

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

**Summary of Monitoring Results for  
*Dudleya variegata***

**June 2004**

## Introduction

Variiegated dudleya (*Dudleya variegata*) is a small, succulent plant that is found in grassland areas and open areas in chaparral. This species is considered a narrow endemic species under the Multiple Species Conservation Program (MSCP).

Monitoring for this plant was conducted between May and June of 2004 in various locations. 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 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 Black Mountain Ranch population was conducted this year 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 variegated dudleya under the MSCP.

Variiegated Dudleya Surveys, 2004		
Location	Date	Surveyors
Mission Trails Regional Park	May 16, 2004	Holly Cheong, Betsy Miller, Khalil Martinez, Paul Seiley
Margerum Avenue	May 16, 2004	Holly Cheong, Betsy Miller, Khalil Martinez
Otay Lakes	May 21, 2003	Melanie Johnson, Khalil Martinez, Betsy Miller
Goat Mesa	May 26, 2004	Melanie Johnson, Khalil Martinez, Betsy Miller
Mercy Road	May 26, 2004	Melanie Johnson, Khalil Martinez, Betsy Miller
East Elliott	May 28, 2004	Holly Cheong, Khalil Martinez, Keith Greer, Randy Rodriguez, Casey Smith, Paul Seiley
East Elliott	June 3 and 4, 2004	Melanie Johnson, Khalil Martinez

## 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. Each population was censused except for Otay Lakes. In 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).

## **Results**

Surveyors estimated a total of 7,260 flowering plants. A description of each site and the number of individuals found at each site is given below.

### Mission Trails Regional Park

The Mission Trails variegated dudleya population is located in the eastern and central portion of the park (see attached figure). This area is a dedicated open space park with hiking trails. A total of 1,129 flowering individuals were counted within Mission Trails.

### Margerum Avenue

The Margerum Avenue variegated dudleya population is located in Rancho Mission Park accessible off of Margerum Avenue (see attached figure). This area is a dedicated open space park with hiking trails and picnic areas. The variegated dudleya population is on the other side of a creek that has formed from the adjacent development and is relatively isolated from recreational activities. A total of 566 flowering individuals were documented on site in 2004.

### Otay Lakes

The Otay Lakes variegated dudleya population is located in the eastern portion 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. A total of 2,457 flowering individuals were estimated within Otay Lakes using the 1 meter-wide belt transect method.

### Goat Mesa

The Goat Mesa variegated dudleya population is located in Otay Mesa above Spring Canyon (see attached figure). In 2004, 2,024 flowering individuals were counted.

### Mercy Road

The Mercy Road variegated dudleya population is part of Los Peñasquitos Canyon Preserve accessible off of Mercy Road (see attached figure). In 2004, 128 flowering individuals were counted.

### East Elliott

Individuals were counted within the recently acquired City-owned parcels on East Elliott (see attached figure). In 2004, 956 flowering individuals were counted.

## **Recommendations**

Similar to other dudleya species, variegated dudleya numbers tend to fluctuate with rainfall. 2004 was a relatively low rainfall year with only 4.2 inches of rain. In 2003, 10.4 inches of rain fall within San Diego County and 31,256 plants were estimated in 2003. Only 7,260 plants were estimated in 2003. In 2002, when San Diego County only received 3 inches of rainfall, variegated dudleya did not come up at any of the monitoring sites. If San Diego County receives more rainfall in 2005, it is anticipated that the variegated dudleya numbers will increase.

In terms of future sampling methodology, a census of all individuals present should be taken whenever possible. If a census cannot be done, the belt transect sampling method appears to be a viable, efficient sampling method for this species.

### **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.