

Brodiaea filifolia
Thread-leaved Brodiaea



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MSP - Rare Plant Occurrence Monitoring Form

Scientific Name: Brodiaea filifolia MSP Occurrence ID: BRF1_6BMRA002
 Common Name: Thread-leaved brodiaea CNDDB EO#: EO89 Translocated? no
 Preserve: Black Mountain Open Space Management Unit: 6
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: Black Mountain Sample Point #: 1
 Surveyors & Affiliation: Betsy Miller, Kim Roeland, Wendy Rogers - City of San Diego
 Date: 5/8/14 Time Start: 1:35 PM Time Finish: 2:30 PM

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 3 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 10 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 252 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 1 Flowering: 5 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 029 01 51.048 N: 1933 507.307 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax Optio N90
 Location 1 (see coordinates above) NE, E, SE 3.4 ft 5° up 1479-1482 S: 05/mser
 Direction (facing) Height Camera Angle Photo # File location
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA If need more room, record additional data and any notes on page 3.

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<u>Brodiaea filifolia</u>	<u>1</u>							
	<u>Calochortus splendens</u>	<u>1</u>							
	<u>Bloomeria crocea</u>	<u>1</u>							
	<u>Dichelostemma capitatum</u>	<u>1</u>							
	<u>Malosma laurina</u>	<u>2</u>							
<input checked="" type="checkbox"/>	<u>Cynara cardunculus</u>	<u>1</u>							
<input checked="" type="checkbox"/>	<u>Brassica nigra</u>	<u>1</u>							
<input checked="" type="checkbox"/>	<u>Foeniculum vulgare</u>	<u>1</u>							
<input checked="" type="checkbox"/>	<u>Lactuca scariola</u>	<u>1</u>							
<input checked="" type="checkbox"/>	<u>Trachypodium distachyon</u>	<u>15</u>							
<input checked="" type="checkbox"/>	<u>Avena sp.</u>	<u>8</u>							
<input checked="" type="checkbox"/>	<u>Centaurea melitensis</u>	<u>1</u>							
	<u>Lupinus caninus</u>	<u>1</u>				Bare Ground:	<u>0</u>		
	<u>Calystegia macrostegia</u>	<u>3</u>				Litter:	<u>0</u>		
	<u>Stipa pulchra</u>	<u>1</u>				Rock:	<u>3</u>		

Total % Cover: 40 % Herb Cover: 38 % Shrub Cover: 2 % Tree Cover: 0

Scientific Name: Brodiaea filifolia MSP Occurrence ID: BRFL_6BMRA002

Preserve: Black Mountain Open Space Occurrence Name: Black Mountain

Date: 5/8/14 Time Start: 1:35 Time Finish: 2:30

Surveyors & Affiliation/Agency: BM, KR, WR

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within **species-specific sampling area (typically 10-m radius circle)**. Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Bromus (claudius, hordeaceus) - Brachypodium distachyon Semi-natural stands; Brachypodium distachyon Semi-natural

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%) Stand Type

Cryptogamic Crust Cover: 1 Thatch Cover: 5 Thatch Depth: Ave. 2 cm Max: 4 cm

Dead Standing Biomass? Yes No If Yes, Species/Cover Class: Cruciana nigra / 2 Ave. Height? 25 cm

Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 2

Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the **occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer**. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): open space, high school, residential

Argentine Ant Abundance at Bait Station (1-4): n/a Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____

Ant Sample Collected?: Yes No Ant Sample #: _____ Ant Station Photo #: _____

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>3</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>5</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>6</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>1</u>		

Fuel Modification Zone/Fire Break 1
 Road Construction/Maintenance 1
 Vegetation Clearing 1
 ORV: 1 If Observed, List Type(s) of ORV/Bike Activity: _____
 Evidence of Recent Fire 6 If Sign of Recent Fire: Year Burned? 2007 Unknown Burn Year: _____
 Trails 2 If Trails are Present, are They Authorized? Yes / No / Unknown
 Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

***Brodiaea filifolia* (Threadleaf Brodiaea)**
Black Mountain Ranch



Panorama from Northeastern end of population, facing Northeast, East, Southeast.
Panorama location is 6296151.648 1933507.307 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Brodiaea filifolia - Black Mountain



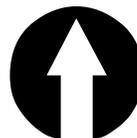
Area 2014: 252 sq. m.

 Brodiaea filifolia

Pop. Area 2014
Max Area: 252 sq. m.

0 5 10 20
 Meters

Source: San GIS & City of San Diego Park & Rec
Map Created By: Wendy Rogers, 2014



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Brodiaea orcuttii
Orcutt's Brodiaea



© Scott McMillan, 2001

MSP - Rare Plant Habitat and Threats Assessment Form

Scientific Name: <u>Brodiaea orcuttii</u>	MSP Occurrence ID: <u>BROR_6CACA015</u>	
Preserve: <u>Carroll Canyon Vernal Pool Preserve</u>	Occurrence Name: <u>Carroll Canyon</u>	
Date: <u>4/24/04</u>	Time Start: <u>10:26</u> Time Finish: <u>10:39</u>	
Surveyors & Affiliation/Agency: <u>B.M. Kr. SM</u>		
<p>IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.</p>		
SANDAG 2012 Vegetation Alliance/Association: <u>Deinandra fasciculata Provisional Alliance / Deinandra fasciculata Association</u>		
Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)		
Cryptogamic Crust Cover: <u>5</u> Thatch Cover: <u>3</u> Thatch Depth: Ave. <u>1</u> cm Max: <u>3</u> cm		
Dead Standing Biomass? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Species/Cover Class: <u>Deinandra / 2</u> Ave. Height? <u>6</u> cm		
Mammal Species Activity Categories (1-4): Feral Pig Activity: <u>1</u> Ground Squirrel Activity: <u>1</u> Gopher Activity: <u>1</u>		
Sampling Area Representative of Maximum Extent? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, Note Differences on Page 3.		
<p>V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.</p>		
Surrounding Land Use at Site (>Maximum Extent): <u>open space, Residential</u>		
Argentine Ant Abundance at Bait Station (1-4): <u>n/a</u> Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____		
Ant Sample Collected?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Ant Sample #: _____ Ant Station Photo #: _____		
Disturbances (rank each as 1-6):		
Non-Native Forbs <u>1</u> Non-Native Grasses <u>1</u> Non-Native Woody Plants <u>1</u> Competitive Native Plants <u>1</u> Dumping/Trash <u>3</u> Encampments <u>1</u>	Feral Pig Activity <u>1</u> Trampling <u>1</u> Vandalism <u>1</u> Current Grazing <u>1</u> Historic Grazing <u>1</u> Historic Agriculture <u>1</u>	Altered Hydrology <u>1</u> Erosion <u>1</u> Urban Runoff <u>1</u> Slope Movement <u>1</u> Soil Compaction <u>1</u>
Fuel Modification Zone/Fire Break <u>1</u> Road Construction/Maintenance <u>1</u> Vegetation Clearing <u>1</u> ORV/Mountain Bike Activity <u>1</u> If Observed, List Type(s) of ORV/Bike Activity: _____ Evidence of Recent Fire <u>1</u> If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____ Trails <u>1</u> If Trails are Present, are They Authorized? Yes / No / Unknown Type of Trail Use? <input type="checkbox"/> Hiking <input type="checkbox"/> Biking <input type="checkbox"/> Equestrian <input type="checkbox"/> Dog <input type="checkbox"/> Motorcycle <input type="checkbox"/> ORV <input type="checkbox"/> Service Vehicles		
Overall Site Quality (see page 5): <input type="checkbox"/> Very Good-Excellent <input checked="" type="checkbox"/> Fair to <u>Good</u> <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor		

MSP - Management Needs and Notes

Occurrence ID: BROR_6CACA015

Species: BROR

Page 3

Date: 4/21/14

VI. MANAGEMENT RECOMMENDATIONS

clean up broken glass

VII. MANAGEMENT ACTIONS IN LAST YEAR

VIII. CNDDDB SPECIES DETECTED & NOTES

List any plant or animal species to add to the CNDDDB:

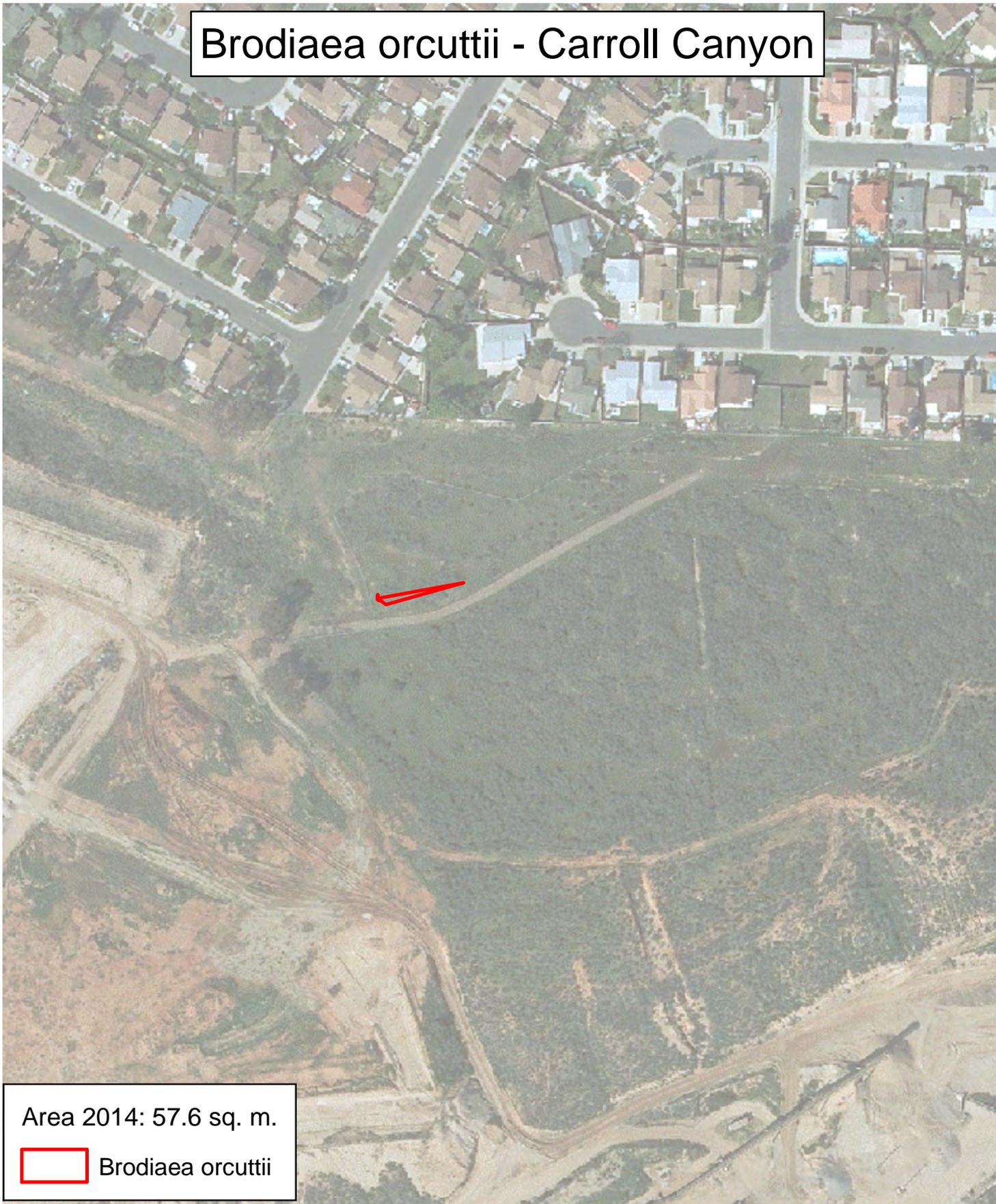
adjacent to pools, restoration underway
grading + planting for SDUSD mitigation project

***Brodiaea orcuttii* (Orcutt's Brodiaea) Carroll Canyon**



Panorama from Southern edge of population, facing East, Southeast, South, Southwest.
Panorama location is 6282439.860 1907633.765 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Brodiaea orcuttii - Carroll Canyon



Area 2014: 57.6 sq. m.
 Brodiaea orcuttii

Pop. Area 2003 - 2014
Max Area: 4863.29 sq. m.
Min Area: 0 sq. m.

0 12.5 25 50
 Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Wendy Rogers, 2014



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Scientific Name: *Brodiaea ornuttia* MSP Occurrence ID: BROR_6LORIO18
 Common Name: *Orcutt's Brodiaea* CNDDB EO#: EO63 Translocated? *no*
 Preserve: *Los Peñasquitos Canyon Preserve* Management Unit: *6*
 Land Owner: City of San Diego Land Manager: City of San Diego Env. Services
 Occurrence Name: Lopez Ridge Sample Point #: *1*
 Surveyors & Affiliation: *Betsy Miller, Kim Raeland, Sara Messaros - City of San Diego*
 Date: *4/21/14* Time Start: *12:40 pm* Time Finish: *2:00 pm*

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: *23* Exact Estimate (extrapolate partial count) Uncertainty? *low*
 # Plants/Current Mapped Extent: *23* Exact Count Estimate (1,000s, 10,000s) Uncertainty? *low*
 Area of Current Mapped Extent: *25* *m²* units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: *5* Flowering: *2* Fruiting: *1* Dead: *1*
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: *1* Disease: *1* Stunted Growth: *1*
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- *<1* meters feet Datum: _____
 Coordinates; E: *6278246.403* N: *1915522.734* State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: *Pentax K190*
 Location 1 (see coordinates above) SW, W, NW *1.1m* 10° down *1227-1232* S/OS/MSCP
 Direction (facing) Height Camera Angle Photo # File location
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA *If need more room, record additional data and any notes on page 3.*

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Pogogyne abramsii</i>	5				<i>Panicum tenuifolium</i>	1		
	<i>Brodiaea ornuttia</i>	1				<i>Panicum brevissimum</i>	1		
	<i>Boerhaavia clevelandii</i>	1			<input checked="" type="checkbox"/>	<i>Erodium sp.</i>	5		
	<i>Lesqueria californica</i>	1				<i>Lupinus bicolor</i>	1		
	<i>Allium haematodes</i>	3			<input checked="" type="checkbox"/>	<i>Avena sp.</i>	2		
	<i>Adenostoma fasciculatum</i>	7				<i>Stipa pulchra</i>	1		
	<i>Opuntia littoralis</i>	3			<input checked="" type="checkbox"/>	<i>Bromus madritensis ssp. r.</i>	1		
	<i>Selaginella ciereaensis</i>	3			<input checked="" type="checkbox"/>	<i>Bromus hordeaceus</i>	1		
	<i>Amispon glaber</i>	1			<input checked="" type="checkbox"/>	<i>Hordeum murinum</i>	4		
	<i>Pseudognaphalium bioretii</i>	1				<i>Plantago erecta</i>	<1		
	<i>Malosma laurina</i>	2			<input checked="" type="checkbox"/>	<i>Sanchus oleraceus</i>	1		
	<i>Penstemon fasciculatum</i>	3							
	<i>Chorogalum parvifolium</i>	1				Bare Ground:	20		
<input checked="" type="checkbox"/>	<i>Hypochaeris glabra</i>	3				Litter:	7		
	<i>Navaretia humata</i>	1				Rock:	25		

Total % Cover: *35* % Herb Cover: *28* % Shrub Cover: *7* % Tree Cover: *0*

Scientific Name: Pogogyne abramsii MSP Occurrence ID: BROR_6LORIO18

Preserve: Los Peñasquitos Canyon Preserve Occurrence Name: Lopez Ridge

Date: 4/21/14 Time Start: 12:40 Time Finish: 2:00

Surveyors & Affiliation/Agency: KA, SM, B, M

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Adenostoma fasciculatum Alliance / Adenostoma fasciculatum - Lotus scoparius Association

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)
 Cryptogamic Crust Cover: 2 Thatch Cover: 3 Thatch Depth: Ave. 5 cm Max: 8 cm
 Dead Standing Biomass? Yes No If Yes, Species/Cover Class: unk grass/4; 2 ^{*psilocarphus brevis*} Ave. Height? 6 cm
 Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1
 Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): open space, transportation, residential

Argentine Ant Abundance at Bait Station (1-4): n/a Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____

Ant Sample Collected?: Yes No Ant Sample #: _____ Ant Station Photo #: _____

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>3</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>3</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>6</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>1</u>		

Fuel Modification Zone/Fire Break 1
 Road Construction/Maintenance 1
 Vegetation Clearing 1
 ORV/Mountain Bike Activity 1 If Observed, List Type(s) of ORV/Bike Activity: _____
 Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____
 Trails 1 If Trails are Present, are They Authorized? Yes / No / Unknown
 Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles
site not open to public

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

MSP - Management Needs and Notes

Occurrence ID: BROR_6LORI018

Species:

Brodiaea orcuttii

Page 3

Date: 04/21/14

VI. MANAGEMENT RECOMMENDATIONS

continue to maintain fences/signs
continue trash pick-up

VII. MANAGEMENT ACTIONS IN LAST YEAR

maintained fences/signs
trash removal

VIII. CNDDDB SPECIES DETECTED & NOTES

List any plant or animal species to add to the CNDDDB:

Lined area for listing species to add to the CNDDDB.

***Brodiaea orcuttii* (Orcutt's Brodiaea) Lopez Ridge**



Panorama from Eastern edge of population, facing Southwest, West, Northwest.
Panorama location is 6278246.405 1915522.734 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Brodiaea orcuttii - Lopez Ridge

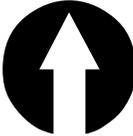


Area 2014: 25.0 sq. m.
 Brodiaea orcuttii

Pop. Area 2003 - 2014
Max Area: 568.02 sq. m.
Min Area: 25.0 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Wendy Rogers, 2014



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Scientific Name: *Brodiaea orcuttii* MSP Occurrence ID: BROR-2 NOBD002
 Common Name: Orcutt's brodiaea CNDDB EO#: EO36 Translocated? no
 Preserve: Rose Canyon Open Space Management Unit: 2
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: Nobel Drive Sample Point #: 1
 Surveyors & Affiliation: Kim Zoeland, Beth Miller, Sam Messers - City of San Diego
 Date: 4/21/14 Time Start: 2:30 pm Time Finish: 3:10 pm

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 0 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 0 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 0 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 1 Flowering: 1 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 7
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No low rainfall
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6271105.37 N: 1896318.834 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax W90
 Location 1 (see coordinates above) Direction (facing) NW, W, SW, S Height 1.1m Camera Angle 20° down Photo # 1239-1244 File location S/OS/MSCP
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA If need more room, record additional data and any notes on page 3.

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Navamtia fossilis</i>	<1							
	<i>Croton setigerus</i>	1							
	<i>Deinandra fasciculata</i>	7							
	<i>Apiastrum angustifolium</i>	<1							
✓	<i>Bromus hololaceus</i>	1							
	<i>Ribragopus brevissimus</i>	10							
✓	<i>Hypochaeris glabra</i>	3							
✓	<i>Cotula coronopifolia</i>	1							
✓	<i>Erodium</i> sp.	5							
✓	<i>Aragallus arvensis</i>	1							
	<i>Chenopodium dubium</i>	1							
	<i>Juncus subsericus</i>	1							
	<i>Ribragopus tenellus</i>	1							
	<i>Eriogonum fasciculatum</i>	5							
						Bare Ground:			<u>30</u>
						Litter:			<u>40</u>
						Rock:			<u>10</u>

Total % Cover: 25 % Herb Cover: 20 % Shrub Cover: 5 % Tree Cover: 0

Scientific Name: Brodiaea orcuttii MSP Occurrence ID: BROP_2NOBD 002

Preserve: Rose Canyon Open Space Occurrence Name: Nobel Drive

Date: 4/21/14 Time Start: 2:30 Time Finish: 3:10

Surveyors & Affiliation/Agency: KR, BVA, SM

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within **species-specific sampling area (typically 10-m radius circle)**. Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Eriogonum fasciculatum Alliance / Eriogonum fasciculatum Association

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)
 Cryptogamic Crust Cover: 1 Thatch Cover: 2 Thatch Depth: Ave. 2 cm Max: 2 cm
 Dead Standing Biomass? Yes No If Yes, Species/Cover Class: Deinandra fasciculata / 2 Ave. Height? 10 cm
 Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1
 Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the **occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer**. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): open space, transportation

Argentine Ant Abundance at Bait Station (1-4): n/a Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____

Ant Sample Collected?: Yes No Ant Sample #: _____ Ant Station Photo #: _____

Disturbances (rank each as 1-6)

Non-Native Forbs	<u>3</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>3</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>unk</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>1</u>		

Fuel Modification Zone/Fire Break 1
 Road Construction/Maintenance 1
 Vegetation Clearing 5 non-native species removal for restoration project
 ORV/Mountain Bike Activity 2 If Observed, List Type(s) of ORV/Bike Activity: legal mtn bike use
 Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____
 Trails 2 If Trails are Present, are They Authorized? Yes / No / Unknown
 Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV : Service Vehicles

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

MSP - Management Needs and Notes

Occurrence ID: BROR_2NOBD002

Species: BROR

Page 3

Date: 4/21/14

VI. MANAGEMENT RECOMMENDATIONS

Continue habitat enhancement efforts

VII. MANAGEMENT ACTIONS IN LAST YEAR

habitat enhancement (weeding + vernal pool recontouring) by SANDAG EMP grant (2007-2008), City (2009), and CalTrans mitigation project (2013-2014)

VIII. CNDDDB SPECIES DETECTED & NOTES

List any plant or animal species to add to the CNDDDB:

Lined area for listing species to add to the CNDDDB.

***Brodiaea orcuttii* (Orcutt's Brodiaea) Nobel Drive**



Panorama from Northern end of population, facing Southwest, South, Southeast.
Panorama location is 6271105.47 1896367.536 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Brodiaea orcuttii - Nobel Drive

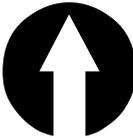


Area 2014: 0 sq. m.

Pop. Area 2003 - 2014
Max Area: 22.28 sq. m.
Min Area: 0 sq. m.

0 5 10 20
Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Wendy Rogers, 2014



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Scientific Name: *Brodiaea orcuttii* MSP Occurrence ID: B20R-4USIU014
 Common Name: Orcutt's brodiaea CNDDDB EO#: EO49 Translocated? no
 Preserve: United States International University Management Unit: 4
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: USIU/Scripps Miramar Ranch Sample Point #: 1
 Surveyors & Affiliation: Betsy Miller, Kim Roeland, Sara Meszaros - City of San Diego
 Date: 4/21/14 and 5/2/14 Time Start: 9:05 Time Finish: 9:55

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: see below: ~20 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 119 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 301 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 5 Flowering: 3 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No about 20 w/in 10-m of photo pt, but contiguous pop
 Species Found in Maximum Extent? Yes No _____
 If not, why (if reason known or suspected)? _____
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: _____
 Collector: _____ Collection Number: _____ Museum/Herbarium: _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6302393.501 N: 1905898.594 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax optio W90
 Location 1 (see coordinates above) SW, S, SE, E 1.1m 10° down 1198-1198 S/OS/MSCP
 Direction (facing) Height Camera Angle Photo # File location
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA *If need more room, record additional data and any notes on page 3.*

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Brodiaea orcuttii</i>	1				<i>Stipa pulchra</i>	7		
	<i>Malosma laurina</i>	5			✓	<i>Erodium sp.</i>	5		
	<i>Eriogonum fasciculatum</i>	3				<i>Juncus dubius</i>	2		
	<i>Artemisia californica</i>	3			✓	<i>Bromus hordeaceus - Dead</i>			
✓	<i>Acacia sp</i>	3			✓	<i>Bromus madritensis</i>	1		
	<i>Acmispon glaber</i>	1			✓	<i>Avena sp.</i>	1		
	<i>Baccharis pilularis</i>	2			✓	<i>Bromus diandrus</i>	1		
	<i>Rhamnus crocea</i>	5				<i>Salvia mellifera</i>	1		
	<i>Mimulus aurantiacus</i>	2				<i>Onus integrifolia</i>	1		
	<i>Heteromeles arbutifolia</i>	1							
	<i>Dichelostemma capitatum</i>	1							
	<i>Calochortus splendens</i>	1							
	<i>Sidalcea sparsifolia</i>	3				Bare Ground:	7		
	<i>Sicyrinchium bellum</i>	2				Litter:	1		
✓	<i>Vicia villosa</i>	5				Rock:	1		

Total % Cover: 20 % Herb Cover: 15 % Shrub Cover: 5 % Tree Cover: 0

MSP - Rare Plant Habitat and Threats Assessment Form

Scientific Name:	Brodiaea orcuttii	MSP Occurrence ID:	BROR_4USIU014
Preserve:	0 United States International University	Occurrence Name:	USIU/Scripps Miramar Ranch
Date:	4/21/14	Time Start:	9:05
		Time Finish:	9:55
Surveyors & Affiliation/Agency:	KR, BM, SM		
<p>IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.</p>			
SANDAG 2012 Vegetation Alliance/Association: <u>Malosma launna Alliance / Malosma launna - Lotus scoparius Association</u>			
Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)			
Cryptogamic Crust Cover: <u>2</u> Thatch Cover: <u>3</u> Thatch Depth: Ave. <u>3</u> cm Max: <u>5</u> cm			
Dead Standing Biomass? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Species/Cover Class: <u>Bromus sp/a</u> Ave. Height? <u>10</u> cm			
Mammal Species Activity Categories (1-4): Feral Pig Activity: <u>1</u> Ground Squirrel Activity: <u>1</u> Gopher Activity: <u>1</u>			
Sampling Area Representative of Maximum Extent? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, Note Differences on Page 3.			
<p>V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.</p>			
Surrounding Land Use at Site (>Maximum Extent): <u>Open space; university; parking lot</u>			
Argentine Ant Abundance at Bait Station (1-4): <u>n/a</u> Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____			
Ant Sample Collected?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Ant Sample #: _____ Ant Station Photo #: _____			
Disturbances (rank each as 1-6):			
Non-Native Forbs <u>3</u> Non-Native Grasses <u>5</u> Non-Native Woody Plants <u>2</u> Competitive Native Plants <u>1</u> Dumping/Trash <u>1</u> Encampments <u>1</u>	Feral Pig Activity <u>1</u> Trampling <u>1</u> Vandalism <u>1</u> Current Grazing <u>1</u> Historic Grazing <u>1</u> Historic Agriculture <u>1</u>	Altered Hydrology <u>1</u> Erosion <u>1</u> Urban Runoff <u>1</u> Slope Movement <u>1</u> Soil Compaction <u>1</u>	
Fuel Modification Zone/Fire Break <u>1</u> Road Construction/Maintenance <u>1</u> Vegetation Clearing <u>1</u> ORV/Mountain Bike Activity <u>1</u> If Observed, List Type(s) of ORV/Bike Activity: _____ Evidence of Recent Fire <u>1</u> If Sign of Recent Fire: Year Burned? <u>2003</u> Unknown Burn Year: _____ Trails <u>1</u> If Trails are Present, are They Authorized? Yes / No / Unknown Type of Trail Use? <input type="checkbox"/> Hiking <input type="checkbox"/> Biking <input type="checkbox"/> Equestrian <input type="checkbox"/> Dog <input type="checkbox"/> Motorcycle <input type="checkbox"/> ORV <input type="checkbox"/> service Vehicles			
Overall Site Quality (see page 5): <input type="checkbox"/> Very Good-Excellent <input checked="" type="checkbox"/> Fair to Good <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor			

MSP - Management Needs and Notes

Occurrence ID: BROR_4USIU014

Species: BROR

Page 3

Date: 4/21/14

VI. MANAGEMENT RECOMMENDATIONS

treat non-native grasses

VII. MANAGEMENT ACTIONS IN LAST YEAR

Ø

VIII. CNDDDB SPECIES DETECTED & NOTES

List any plant or animal species to add to the CNDDDB:

return when flowers are open to verify

on 5/2/14, BM and KR returned and verified correct species. We also mapped a few more areas within the marshy area at the base of the slope near the photo point. Population count and area is total for this site including the 5/2/14 visit.

***Brodiaea orcuttii* (Orcutt's Brodiaea)
USIU/Scripps Miramar Ranch**



Panorama from Southern end of population, facing Southwest, South, Southeast, East.
Panorama location is 6302393.50 1905898.59 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Brodiaea orcuttii - USIU/Scripps Miramar Ranch

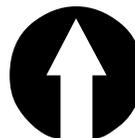


Area 2014: 301 sq. m.

Pop. Area 2003 - 2014
Max Area: 12631.1 sq. m.
Min Area: 0 sq. m.

0 5 10 20
Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Wendy Rogers, 2014



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SanGIS

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Chloropyron maritimum ssp. *maritimum*
Salt-marsh Bird's Beak



© CNPS, San Luis Obispo Chapter

MSP - Rare Plant Habitat and Threats Assessment Form

Scientific Name: Chloropyron maritimum	MSP Occurrence ID: COMAM3_1DOBE007		
Preserve: Flood Control Channel Southern Wildlife Preserve	Occurrence Name: Dog Beach		
Date: 5/16/14	Time Start: 8:35	Time Finish: 9:08	
Surveyors & Affiliation/Agency: BM, KR, SM - city of SD			
<p>IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within <i>species-specific sampling area (typically 10-m radius circle)</i>. Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.</p>			
SANDAG 2012 Vegetation Alliance/Association: <u>Sarcocornia pacifica (Salicornia depressa) Alliance / Sarcocornia pacifica - Frankenia salina Association</u>			
Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)			
Cryptogamic Crust Cover: <u>1</u>	Thatch Cover: <u>1</u>	Thatch Depth: Ave. <u>1/8</u> cm	Max: <u>1/8</u> cm
Dead Standing Biomass? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If Yes, Species/Cover Class: _____		Ave. Height? _____ cm
Mammal Species Activity Categories (1-4): Feral Pig Activity: <u>1</u>	Ground Squirrel Activity: <u>1</u>	Gopher Activity: <u>3</u>	
Sampling Area Representative of Maximum Extent? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If No, Note Differences on Page 3.		
<p>V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the <i>occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer</i>. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.</p>			
Surrounding Land Use at Site (>Maximum Extent): <u>Flood control channel; dog beach</u>			
Argentine Ant Abundance at Bait Station (1-4): <u>1</u>	Time Start: <u>8:37</u>	Temp. Start: <u>80</u>	Time Finish: <u>9:03</u> Temp. Finish: <u>80.5</u>
Ant Sample Collected?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Ant Sample #: _____	Ant Station Photo #: <u>1542</u>	
Disturbances (rank each as 1-6):			
Non-Native Forbs <u>6</u>	Feral Pig Activity <u>1</u>	Altered Hydrology <u>6</u>	
Non-Native Grasses <u>1</u>	Trampling <u>1</u>	Erosion <u>1</u>	
Non-Native Woody Plants <u>1</u>	Vandalism <u>1</u>	Urban Runoff <u>1</u>	
Competitive Native Plants <u>1</u>	Current Grazing <u>1</u>	Slope Movement <u>1</u>	
Dumping/Trash <u>3</u>	Historic Grazing <u>1</u>	Soil Compaction <u>1</u>	
Encampments <u>2</u>	Historic Agriculture <u>1</u>		
Fuel Modification Zone/Fire Break <u>1</u>			
Road Construction/Maintenance <u>1</u>			
Vegetation Clearing <u>1</u>			
ORV/Mountain Bike Activity <u>1</u>	If Observed, List Type(s) of ORV/Bike Activity: _____		
Evidence of Recent Fire <u>1</u>	If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____		
Trails <u>2</u>	If Trails are Present, are They Authorized? <input checked="" type="checkbox"/> Yes / No / Unknown <u>Fenced / signed</u>		
Type of Trail Use?	<input checked="" type="checkbox"/> Hiking <input type="checkbox"/> Biking <input type="checkbox"/> Equestrian <input checked="" type="checkbox"/> Dog <input type="checkbox"/> Motorcycle <input type="checkbox"/> ORV <input type="checkbox"/> Service Vehicles		
Overall Site Quality (see page 5):	<input type="checkbox"/> Very Good-Excellent <input type="checkbox"/> Fair to Good <input checked="" type="checkbox"/> Poor <input type="checkbox"/> Very Poor		

↓
Limonium

VI. MANAGEMENT RECOMMENDATIONS

- Use best available method for treating Limonium
within maximum extent
- continue to maintain fences and signs to keep people
and dogs out of sensitive habitat

VII. MANAGEMENT ACTIONS IN LAST YEAR

- San Diego River Park Foundation installed
fence with fence post artwork of native plants.
Interperative posts w/ native plants also installed

VIII. CNDDB SPECIES DETECTED & NOTES

List any plant or animal species to add to the CNDDB:

Belding's savannah sparrow record - pt taken

Chloropyron maritimum* ssp. *maritimum
(Salt Marsh Bird's Beak)
Dog Beach



Panorama from Eastern end of population, facing Northeast, North, Northwest.
Panorama location is 6254599.243 1856054.397 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

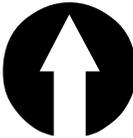
Chloropyron maritimum - Dog Beach



Area 2014: 223.57 sq. m.
 Chloropyron maritimum



Source: San GIS & City of San Diego Park & Rec
Map Created By: Sara Meszaros, 2014



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Cylindropuntia californica var. *californica*
Snake Cholla



© City of San Diego, 2002

MSP - Rare Plant Habitat and Threats Assessment Form

Scientific Name:	Cylindropuntia californica var. californica	MSP Occurrence ID:	TBD
Preserve:	Otay Mesa Open Space	Occurrence Name:	Otay Mesa
Date:	4/24/14	Time Start:	12:05
		Time Finish:	12:45
Surveyors & Affiliation/Agency:	KR, SP, BM, WR		
IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.			
SANDAG 2012 Vegetation Alliance/Association: <u>Adenostoma fasciculatum Alliance/Adenostoma fasciculatum - (Eriogonum fasciculatum) Artemisia californica/Salvia mellifera Association</u>			
Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)			
Cryptogamic Crust Cover: <u>1</u> Thatch Cover: <u>20</u> Thatch Depth: Ave. <u>5</u> cm Max: <u>10</u> cm			
Dead Standing Biomass? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Species/Cover Class: <u>wak grass/2</u> Ave. Height? <u>15</u> cm			
Mammal Species Activity Categories (1-4): Feral Pig Activity: <u>1</u> Ground Squirrel Activity: <u>1</u> Gopher Activity: <u>1</u>			
Sampling Area Representative of Maximum Extent? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, Note Differences on Page 3.			
V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer . See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.			
Surrounding Land Use at Site (>Maximum Extent): <u>open space</u>			
Argentine Ant Abundance at Bait Station (1-4): <u>1</u> Time Start: <u>12:05</u> Temp. Start: <u>65°F</u> Time Finish: <u>12:41</u> Temp. Finish: <u>65°F</u>			
Ant Sample Collected?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Ant Sample #: _____ Ant Station Photo #: _____			
Disturbances (rank each as 1-6):			
Non-Native Forbs <u>3</u>	Feral Pig Activity <u>1</u>	Altered Hydrology <u>1</u>	
Non-Native Grasses <u>4</u>	Trampling <u>1</u>	Erosion <u>1</u>	
Non-Native Woody Plants <u>1</u>	Vandalism <u>1</u>	Urban Runoff <u>1</u>	
Competitive Native Plants <u>1</u>	Current Grazing <u>1</u>	Slope Movement <u>1</u>	
Dumping/Trash <u>1</u>	Historic Grazing <u>6</u>	Soil Compaction <u>1</u>	
Encampments <u>1</u>	Historic Agriculture <u>1</u>		
Fuel Modification Zone/Fire Break <u>1</u>			
Road Construction/Maintenance <u>1</u>			
Vegetation Clearing <u>1</u>			
ORV/Mountain Bike Activity <u>2</u> If Observed, List Type(s) of ORV/Bike Activity: <u>Border Patrol road</u>			
Evidence of Recent Fire <u>1</u> If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____			
Trails <u>1</u> If Trails are Present, are They Authorized? <input checked="" type="checkbox"/> Yes / No / Unknown			
Type of Trail Use?			
<input type="checkbox"/> Hiking <input type="checkbox"/> Biking <input type="checkbox"/> Equestrian <input type="checkbox"/> Dog <input type="checkbox"/> Motorcycle <input type="checkbox"/> ORV <input checked="" type="checkbox"/> Service Vehicles			
Overall Site Quality (see page 5): <input type="checkbox"/> Very Good-Excellent <input checked="" type="checkbox"/> Fair to Good <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor			

Occurrence ID: TBD

Species: *Cylindropuntia californica*

Date: 4/24/14

VI. MANAGEMENT RECOMMENDATIONS

submit pesticide applicator request to treat non-native grasses and mustards near photo point - weeds from across dirt road are beginning to spread up slope towards cactus population

VII. MANAGEMENT ACTIONS IN LAST YEAR

none

VIII. CNDDDB SPECIES DETECTED & NOTES

List any plant or animal species to add to the CNDDDB:

CAEN @ point

* slightly more invaded with weeds - upslope on hill nearly pristine MSS

orange-throated whiptail - see GPS point

- note for data analysis - chollas #'s at this site have crashed since 2006 - 30+ skeletons found today - all alive + flowering 10 years ago

Cylindropuntia californica* var. *californica
(Snake Cholla)
Otay Mesa



Panorama from Northern edge of population, facing East, Northeast, North.
Panorama location is 6323469.55 1779652.07 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Cylindropuntia californica - Otay Mesa



Area 2014: 2730 sq. m.

 Cylindropuntia californica

Pop. Area 2002 - 2014
Max Area: 6547.26 sq. m.
Min Area: 460.3 sq. m.

0 5 10 20
 Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Wendy Rogers, 2014



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MSP - Rare Plant Occurrence Monitoring Form

Scientific Name: Cylindropuntia californica var. californica MSP Occurrence ID: TBD
 Common Name: Snake Cholla CNDDDB EO#: none Translocated? no
 Preserve: Spring Canyon Open Space Management Unit: 3
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: Spring Canyon Sample Point #: 1
 Surveyors & Affiliation: Kim Roeland, Sean Pauer, Boby Miller, Blandy Rogers - City of San Diego
 Date: 4/24/14 Time Start: 10:50 AM Time Finish: 11:20 AM

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 3 Exact Estimate (extrapolate partial count) Uncertainty? _____
 # Plants/Current Mapped Extent: 14 Exact Count Estimate (1,000s, 10,000s) Uncertainty? _____
 Area of Current Mapped Extent: 559 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 5 Flowering: 1 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No
 If not, why (if reason known or suspected)? _____
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6330060.051 N: 1781287.695 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax Optia M90
 Location 1 (see coordinates above) Direction (facing) N, NE, E, SE Height 1.1m Camera Angle 5° up Photo # K105-1808 File location S/OS/MSCP
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA If need more room, record additional data and any notes on page 3.

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Cylindropuntia californica</i>	1			✓	<i>Medicago polymorpha</i>	1		
	<i>Cylindropuntia prolifera</i>	1							
	<i>Simmondsia chinensis</i>	10							
	<i>Aemisson glaber</i>	1							
	<i>Ambrosia leopoldifolia</i>	16							
	<i>Mirabilis laevis</i>	1							
	<i>Artemisia californica</i>	1							
	<i>Encelia californica</i>	1							
✓	<i>Salsola tragus</i>	2							
✓	<i>Centaurea melitensis</i>	7							
✓	<i>Melilotus indica</i>	2							
✓	<i>Erodium</i> sp.	15							
✓	<i>Bromus madritensis</i> ssp. r.	2				Bare Ground:	60		
✓	<i>Helianthus scabra</i>	1				Litter:	5		
✓	<i>Sonchus asper</i>	1				Rock:	15		

Total % Cover: 40 % Herb Cover: 20 % Shrub Cover: 20 % Tree Cover: 0

Scientific Name: Cylindropuntia californica var. californica MSP Occurrence ID: TBD
 Preserve: Spring Canyon Open Space Occurrence Name: Spring Canyon
 Date: 4/24/14 Time Start: 10:50 Time Finish: 11:20
 Surveyors & Affiliation/Agency: KB, SP, WA, BM

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within **species-specific sampling area (typically 10-m radius circle)**. Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Simmondsia chinensis Alliance
Simmondsia chinensis - Bahiopsis lacinata Association

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)

Cryptogamic Crust Cover: 1 Thatch Cover: 2 Thatch Depth: Ave. 4 cm Max: 6 cm
 Dead Standing Biomass? Yes No If Yes, Species/Cover Class: Crassica rigm/2; unk grass/2 Ave. Height? 7 cm
 Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1
 Sampling Area Representative of Maximum Extent? Yes No* If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the **occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer**. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): open space

Argentine Ant Abundance at Bait Station (1-4): n/a Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____
 Ant Sample Collected?: Yes No Ant Sample #: _____ Ant Station Photo #: _____

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>4</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>3</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>6</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>1</u>		

Fuel Modification Zone/Fire Break 1
 Road Construction/Maintenance 1
 Vegetation Clearing 1
 ORV/Mountain Bike Activity 1 If Observed, List Type(s) of ORV/Bike Activity: _____
 Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____
 Trails 1 If Trails are Present, are They Authorized? Yes / No / Unknown
 Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

MSP - Management Needs and Notes

Occurrence ID: TBD

Species: CyCA

Page 3

Date: 4/24/14

VI. MANAGEMENT RECOMMENDATIONS

continue to maintain access control - signs, fences + gates

VII. MANAGEMENT ACTIONS IN LAST YEAR

Public Utilities Dept installed 3500 ft of fencing to limit extensive Border Patrol/CRV roads in the area

VIII. CNDDDB SPECIES DETECTED & NOTES

List any plant or animal species to add to the CNDDDB:

CAEN seen/heard @ point

* sampling area is in old road bed in order to get photo of slope where CyCa is found - is more highly disturbed than hillside which is intact MSS

orange-throated whiptail - GPS pt taken

Cylindropuntia californica* var. *californica
(Snake Cholla)
Spring Canyon



Panorama from Northeastern edge of population, facing North, Northeast, East, Southeast.
Panorama location is 6330060.05 1781287.695 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Cylindropuntia californica - Spring Canyon



Area 2014: 559.0 sq. m.

 Cylindropuntia californica

Pop. Area 2002 - 2014
Max Area: 3138.6 sq. m.
Min Area: 559.0 sq. m.

0 5 10 20
 Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Wendy Rogers, 2014



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Deinandra conjugens
Otay Tarplant



© City of San Diego, 2005

Scientific Name: Deinandra conjugens MSP Occurrence ID: DECO13_3DERA020
 Common Name: Otay Tarplant CNDDDB EO#: EO27/29 Translocated? partial
 Preserve: Dennery Ranch Preserve Management Unit: 3
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: Dennery Ranch Sample Point #: 1
 Surveyors & Affiliation: Kim Roeland, Betsy Miller, Wendy Rogers - City of San Diego
 Date: 5/13/14 Time Start: 11:13 AM Time Finish: 11:40 AM

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 0 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 0 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 0 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 1 Flowering: 1 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No low rainfall, low #s found in previous years
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- ≤1 meters feet Datum: _____
 Coordinates; E: W321437.419 N: 1791601.507 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax Optio W90
 Location 1 (see coordinates above) Direction (facing) S, SE, E Height 1.1m Camera Angle 5° up Photo # 1525-1528 File location _____
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA If need more room, record additional data and any notes on page 3.

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Rosa minutifolia</i>	3							
	<i>Artemisia californica</i>	20							
	<i>Simmondsia chinensis</i>	7							
	<i>Bahiopsis lacinata</i>	7							
	<i>Encelia californica</i>	2							
	<i>Rhus integrifolia</i>	3							
	<i>Eriogonum fasciculatum</i>	1							
✓	<i>Centauria allitensis</i>	1							
✓	<i>Erodium sp.</i>	1							
✓	<i>Festuca myuros</i>	1							
	<i>Helianthodium scoparium</i>	2							
✓	<i>Anagallis arvensis</i>	1							
✓	<i>Lactuca scariola</i>	1				Bare Ground:	25		
	<i>Ambrosia chenopodiifolia</i>	1				Litter:	5		
						Rock:	20		

Total % Cover: 55 % Herb Cover: 5 % Shrub Cover: 50 % Tree Cover: 0

MSP - Rare Plant Habitat and Threats Assessment Form

Scientific Name: Deinandra conjugens MSP Occurrence ID: DECO13_3DERA020

Preserve: Dennerly Ranch Preserve Occurrence Name: Dennerly Ranch

Date: 5/13/14 Time Start: 11:13 Time Finish: 11:40

Surveyors & Affiliation/Agency: KR, BM, WK

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within **species-specific sampling area (typically 10-m radius circle)**. Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Simmondsia chinensis Alliance
Simmondsia chinensis - Bahiopsis lacinata Association

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)
 Cryptogamic Crust Cover: 1 Thatch Cover: 1 Thatch Depth: Ave. n/a cm Max: n/a cm
 Dead Standing Biomass? Yes No If Yes, Species/Cover Class: wak shrub/2 Ave. Height? 70 cm
 Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1
 Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the **occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer**. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): open space, residential

Argentine Ant Abundance at Bait Station (1-4): n/a Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____

Ant Sample Collected?: Yes No Ant Sample #: _____ Ant Station Photo #: _____

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>3</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>3</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>wak</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>1</u>		

Fuel Modification Zone/Fire Break 6
 Road Construction/Maintenance 1
 Vegetation Clearing 6 } veg clearing b/c point is in brush management zone
 ORV 1 If Observed, List Type(s) of ORV/Bike Activity: _____
 Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____
 Trails 1 If Trails are Present, are They Authorized? Yes / No / Unknown
 Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

VI. MANAGEMENT RECOMMENDATIONS
continue to maintain fences/gates

VII. MANAGEMENT ACTIONS IN LAST YEAR
maintained fences/gates

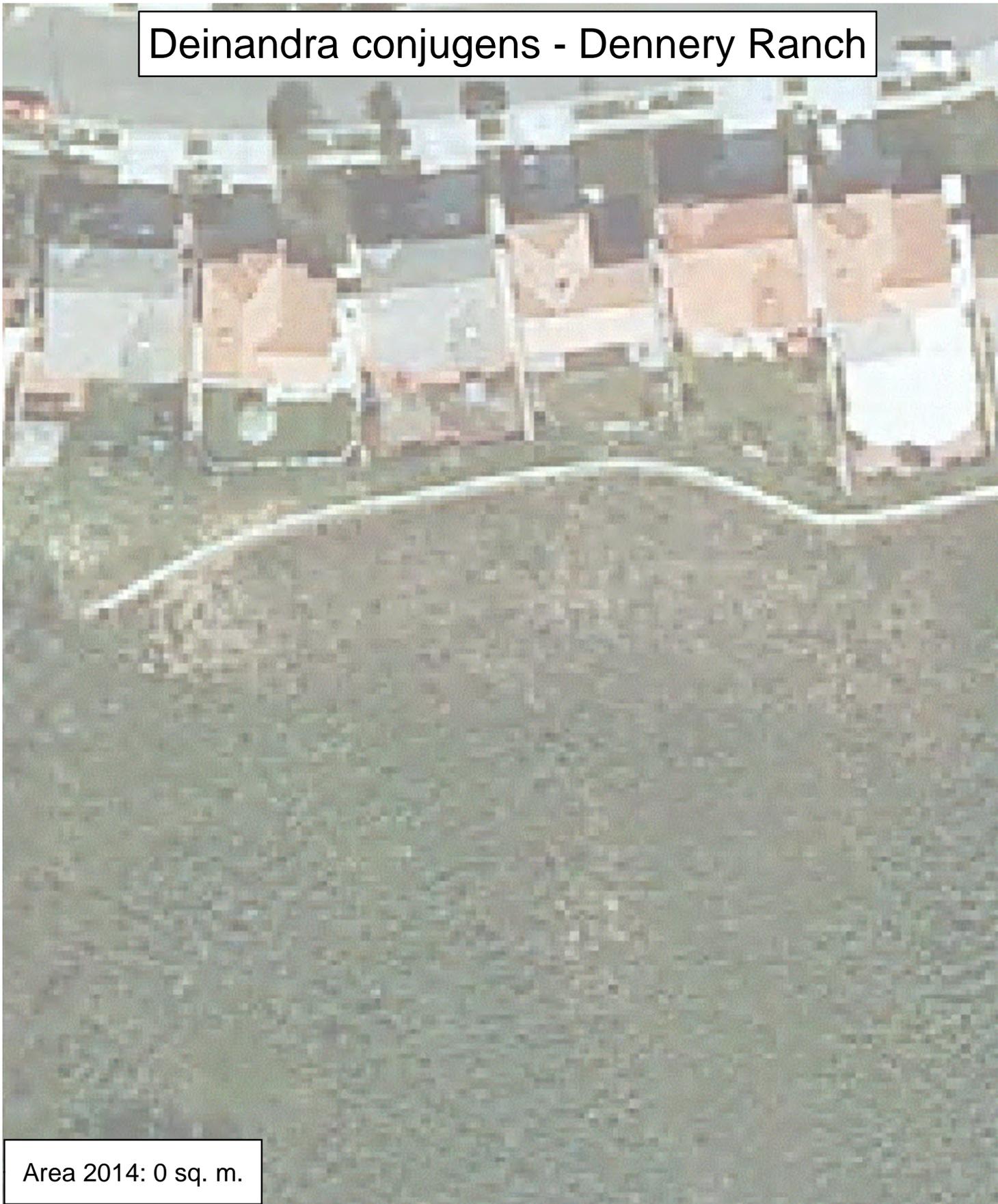
VIII. CNDDDB SPECIES DETECTED & NOTES
List any plant or animal species to add to the CNDDDB:

***Deinandra conjugens* (Otay Tarplant) Dennery Ranch**



Panorama from Southern edge of population, facing South, Southeast, East.
Panorama location is 6321401.87 1791630.28 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Deinandra conjugens - Dennery Ranch

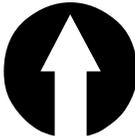


Area 2014: 0 sq. m.

Pop Area: 2001 - 2014
Max: 3623.64 sq. m.
Min: 0 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Wendy Rogers, 2014



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SanGIS
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MSP - Rare Plant Occurrence Monitoring Form

Scientific Name: *Deinandra conjugens* MSP Occurrence ID: DECO13_3DREA021
 Common Name: Otay Tarplant CNDDDB EO#: EO27/29 Translocated? yes
 Preserve: Dennerly Ranch Preserve Management Unit: 3
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: Dennerly Ranch East Sample Point #: 1
 Surveyors & Affiliation: *Betsy Miller, Kim Rockland, Wendy Rogers - City of SD*
 Date: *5/13/14* Time Start: *10:35* Time Finish: *10:47*

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 1 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 2 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 1 Flowering: 5 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No 1 w/in sampling area + 1 outside = 2 total population
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6323139.660 N: 1792737.03 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax opto w90
 Location 1 (see coordinates above) SW, S, SE 1.1m 5° up 1521-1524 S/OS/MSCP
 Direction (facing) Height Camera Angle Photo # File location
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA *If need more room, record additional data and any notes on page 3.*

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Deinandra conjugens</i>	1			<input checked="" type="checkbox"/>	<i>Anagalis arvensis</i>	1		
	<i>Simmondsia chinensis</i>	5			<input checked="" type="checkbox"/>	<i>Brachypodium distachyon</i>	5		
	<i>Pentstemon arborea</i>	2			<input checked="" type="checkbox"/>	<i>Hedysarum cretense</i>	1		
	<i>Ambrosia chenopodiifolia</i>	2							
	<i>Eriogonum fasciculatum</i>	3							
	<i>Isoloma menziesii</i>	1							
	<i>Bloomenia arcea</i>	1							
<input checked="" type="checkbox"/>	<i>Centaurea melitensis</i>	10							
	<i>Sisyrinchium bellum</i>	1							
<input checked="" type="checkbox"/>	<i>Bromus madriensis</i>	1							
<input checked="" type="checkbox"/>	<i>Avena sp.</i>	15							
<input checked="" type="checkbox"/>	<i>Brassica nigra</i>	5							
<input checked="" type="checkbox"/>	<i>Festuca perennis</i>	1							
	<i>Stipa pulchra</i>	1							
<input checked="" type="checkbox"/>	<i>Bromus hordeaceus</i>	1							
						Bare Ground:	10		
						Litter:	0		
						Rock:	5		

Total % Cover: 40 % Herb Cover: 35 % Shrub Cover: 5 % Tree Cover: 0

Scientific Name: Deinandra conjugens MSP Occurrence ID: DECO13_3DREA021

Preserve: Dennerly Ranch Preserve Occurrence Name: Dennerly Ranch East

Date: 5/13/14 Time Start: 10:35 Time Finish: 10:47

Surveyors & Affiliation/Agency: BM, KR, WR

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Simmondsia chinensis Alliance
Simmondsia chinensis - Bahiopsis lacinata Association

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)
 Cryptogamic Crust Cover: 1 Thatch Cover: 4 Thatch Depth: Ave. 4 cm Max: 5 cm
 Dead Standing Biomass? Yes No If Yes, Species/Cover Class: Brassica: 2 Ave. Height? 30 cm
 Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1
 Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): open space

Argentine Ant Abundance at Bait Station (1-4): N/A Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____

Ant Sample Collected?: Yes No Ant Sample #: _____ Ant Station Photo #: _____

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>5</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>5</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>N/A</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>1</u>		

Fuel Modification Zone/Fire Break 1
 Road Construction/Maintenance 1
 Vegetation Clearing 1
 ORV/Mountain Bike Activity 1 If Observed, List Type(s) of ORV/Bike Activity: _____
 Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____
 Trails 2 If Trails are Present, are They Authorized? Yes No Unknown
 Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

VI. MANAGEMENT RECOMMENDATIONS

- treat non-native forbs and grasses
- restrict access on unauthorized trail

VII. MANAGEMENT ACTIONS IN LAST YEAR

∅

VIII. CNDDDB SPECIES DETECTED & NOTES

List any plant or animal species to add to the CNDDDB:

***Deinandra conjugens* (Otay Tarplant)
Dennery Ranch East**



Panorama from Southern edge of population, facing Southwest, South, Southeast.
Panorama location is 6323139.66 1792737.05 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Deinandra conjugens - Dennery Ranch East



Area 2014: >1 sq. m.

 Deinandra conjugens

Pop Area: 2010-2014
Max: 9528.1 sq. m.
Min: >1 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Wendy Rogers, 2014



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MSP - Rare Plant Occurrence Monitoring Form

Scientific Name: Deinandra conjugens MSP Occurrence ID: DECO13_3PRVA013
 Common Name: Otay Tarplant CNDDDB EO#: EO22 Translocated? no
 Preserve: Proctor Valley Management Unit: 3
 Land Owner: City of San Diego Land Manager: City of San Diego PUD
 Occurrence Name: Proctor Valley Sample Point #: 1
 Surveyors & Affiliation: Kim Zealand, Patsy Miller, Wendy Rogers - City of San Diego
 Date: 5/13/14 Time Start: 8:35 AM Time Finish: 9:15 AM

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 0 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 0 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 0 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 1 Flowering: 1 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No low rainfall, not found in recent years
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6353224.493 N: 1825326.858 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax Optio W90
 Location 1 (see coordinates above) Direction (facing) E, SE, S Height 1.1m Camera Angle 5° down Photo # 1517-1519 File location S/OS/MSCP
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA If need more room, record additional data and any notes on page 3.

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Isocoma menziesii</i>	3							
	<i>Amispon glaber</i>	3							
	<i>Calechortus splendens</i>	1							
	<i>Stipa pulchra</i>	15							
✓	<i>Brachypodium distachyon</i>	20							
	<i>Districhium bellum</i>	1							
✓	<i>Avena sp.</i>	7							
✓	<i>Festuca perennica</i>	1							
✓	<i>Brassica nigra</i>	2							
						Bare Ground:	7		
						Litter:	2		
						Rock:	3		

Total % Cover: 50 % Herb Cover: 40 % Shrub Cover: 10 % Tree Cover: 0

Scientific Name: Deinandra conjugens MSP Occurrence ID: DECO13_3PRVA013

Preserve: Proctor Valley Occurrence Name: Proctor Valley

Date: 5/13/14 Time Start: 8:35 Time Finish: 9:15

Surveyors & Affiliation/Agency: XX, SM, KR

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within **species-specific sampling area (typically 10-m radius circle)**. Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Isocoma menziesii Alliance / Isocoma menziesii Provisional Association

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)
 Cryptogamic Crust Cover: 1 Thatch Cover: 5 Thatch Depth: Ave. 3 cm Max: 10 cm
 Dead Standing Biomass? Yes No If Yes, Species/Cover Class: Acmispon glaber / 2 Ave. Height' 60 cm
 Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1
 Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the **occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer**. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): open space, residential

Argentine Ant Abundance at Bait Station (1-4): 1 Time Start: 8:40 Temp. Start: 78°F Time Finish: 9:05 am Temp. Finish: 82°F

Ant Sample Collected?: Yes No Ant Sample #: n/a Ant Station Photo #: 1520

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>3</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>5</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>2</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>6</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>1</u>		

Fuel Modification Zone/Fire Break 1
 Road Construction/Maintenance 2
 Vegetation Clearing 1
 ORV: 1 If Observed, List Type(s) of ORV/Bike Activity: _____
 Evidence of Recent Fire 6 If Sign of Recent Fire: Year Burned? 2003 Unknown Burn Year: _____
 Trails 1 If Trails are Present, are They Authorized? Yes / No / Unknown
 Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

VI. MANAGEMENT RECOMMENDATIONS

treat exotic grasses
dethatch
continue access control

VII. MANAGEMENT ACTIONS IN LAST YEAR

major access control project along Proctor Valley Road (SANDAG funded)
installed + maintained gates

VIII. CNDDDB SPECIES DETECTED & NOTES

List any plant or animal species to add to the CNDDDB:

family of 5 CAEN (9:14 - 9:20)

***Deinandra conjugens* (Otay Tarplant) Proctor Valley**



Panorama from Southeastern edge of population, facing East, Southeast, South.
Panorama location is 6353224.49 18525326.86 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Deinandra conjugens - Proctor Valley



Area 2014: 0 sq. m.

Pop Area: 2003 - 2014
Max: 3347.3 sq. m.
Min: 0 sq. m.

0 12.5 25 50
Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Wendy Rogers, 2014



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SanGIS
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Dicranostegia orcuttiana
Orcutt's Bird's Beak



© City of San Diego, 2005

Scientific Name: Dicranostegia orcuttiana MSP Occurrence ID: COOR7_3ORVA001
 Common Name: Orcutt's Bird's Beak CNDDDB EO#: EO6 Translocated? no
 Preserve: Otay Valley Regional Park Management Unit: 3
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: Otay River Valley Sample Point #: 1
 Surveyors & Affiliation: Kim Roeland, Sara Miszenos, Wendy Rogers - City of San Diego
 Date: 5/29/14 Time Start: 9:10 Time Finish: 9:41

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 0 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 1 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 9 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 1 Flowering: 5 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6316914.067 N: 1794310.864 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax Optio W90
 Location 1 (see coordinates above) Direction (facing) N, NE, E Height 1.1m Camera Angle 10-15° down Photo # 1633-1635 S/OS/MSCP File location
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA If need more room, record additional data and any notes on page 3.

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Dicranostegia orcuttiana</i>	4				<i>Pseudognaphalium californicum</i>	1		
	<i>Baccharis sarothroides</i>	7			✓	<i>Brassica nigra</i>	1		
	<i>Malosma laurina</i>	2			✓	<i>Avena sp.</i>	1		
	<i>Baccharis salicifolia</i>	2			✓	<i>Bromus madritensis</i>	1		
	<i>Salix lasiolepis</i>	7							
	<i>Toxicodendron diversilobum</i>	1							
	<i>Baccharis pilularis</i>	1							
	<i>Arcyuthia californica</i>	20							
	<i>Isoloma menziesii</i>	1							
	<i>Rhus integrifolia</i>	5							
	<i>Mimulus aurantiacus</i>	10							
	<i>Rhamnus crocea</i>	2							
	<i>Dudleya pulcherrima</i>	1				Bare Ground:	10		
	<i>Heteromeles arbutifolia</i>	1				Litter:	5		
	<i>Galium nuttallii</i>	1				Rock:	5		

Total % Cover: 60 % Herb Cover: 5 % Shrub Cover: 55 % Tree Cover: 0

Scientific Name: Dicranostegia orcuttiana MSP Occurrence ID: COOR7_3ORVA001
 Preserve: Otay Valley Regional Park Occurrence Name: Otay River Valley
 Date: 5/29/14 Time Start: 9:10 Time Finish: 9:41
 Surveyors & Affiliation/Agency: KR, WR, SM

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within **species-specific sampling area (typically 10-m radius circle)**. Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Artemisia californica alliance; Artemisia californica-Mimulus aurantiacus association

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)

Cryptogamic Crust Cover: 3 Thatch Cover: 2 Thatch Depth: Ave. 2 cm Max: 3 cm
 Dead Standing Biomass? Yes No If Yes, Species/Cover Class: Rhamnus crocea: 2 Ave. Height? 50 cm
 Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1
 Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the **occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer**. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): Open space

Argentine Ant Abundance at Bait Station (1-4): 2 Time Start: 9:12 Temp. Start: 70°F Time Finish: 9:31 Temp. Finish: 72°F
 Ant Sample Collected?: Yes No Ant Sample #: 5 Ant Station Photo #: 1636-1637

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>3</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>3</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>unk</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>unk</u>		

Fuel Modification Zone/Fire Break 1
 Road Construction/Maintenance 1
 Vegetation Clearing 3 trimming of shrubs along trail - routine trail maintenance
 ORV/Mountain Bike Activity 1 If Observed, List Type(s) of ORV/Bike Activity: _____
 Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____
 Trails 4 If Trails are Present, are They Authorized? Yes / No / Unknown
 Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

MSP - Management Needs and Notes

Occurrence ID: COOR7_3ORVAPP01 Species: Dicranostegia orcutiana Date: 5/29/14

VI. MANAGEMENT RECOMMENDATIONS

- Continue to maintain access control w/ fencing
- pick up cut shrubs / debris along trail

VII. MANAGEMENT ACTIONS IN LAST YEAR

- access control through fencing

VIII. CNDDDB SPECIES DETECTED & NOTES

List any plant or animal species to add to the CNDDDB:

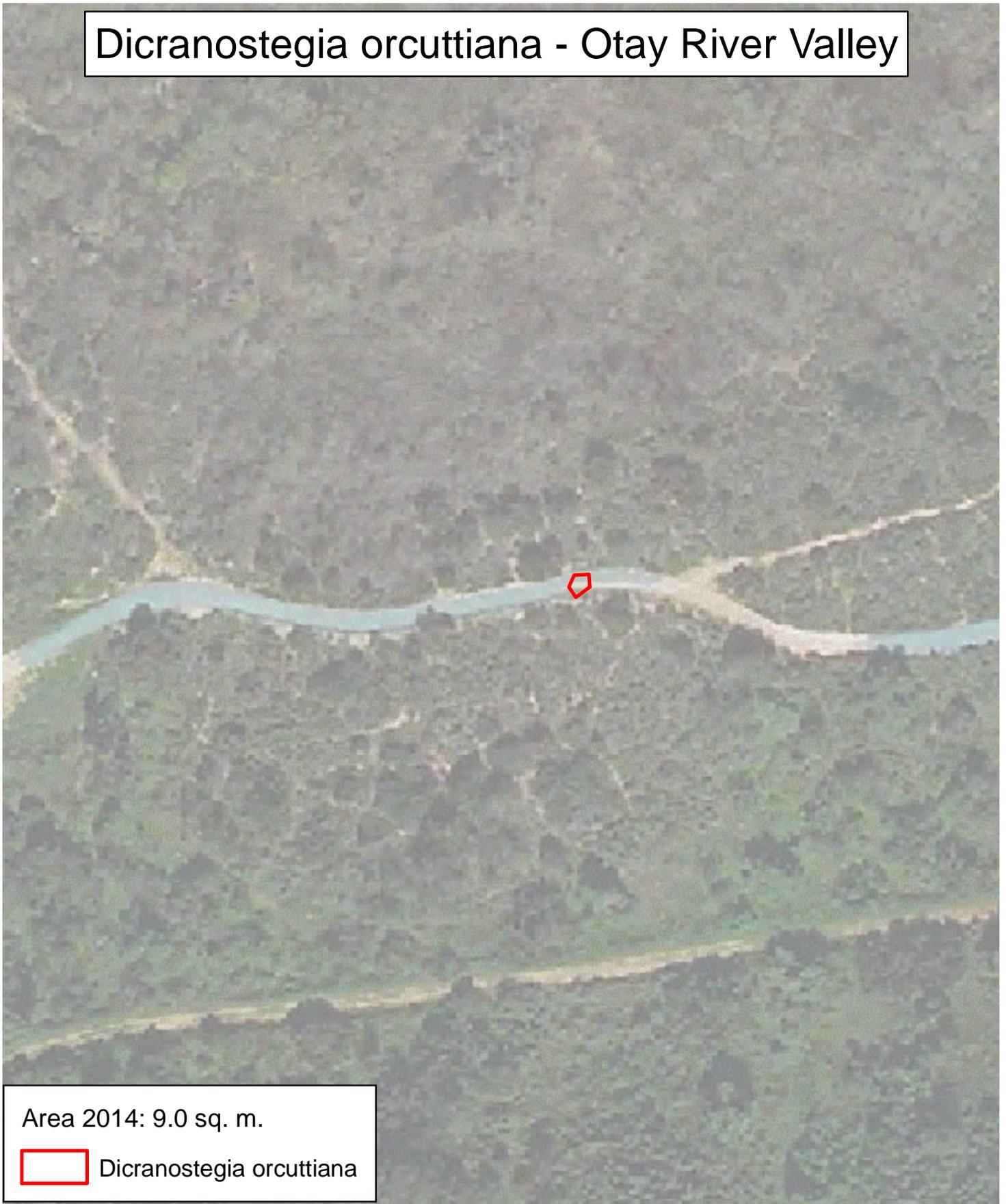
- LBVI calling in creek area just north of photopoint
- YBCH, YEWA, LBVI calling from riparian corridor near the trail on the east side of the park
 LBVI - 3 total
 YEWA - 1 total
 YBCH - 2 total
- CAGN heard calling from CSS / Baughan's on canyon rim to the south

***Dicranostegia orcuttiana* (Orcutt's Bird's Beak) Otay River Valley**



Panorama from Southwestern end of population, facing North, Northeast, East.
Panorama location is 6316914.07 1794310.86 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Dicranostegia orcuttiana - Otay River Valley



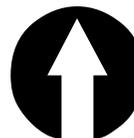
Area 2014: 9.0 sq. m.

 Dicranostegia orcuttiana

Pop. Area 2003 - 2014
Max Area: 222.34 sq. m.
Min Area: 9.0 sq. m.

0 5 10 20
 Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Wendy Rogers, 2014



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SanGIS

Dudleya blochmaniae ssp. *brevifolia*
Short-Leaved Dudleya



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Scientific Name: *Dudleya brevifolia* MSP Occurrence ID: DUBLB2_6CMPR001
 Common Name: Short-leaved dudleya CNDDB EO#: EO8 Translocated? no
 Preserve: Carmel Mountain Preserve Management Unit: 6
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: Carmel Mountain Preserve Obs. #1 Sample Point #: 1
 Surveyors & Affiliation: Betsy Miller, Kim Roeland, Sara Mestrovos - City SD Sarah McCutcheon - SANDAG
 Date: 4/30/14 Gina Washington Time Start: 9:00 Time Finish: 10:30

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 0 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 752 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 174.55 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 5 Flowering: 1 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 5
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6264028.673 N: 1920613.917 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax optio W90
 Location 1 (see coordinates above) SW, W, NW, N 1.1m 10° down 1391-1394 S/OS/MSCP
 Direction (facing) Height Camera Angle Photo # File location
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA If need more room, record additional data and any notes on page 3.

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Dudleya brevifolia</i>	1			<input checked="" type="checkbox"/>	<i>Avena</i> sp.	2		
	<i>Adenostoma fasciculatum</i>	1			<input checked="" type="checkbox"/>	<i>Hypochaeris glabra</i>	1		
	<i>Ferocactus viridescens</i>	1				<i>Selaginella bigelovii</i>	1		
	<i>Eriogonum fasciculatum</i>	5				<i>Sonchus asper</i>	1		
	<i>Xylococcus bicolor</i>	5							
	<i>Artemisia californica</i>	2							
	<i>Opuntia littoralis</i>	1							
	<i>Heteromeles arbutifolia</i>	2							
	<i>Selaginella cinerascens</i>	→ saccust							
	<i>Plantago erecta</i>	1							
	<i>Plagiobothrys</i> sp.	1							
	<i>Deinandra fasciculata</i>	1							
	<i>Logfia filaginoides</i>	1				Bare Ground:	20		
<input checked="" type="checkbox"/>	<i>Erodium cicutarium</i>	1				Litter:	0		
<input checked="" type="checkbox"/>	<i>Bromus madritensis</i>	2				Rock:	10		

Total % Cover: 20 % Herb Cover: 1 % Shrub Cover: 20 % Tree Cover: 0

Scientific Name: Dudleya brevifolia MSP Occurrence ID: DUBLB2_6CMPR001
 Preserve: Carmel Mountain Preserve Occurrence Name: Carmel Mountain Preserve Obs. #1
 Date: 4/30/14 Time Start: 9:00 Time Finish: 10:30
 Surveyors & Affiliation/Agency: B.M., K.R., G.W., S.M., S.M.C.

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within **species-specific sampling area (typically 10-m radius circle)**. Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Adenostoma fasciculatum alliance/Adenostoma fasciculatum - (Eriogonum fasciculatum/Artemisia californica/salva mellifera) association
 Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)
 Cryptogamic Crust Cover: 4 Thatch Cover: 1 Thatch Depth: Ave. cm Max: cm
 Dead Standing Biomass? Yes No If Yes, Species/Cover Class: Ave. Height? cm
 Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1
 Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the **occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer**. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): Open Space
 Argentine Ant Abundance at Bait Station (1-4): 1 Time Start: 9:03 Temp. Start: 85 Time Finish: 10:07 Temp. Finish: 85F
 Ant Sample Collected?: Yes No Ant Sample #: n/a Ant Station Photo #: 1395

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>3</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>3</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>unk</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>unk</u>		

Fuel Modification Zone/Fire Break 1
 Road Construction/Maintenance 1
 Vegetation Clearing 1
 ORV/Mountain Bike Activity 1 If Observed, List Type(s) of ORV/Bike Activity:
 Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned? Unknown Burn Year:
 Trails 2 If Trails are Present, are They Authorized? Yes / No / Unknown
 Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

MSP - Management Needs and Notes

Occurrence ID: DUBLB2-6CMR001 Species: Dudleya brevifolia Date: 4/30/14

VI. MANAGEMENT RECOMMENDATIONS

- Continue to maintain access control via fencing, signs, barriers

VII. MANAGEMENT ACTIONS IN LAST YEAR

- Fencing, signs, and other barriers installed to curtail off-trail activity around vernal pool restoration - grant funded (FWS Partners) by chaparral lands Conservancy

VIII. CNDDDB SPECIES DETECTED & NOTES

List any plant or animal species to add to the CNDDDB:

- Peregrine falcon flying overhead (low)

- Dubr 1 : 32.933131 -117.219995
- 2 : 32.933122 -117.219984
- 3 : 32.933061 -117.219996
- 4 : 32.933047 -117.22001
- 5 : 32.932993 -117.220035
- 6 : 32.932969 -117.22009
- 7 : 32.93291 -117.220125
- 8 : 32.932917 -117.220136
- 9 : 32.932913 -117.220169
- 10 : 32.932912 -117.220216
- 11 : 32.932917 -117.220253
- 12 : 32.932967 -117.220167
- 13 : 32.932999 -117.220131

Dudleya blochmaniae* spp. *brevifolia
(Short-Leaved Dudleya)
Carmel Mountain Subpopulation # 1



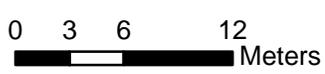
Panorama from Northwestern edge of population, Southwest, West, Northwest, North.
Panorama location is 6264028.67 1920613.92 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Dudleya brevifolia - Carmel Mountain Subpop 1

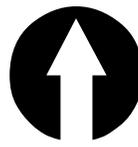


Area 2014: 174.55 sq. m.
 Dudleya brevifolia

Pop. Area 2001 - 2014
Max Area: 313.30 sq. m.
Min Area: 137.43 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Sara Meszaros, 2014



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MSP - Rare Plant Occurrence Monitoring Form

Scientific Name: Dudleya brevifolia MSP Occurrence ID: DUBLB2_6CMPR001
 Common Name: Short-leaved dudleya CNDDB EO#: EO8 Translocated? no
 Preserve: Carmel Mountain Preserve Management Unit: 6
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: Carmel Mountain Preserve Obs. #2 Sample Point #: 2
 Surveyors & Affiliation: Betsy Miller, Kim Roeland, Gina Washington, Sara Meszaros - City SD
 Date: 4/30/14 Sarah McClutcheon SAF 0910 Time Start: 10:50 Time Finish: 11:19

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: see below ~10 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 63 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 26.54 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 5 Flowering: 3 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 5
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6265696.736 N: 1920365.462 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax Optio W90
 Location 1 (see coordinates above) N, NE, E, SE 1.1m 10° down 1396-1398 S/OS/MSCP
 Direction (facing) _____ Height _____ Camera Angle _____ Photo # _____ File location _____
 Location 2 [Coordinates] _____ Direction (facing) _____ Height _____ Camera Angle _____ Photo # _____ File location _____

III. ASSOCIATED SPECIES IN SAMPLING AREA *If need more room, record additional data and any notes on page 3.*

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<u>Dudleya brevifolia</u>	<u>1</u>				<u>Malosma laurina</u>	<u>1</u>		
	<u>Acmispon glaber</u>	<u>1</u>			<input checked="" type="checkbox"/>	<u>Erodium sp.</u>	<u>1</u>		
	<u>Adenostoma fasciculatum</u>	<u>20</u>							
	<u>Salvia mellifera</u>	<u>1</u>							
	<u>Cardionema ramosissimum</u>	<u>1</u>							
	<u>Erigeron fasciculatus</u>	<u>5</u>							
	<u>Reinandra fasciculata</u>	<u>1</u>							
	<u>Xylococcus bicolor</u>	<u>2</u>							
	<u>Navarretia hamata</u>	<u>2</u>							
	<u>Plantago erecta</u>	<u>1</u>							
	<u>Jepsonia pumila</u>	<u>1</u>							
	<u>Plagiobothrys sp.</u>	<u>1</u>							
	<u>Selaginella cinerascens</u>	<u>→ crust</u>				Bare Ground:	<u>50</u>		
	<u>Selaginella bigelovii</u>	<u>→ crust</u>				Litter:	<u>0</u>		
	<u>Psilocarphus brevissimus</u>	<u>1</u>				Rock:	<u>15</u>		

Total % Cover: 30 % Herb Cover: 1 % Shrub Cover: 30 % Tree Cover: 0

Scientific Name: Dudleya brevifolia MSP Occurrence ID: DUBLB2_6CMPR001
 Preserve: Carmel Mountain Preserve Occurrence Name: Carmel Mountain Preserve Obs. #2
 Date: 4/30/14 Time Start: 10:56 Time Finish: 11:19
 Surveyors & Affiliation/Agency: B.M., K.R., G.W., S.M., S.M.C.

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within **species-specific sampling area** (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Adenostoma fasciculatum Alliance / Adenostoma fasciculatum - (Eriogonum fasciculatum / Artemisia californica / Salvia mellifera)
 Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%) Association
 Cryptogamic Crust Cover: 5 Thatch Cover: 1 Thatch Depth: Ave. _____ cm Max: _____ cm
 Dead Standing Biomass? Yes No If Yes, Species/Cover Class: _____ Ave. Height? _____ cm
 Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1
 Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the **occurrence's maximum extent** (cumulative extent over years of monitoring) **plus 10-m surrounding buffer**. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): Open Space
 Argentine Ant Abundance at Bait Station (1-4): 1 Time Start: 10:56 Temp. Start: 90 F Time Finish: 11:19 Temp. Finish: 90 F
 Ant Sample Collected?: Yes No Ant Sample #: N/A Ant Station Photo #: 1399

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>1</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>1</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>3 glass</u>	Historic Grazing	<u>unk</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>unk</u>		

Fuel Modification Zone/Fire Break 1
 Road Construction/Maintenance 1
 Vegetation Clearing 1
 ORV/Mountain Bike Activity 2 If Observed, List Type(s) of ORV/Bike Activity: with Baja tracks outside of maximum extent
 Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____
 Trails 2 If Trails are Present, are They Authorized? Yes No Unknown - the trail has been closed
 Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV senio vehicles

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

VI. MANAGEMENT RECOMMENDATIONS

-continue to maintain trail closure
with fences, signs, native plants, and other barriers

VII. MANAGEMENT ACTIONS IN LAST YEAR

- off trail use reduced with fences, signs, native
plantings

VIII. CNDDDB SPECIES DETECTED & NOTES

List any plant or animal species to add to the CNDDDB:

DUBR 1 : 32.932285 -117.214476
2 : 32.932301 -117.214498
3 : 32.93234 -117.21451
4 : 32.932~~304~~⁵4 -117.2145~~88~~
5 : 32.932471 -117.214561
6 : 32.932469 -117.214549

Dudleya blochmaniae* ssp. *brevifolia
(Short-Leaved Dudleya)
Carmel Mountain Subpopulation # 2



Panorama from Northeastern edge of population, North, Northeast, East, Southeast.
Panorama location is 6265696.74 1920365.46 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Dudleya brevifolia - Carmel Mountain Subpop 2



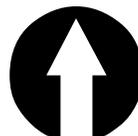
Area 2014: 26.54 sq. m.

 Dudleya brevifolia

Pop. Area 2001 - 2014
Max Area: 249.35 sq. m.
Min Area: 26.54 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Sara Meszaros, 2014



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MSP - Rare Plant Occurrence Monitoring Form

Scientific Name: Dudleya brevifolia MSP Occurrence ID: DUBLB2_6CMPR001
 Common Name: Short-leaved dudleya CNDDDB EO#: EO8 Translocated? no
 Preserve: Carmel Mountain Preserve Management Unit: 6
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: Carmel Mountain Preserve Obs. #3 Sample Point #: 3
 Surveyors & Affiliation: Betsy Miller, Kim Roeland, Gina Washington, Sara Mustavos - city of SD
 Date: 4/30/14 Sarah McCutcheon-SANDAG Time Start: 11:20 Time Finish: 12:30

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: see below: ~100 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 615 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 321.50 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 5 Flowering: 5 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 2
 Is Sampling Area within Current Mapped Extent? Yes No about 100w/in 10m² of sampling pt, but pop in contiguous
 Species Found in Maximum Extent? Yes No in contiguous
 If not, why (if reason known or suspected)?

Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates: E: 6265528.098 N: 1920724.116 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax Optio W90
 Location 1 (see coordinates above) SE, S, SW, NW 1.1m 10° down 1400-1406 S/OS/MSCP
 Direction (facing) Height Camera Angle Photo # File location
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA If need more room, record additional data and any notes on page 3.

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<u>Dudleya brevifolia</u>	<u>1</u>				<u>Cardiadenia ramossissimum</u>	<u>1</u>		
	<u>Rhus integrifolia</u>	<u>5</u>				<u>Navaretia hamata</u>	<u>1</u>		
	<u>Eriogonum fasciculatum</u>	<u>2</u>				<u>Ferocactus viridescens</u>	<u>1</u>		
	<u>Adenostoma fasciculatum</u>	<u>3</u>							
	<u>Malosma laurina</u>	<u>5</u>							
	<u>Salvia mellifera</u>	<u>5</u>							
	<u>Xylococcus bicolor</u>	<u>10</u>							
	<u>Stipa pulchra</u>	<u>1</u>							
	<u>Selaginella olivascens</u>	<u>→ crust</u>							
	<u>Plantago erecta</u>	<u>1</u>							
	<u>Deinandra fasciculata</u>	<u>1</u>							
✓	<u>Bromus hordeaceus</u>	<u>1</u>							
	<u>Acornispon micranthus</u>	<u>1</u>				<u>Bare Ground:</u>	<u>50</u>		
✓	<u>Centaurea melitensis</u>	<u>1</u>				<u>Litter:</u>	<u>0</u>		
	<u>Cyassula</u>	<u>1</u>				<u>Rock:</u>	<u>20-100</u>		

Total % Cover: 30 % Herb Cover: 1 % Shrub Cover: 30 % Tree Cover: 0

MSP - Rare Plant Habitat and Threats Assessment Form

Scientific Name: Dudleya brevifolia MSP Occurrence ID: DUBLB2_6CMPR001

Preserve: Carmel Mountain Preserve Occurrence Name: Carmel Mountain Preserve Obs. #3

Date: 4/30/14 Time Start: 11:20 Time Finish: 12:30

Surveyors & Affiliation/Agency: BM, KR, GW, SM, SMC

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within **species-specific sampling area (typically 10-m radius circle)**. Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Adenastoma fasciculatum - Xylococcus bicolor
Alliance & Association

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)

Cryptogamic Crust Cover: 3 Thatch Cover: 1 Thatch Depth: Ave. _____ cm Max: _____ cm

Dead Standing Biomass? Yes No If Yes, Species/Cover Class: _____ Ave. Height? _____ cm

Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1

Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the **occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer**. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): Open Space

Argentine Ant Abundance at Bait Station (1-4): N/A Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____

Ant Sample Collected?: Yes No Ant Sample #: _____ Ant Station Photo #: _____

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>3</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>3</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>3</u>	Historic Grazing	<u>unk</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>unk</u>		

Fuel Modification Zone/Fire Break 1

Road Construction/Maintenance 1

Vegetation Clearing 1

ORV/Mountain Bike Activity 2 If Observed, List Type(s) of ORV/Bike Activity: Bike tracks seen near edge

Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____ of max extent

Trails 4 If Trails are Present, are They Authorized? Yes No Unknown trails have been closed w/ barbed wire

Type of Trail Use? Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

chirps near photo pt

VI. MANAGEMENT RECOMMENDATIONS

-continue to maintain access control w/ fencing, signs, other barriers

VII. MANAGEMENT ACTIONS IN LAST YEAR

-maintained access control w/ fencing, signs, barriers

VIII. CNDDDB SPECIES DETECTED & NOTES

List any plant or animal species to add to the CNDDDB:

<u>Polygon 1 113 total</u>		<u>Polygon 4 477 total</u>	
<u>DUBR 1</u>	<u>32.932853 -117.214817</u>	<u>1</u>	<u>32.933254 -117.215029</u>
<u>2</u>	<u>32.93281 -117.214858</u>	<u>2</u>	<u>32.933246 -117.215069</u>
<u>3</u>	<u>32.932856 -117.214865</u>	<u>3</u>	<u>32.933281 -117.215115</u>
<u>4</u>	<u>32.932898 -117.214875</u>	<u>4</u>	<u>32.933336 -117.215146</u>
<u>5</u>	<u>32.932899 -117.214821</u>	<u>5</u>	<u>32.933292 -117.215183</u>
<u>6</u>	<u>32.932895 -117.214788</u>	<u>6</u>	<u>32.933296 -117.215174</u>
<u>7</u>	<u>32.932</u>	<u>7</u>	<u>32.933353 -117.215184</u>
		<u>8</u>	<u>32.933283 -117.215242</u>
<u>Polygon 2 23 total</u>			<u>32.933353 -117.215184</u>
<u>DUBR</u>		<u>9</u>	<u>32.933297 -117.215068</u>
		<u>10</u>	<u>32.93341 -117.215342</u>
		<u>11</u>	<u>32.933384 -117.215254</u>
<u>1</u>	<u>32.933138 -117.214824</u>	<u>12</u>	<u>32.933476 -117.215414</u>
<u>2</u>	<u>32.933144 -117.214707</u>	<u>13</u>	<u>32.933497 -117.215885</u>
<u>3</u>	<u>32.933175 -117.214723</u>	<u>14</u>	<u>32.933489 -117.215457</u>
<u>4</u>	<u>32.933192 -117.214711</u>	<u>15</u>	<u>32.933503 -117.215532</u>
		<u>16</u>	<u>32.933481 -117.215538</u>
<u>Polygon 3 2 total</u>		<u>17</u>	<u>32.933484 -117.215499</u>
<u>1</u>	<u>32.933255 -117.21502</u>	<u>18</u>	<u>32.933437 -117.215464</u>
<u>2</u>	<u>32.933233 -117.214937</u>	<u>19</u>	<u>32.933434 -117.215414</u>
		<u>20</u>	<u>32.933366 -117.215373</u>
		<u>21</u>	<u>32.933361 -117.215325</u>
		<u>22</u>	<u>32.933378 -117.215194</u>
		<u>23</u>	<u>32.933391 -117.215287</u>
		<u>24</u>	<u>32.933359 -117.215255</u>
		<u>25</u>	<u>32.933367 -117.215306</u>
		<u>26</u>	<u>32.933437 -117.215355</u>

-we removed some folding chairs that had been stacked near photo pt.

Dudleya blochmaniae* spp. *brevifolia
(Short-Leaved Dudleya)
Carmel Mountain Subpopulation # 3



Panorama from Southwestern edge of population, Southeast, South, Southwest, West, Northwest.
Panorama location is 6265528.09 1920724.12 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Dudleya brevifolia - Carmel Mountain Subpop 3

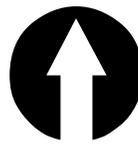


Area 2014: 321.50 sq. m.
 Dudleya brevifolia

Pop. Area 2001 - 2014
Max Area: 1487.37 sq. m.
Min Area: 321.50 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Sara Meszaros, 2014



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MSP - Rare Plant Occurrence Monitoring Form

Scientific Name: Dudleya brevifolia MSP Occurrence ID: DUBLB2_7CRCA003
 Common Name: Short-leaved dudleya CNDDDB EO#: EO1 Translocated? no
 Preserve: Crest Canyon Preserve Management Unit: 7
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: Crest Canyon- N. Subpop. Sample Point #: 1
 Surveyors & Affiliation: Betsy Miller, Kim Rockland, Sara Meszans, City of SP, Sarah McCutcheon - SANDAG
 Date: 4/30/14 Time Start: 2:30 Time Finish: 2:54

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 57 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 825 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 144.25 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 5 Flowering: 1 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6253917.074 N: 1928311.12 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: - Pentax Optio W90
 Location 1 (see coordinates above) Direction (facing) W, NW, N, NE, E Height 1.1m Camera Angle 10° down Photo # 1407-1411 File location S/OS/MSCP
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA If need more room, record additional data and any notes on page 3.

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<u>Dudleya brevifolia</u>	<u>1</u>			<input checked="" type="checkbox"/>	<u>Carpobrotus sp.</u>	<u>5</u>		
	<u>Eriogonum fasciculatum</u>	<u>5</u>							
	<u>Rhus integrifolia</u>	<u>3</u>							
	<u>Adenostoma fasciculatum</u>	<u>5</u>							
	<u>Xylococcus bicolor</u>	<u>5</u>							
	<u>Mimulus aurantiacus</u>	<u>1</u>							
	<u>Salvia mellifera</u>	<u>1</u>							
	<u>Stipa pulchra</u>	<u>1</u>							
	<u>Artemisia californica</u>	<u>1</u>							
	<u>Pseudognaphalium hemicladum</u>	<u>1</u>							
	<u>Logfia filaginoides</u>	<u>1</u>							
	<u>Cineoedium dumosum</u>	<u>1</u>							
	<u>Selaginella cinerascens</u>	<u>→ crust</u>				Bare Ground:	<u>40</u>		
	<u>Marah microcarpus</u>	<u>1</u>				Litter:	<u>3</u>		
<input checked="" type="checkbox"/>	<u>Bromus madritensis</u>	<u>1</u>				Rock:	<u>5</u>		

Total % Cover: 20 % Herb Cover: 0 % Shrub Cover: 20 % Tree Cover: 0

MSP - Rare Plant Habitat and Threats Assessment Form

Scientific Name: Dudleya brevifolia MSP Occurrence ID: DUBLB2_7CRCA003
 Preserve: Crest Canyon Preserve Occurrence Name: Crest Canyon- N. Subpop.
 Date: 4/30/14 Time Start: 2:30 Time Finish: 2:54
 Surveyors & Affiliation/Agency: IBM, KR, SM, SMC

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within **species-specific sampling area** (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Adenostoma fasciculatum Alliance / Adenostoma fasciculatum - (Eriogonum fasciculatum / Artemisia californica / Salvia mellifera) Association
 Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)
 Cryptogamic Crust Cover: 4 Thatch Cover: 1 Thatch Depth: Ave. _____ cm Max: _____ cm
 Dead Standing Biomass? Yes No If Yes, Species/Cover Class: _____ Ave. Height? _____ cm
 Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1
 Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the **occurrence's maximum extent** (cumulative extent over years of monitoring) **plus 10-m surrounding buffer**. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): Open space; Residential
 Argentine Ant Abundance at Bait Station (1-4): N/A Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____
 Ant Sample Collected?: Yes No Ant Sample #: _____ Ant Station Photo #: _____

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>2</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>3</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>1</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>1</u>		

Fuel Modification Zone/Fire Break 1
 Road Construction/Maintenance 1
 Vegetation Clearing 1
 ORV/Mountain Bike Activity 1 If Observed, List Type(s) of ORV/Bike Activity: _____
 Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____
 Trails 1 If Trails are Present, are They Authorized? Yes / No / Unknown
 Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

Occurrence ID: DUBLB2-7CRCAD03 Species: (Crest Cyn N.) Date: 4/30/14

VI. MANAGEMENT RECOMMENDATIONS

-continue to manage access and monitor for
trampling by adjacent homeowner

VII. MANAGEMENT ACTIONS IN LAST YEAR

VIII. CNDDDB SPECIES DETECTED & NOTES

List any plant or animal species to add to the CNDDDB:

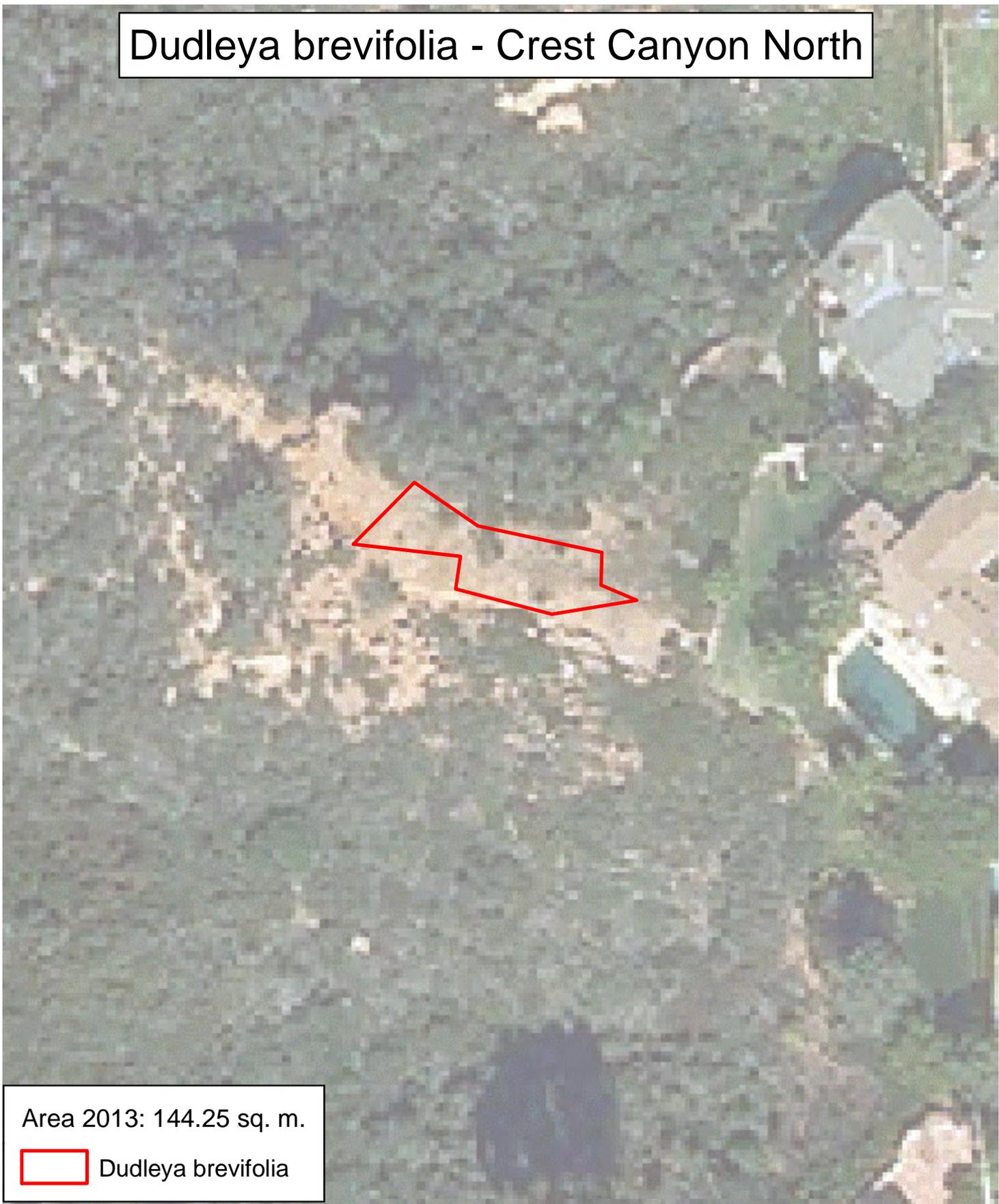
DUBR 1: 32.953894 -117.25349
2: 32.953949 -117.253425
3: 32.953911 -117.253358
4: 32.953883 -117.253375
5: 32.953855 -117.25338
6: 32.953834 -117.253279
7: 32.953816 -117.253227
8: 32.953846 -117.25319
9: 32.953889 -117.253226

Dudleya blochmaniae* spp. *brevifolia
(Short-Leaved Dudleya)
Crest Canyon – Northern Subpopulation



Panorama from Northeastern edge of population, West, North, East.
Panorama location is 6253917.07 1928311.12 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Dudleya brevifolia - Crest Canyon North



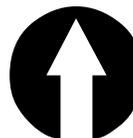
Area 2013: 144.25 sq. m.

 Dudleya brevifolia

Pop. Area 2001 - 2014
Max Area: 180.05 sq. m.
Min Area: 123.32 sq. m.

0 4 8 16 Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Sara Meszaros, 2014



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MSP - Rare Plant Occurrence Monitoring Form

Scientific Name: Dudleya brevifolia MSP Occurrence ID: DUBLB2_7CRCA003
 Common Name: Short-leaved dudleya CNDDDB EO#: EO1 Translocated? no
 Preserve: Crest Canyon Preserve Management Unit: 7
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: Crest Canyon- S. Subpop. Sample Point #: 1
 Surveyors & Affiliation: Kim Roeland, Sara Meszaros - City of SD Sarah McClutchee - SANDAG
 Date: 4/30/14 Time Start: 3:10 Time Finish: 3:26

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 20 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: see above Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 34.67 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 5 Flowering: 1 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6253843.223 N: 1927609.02 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax Optio W90
 Location 1 (see coordinates above) Direction (facing): NW, N, NE Height: 1.1m Camera Angle: 5° down Photo #: 1412-1414 S/OS/MSCP File location: _____
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA If need more room, record additional data and any notes on page 3.

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<u>Dudleya brevifolia</u>	<u>1</u>							
	<u>Adenostoma fasciculatum</u>	<u>40</u>							
	<u>Salvia mellifera</u>	<u>5</u>							
	<u>Cneoridium dumosum</u>	<u>1</u>							
	<u>Chlorogalum parviflorum</u>	<u>1</u>							
	<u>Malosma laurina</u>	<u>1</u>							
	<u>Selaginella cinerascens</u>	<u>5</u>							
	<u>Deinandra fasciculata</u>	<u>1</u>							
	<u>Dudleya lanceolata</u>	<u>1</u>							
	<u>Mimulus aurantiacus</u>	<u>1</u>							
	<u>unk grass</u>	<u>1</u>							
	<u>Rhus integrifolia</u>	<u>1</u>							
						Bare Ground:	<u>20</u>		
						Litter:	<u>5</u>		
						Rock:	<u>50 - 100</u>		

Total % Cover: 45 % Herb Cover: 1 % Shrub Cover: 45 % Tree Cover: 0

Scientific Name: Dudleya brevifolia MSP Occurrence ID: DUBLB2_7CRCA003
 Preserve: Crest Canyon Preserve Occurrence Name: Crest Canyon- S. Subpop.
 Date: 4/30/14 Time Start: 3:10 Time Finish: 3:26
 Surveyors & Affiliation/Agency: KR, SM, SMZ

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within **species-specific sampling area (typically 10-m radius circle)**. Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Adenostoma fasciculatum Alliance / Adenostoma fasciculatum southern Maritime Association

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)
 Cryptogamic Crust Cover: 5 Thatch Cover: 0 Thatch Depth: Ave. _____ cm Max: _____ cm
 Dead Standing Biomass? Yes No If Yes, Species/Cover Class: _____ Ave. Height? _____ cm
 Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1
 Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the **occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer**. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): Open space, Residential

Argentine Ant Abundance at Bait Station (1-4): N/A Time Start: _____ Temp. Start: 95+ Time Finish: _____ Temp. Finish: _____
 Ant Sample Collected?: Yes No Ant Sample #: _____ Ant Station Photo #: _____

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>1</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>1</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>1</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>1</u>		

Fuel Modification Zone/Fire Break 1
 Road Construction/Maintenance 1
 Vegetation Clearing 1
 ORV/Mountain Bike Activity 1 If Observed, List Type(s) of ORV/Bike Activity: _____
 Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____
 Trails 3 If Trails are Present, are They Authorized? Yes No / Unknown Fenced
 Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

Too Hot

MSP - Management Needs and Notes

Occurrence ID: DUBLB2-7CRCA903 Species: Dudleya brevifolia (Crest cyn S) Date: 4/30/14 Page 3

VI. MANAGEMENT RECOMMENDATIONS

-continue to maintain access control with fencing

VII. MANAGEMENT ACTIONS IN LAST YEAR

-access control maintained w/ fencing

VIII. CNDDDB SPECIES DETECTED & NOTES

List any plant or animal species to add to the CNDDDB:

- 1: 32.951998 -117.253439
- 2: .952043 .253505
- 3: .951984 .253519
- 4: .951985 .253524

Dudleya blochmaniae* spp. *brevifolia
(Short-Leaved Dudleya)
Crest Canyon – Southern Subpopulation



Panorama from Northern edge of population, Northwest, North, Northeast.
Panorama location is 6253843.22 1927609.02 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Dudleya brevifolia - Crest Canyon South



Area 2014: 34.67 sq. m.
 Dudleya brevifolia

Pop. Area 2005 - 2014
Max Area: 31.6 sq. m.
Min Area: 6.95 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Sara Meszaros, 2014



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Dudleya variegata
Variegated Dudleya



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MSP - Rare Plant Occurrence Monitoring Form

Scientific Name: Dudleya variegata MSP Occurrence ID: DUVA_6BMRA020
 Common Name: Variegated dudleya CNDDDB EO#: EO51 Translocated? no
 Preserve: Black Mountain Open Space Management Unit: 6
 Land Owner: City of San Diego Land Manager: City of San Diego
 Occurrence Name: Black Mountain Ranch East Sample Point #: 1
 Surveyors & Affiliation: Betsy Miller, Kim Roeland, Wendy Rogers
 Date: 5/8/14 Time Start: 12:25 Time Finish: 12:52

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 0 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 0 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 0 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 1 Flowering: 1 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 10291992.202 N: 1939635.417 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax Optio W90
 Location 1 (see coordinates above) Direction (facing): N, NE, E, SE Height: 1.1m Camera Angle: 10° up Photo #: 1473-1476 S/OS/MSCP File location: _____
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA If need more room, record additional data and any notes on page 3.

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Salvia apiana</i>	7				<i>Isoloma menziesii</i>	1		
	<i>Aremisia californica</i>	1			✓	<i>Cynara cardunculus</i>	10		
	<i>Malosma laurina</i>	5			✓	<i>Brassica nigra</i>	1		
	<i>Rhus integrifolia</i>	3			✓	<i>Sonchus asper</i>	1		
	<i>Salvia mellitara</i>	1				<i>Erigeron fasciculatum</i>	1		
	<i>Baccharis pilularis</i>	1			✓	<i>Foeniculum vulgare</i>	1		
	<i>Solanum sp.</i>	1							
	<i>Calochortus splendens</i>	1							
	<i>Sisymbrium bellum</i>	1							
	<i>Bloomeria covea</i>	1							
	<i>Calystegia macrostegia</i>	1							
	<i>Dichelostemma capitatum</i>	1							
	<i>Stipa pulchra</i>	30				Bare Ground:	3		
✓	<i>Centaurea melitensis</i>	1				Litter:	0		
✓	<i>Brachypodium distachyon</i>	15				Rock:	0		

Total % Cover: 100 % Herb Cover: 50 % Shrub Cover: 10 % Tree Cover: 0

Scientific Name: Dudleya variegata MSP Occurrence ID: DMVA-6BMPA020
 Preserve: Black Mountain Open Space Occurrence Name: Black Mountain Ranch East
 Date: 5/8/14 Time Start: 12:25 Time Finish: 12:52
 Surveyors & Affiliation/Agency: BM, KR, WR

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within **species-specific sampling area (typically 10-m radius circle)**. Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Salvia apiana Alliance / Salvia apiana-Artemisia Californica Association

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)

Cryptogamic Crust Cover: 1 Thatch Cover: 4 Thatch Depth: Ave. 3 cm Max: 6 cm
 Dead Standing Biomass? Yes No If Yes, Species/Cover Class: _____ Ave. Height? _____ cm
 Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 3
 Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the **occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer**. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): Open space

Argentine Ant Abundance at Bait Station (1-4): 1 Time Start: 12:30 Temp. Start: 70F Time Finish: 12:51 Temp. Finish: 70F
 Ant Sample Collected?: Yes No Ant Sample #: N/A Ant Station Photo #: 1477

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>4</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>4</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>3</u>	Historic Grazing	<u>unk</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>unk</u>		

Fuel Modification Zone/Fire Break 1
 Road Construction/Maintenance 1
 Vegetation Clearing 1
 ORV/Mountain Bike Activity 1 If Observed, List Type(s) of ORV/Bike Activity: _____
 Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____
 Trails 1 If Trails are Present, are They Authorized? Yes / No / Unknown
 Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

MSP - Management Needs and Notes

Occurrence ID: DIANA_12 BMRA020 Species: DUVA

Date: 5/8/14

VI. MANAGEMENT RECOMMENDATIONS

- treat non-native grasses and forbs and remove
thatch to try to get *Dudleya* to return

VII. MANAGEMENT ACTIONS IN LAST YEAR

- none

VIII. CNDDDB SPECIES DETECTED & NOTES

List any plant or animal species to add to the CNDDDB:

- orange throated whiptail - point taken

***Dudleya variegata* (Variegated Dudleya) Black Mountain East**



Panorama from Southeastern edge of population, facing East, Southeast, South.
Panorama location is 6291985.663 1939628.817 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Dudleya variegata - Black Mountain East



Area 2014: 0 sq. m.

Pop. Area 2001 - 2014
Max Area: 1845.93 sq. m.
Min Area: 0.0 sq. m.

0 12.5 25 50 Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Wendy Rogers, 2014



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Scientific Name: *Dudleya variegata* MSP Occurrence ID: DUVA_4EAEL012
 Common Name: Variegated dudleya CNDB EO#: EO22 Translocated? no
 Preserve: Mission Trails Regional Park Management Unit: 4
 Land Owner: City of San Diego Land Manager: City of San Diego
 Occurrence Name: East Elliott - Creek Sample Point #: 2
 Surveyors & Affiliation: *Kim Roeland, Betty Miller, Wendy Rogers - City of San Diego*
 Date: *5/6/14* Time Start: *1:40 pm* Time Finish: *1:55 pm*

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 0 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 0 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 0 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 1 Flowering: 1 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No low rainfall, absent in recent years
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6356396.908 N: 1807139.545 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax Optio W90
 Location 1 (see coordinates above) N, NE, E, SE 1.1m 10° up 1444-1447 S/OS/MSCP
 Direction (facing) Height Camera Angle Photo # File location
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA If need more room, record additional data and any notes on page 3.

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Eriogonum fasciculatum</i>	5							
	<i>Thocoma menziesii</i>	5							
	<i>Rhus integrifolia</i>	1							
	<i>Calochortus splendens</i>	1							
	<i>Selaginella cicerascens</i>	3							
✓	<i>Erodium botrys</i>	3							
	<i>Sida pulchra</i>	10							
✓	<i>Brachymidium distachyon</i>	5							
✓	<i>Bromus horstaceus</i>	1							
✓	<i>Bromus madritensis ssp. c.</i>	1							
✓	<i>Avena sp.</i>	1							
✓	<i>Pentstemon melitensis</i>	1							
	<i>Convolvulus simulans</i>	1							
	<i>Sanicula bipinnatifida</i>	1							
						Bare Ground:	20		
						Litter:	7		
						Rock:	25		

Total % Cover: 40 % Herb Cover: 30 % Shrub Cover: 10 % Tree Cover: 0

Scientific Name: Dudleya variegata MSP Occurrence ID: DUVA_4EAELO12

Preserve: Mission Trails Regional Park Occurrence Name: East Elliott - Creek

Date: 5/16/14 Time Start: 1:40 Time Finish: 1:55

Surveyors & Affiliation/Agency: KR, RM, WR

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within **species-specific sampling area (typically 10-m radius circle)**. Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Isocoma menziesii alliance; Isocoma menziesii provisional association

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)
 Cryptogamic Crust Cover: 3 Thatch Cover: 2 Thatch Depth: Ave. 4 cm Max: 10 cm
 Dead Standing Biomass? Yes No If Yes, Species/Cover Class: Isocoma menziesii / 2 Ave. Height? 25 cm
 Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1
 Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the **occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer**. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): open space

Argentine Ant Abundance at Bait Station (1-4): n/a Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____

Ant Sample Collected?: Yes No Ant Sample #: _____ Ant Station Photo #: _____

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>3</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>4</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>6</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>1</u>		

Fuel Modification Zone/Fire Break 1
 Road Construction/Maintenance 1
 Vegetation Clearing 1
 ORV/ 1 If Observed, List Type(s) of ORV/Bike Activity: _____
 Evidence of Recent Fire 6 If Sign of Recent Fire: Year Burned? 2007 Unknown Burn Year: _____
 Trails 3 If Trails are Present, are They Authorized? Yes / No / Unknown
 Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

***Dudleya variegata* (Variegated Dudleya) East Elliott - Creek**



Panorama from Northwestern edge of population, facing Southwest, West, Northwest, North.
Panorama location is 6316694.86 1897093.54 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Dudleya variegata - East Elliott Creek

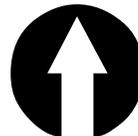


Area 2014: 0 sq. m.

Pop. Area 2004 - 2014
Max Area: 1725.22 sq. m.
Min Area: 0 sq. m.

0 3.75 7.5 15
Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Wendy Rogers, 2014



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SanGIS

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MSP - Rare Plant Occurrence Monitoring Form

Scientific Name: Dudleya variegata MSP Occurrence ID: DUVA_4EAELO12
 Common Name: Variiegated dudleya CNDDDB EO#: EO22 Translocated? no
 Preserve: Mission Trails Regional Park Management Unit: 4
 Land Owner: City of San Diego Land Manager: City of San Diego
 Occurrence Name: East Elliott - Hilltop Sample Point #: 1
 Surveyors & Affiliation: Betsy Miller, Kim Roeland, Wendy Rogers - City of San Diego
 Date: 5/6/14 Time Start: 2:35 Time Finish: 3:00

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 0 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 1 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: <1.0 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 5 Flowering: 1 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6356396.908 N: 1807139.545 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax Optio W90
 Location 1 (see coordinates above) Direction (facing): N, NE, E, SE Height: 1.1m Camera Angle: 10° up Photo #: 1455-1458 File location: S/OS/MSCP
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA If need more room, record additional data and any notes on page 3.

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Dudleya variegata</i>	1				<i>Artemisia californica</i>	3		
	<i>Adenostoma fasciculatum</i>	20				<i>Amispon glaber</i>	1		
	<i>Xylococcus bicolor</i>	1							
	<i>Malosma laurina</i>	1							
	<i>Erigonum fasciculatum</i>	5							
	<i>Dichondra occidentalis</i>	1							
	<i>Salvia mellifera</i>	3							
	<i>Ferocactus viridescens</i>	1							
	<i>Hesperoyucca whipplei</i>	1							
	<i>Porophyllum gracile</i>	5							
	<i>Chloregalum parviflorum</i>	1							
	<i>Lasthenia coronaria</i>	1							
	<i>Stipa pulchra</i>	7				Bare Ground:	20		
✓	<i>Pentstemon multiflorus</i>	1				Litter:	5		
	<i>Cuscuta californica</i>	1				Rock:	20		

Total % Cover: 40 % Herb Cover: 10 % Shrub Cover: 30 % Tree Cover: 0

MSP - Rare Plant Habitat and Threats Assessment Form

Scientific Name: Dudleya variegata MSP Occurrence ID: DUVA_4EAEL012

Preserve: Mission Trails Regional Park Occurrence Name: East Elliott - Hilltop

Date: 5/6/14 Time Start: 2:35 Time Finish: 3:00

Surveyors & Affiliation/Agency: BM, KR, WR

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within **species-specific sampling area (typically 10-m radius circle)**. Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Adenostoma fasciculatum Alliance; Adenostoma fasciculatum (Eriogonum fasciculatum | Artemisia californica | Salvia mellitera) Association

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)

Cryptogamic Crust Cover: 2 Thatch Cover: 1 Thatch Depth: Ave. X cm Max: X cm

Dead Standing Biomass? Yes No If Yes, Species/Cover Class: Eriogonum: 2 Ave. Height? 20 cm

Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1

Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the **occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer**. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): open space / military

Argentine Ant Abundance at Bait Station (1-4): N/A Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____

Ant Sample Collected?: Yes No Ant Sample #: _____ Ant Station Photo #: _____

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>3</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>2</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>unk</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>unk</u>		

Fuel Modification Zone/Fire Break 1

Road Construction/Maintenance 1

Vegetation Clearing 1

ORV/Mountain Bike Activity 3 If Observed, List Type(s) of ORV/Bike Activity: Mtn Bike

Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____

Trails 1 Trails are Present, are They Authorized? Yes / No / Unknown

Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

***Dudleya variegata* (Variegated Dudleya) East Elliott - Hilltop**



Panorama from the Southwestern edge of population, facing Southeast, South, Southwest.
Panorama location is 6316264.13 1897663.71 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Dudleya variegata - East Elliott Hilltop



Area 2014: <1 sq. m.
 Dudleya variegata

Pop. Area 2004 - 2014
Max Area: 369.1 sq. m.
Min Area: 0.0 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Wendy Rogers, 2014



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Scientific Name: Dudleya variegata MSP Occurrence ID: DUVA_4EAELO12
 Common Name: Variegated dudleya CNDDB EO#: EO22 Translocated? no
 Preserve: Mission Trails Regional Park Management Unit: 4
 Land Owner: City of San Diego Land Manager: City of San Diego
 Occurrence Name: East Elliott - Slope Sample Point #: 3
 Surveyors & Affiliation: Kim Roeland, Betty Miller, Wendy Rogers - City of San Diego
 Date: 5/16/14 Time Start: 2:05 PM Time Finish: 2:27 PM

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 0 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 0 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 0 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 1 Flowering: 1 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No low rainfall, not found previous years
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6356396.908 N: 1807139.545 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax Optio W90
 Location 1 (see coordinates above) Direction (facing) N, NE, E, SE Height 1.1m Camera Angle 10° up Photo # 1448-1451 File location _____
 Location 2 [Coordinates] _____ Direction (facing) _____ Height _____ Camera Angle _____ Photo # _____ File location _____

III. ASSOCIATED SPECIES IN SAMPLING AREA If need more room, record additional data and any notes on page 3.

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Acaispon glaber</i>	7							
	<i>Ferocactus viridescens</i>	1							
	<i>Eriogonum fasciculatum</i>	7							
	<i>Isocoma mesasiatica</i>	7							
✓	<i>Erodium cicutarium</i>	5							
✓	<i>Brachypodium distachyon</i>	10							
	<i>Stipa pulchra</i>	10							
✓	<i>Trinium madritense</i> ssp. r.	1							
	<i>Lomatium dasycarpum</i>	1							
	<i>Calochortus splendens</i>	1							
	<i>Sabia apiaria</i>	1							
	<i>Lepidium</i> sp.	1							
						Bare Ground:	30		
						Litter:	15		
						Rock:	15		

Total % Cover: 60 % Herb Cover: 40 % Shrub Cover: 60 % Tree Cover: 0

MSP - Rare Plant Habitat and Threats Assessment Form

Scientific Name: Dudleya variegata MSP Occurrence ID: DUVA_4EAELO12

Preserve: Mission Trails Regional Park Occurrence Name: East Elliott - Slope

Date: 5/6/14 Time Start: 2:05 Time Finish: 2:27

Surveyors & Affiliation/Agency: KR, BM, WR

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within **species-specific sampling area (typically 10-m radius circle)**. Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Isocoma menziesii Alliance
Isocoma menziesii Provisional Association

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)
Cryptogamic Crust Cover: 1 Thatch Cover: 2 Thatch Depth: Ave. 3 cm Max: 5 cm
Dead Standing Biomass? Yes No If Yes, Species/Cover Class: Aemisson glaber/3 Ave. Height? 20 cm
Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1
Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the **occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer**. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): open space

Argentine Ant Abundance at Bait Station (1-4): n/a Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____

Ant Sample Collected?: Yes No Ant Sample #: _____ Ant Station Photo #: _____

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>3</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>4</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>6</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>1</u>		

Fuel Modification Zone/Fire Break 1
Road Construction/Maintenance 1
Vegetation Clearing 1
ORV 1 If Observed, List Type(s) of ORV/Bike Activity: _____
Evidence of Recent Fire 6 If Sign of Recent Fire: Year Burned? 2007 Unknown Burn Year: _____
Trails 1 If Trails are Present, are They Authorized? Yes / No / Unknown
Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

MSP - Management Needs and Notes

Occurrence ID: DUVA_4EAEL012

Species: DUVA

Page 3

Date: 05/06/14

VI. MANAGEMENT RECOMMENDATIONS

None

VII. MANAGEMENT ACTIONS IN LAST YEAR

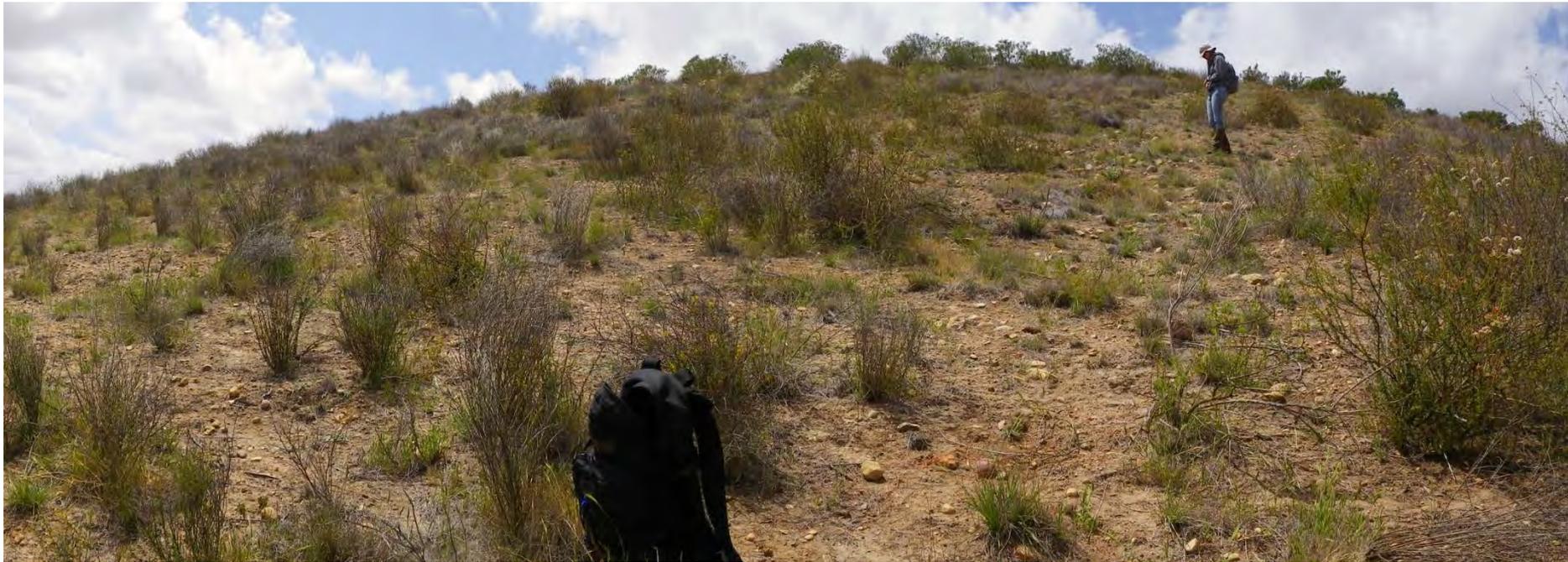
none at survey point

*general preserve actions: daily patrols
fences/signs/gates*

VIII. CNDDDB SPECIES DETECTED & NOTES

List any plant or animal species to add to the CNDDDB:

***Dudleya variegata* (Variegated Dudleya) East Elliott - Slope**



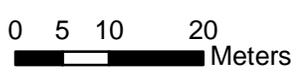
Panorama from the Southern edge of population, facing West, Northwest, North, Northeast.
Panorama location is 6315780.58 1896466.98 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Dudleya variegata - East Elliott Slope

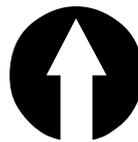


Area 2014: 0 sq. m.

Pop. Area 2004 - 2014
Max Area: 1155.2 sq. m.
Min Area: 0.0 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Wendy Rogers, 2014



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SanGIS
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MSP - Rare Plant Occurrence Monitoring Form

Scientific Name: Dudleya variegata MSP Occurrence ID: DUVA_3GOME003
 Common Name: Variegated dudleya CNDDDB EO#: EO57 Translocated? no
 Preserve: Spring Canyon Open Space Management Unit: 3
 Land Owner: City of San Diego Land Manager: City of San Diego PUD
 Occurrence Name: Goat Mesa / Spring Canyon Sample Point #: 1
 Surveyors & Affiliation: Kim Roeland, Sean Paver, Boby Miller, Wendy Rogers - City of San Diego
 Date: 4/24/14 Time Start: 9:10 Time Finish: 9:45

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 21 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 21 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 37 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 5 Flowering: 4 Fruiting: 2 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 5
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6407136.242 N: 1787954.48 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax M/90
 Location 1 (see coordinates above) SE, S, SW 1.1m Level 1291-1294 S/OS/MSCP
 Direction (facing) Height Camera Angle Photo # File location
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA If need more room, record additional data and any notes on page 3.

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Simmondsia chinensis</i>	17				<i>Lepidium nitidum</i>	1		
	<i>Triglochin fasciculatum</i>	12				<i>Cryptantha</i> sp.	1		
	<i>Ambrosia chenopodiifolia</i>	3				<i>Dudleya variegata</i>	1		
	<i>Artemisia californica</i>	5							
	<i>Cylindropuntia prolifera</i>	1							
	<i>Foucaea viridescens</i>	3							
	<i>Stipa pulchra</i>	5							
	<i>Selaginella cinerascens</i>	7							
✓	<i>Centauria melisensis</i>	1							
✓	<i>Frodium</i> sp.	7							
✓	<i>Avena</i> sp.	3							
	<i>Reinandra fasciculata</i>	2							
	<i>Chorogalum parviflorum</i>	1				Bare Ground:	50		
	<i>Banksia maritima</i> ssp. r.	1				Litter:	3		
	<i>Mirabilis laevis</i>	1				Rock:	15		

Total % Cover: 45 % Herb Cover: 20 % Shrub Cover: 25 % Tree Cover: 0

MSP - Rare Plant Habitat and Threats Assessment Form

Scientific Name: <u>Dudleya variegata</u>	MSP Occurrence ID: <u>DUVA_3GOME003</u>	
Preserve: <u>Spring Canyon Open Space</u>	Occurrence Name: <u>Goat Mesa / Spring Canyon</u>	
Date: <u>4/24/14</u>	Time Start: <u>9:10</u>	Time Finish: <u>9:45</u>
Surveyors & Affiliation/Agency: <u>KR, SP, WR, BM</u>		
<p>IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.</p>		
SANDAG 2012 Vegetation Alliance/Association: <u>Simmondsia chinensis Alliance</u> <u>Simmondsia chinensis - Bahiopsis lachnata Association</u>		
Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)		
Cryptogamic Crust Cover: <u>3</u> Thatch Cover: <u>2</u> Thatch Depth: Ave. <u>10</u> cm Max: <u>15</u> cm		
Dead Standing Biomass? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Species/Cover Class: <u>Avena sp/2; Bromus sp/2</u> Ave. Height? <u>7</u> cm		
Mammal Species Activity Categories (1-4): Feral Pig Activity: <u>1</u> Ground Squirrel Activity: <u>1</u> Gopher Activity: <u>1</u>		
Sampling Area Representative of Maximum Extent? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, Note Differences on Page 3.		
<p>V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.</p>		
Surrounding Land Use at Site (>Maximum Extent): <u>Open Space</u>		
Argentine Ant Abundance at Bait Station (1-4): <u>1</u> Time Start: <u>9:15</u> Temp. Start: <u>67°</u> Time Finish: <u>9:45</u> Temp. Finish: <u>72°</u>		
Ant Sample Collected?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Ant Sample #: _____ Ant Station Photo #: _____		
Disturbances (rank each as 1-6):		
Non-Native Forbs <u>3</u>	Feral Pig Activity <u>1</u>	Altered Hydrology <u>1</u>
Non-Native Grasses <u>3</u>	Trampling <u>1</u>	Erosion <u>1</u>
Non-Native Woody Plants <u>1</u>	Vandalism <u>1</u>	Urban Runoff <u>1</u>
Competitive Native Plants <u>1</u>	Current Grazing <u>1</u>	Slope Movement <u>1</u>
Dumping/Trash <u>1</u>	Historic Grazing <u>4</u>	Soil Compaction <u>1</u>
Encampments <u>1</u>	Historic Agriculture <u>1</u>	
Fuel Modification Zone/Fire Break <u>1</u>		
Road Construction/Maintenance <u>1</u>		
Vegetation Clearing <u>1</u>		
ORV/Mountain Bike Activity <u>3</u> If Observed, List Type(s) of ORV/Bike Activity: <u>Border Patrol road</u>		
Evidence of Recent Fire <u>1</u> If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____		
Trails <u>2</u> If Trails are Present, are They Authorized? <input checked="" type="checkbox"/> Yes / No / Unknown		
Type of Trail Use?		
<input type="checkbox"/> Hiking <input type="checkbox"/> Biking <input type="checkbox"/> Equestrian <input type="checkbox"/> Dog <input type="checkbox"/> Motorcycle <input type="checkbox"/> ORV <input checked="" type="checkbox"/> Service Vehicles		
Overall Site Quality (see page 5): <input checked="" type="checkbox"/> Very Good-Excellent <input type="checkbox"/> Fair to Good <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor		

MSP - Management Needs and Notes

Occurrence ID: DUVA_3GOME003

Species: DUVA

Page 3

Date: 4/24/14

VI. MANAGEMENT RECOMMENDATIONS

continue to maintain access control - signs + fences + gates

VII. MANAGEMENT ACTIONS IN LAST YEAR

Public Utilities Dept installed 3500 ft of fencing to limit extensive Border Patrol/ORN roads in the area

VIII. CNDDDB SPECIES DETECTED & NOTES

List any plant or animal species to add to the CNDDDB:

blacktailed jackrabbit @ photo point
LBV in Spring Canyon on road to site

***Dudleya variegata* (Variegated Dudleya) Goat Mesa/Spring Canyon**



Panorama looking towards the Southwestern edge of the population, facing Southeast, South, Southwest.
Panorama location is 6330814.78 1782263.11 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Dudleya variegata - Goat Mesa/Spring Canyon



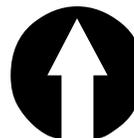
Area 2014: 37 sq. m.

 Dudleya variegata

Pop. Area 2003 - 2014
Max Area: 1065.54 sq. m.
Min Area: 37.0 sq. m.

0 5 10 20
 Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Wendy Rogers, 2014



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MSP - Rare Plant Habitat and Threats Assessment Form

Scientific Name: <u>Dudleya variegata</u>	MSP Occurrence ID: <u>DUVA-3MAVA004</u>	
Preserve: <u>Marron Valley Mitigation Bank</u>	Occurrence Name: <u>Marron Valley</u>	
Date: <u>4/22/14</u>	Time Start: <u>2:15</u>	Time Finish: <u>2:40</u>
Surveyors & Affiliation/Agency: <u>BM, KR, SP, WR</u>		
<p>IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.</p>		
SANDAG 2012 Vegetation Alliance/Association: <u>Artensia californica - Eriogonum fasciculatum Alliance / Artensia californica - Eriogonum fasciculatum - Opuntia littoralis / Dudleya (edulis) Association</u>		
Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)		
Cryptogamic Crust Cover: <u>4</u> Thatch Cover: <u>2</u> Thatch Depth: Ave. <u>3</u> cm Max: <u>5</u> cm		
Dead Standing Biomass? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Species/Cover Class: <u>Avena - 3</u> Ave. Height? <u>15</u> cm		
Mammal Species Activity Categories (1-4): Feral Pig Activity: <u>1</u> Ground Squirrel Activity: <u>2</u> Gopher Activity: <u>1</u>		
Sampling Area Representative of Maximum Extent? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, Note Differences on Page 3.		
<p>V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.</p>		
Surrounding Land Use at Site (>Maximum Extent): <u>Open Space</u>		
Argentine Ant Abundance at Bait Station (1-4): <u>N/A</u> Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____		
Ant Sample Collected?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Ant Sample #: _____ Ant Station Photo #: _____		
Disturbances (rank each as 1-6):		
Non-Native Forbs <u>4</u> Non-Native Grasses <u>4</u> Non-Native Woody Plants <u>1</u> Competitive Native Plants <u>1</u> Dumping/Trash <u>1</u> Encampments <u>1</u>	Feral Pig Activity <u>1</u> Trampling <u>1</u> Vandalism <u>1</u> Current Grazing <u>1</u> <i>grazing on N side of creek</i> Historic Grazing <u>6</u> Historic Agriculture <u>1</u>	Altered Hydrology <u>1</u> Erosion <u>1</u> Urban Runoff <u>1</u> Slope Movement <u>1</u> Soil Compaction <u>1</u>
Fuel Modification Zone/Fire Break <u>1</u> Road Construction/Maintenance <u>1</u> Vegetation Clearing <u>1</u> ORV/Mountain Bike Activity <u>1</u> If Observed, List Type(s) of ORV/Bike Activity: _____ Evidence of Recent Fire <u>1</u> If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____ Trails <u>2</u> If Trails are Present, are They Authorized? <input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No / <input type="checkbox"/> Unknown Type of Trail Use? <input type="checkbox"/> Hiking <input type="checkbox"/> Biking <input type="checkbox"/> Equestrian <input type="checkbox"/> Dog <input type="checkbox"/> Motorcycle <input type="checkbox"/> ORV <input checked="" type="checkbox"/> Service Vehicles <u>Border Patrol</u>		
Overall Site Quality (see page 5): <input type="checkbox"/> Very Good-Excellent <input checked="" type="checkbox"/> Fair to Good <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor		

***Dudleya variegata* (Variegated Dudleya) Marron Valley**



Panorama from Northern edge of population, facing Southeast, South, Southwest.
Panorama location is 6407136.24 1787954.48 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Dudleya variegata - Marron Valley



Area 2014: 152 sq. m.



Dudleya variegata

Pop. Area 2005 - 2014
Max Area: 152 sq. m.
Min Area: 33.6 sq. m.

0 5 10 20
Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Wendy Rogers, 2014



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SanGIS

Scientific Name: Dudleya variegata MSP Occurrence ID: DUVA_4MERO014
 Common Name: Variiegated dudleya CNDDDB EO#: none Translocated? no
 Preserve: Los Penasquitos Canyon Preserve Management Unit: 4
 Land Owner: City of San Diego Land Manager: City of San Diego
 Occurrence Name: Mercy Road Sample Point #: 1
 Surveyors & Affiliation: Betsy Miller, Kim Roeland, Wendy Rogers
 Date: 5/18/14 Time Start: 10:50 Time Finish: 11:13

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 37 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: see above Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 66 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 5 Flowering: 5 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6356396.908 N: 1807139.545 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax Optio W90
 Location 1 (see coordinates above) Direction (facing): N, NE, E, SE Height: 1.1m Camera Angle: 10° up Photo #: 1470-1472 File location: S/OS/MSCP
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA If need more room, record additional data and any notes on page 3.

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<u>Dudleya brevifolia</u>	<u>1</u>				<u>Selaginella cinerascens</u>	<u>→ see crust</u>		
	<u>Adolphia californica</u>	<u>2</u>				<u>Ferocactus viridescens</u>	<u>1</u>		
	<u>Rhus integrifolia</u>	<u>5</u>				<u>Stipa pulchra</u>	<u>10</u>		
	<u>Isocoma menziesii</u>	<u>3</u>			<input checked="" type="checkbox"/>	<u>Centauria melitensis</u>	<u>1</u>		
	<u>Eriogonum fasciculatum</u>	<u>3</u>			<input checked="" type="checkbox"/>	<u>Brachypodium distachyon</u>	<u>40</u>		
	<u>Artemisia californica</u>	<u>1</u>			<input checked="" type="checkbox"/>	<u>Erodium botrys</u>	<u>1</u>		
	<u>Penstemon arborea</u>	<u>1</u>				<u>Calochortus splendens</u>	<u>1</u>		
	<u>Lomatium dasycarpum</u>	<u>7</u>							
	<u>Corethrogyne filaginifolia</u>	<u>1</u>							
	<u>Acmispon glaber</u>	<u>1</u>							
	<u>Sisyrinchium bellum</u>	<u>1</u>							
	<u>Croton setigerus</u>	<u>1</u>							
	<u>Chlorogalum parviflorum</u>	<u>1</u>							
	<u>Deinandra fasciculata</u>	<u>1</u>							
<input checked="" type="checkbox"/>	<u>Hypochaeris glabra</u>	<u>1</u>							
						Bare Ground:	<u>20</u>		
						Litter:	<u>0</u>		
						Rock:	<u>5</u>		

Total % Cover: 80 % Herb Cover: 60 % Shrub Cover: 20 % Tree Cover: 0

Scientific Name: Dudleya variegata MSP Occurrence ID: DIVA-4MER014

Preserve: Los Penasquitos Canyon Preserve Occurrence Name: Mercy Road

Date: 5/8/14 Time Start: 10:50 Time Finish: 11:13

Surveyors & Affiliation/Agency: WR, KR, BM

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within **species-specific sampling area** (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Artemisia californica - Eriogonum fasciculatum

Allianu; Artemisia californica - Eriogonum fasciculatum - Opuntia littoralis

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)
 Cryptogamic Crust Cover: 4 Thatch Cover: 3 Thatch Depth: Ave. 1 cm Max: 2 cm

Dudleya (edulis) association

Dead Standing Biomass? Yes No If Yes, Species/Cover Class: unk. 2 Ave. Height? 10 cm

Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1

Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the **occurrence's maximum extent** (cumulative extent over years of monitoring) **plus 10-m surrounding buffer**. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): open space

Argentine Ant Abundance at Bait Station (1-4): MA Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____

Ant Sample Collected?: Yes No Ant Sample #: _____ Ant Station Photo #: _____

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>3</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>5</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>unk</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>unk</u>		

Fuel Modification Zone/Fire Break 1
 Road Construction/Maintenance 1
 Vegetation Clearing 1
 ORV/Mountain Bike Activity 1 If Observed, List Type(s) of ORV/Bike Activity: _____
 Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____
 Trails 1 If Trails are Present, are They Authorized? Yes / No / Unknown
 Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV [] Service Vehicles

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

MSP - Management Needs and Notes

Occurrence ID: DIVA-4MER0014 Species: DIVA

Date: 5/8/14

VI. MANAGEMENT RECOMMENDATIONS

- treat non-native grasses w/ CBI approved methods

VII. MANAGEMENT ACTIONS IN LAST YEAR

- ∅

VIII. CNDDDB SPECIES DETECTED & NOTES

List any plant or animal species to add to the CNDDDB:

CACIN calling on s-facing slope near
photo pt - CNDDDB pt taken

***Dudleya variegata* (Variegated Dudleya) Mercy Road**



Panorama from Northwestern edge of population, facing Southwest, West, Northwest.
Panorama location is 6294492.70 1924435.77 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Dudleya variegata - Mercy Road

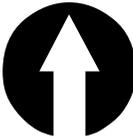


Area 2014: 66.0 sq. m.
 Dudleya variegata

Pop. Area 2003 - 2014
Max Area: 494.99 sq. m.
Min Area: 66.0 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Wendy Rogers, 2014



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Scientific Name: Dudleya variegata MSP Occurrence ID: DUVA_4MTRP015
 Common Name: Variiegated dudleya CNDB EO#: none Translocated? no
 Preserve: Mission Trails Regional Park Management Unit: 4
 Land Owner: City of San Diego Land Manager: City of San Diego
 Occurrence Name: Mission Trails Regional Park Sample Point #: 1
 Surveyors & Affiliation: Betsy Miller, Kim Roeland, Wendy Rogers - City of San Diego
 Date: 5/6/14 Time Start: 11:30 Time Finish: 12:00

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 0 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 24 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 35 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 5 Flowering: 5 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6356396.908 N: 1807139.545 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax optio W90
 Location 1 (see coordinates above) Direction (facing) N, NE, E, SE Height 1.1m Camera Angle 10° up Photo # 1440-1443 File location S/OS/MSCP
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA If need more room, record additional data and any notes on page 3.

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<u>Dudleya variegata</u>	<u>1</u>				<u>Logfia filaginoides</u>	<u>1</u>		
	<u>Pentstemon arborca</u>	<u>1</u>			<input checked="" type="checkbox"/>	<u>Hypochaeris glabra</u>	<u>1</u>		
	<u>Eriogonum fasciculatum</u>	<u>10</u>				<u>Stylocline gnaphaloides</u>	<u>1</u>		
	<u>Malosma laurina</u>	<u>2</u>				<u>Pectocarya linearis</u>	<u>1</u>		
	<u>Artemisia californica</u>	<u>1</u>			<input checked="" type="checkbox"/>	<u>Brachypodium distachyon</u>	<u>5</u>		
	<u>Acmispon glaber</u>	<u>2</u>			<input checked="" type="checkbox"/>	<u>Avena sp.</u>	<u>1</u>		
	<u>Ferocactus viridescens</u>	<u>1</u>							
	<u>Bahjopsis laciniata</u>	<u>1</u>							
	<u>Deinandra fusciculata</u>	<u>1</u>							
	<u>Selaginella cinerascens</u>	<u>3</u>							
	<u>Chlorogalum parviflorum</u>	<u>1</u>							
	<u>Stipa pulchra</u>	<u>1</u>							
<input checked="" type="checkbox"/>	<u>Centauria melitensis</u>	<u>1</u>				<u>Bare Ground: 60</u>			
<input checked="" type="checkbox"/>	<u>Erodium cicutarium</u>	<u>1</u>				<u>Litter: 0</u>			
<input checked="" type="checkbox"/>	<u>Brodium botrys</u>	<u>1</u>				<u>Rock: 20</u>			

Total % Cover: 20 % Herb Cover: 10 % Shrub Cover: 10 % Tree Cover: 0

Scientific Name: Dudleya variegata MSP Occurrence ID: DUVA_4MTRP015

Preserve: Mission Trails Regional Park Occurrence Name: Mission Trails Regional Park

Date: 5/6/14 Time Start: 11:30 Time Finish: 12:00

Surveyors & Affiliation/Agency: K.R. B.M. W.R.

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within **species-specific sampling area (typically 10-m radius circle)**. Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Bahiopsis lacinata Alliance/Bahiopsis lacinata - Artemisia californica - Eriogonum fasciculatum Association

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)

Cryptogamic Crust Cover: 5 Thatch Cover: 0 Thatch Depth: Ave. 0 cm Max: 0 cm

Dead Standing Biomass? Yes No If Yes, Species/Cover Class: Amispon: 2 Ave. Height? 12 cm

Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1

Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the **occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer**. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): Open space

Argentine Ant Abundance at Bait Station (1-4): N/A Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____

Ant Sample Collected?: Yes No Ant Sample #: _____ Ant Station Photo #: _____

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>3</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>3</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>unk</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>unk</u>		

Fuel Modification Zone/Fire Break 1

Road Construction/Maintenance 1

Vegetation Clearing 1

ORV/Mountain Bike Activity 1 If Observed, List Type(s) of ORV/Bike Activity: _____

Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____

Trails 2 If Trails are Present, are They Authorized? Yes / No / Unknown Fenced

Type of Trail Use? Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

MSP - Management Needs and Notes

Occurrence ID: DUVA_4MTRP015 Species: DUVA

Date: 5/6/14

VI. MANAGEMENT RECOMMENDATIONS

- continue to maintain access control with fencing, etc.

VII. MANAGEMENT ACTIONS IN LAST YEAR

- Access controlled via fences and trail brushing

VIII. CNDDDB SPECIES DETECTED & NOTES

List any plant or animal species to add to the CNDDDB:

***Dudleya variegata* (Variegated Dudleya) Mission Trails Regional Park Subpopulation # 1**



Panorama from the Southern edge of population, facing Northwest, North, Northeast.
Panorama location is 6309627.30 1879705.91 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Dudleya variegata - Mission Trails RP Pt. 1



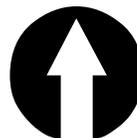
Area 2014: 35.0 sq. m.

 Dudleya variegata

Pop. Area 2004 - 2014
Max Area: 386.4 sq. m.
Min Area: 20.4 sq. m.

0 5 10 20 Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Wendy Rogers, 2014



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SanGIS

Scientific Name: Dudleya variegata MSP Occurrence ID: DUVA_4MTRP015
 Common Name: Variegated dudleya CNDDDB EO#: none Translocated? no
 Preserve: Mission Trails Regional Park Management Unit: 4
 Land Owner: City of San Diego Land Manager: City of San Diego
 Occurrence Name: Mission Trails Regional Park Sample Point #: 2
 Surveyors & Affiliation: Kim Zoeland, Betty Miller, Wendy Rogers - City of San Diego
 Date: 5/6/14 Time Start: 10:35 AM Time Finish: 11:10 AM

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 0 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 108 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 109 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 5 Flowering: 3 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6356396.908 N: 1807139.545 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax Optica K190
 Location 1 (see coordinates above) Direction (facing) N, NE, E, SE Height 1.1m Camera Angle 10° up Photo # 1430-1433 File location S/OS/MSCP
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA If need more room, record additional data and any notes on page 3.

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Dudleya variegata</i>	1				<i>Corythogone filigeanifolia</i>	1		
	<i>Rhus integrifolia</i>	1			✓	<i>Averna</i> sp.	1		
	<i>Eriogonum fasciculatum</i>	7				<i>Callium angustifolium</i>	1		
	<i>Artemisia californica</i>	5							
	<i>Acmispon glaber</i>	3							
	<i>Malosma laurina</i>	3							
	<i>Tocoma menziesii</i>	1							
	<i>Ferocactus viridescens</i>	1							
	<i>Chlorogalum parviflorum</i>	2							
	<i>Selaginella circoscans</i>	5							
✓	<i>Erodium</i> sp.	7							
✓	<i>Brachypodium distachyon</i>	50							
	<i>Stipa pulchra</i>	3				Bare Ground:	25		
	<i>Legtia gallica</i>	2				Litter:	3		
	<i>Calochortus splendens</i>	1				Rock:	30		

Total % Cover: 70 % Herb Cover: 50 % Shrub Cover: 25 % Tree Cover: 0

Scientific Name: Dudleya variegata MSP Occurrence ID: DUVA_4MTRP015
 Preserve: Mission Trails Regional Park Occurrence Name: Mission Trails Regional Park #42
 Date: 5/6/14 Time Start: 10:35 Time Finish: 11:10
 Surveyors & Affiliation/Agency: KR, BM, WR

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within **species-specific sampling area (typically 10-m radius circle)**. Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Artemisia californica - Eriogonum fasciculatum Alliance
Artemisia californica - Eriogonum fasciculatum - Opuntia littoralis / Dudleya (edulis) Association

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)

Cryptogamic Crust Cover: 2 Thatch Cover: 4 Thatch Depth: Ave. 2 cm Max: 5 cm

Dead Standing Biomass? Yes No If Yes, Species/Cover Class: Amisoplon glaber / 2; Isocoma menziesii / 2 Ave. Height? 15 cm

Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1

Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the **occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer**. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): open space

Argentine Ant Abundance at Bait Station (1-4): 1 Time Start: 10:40 AM Temp. Start: 62 Time Finish: 11:10 AM Temp. Finish: 62

Ant Sample Collected?: Yes No Ant Sample #: n/a Ant Station Photo #: n/a

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>3</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>5</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>6</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>1</u>		

Fuel Modification Zone/Fire Break 1

Road Construction/Maintenance 1

Vegetation Clearing 1

ORV: 1 If Observed, List Type(s) of ORV/Bike Activity: _____

Evidence of Recent Fire 6 If Sign of Recent Fire: Year Burned? 2003 Unknown Burn Year: _____

Trails 2 If Trails are Present, are They Authorized? Yes / No / Unknown

Type of Trail Use?

- Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

MSP - Management Needs and Notes

Occurrence ID: DUVA_4MTRP015 Species: DUVA

Date: 5/6/14

VI. MANAGEMENT RECOMMENDATIONS

none

VII. MANAGEMENT ACTIONS IN LAST YEAR

closed illegal trail to population
general ongoing maintenance includes: ranger patrols
prebtre *signs/gates/fences*
trash removal

VIII. CNDDDB SPECIES DETECTED & NOTES

List any plant or animal species to add to the CNDDDB:

Multiple horizontal lines for listing species.

***Dudleya variegata* (Variegated Dudleya) Mission Trails Regional Park Subpopulation # 2**



Panorama from Northeastern edge of population, facing West, Northwest, North.
Panorama location is 6309627.31 1879705.91 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Dudleya variegata - Mission Trail Regional Park Pt 2



Area 2014: 109.0 sq. m.

 Dudleya variegata

Pop. Area 2004 - 2014
Max Area: 241.36 sq. m.
Min Area: 36.16 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Wendy Rogers, 2014



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Scientific Name: Dudleya variegata MSP Occurrence ID: DUVA_4MTRP015
 Common Name: Variegated dudleya CNDDDB EO#: none Translocated? no
 Preserve: Mission Trails Regional Park Management Unit: 4
 Land Owner: City of San Diego Land Manager: City of San Diego
 Occurrence Name: Mission Trails Regional Park Sample Point #: 3
 Surveyors & Affiliation: Kim Roeland, Betay Miller, Wendy Rogers - City of San Diego
 Date: 5/6/14 Time Start: 11:15 AM Time Finish: 11:30 AM

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 48 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 48 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 21 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 4 Flowering: 5 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6356396.908 N: 1807139.545 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax Optica W90
 Location 1 (see coordinates above) N, NE, E, SE 1.1m 10° up 1436-1439 S/OS/MSCP
 Direction (facing) Height Camera Angle Photo # File location
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA If need more room, record additional data and any notes on page 3.

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<u>Dudleya variegata</u>	<u>1</u>							
	<u>Eriogonum fasciculatum</u>	<u>5</u>							
	<u>Aemionon glaber</u>	<u>7</u>							
	<u>Malva laurina</u>	<u>5</u>							
	<u>Palium angustifolium</u>	<u>2</u>							
	<u>Opuntia sp.</u>	<u>1</u>							
	<u>Calochortus splendens</u>	<u>1</u>							
	<u>Selaginella cinerascens</u>	<u>15</u>							
	<u>Alba pulchra</u>	<u>1</u>							
	<u>Chlorogalum parviflorum</u>	<u>1</u>							
<input checked="" type="checkbox"/>	<u>Brachypodium distachyon</u>	<u>30</u>							
<input checked="" type="checkbox"/>	<u>Avena sp.</u>	<u>1</u>							
						Bare Ground:	<u>15</u>		
						Litter:	<u>3</u>		
						Rock:	<u>20</u>		

Total % Cover: 70 % Herb Cover: 50 % Shrub Cover: 20 % Tree Cover: 0

MSP - Rare Plant Habitat and Threats Assessment Form

Scientific Name: <u>Dudleya variegata</u>	MSP Occurrence ID: <u>DUVA_4MTRP015</u>	
Preserve: <u>Mission Trails Regional Park</u>	Occurrence Name: <u>Mission Trails Regional Park #3</u>	
Date: <u>5/6/14</u>	Time Start: <u>11:15</u>	Time Finish: <u>11:30</u>
Surveyors & Affiliation/Agency: <u>KR, BM, WR</u>		
<p>IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.</p>		
SANDAG 2012 Vegetation Alliance/Association: <u>Artemisia californica - Eriogonum fasciculatum Alliance</u>		
<u>Artemisia californica - Eriogonum fasciculatum - Opuntia littoralis / Dudleya (dulis) Association</u>		
Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)		
Cryptogamic Crust Cover: <u>3</u> Thatch Cover: <u>3</u> Thatch Depth: Ave. <u>3</u> cm Max: <u>5</u> cm		
Dead Standing Biomass? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Species/Cover Class: <u>Acemison glaber/2</u> Ave. Height? <u>20</u> cm		
Mammal Species Activity Categories (1-4): Feral Pig Activity: <u>1</u> Ground Squirrel Activity: <u>1</u> Gopher Activity: <u>1</u>		
Sampling Area Representative of Maximum Extent? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, Note Differences on Page 3.		
<p>V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.</p>		
Surrounding Land Use at Site (>Maximum Extent): <u>open space</u>		
Argentine Ant Abundance at Bait Station (1-4): <u>n/a</u> Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____		
Ant Sample Collected?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Ant Sample #: _____ Ant Station Photo #: _____		
Disturbances (rank each as 1-6):		
Non-Native Forbs <u>3</u>	Feral Pig Activity <u>1</u>	Altered Hydrology <u>1</u>
Non-Native Grasses <u>4</u>	Trampling <u>1</u>	Erosion <u>1</u>
Non-Native Woody Plants <u>1</u>	Vandalism <u>1</u>	Urban Runoff <u>1</u>
Competitive Native Plants <u>1</u>	Current Grazing <u>1</u>	Slope Movement <u>1</u>
Dumping/Trash <u>1</u>	Historic Grazing <u>6</u>	Soil Compaction <u>1</u>
Encampments <u>1</u>	Historic Agriculture <u>1</u>	
Fuel Modification Zone/Fire Break <u>1</u>		
Road Construction/Maintenance <u>1</u>		
Vegetation Clearing <u>1</u>		
ORV <u>1</u>	If Observed, List Type(s) of ORV/Bike Activity: _____	
Evidence of Recent Fire <u>6</u>	If Sign of Recent Fire: Year Burned? <u>2003</u> Unknown Burn Year: _____	
Trails <u>2</u>	If Trails are Present, are They Authorized? <input checked="" type="checkbox"/> Yes / No / Unknown	
Type of Trail Use?	<input checked="" type="checkbox"/> Hiking <input checked="" type="checkbox"/> Biking <input checked="" type="checkbox"/> Equestrian <input checked="" type="checkbox"/> Dog <input type="checkbox"/> Motorcycle <input type="checkbox"/> ORV <input checked="" type="checkbox"/> Service Vehicles	
Overall Site Quality (see page 5): <input type="checkbox"/> Very Good-Excellent <input checked="" type="checkbox"/> Fair to Good <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor		

MSP - Management Needs and Notes

Occurrence ID: DUVA_4MTRP015 Species: DUVA Date: 5/6/14

VI. MANAGEMENT RECOMMENDATIONS

none

VII. MANAGEMENT ACTIONS IN LAST YEAR

none @ survey point -
general ongoing preserve actions: daily patrols
signs/fencing/gates
trash collection

VIII. CNDDDB SPECIES DETECTED & NOTES

List any plant or animal species to add to the CNDDDB:

Blank lined area for listing species to add to the CNDDDB.

***Dudleya variegata* (Variegated Dudleya) Mission Trails Regional Park Subpopulation # 3**



Panorama from Southwestern edge of population, facing Southeast, South, Southwest.
Panorama location is 6309578.77 1880426.96 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Dudleya variegata - Mission Trail Regional Park Pt 3



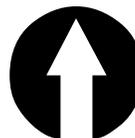
Area 2014: 21.0 sq. m.

 Dudleya variegata

Pop. Area 2004 - 2014
Max Area: 44.34 sq. m.
Min Area: 0.038 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Wendy Rogers, 2014



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Scientific Name: <u>Dudleya variegata</u>		MSP Occurrence ID: <u>DUVA_4NAVA016</u>							
Common Name: <u>Variegated dudleya</u>		CNDDDB EO#: <u>none</u>	Translocated? <u>no</u>						
Preserve: <u>Rancho Mission Canyon</u>		Management Unit: <u>4</u>							
Land Owner: <u>City of San Diego</u>		Land Manager: <u>City of San Diego</u>							
Occurrence Name: <u>Navajo / Mission Gorge</u>		Sample Point #: <u>1</u>							
Surveyors & Affiliation: <u>Betsy Miller, Kim Roeland, Wendy Rogers</u>									
Date: <u>5/6/14</u>		Time Start: <u>4:10</u>	Time Finish: <u>4:40</u>						
I. OCCURRENCE STATUS - Assess # plants in both the species-specific sampling area (typically 10-m radius circle) & in the current mapped extent . See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.									
# Plants/Sampling Area: <u>see below</u>		<input checked="" type="checkbox"/> Exact	<input type="checkbox"/> Estimate (extrapolate partial count) Uncertainty? <u>low</u>						
# Plants/Current Mapped Extent: <u>552</u>		<input checked="" type="checkbox"/> Exact Count	<input type="checkbox"/> Estimate (1,000s, 10,000s) Uncertainty? <u>low</u>						
Area of Current Mapped Extent: <u>79</u> m ² units		<input checked="" type="checkbox"/> Exact (GPS mapping)	<input type="checkbox"/> Estimate						
Phenology in Current Mapped Extent (Categories 1-5): Vegetative: <u>5</u> Flowering: <u>5</u> Fruiting: <u>1</u> Dead: <u>1</u>									
Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: <u>1</u> Disease: <u>1</u> Stunted Growth: <u>1</u>									
Is Sampling Area within Current Mapped Extent?		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <u>population near photo pt. is contiguous w/ population w/in maximum extent.</u>						
Species Found in Maximum Extent?		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No						
If not, why (if reason known or suspected)?									
Collection (if not collected previously)?		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No <input type="checkbox"/> Collected Previously						
If yes: Collector _____		Collection Number _____	Museum/Herbarium _____						
II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING									
GPS Accuracy: +/- <u><1</u> <input checked="" type="checkbox"/> meters <input type="checkbox"/> feet		Datum: _____							
Coordinates; E: <u>6316074.339</u> N: <u>1873618.091</u>		<input checked="" type="checkbox"/> State Plane (ft)	<input type="checkbox"/> UTM (m) <input type="checkbox"/> Lat-Long (dec deg)						
Camera type: <u>Pentax optio W90</u>									
Location 1 (see coordinates above)	N, NE, E, SE Direction (facing)	1.1m Height	10° up Camera Angle						
			<u>1459-1462</u> Photo #						
			S/OS/MSCP File location						
Location 2 [Coordinates]	Direction (facing)	Height	Camera Angle						
			Photo #						
			File location						
III. ASSOCIATED SPECIES IN SAMPLING AREA <i>If need more room, record additional data and any notes on page 3.</i>									
Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<u>Dudleya variegata</u>	<u>1</u>			<input checked="" type="checkbox"/>	<u>Brachypodium distachyon</u>	<u>40</u>		
	<u>Mimulus aurantiacus</u>	<u>5</u>			<input checked="" type="checkbox"/>	<u>Anagalis aurensis</u>	<u>1</u>		
	<u>Rhus integrifolia</u>	<u>2</u>				<u>Ranunculus californicus</u>	<u>1</u>		
	<u>Artemisia californica</u>	<u>1</u>							
	<u>Baccharis sarothroides</u>	<u>10</u>							
	<u>Malosma laurina</u>	<u>5</u>							
	<u>Sisyrinchium bellum</u>	<u>5</u>							
	<u>Boloma menziesii</u>	<u>5</u>							
	<u>Stachys bullata</u>	<u>2</u>							
	<u>Bloomeria crocea</u>	<u>1</u>							
	<u>Brechania pilularis</u>	<u>1</u>							
	<u>Erigeron fasciculatum</u>	<u>5</u>							
	<u>Erigeron confertiflorum</u>	<u>3</u>							
	<u>Stipa pulchra</u>	<u>3</u>							
<input checked="" type="checkbox"/>	<u>Brassica nigra</u>	<u>1</u>							
						Bare Ground:	<u>0</u>		
						Litter:	<u>0</u>		
						Rock:	<u>1</u>		
Total % Cover: <u>90</u>		% Herb Cover: <u>55</u>		% Shrub Cover: <u>35</u>		% Tree Cover: <u>0</u>			

Scientific Name: Dudleya variegata MSP Occurrence ID: DUVA_4NAVA016

Preserve: Rancho Mission to Canyon Occurrence Name: Navajo / Mission Gorge

Date: 5/6/12 Time Start: 4:10 Time Finish: 4:40

Surveyors & Affiliation/Agency: BM, KR, WR

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within **species-specific sampling area (typically 10-m radius circle)**. Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Baccharis sarothroides Provisional Alliance
Baccharis sarothroides Association

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)

Cryptogamic Crust Cover: 2 Thatch Cover: 2 Thatch Depth: Ave. 2 cm Max: 5 cm

Dead Standing Biomass? Yes No If Yes, Species/Cover Class: Isocoma: 2 Ave. Height? 10 cm

Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1

Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the **occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer**. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): Open Space

Argentine Ant Abundance at Bait Station (1-4): N/A Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____

Ant Sample Collected?: Yes No Ant Sample #: _____ Ant Station Photo #: _____

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>3</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>5</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>unk</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>unk</u>		

Fuel Modification Zone/Fire Break 1

Road Construction/Maintenance 1

Vegetation Clearing 1

ORV/Mountain Bike Activity 1 If Observed, List Type(s) of ORV/Bike Activity: _____

Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____

Trails 1 If Trails are Present, are They Authorized? Yes / No / Unknown

Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

***Dudleya variegata* (Variegated Dudleya) Navajo/Mission Gorge**



Panorama from Northwestern edge of population, facing Northeast, East, Southeast.
Panorama location is 6313087.92 1873620.15 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Dudleya variegata - Navajo/Mission Gorge



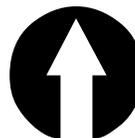
Area 2014: 79.0 sq. m.

 Dudleya variegata

Pop. Area 2003 - 2014
Max Area: 451.44 sq. m.
Min Area: 26.2 sq. m.

0 3.75 7.5 15
 Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Wendy Rogers, 2014



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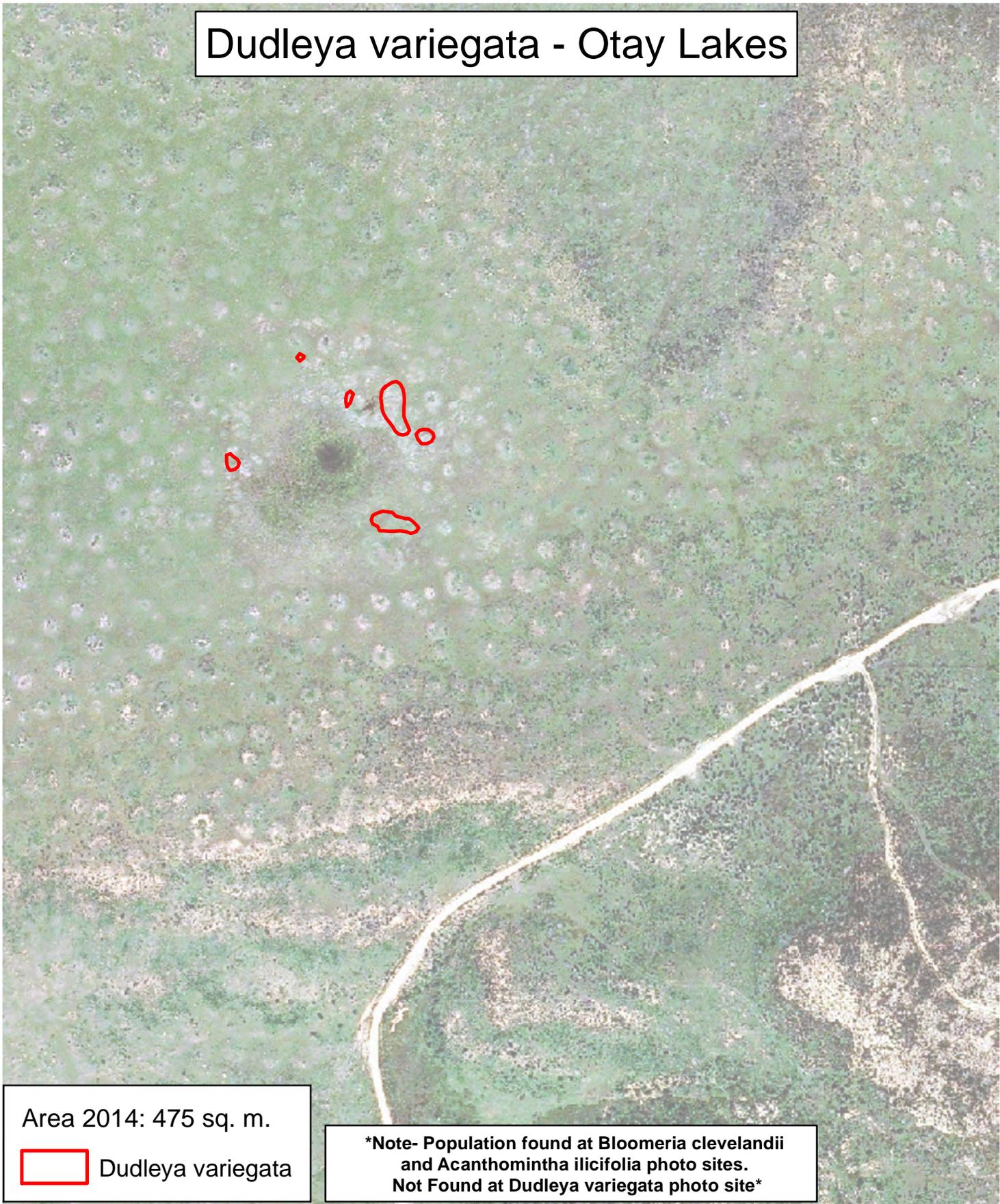
Scientific Name: <u>Dudleya variegata</u>	MSP Occurrence ID: <u>DUVA-30TLA005</u>	
Preserve:	Occurrence Name: <u>Otay Lakes</u>	
Date: <u>4/22/14</u>	Time Start: <u>9:22</u> Time Finish: <u>11:26</u>	
Surveyors & Affiliation/Agency: <u>BM, KR, WR, SP</u>		
<p>IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.</p>		
SANDAG 2012 Vegetation Alliance/Association: <u>Erigeron fasciculatus Alliance</u> <u>Erigeron fasciculatus Association</u>		
Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)		
Cryptogamic Crust Cover: <u>2</u> Thatch Cover: <u>2</u> Thatch Depth: Ave. <u>3</u> cm Max: <u>4</u> cm		
Dead Standing Biomass? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Species/Cover Class: <u>Festuca/Desmodium</u> Ave. Height? <u>6</u> cm		
Mammal Species Activity Categories (1-4): Feral Pig Activity: <u>1</u> Ground Squirrel Activity: <u>1</u> Gopher Activity: <u>1</u>		
Sampling Area Representative of Maximum Extent? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, Note Differences on Page 3.		
<p>V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.</p>		
Surrounding Land Use at Site (>Maximum Extent): <u>open space / lake / reservoir</u>		
Argentine Ant Abundance at Bait Station (1-4): <u>N/A</u> Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____		
Ant Sample Collected?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Ant Sample #: _____ Ant Station Photo #: _____		
Disturbances (rank each as 1-6):		
Non-Native Forbs <u>4</u> Non-Native Grasses <u>4</u> Non-Native Woody Plants <u>1</u> Competitive Native Plants <u>1</u> Dumping/Trash <u>1</u> Encampments <u>1</u>	Feral Pig Activity <u>1</u> Trampling <u>1</u> Vandalism <u>1</u> Current Grazing <u>1</u> Historic Grazing <u>1</u> Historic Agriculture <u>1</u>	Altered Hydrology <u>1</u> Erosion <u>1</u> Urban Runoff <u>1</u> Slope Movement <u>1</u> Soil Compaction <u>1</u>
Fuel Modification Zone/Fire Break <u>1</u>		
Road Construction/Maintenance <u>1</u>		
Vegetation Clearing <u>1</u>		
ORV/Mountain Bike Activity <u>1</u> If Observed, List Type(s) of ORV/Bike Activity: _____		
Evidence of Recent Fire <u>1</u> If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____		
Trails <u>2</u> If Trails are Present, are They Authorized? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No / Unknown		
Type of Trail Use?		
<input type="checkbox"/> Hiking <input type="checkbox"/> Biking <input type="checkbox"/> Equestrian <input type="checkbox"/> Dog <input type="checkbox"/> Motorcycle <input type="checkbox"/> ORV <input checked="" type="checkbox"/> Service Vehicles		
Overall Site Quality (see page 5): <input checked="" type="checkbox"/> Very Good-Excellent <input type="checkbox"/> Fair to Good <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor		

***Dudleya variegata* (Variegated Dudleya) Otay Lakes**



Panorama from Northeastern edge of the population, facing North, Northeast, East, Southeast.
Panorama location is 635639.91 1807139.55 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Dudleya variegata - Otay Lakes



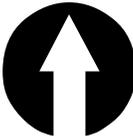
Area 2014: 475 sq. m.
 Dudleya variegata

Note- Population found at Bloomeria clevelandii and Acanthomintha ilicifolia photo sites. Not Found at Dudleya variegata photo site

Pop. Area 2003 - 2014
Max Area: 196313.44 sq. m.
Min Area: 475.0 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Wendy Rogers, 2014



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MSP - Rare Plant Occurrence Monitoring Form

Scientific Name: Dudleya variegata MSP Occurrence ID: DUVA_6SALU024
 Common Name: Variegated dudleya CNDDDB EO#: EO53 Translocated? yes
 Preserve: Black Mountain Open Space Management Unit: 6
 Land Owner: City of San Diego Land Manager: City of San Diego
 Occurrence Name: Santa Luz Sample Point #: 1
 Surveyors & Affiliation: Betsy Miller, Kim Roeland, Wendy Rogers - city of San Diego
 Date: 5/8/14, post-fire 5/23/14 Time Start: 2:40 Time Finish: 2:59

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 0 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 0 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: np m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 1 Flowering: 1 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No species not found at this site past few years
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6356396.908 N: 1807139.545 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax Optio W90
 Location 1 (see coordinates above) N, NE, E, SE Direction (facing) W Height 1.1m Camera Angle 10° up Photo # E: 1496-1499 File location S/OS/MSCP
 Location 2 [Coordinates] same as above Direction (facing) W Height 1.1m Camera Angle W: 1500-1503 Photo # _____ File location _____

III. ASSOCIATED SPECIES IN SAMPLING AREA If need more room, record additional data and any notes on page 3.

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Artemisia californica</i>	40				<i>Deinandra fasciculata</i>	1		
	<i>Isocoma menziesii</i>	5							
	<i>Rhus integrifolia</i>	1							
	<i>Aemisson glaber</i>	3							
	<i>Eriogonum fasciculatum</i>	1							
	<i>Malosma laurina</i>	7							
	<i>Calochortus splendens</i>	1							
	<i>Calystegia macrostegia</i>	1							
	<i>Mirabilis laevis</i>	1							
	<i>Stipa pulchra</i>	10							
✓	<i>Sonchus asper</i>	1							
✓	<i>Brassica nigra</i>	1							
✓	<i>Brachypodium distachyon</i>	10				Bare Ground:	5		
	<i>Sisyrinchium bellum</i>	1				Litter:	0		
✓	<i>Avena sp.</i>	1				Rock:	5		

Total % Cover: 70 % Herb Cover: 20 % Shrub Cover: 50 % Tree Cover: 0

Scientific Name: Dudleya variegata MSP Occurrence ID: DUVA-6 SALU 024

Preserve: Black Mountain Open Space Occurrence Name: Santa Luz

Date: 5/8/14 Time Start: 2:40 Time Finish: 2:59

Surveyors & Affiliation/Agency: BSM, KR, WR

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within **species-specific sampling area (typically 10-m radius circle)**. Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Artemisia californica Alliance
Artemisia californica Association

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)
Cryptogamic Crust Cover: 1 Thatch Cover: 4 Thatch Depth: Ave. 4 cm Max: 6 cm
Dead Standing Biomass? Yes No If Yes, Species/Cover Class: unk: 2 Ave. Height? 10 cm
Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1
Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the **occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer**. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): Open Space

Argentine Ant Abundance at Bait Station (1-4): 2 Time Start: 2:40 Temp. Start: 72F Time Finish: 2:56 Temp. Finish: 72F
Ant Sample Collected?: Yes No Ant Sample #: 3 Ant Station Photo #: 1504

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>3</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>4</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>unk</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>unk</u>		

Fuel Modification Zone/Fire Break 1
Road Construction/Maintenance 1
Vegetation Clearing 1
ORV/Mountain Bike Activity 1 If Observed, List Type(s) of ORV/Bike Activity: _____
Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year:
Trails 1 If Trails are Present, are They Authorized? Yes / No / Unknown
Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

VI. MANAGEMENT RECOMMENDATIONS

-species not found at this site for several years;
consider treating non-native grasses and forbs and removing
thatch

*Post Fire: monitor recovery of CSS and treat weeds/grasses
as needed

VII. MANAGEMENT ACTIONS IN LAST YEAR

-none

VIII. CNDDDB SPECIES DETECTED & NOTES

List any plant or animal species to add to the CNDDDB:

CAGN just south of photopoint - point taken

* Bernardo Fire burned this site completely
on 5/13/14. Wire cages @ translocation
sites intact. Photopoint re-taken on 5/23/14.
Burn edge also mapped. Will need to
monitor the site for recovery of CSS -
manage non-native forbs/grasses as needed

***Dudleya variegata* (Variegated Dudleya)**
Santa Luz East, Pre-Fire



Panorama from Northeastern edge of population, facing Southeast, East, Northeast.
Panorama location is 6289735.96 1940293.56 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

***Dudleya variegata* (Variegated Dudleya) Santa Luz East, Post-Fire**



Panorama from Northeastern edge of population, facing Southeast, East, Northeast.
Panorama location is 6289735.96 1940293.56 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.