

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

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

**July 2001**

## Introduction

Willowly monardella (*Monardella linoidea* 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 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. 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
Otay Lakes (Buschalaugh Cove)	May 14, 2001	Scott McMillan
Marron Valley	June 15, 2001	Holly Boessow, Keith Greer, Michael Klein, Jim Harry
Sycamore Canyon	June 27, 2001	Holly Boessow, Jeanne Krosch, Michael Klein, Brett Williams
Lopez Canyon	June 29, 2001	Holly Boessow, Brett Williams, Michael Klein, Randy Rodriguez
Lopez Canyon	July 9, 2001	Keith Greer, Brett Williams
Lopez Canyon	July 13, 2001	Brett Williams, Jim Harry, Randy Rodriguez

## 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. All plant locations were surveyed using a sub-meter GPS.

## **Results**

Surveyors counted a total of 247 flowering clumps. A description of each site and the number of individuals found at each site is given below.

### 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 clump were found along the drainage in this area.

### 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. 66 flowering clumps were found along the drainages in Marron Valley.

### Lopez Canyon

Lopez Canyon is location 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. Eight flowering clumps of willowly monardella were found within the canyon.

### Sycamore Canyon

Sycamore Canyon is located north of NAS Miramar and east of Santee (see attached map). This canyon is within open space proposed for preservation and is relatively undisturbed. 170 flowering clumps were found within Sycamore Canyon.

## **Recommendations**

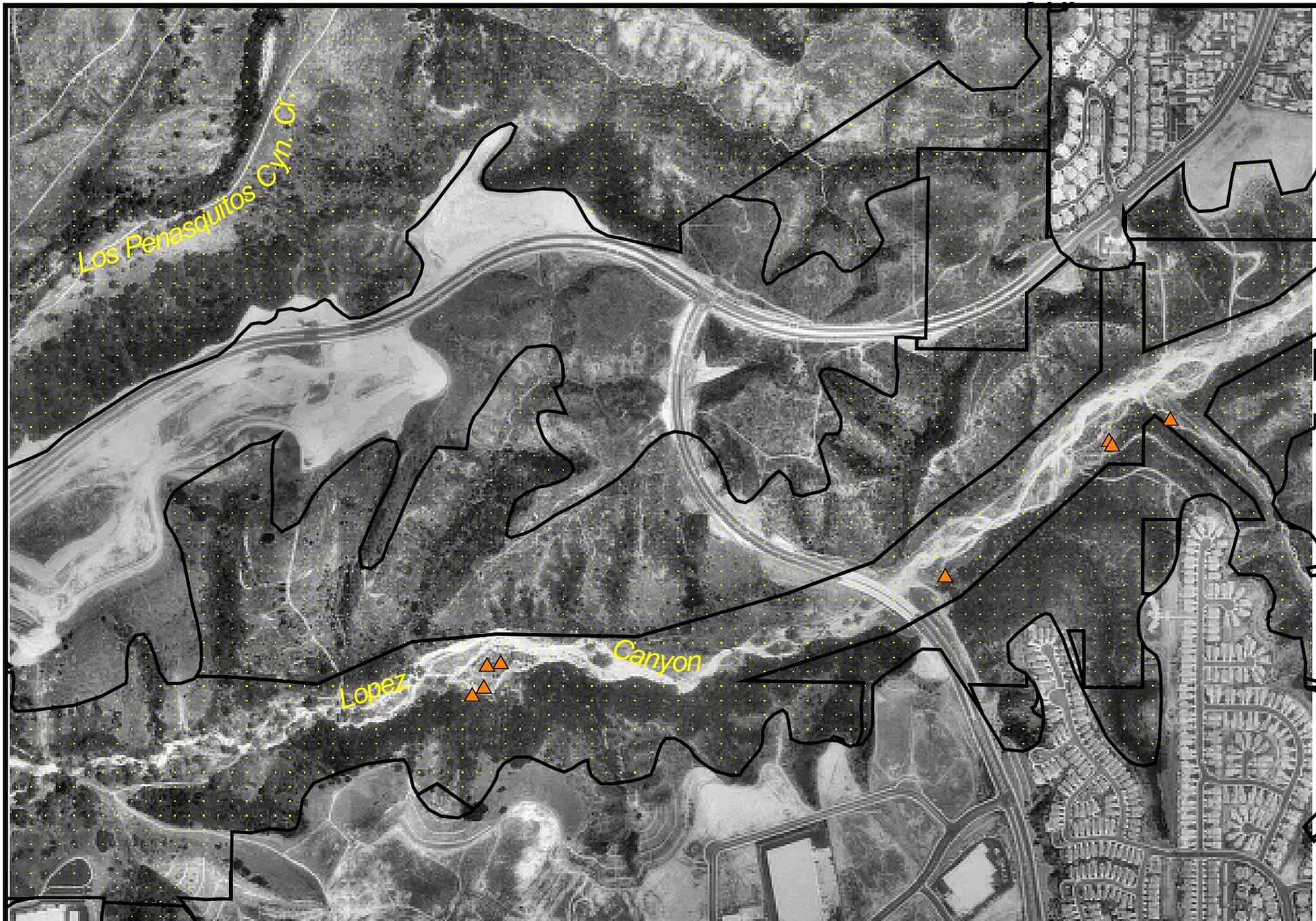
If additional populations of willowly monardella are found within City of San Diego limits, surveys should be conducted in those areas. Willowly monardella has also been identified outside of the City of San Diego jurisdiction in Sycamore Canyon in Santee, Cedar Canyon in Chula Vista and on MCAS Miramar. 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. 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. The City of San Diego received a grant from the California Department of Fish and Game to install gabion dams to control erosion in Lopez Canyon. Future monitoring will help determine the effectiveness of that effort.

An annual census of willowly 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 Sycamore Canyon, Marron Valley, and Otay Lakes populations should be counted every three years augmented with annual presence/absence monitoring to ensure that the populations are protected from erosion. MSCP staff will work with the wildlife agencies to develop a modified schedule for willowly monardella monitoring that is more appropriate for the species.

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.



▲ Patch Locations

■ MHPA

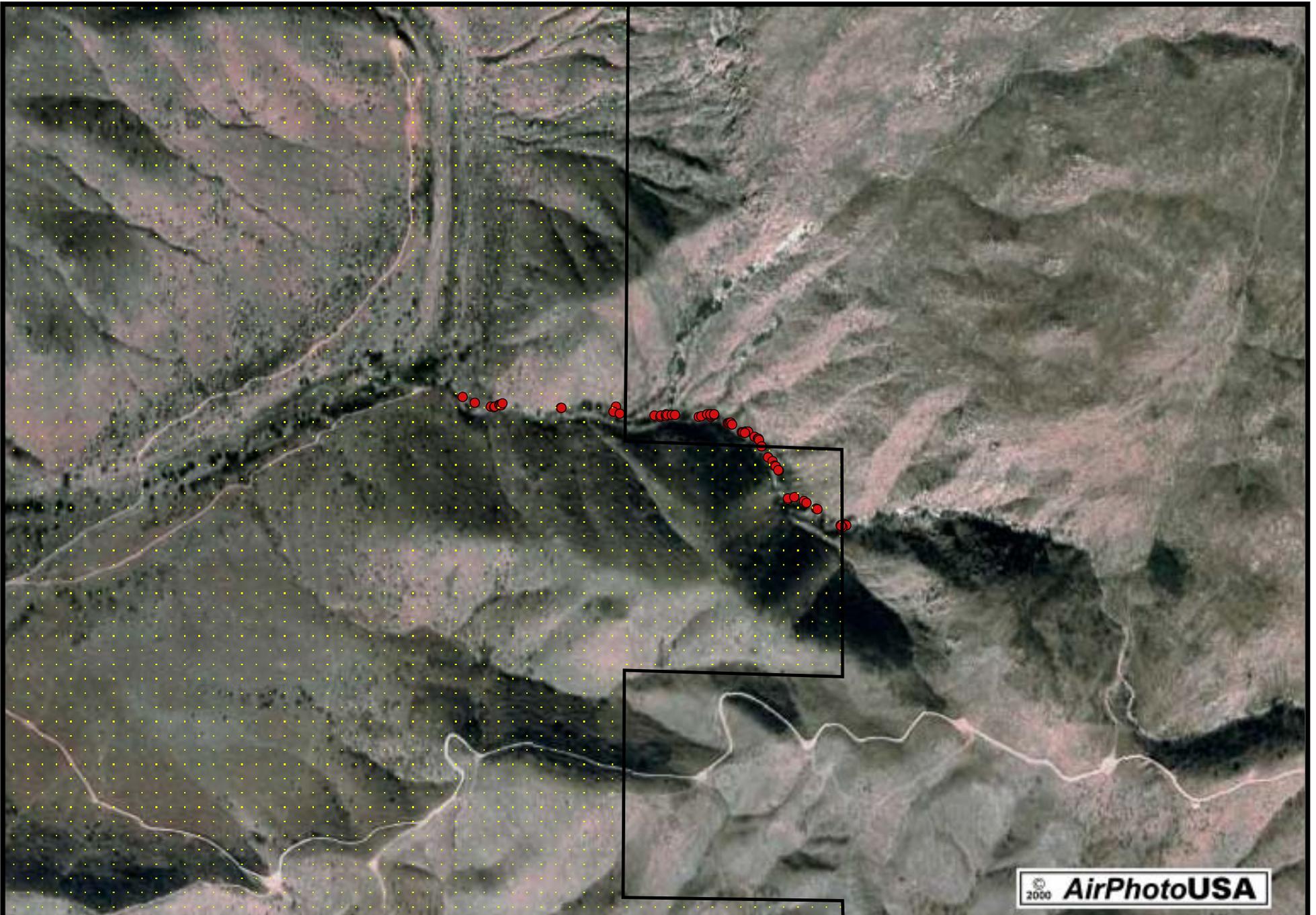


# Lopez Canyon

*Monardella linoides* ssp. *viminea*

Survey Dates: 6-29-01, 7-9-01, 7-13-01

Source: M. Kelly, H. Boessow, K. Greer,  
R. Rodriguez, J. Harry,  
B. Williams, M. Klein



● Patch Locations

 MHPA



# Marron Valley

*Monardella linoides* ssp. *viminea*

Survey Date: 6-15-01

 2000 AirPhotoUSA

Source: K. Greer, H. Boessow  
J. Harry, M. Klein

# Sycamore Canyon

*Monardella  
linoides  
ssp. viminea*

Survey Date: 6-27-01



Patch  
Locations



MHPA



Source: H. Boessow, J. Krosch,  
B. Williams, M. Klein

