging to the plant, the number of clumps found were counted instead of each individual plant. Flowering adult plants were counted separately from non-flowering adult plants. Photographs were taken at each of the survey sites.

## **Results**

Surveyors counted a total of 299 flowering adults, and 11 non-flowering adults. 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 figure). 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 being developed. 42 flowering clumps were found along the drainages in Marron Valley.

### **Otay Lakes**

The Otay Lakes willowly monardella population is located in the southeast corner of lower Otay Lake (see attached figure). These lands are conserved for watershed management of the adjacent Otay Lakes and will be included as a City of San Diego cornerstone conservation bank in the future. Only two flowering clumps were found along the drainage in this area.

### **Lopez Canyon**

Lopez Canyon is location south of Calle Cristobal and Penasquitos Canyon in Mira Mesa (see attached figure). This canyon has been highly disturbed by erosion associated with urban runoff. Five flowering clumps of willowly monardella were found within the canyon. An attempt was made to estimate the number of individuals in the clumps and it was estimated that approximately 21 flowering individuals and one non-flowering individual were within the five clumps on-site.

### **Sycamore Canyon**

Sycamore Canyon is located north of NAS Miramar and east of Santee (see attached figure). This canyon is within open space proposed for preservation and is relatively undisturbed. 241 flowering clumps and 11 non-flowering clumps were found within Sycamore Canyon. An additional 9 flowering clumps were found west of Sycamore Canyon within City-owned open space, for a total of 251 flowering clumps and 11 non-flowering clumps.

## **Recommendations**

Many of the sites were surveyed in using a Geographic Positioning System (GPS) to help relocate sites during future survey efforts. All future surveys should use a GPS so that survey sites can be relocated. Also, if additional populations of willowly monardella are found within City of San Diego limits, surveys should be conducted in those areas. Willowly monardella has

also been identified outside of the City of San Diego jurisdiction in Sycamore Canyon in Santee and Cedar Canyon in **Chula** Vista. Coordination with other jurisdictions may help determine the regional status of this plant species.

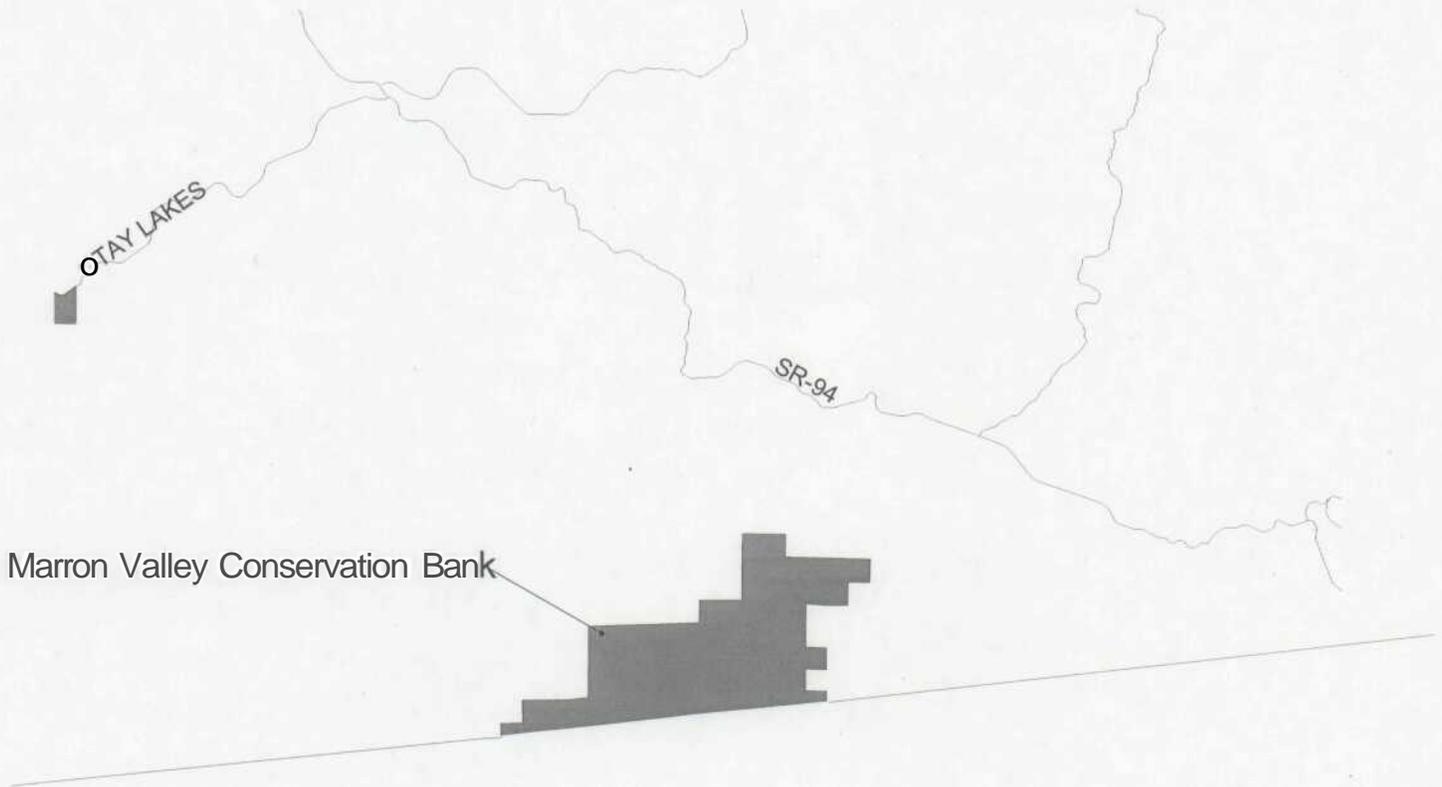
As previously mentioned, clumps of plants were counted, not individuals, since it would be difficult and possibly damaging to the plant to count every plant shoot. In Lopez Canyon, surveyors tried to estimate the individual plant shoots in each clump. If individual numbers are needed in the next survey effort, a standard method for estimating the number of individuals within each clump should be developed. It has also been pointed out that each clump may actually come from one root mass and, therefore, may be considered one individual plant. The biology of the willowly 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 willowly monardella populations can impact the species. Lopez Canyon is a good example of where erosion from urban runoff has already occurred and impacted willowly monardella populations. Future monitoring efforts should document any observed erosion in drainages adjacent to willowly monardella populations and recommendations should be made to correct the problem.

It has been observed that the willowly monardella plants in southern San Diego (Otay Lakes and **Marron** Valley) may have some different characteristics from the northern populations (Lopez Canyon and Sycamore Canyon). Until additional information on these observations is available, MSCP staff will assume that all willowly monardella populations identified within the City of San Diego are the same subspecies.

SURVEY LOCATION  
FIGURES

# Location of Marron Valley



**MEXICO**

# Otay Lakes

*Monardella  
linoides  
ssp. viminea*

Survey Date: 7-12-00

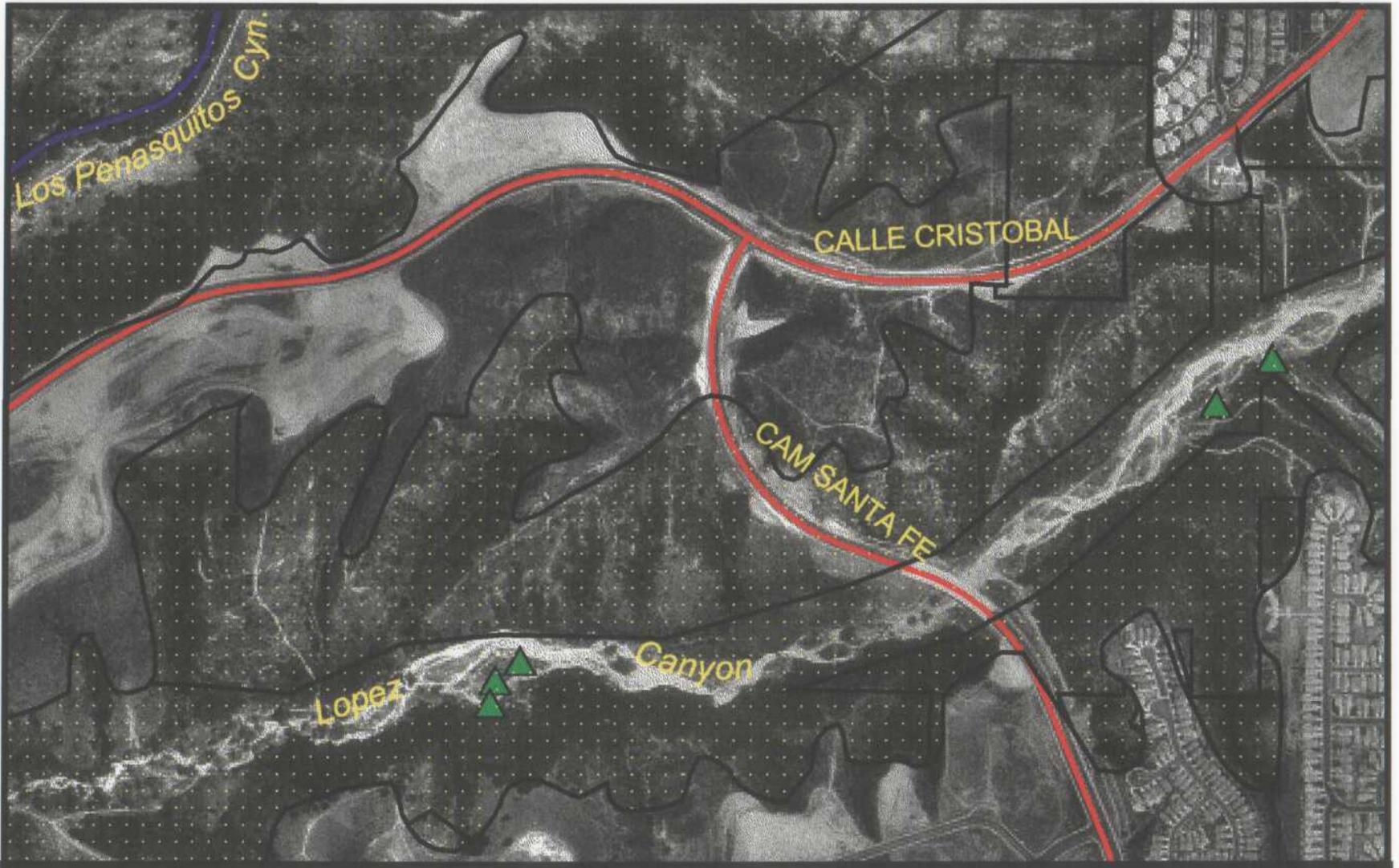
 Patch  
Location

 Reservoir

 MHPA



Source: C. Burrascano, H. Boessow, K. Greer



Patch Locations



MHPA

## Lopez Canyon

*Monardella linoides* ssp. *viminea*

Survey Date: 7-12-00

Source: C. Burrascano, H. Boessow,  
K. Greer



# Sycamore Canyon

*Monardella*  
*linoides*  
ssp. *viminea*

Survey Date: 7-12-00

-  Survey areas
-  MHPA



Source: C. Burrascano, H. Boessow, K. Greer

ADDITIONAL 2000 SURVEYS

Additional 2000 Surveys for <b>Willowly</b> Monardella			
Location	Date	Surveyors	Number Counted
Carroll Canyon (west of Camino Ruiz)	8/23/00	Keith Greer, Holly Boessow, Jeanne Krosch	122 clumps
East Elliot	8/25/00, 8/26/00	Cindy Burrascano	133 clumps
Copper Canyon	7/29/00	Mike Kelly and Cindy Burrascano	167 clumps
Wild Bill's Draw	7/29/00, 8/12/00	Mike Kelly, Cindy Burrascano, Les Braund, and Rob Hutsel	35 clumps

\*Additional surveys were done at MCAS Miramar and the data is available at the U.S. Fish and Wildlife Service or MCAS Miramar by formal request.

# East Elliot

*Monardella  
linoides  
ssp. viminea*

Survey Dates: 8-25-00  
and 8-26-00

 Patch  
Locations

 MHPA



Source: C. Burrascano