

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

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

June 2003

Introduction

Willow 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 willow monardella under the Multiple Species Conservation Program (MSCP).

Willow Monardella Surveys, 2003		
Location	Date	Surveyors
Sycamore Canyon	June 10, 2003	Holly Cheong, Chad Kane, Keli Balo
Marron Valley	June 19, 2003	Holly Cheong, Randy Rodriguez, Eden Nguyen, Chad Kane, Betsy Miller
Lopez Canyon	June 25, 2003	Chad Kane, Melanie Johnson, Betsy Miller

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. Due to time limitations, the Otay Lakes population was not surveyed during the June flowering. However, this site continues to support two individuals (one clump) of willow monardella as verified during other site visits in October.

Results

Surveyors counted a total of 176 clumps of plants, which includes 265 flowering individuals, 471 non-flowering individuals, and 0 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. 83 clumps of plants were found along the drainages in Marron Valley. Of these, there were 192 total individuals, 164 flowering individuals and 28 non-flowering individuals.

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 85 monardella clumps were found including 390 total individuals, 81 flowering individuals and 309 non-flowering individuals.

Recommendations

Low rainfall had a negative impact on this species in 2002. Dead or dormant plants were observed last year 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.

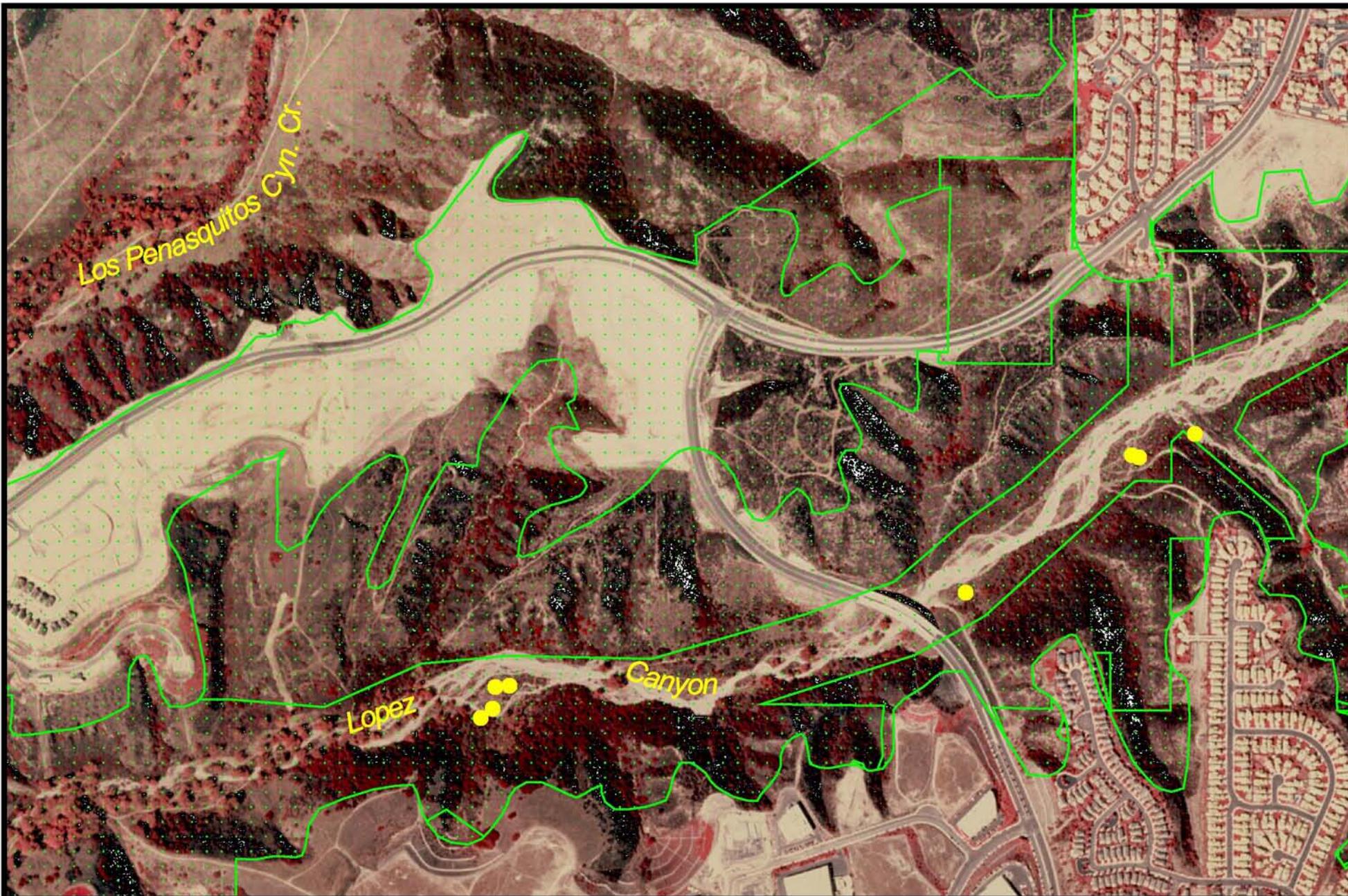
The biology of the willowy monardella should be studied further and if it is determined that the clumps come from one root mass, future surveys may consider all clumps to be one individual plant.

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 willowy 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 implement erosion control measures in Lopez Canyon. Erosion control measures will be installed in August, and future monitoring will be used to determine the effectiveness of this effort.

An annual census of willowy 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.

It has been observed that the willowy 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 data on these observations is available, MSCP staff will assume that all willowy monardella populations identified within the City of San Diego are the same subspecies.



-  Patch Locations
-  MHPA

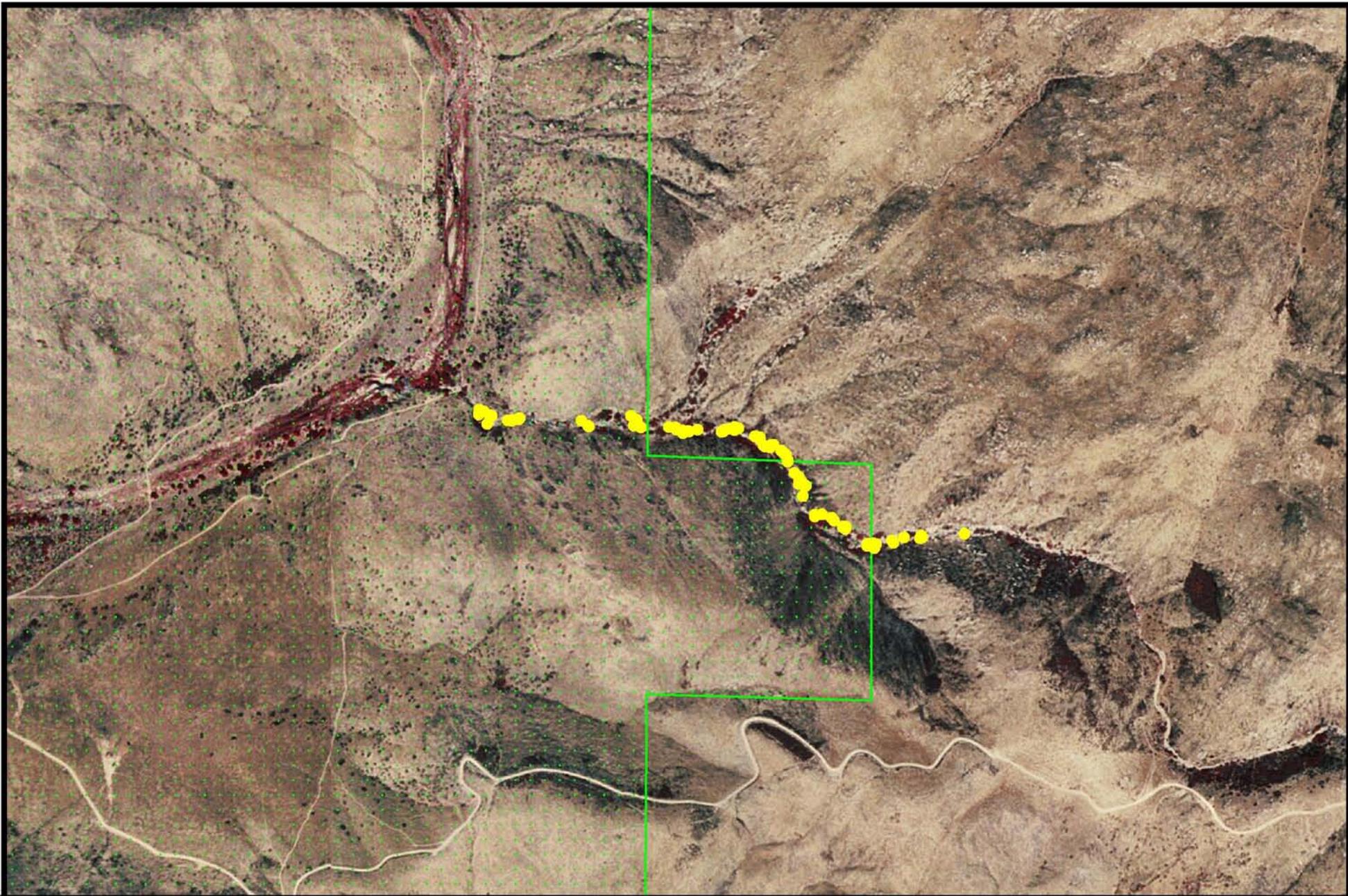
Lopez Canyon

Monardella linoides ssp. *viminea*

Survey Dates: 6-25-03



Source: B. Miller, C. Kane,
M. Johnson



 Patch Locations

 MHPA

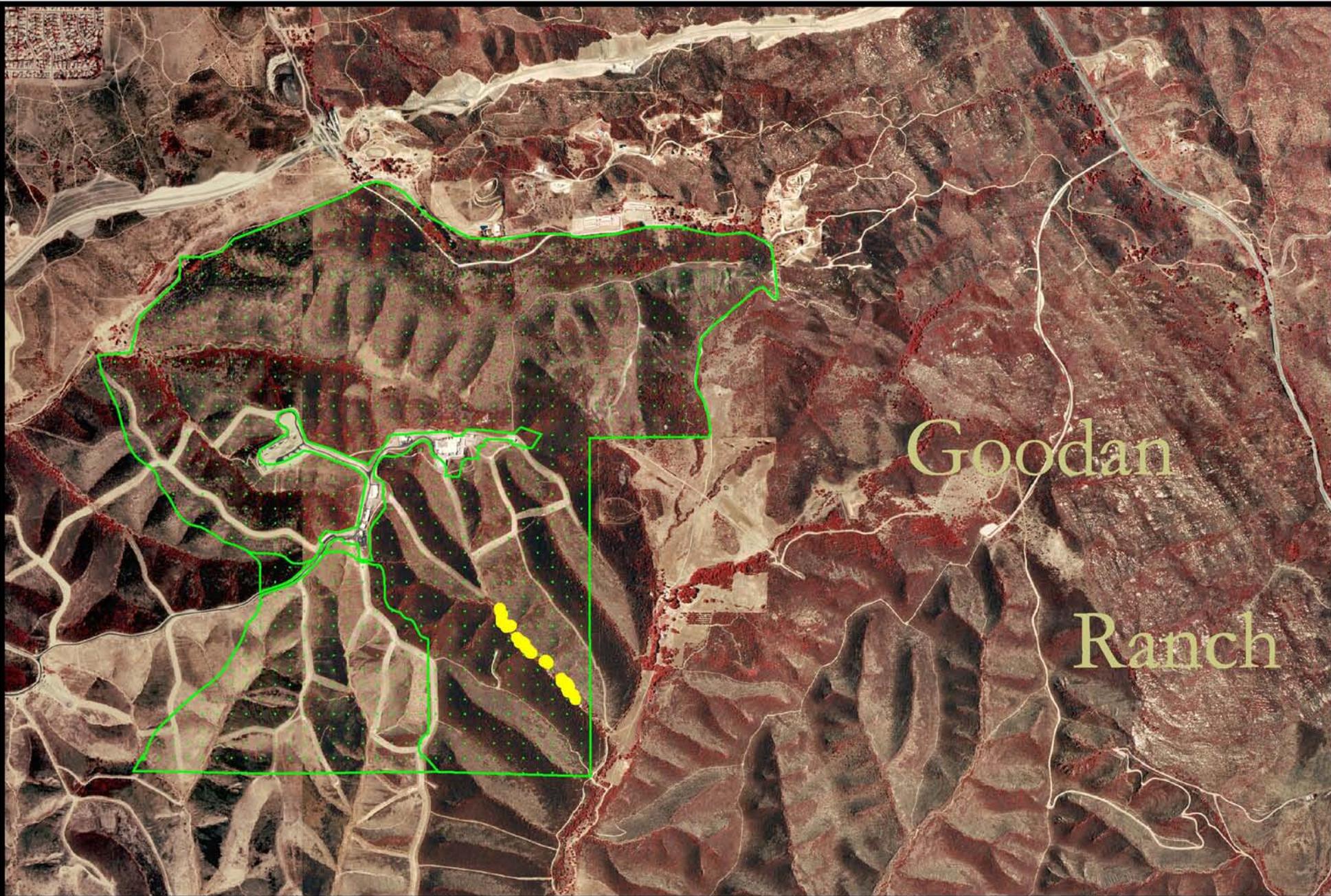
Marron Valley

Monardella linoides ssp. *viminea*

Survey Date: 6-19-03



Source: C. Kane, H. Cheong
B. Miller, E. Nguyen,
R. Rodriguez



-  Patch Locations
-  MHPA

Sycamore Canyon

Monardella linoides ssp. *viminea*

Survey Date: 6-10-03



Source: H. Cheong,
K. Balo, C. Kane