## Appendix B-6

# 2008 QUINO CHECKERSPOT BUTTERFLY SURVEY REPORT

## APPENDIX B-6

2008 QUINO CHECKERSPOT BUTTERFLY SURVEY REPORT

2008 Report
U.S. Fish and Wildlife Service Protocol Level
Presence/Absence Surveys for the
Quino Checkerspot Butterfly
(Euphydryas editha quino)

Prepared for:

Otay Hills (HELIX Job No. SRM-01)

Prepared by:

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(Threatened/Endangered Species Permit: TE778195)

June 5, 2008

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#### INTRODUCTION

HELIX Environmental Planning, Inc. (HELIX) performed presence/absence surveys for the federally listed endangered quino checkerspot butterfly (*Euphydryas editha quino*; QCB) on the Otay Hills site. The approximately 687.7-acre study area is located in southwestern San Diego County at the edge of Otay Mesa approximately 1 mile north of the United States/Mexico border, 1 mile east of the Otay Mesa border crossing, and east of the intersection of Otay Mesa and Alta roads. It is located in Township 18 South, Range 1 East, Sections 19, 28, 29, and 32 on the San Bernardino Meridian U.S. Geological Survey 7.5-minute Otay Mesa quadrangle map (Figure 1). The study area includes the proposed mining areas (Parcels A and E and land west of Parcel A) and five mitigation parcels (Parcels B, C, D, F, and G; Figure 2).

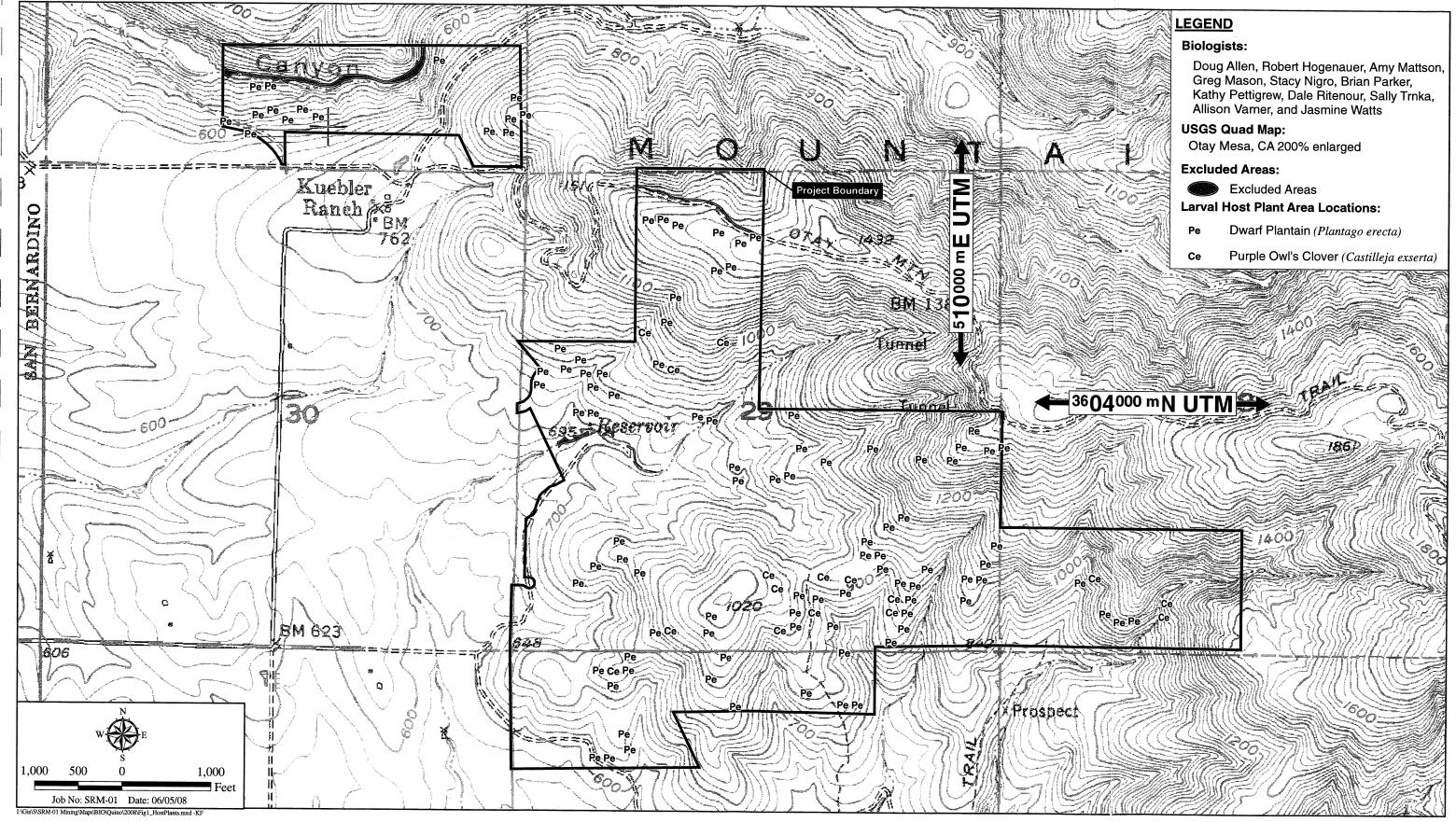
Elevation within the study area varies, but generally ranges from approximately 400 to 1,300 feet above mean sea level, with lower elevations occurring in the southwestern portion of the site and higher elevations occurring in the north and northeast. Soils within the study area consist almost entirely of San Miguel-Exchequer rocky silt loam (9 to 70 percent slopes), which is typically found in mountainous uplands and consist of silt loams with a clay subsoil. A small portion of the site contains Huerhuero loam (9 to 70 percent slopes), which typically consists of loams with a clay subsoil and developed from sandy marine sediments (Bowman 1973).

The study area was burned during a fire that swept through the area in 1997; however, vegetation shows little sign of fire and has recovered, and most of the site has moderate to high shrub cover. As a general characterization of the study area, the south-facing slopes support thinner soils and are more sparsely vegetated. The north-facing slopes have deeper, heavier soils, support more vegetation, and support the majority of the sensitive annual plant species. Openings in the vegetative canopy are common, especially on the south-facing slopes. The study area was not burned during the October 2007 Witch Creek or Harris fires.

In addition to natural habitat, numerous dirt roads cross the property. These roads are frequently used legally by Border Patrol vehicles and illegally by off-highway vehicles (OHVs), especially dirt bikes. Border Patrol trucks and OHVs regularly cross the site during daily patrols, and dozens of illegal dirt bikes and OHVs have been observed within the study area during site visits. In addition, San Diego Gas & Electric maintains access roads and transmission facilities within the study area. These activities degrade the biological resources within the study area, but not to an extent that appreciably decreases their value.

#### **METHODS**

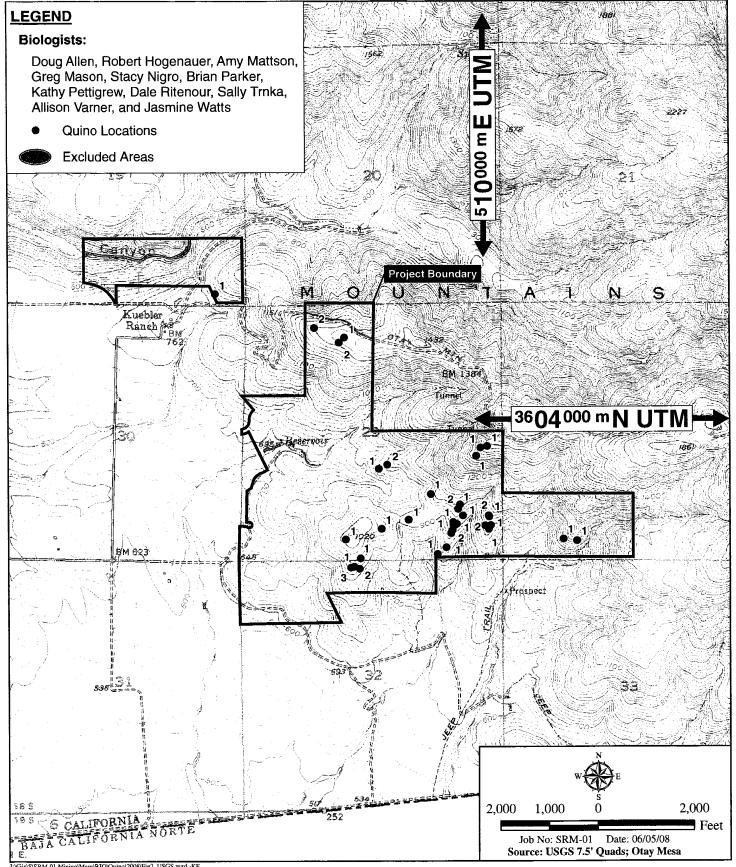
The presence/absence surveys were performed under HELIX's Threatened/ Endangered species permit (TE778195) and generally followed the guidelines outlined in the U.S. Fish and Wildlife Service (USFWS) Year 2002 Survey Protocol for the QCB (USFWS 2002a) and QCB Survey Recommendations (USFWS 2002b). Numerous biological surveys of the entire 687.7-acre site have been conducted since 2000, and protocol QCB surveys were conducted on portions of the site in 2000, 2001, 2002, and 2003. Because the site has been frequently surveyed, an updated habitat assessment was not deemed necessary. The only areas that were excluded from the survey area were wetland/riparian vegetation communities (mule fat scrub, cismontane alkali marsh, southern willow



### **Host Plant Location Map**

OTAY HILLS

Figure 1



**Quino Checkerspot Butterfly Locations** 

**OTAY HILLS** 

Figure 2



scrub, and tamarisk scrub) and developed areas; in total, 683.1 acres were surveyed, while the remaining 4.6 acres were excluded from the survey area (Figure 1).

The Otay Hills site contains 22 locations that the USFWS has identified as survey plots. The survey plots represent 50 meter radius circles (approximately 1.9 acres), centered on locations where the QCB has been reported since it was listed as an endangered species on January 16, 1997. The center, north, south, east, and west points on each circle were identified using a global positioning satellite (GPS) receiver and marked with stakes or flagging. All markers were removed following the final site visit.

Survey plots were visited at least once and no more than twice per week between the hours of 0930 and 1430. Each survey plot was surveyed for 15 minutes. Surveyors recorded the number of adult QCB observed on the plot and the quadrant in which each was observed. The percent bare ground (having no vegetative debris or litter), percent shrub cover, and percent of the plot that was recently burned were visually estimated and recorded. Butterflies, dominant shrubs, and nectar resources were noted. All data collected for the survey plots were recorded on data sheets provided by the USFWS.

The entire Otay Hills site, including all 21 survey plots, was surveyed three times during the QCB flight season between March 19 and April 11, 2008 according to the schedule in Appendix A. Because of the large survey area and variable weather conditions, each survey was spread over several days. Given the large number of adult QCB observed during the first three weeks, it was determined that additional surveys of the entire site were unnecessary and could harm the habitat. Following coordination with Alison Anderson of the USFWS, only the survey plots were surveyed during subsequent visits, such that each survey plot was surveyed five times.

Nomenclature for this report is taken from Holland (1986) for vegetation communities, Hickman (1993) for plants, and field guides by Emmel and Emmel (1973), Glassberg (2001), Opler and Wright (1999), and Pyle (1995) for butterflies.

#### RESULTS

Vegetation within the approximately 683.1-acre survey area is predominated by Diegan coastal sage scrub, which covers approximately 59 percent of the study area. Other vegetation communities within the study area include southern interior cypress forest, native grassland, maritime succulent scrub, coastal sage-chaparral scrub, chamise chaparral, southern mixed chaparral, scrub oak chaparral, non-native grassland, and disturbed habitat. In general, the habitat at the top of hills, along ridgelines, and adjacent to dirt trails is more open than that along the hillsides and lowlands.

Two QCB host plant species, dwarf plantain (*Plantago erecta*) and purple owl's-clover (*Castilleja exserta*), were mapped within the survey area. Dwarf plantain was abundant during the survey period, and was observed in much of the open sage scrub and chaparral on site, particularly on hilltops and adjacent to roads. Purple owl's clover was less abundant and was observed commonly on the hillsides in the central and eastern portions of the site.

Potential QCB nectar sources were abundant on site. California buckwheat (*Eriogonum fasciculatum*), popcorn flower (*Cryptantha* sp. and *Plagiobothrys* sp.), and bluedicks (*Dichelostemma capitatum*) occurred throughout much of the site. Goldfields (*Lasthenia* sp.) and ground pink (*Linanthus dianthiflorus*) were abundant in sage scrub openings and on hilltops in the early portion of the survey period, but declined

during later weeks. Additionally, scattered patches of onion (Allium sp.) and goldenstar (Muilla sp.) occurred in several areas on site.

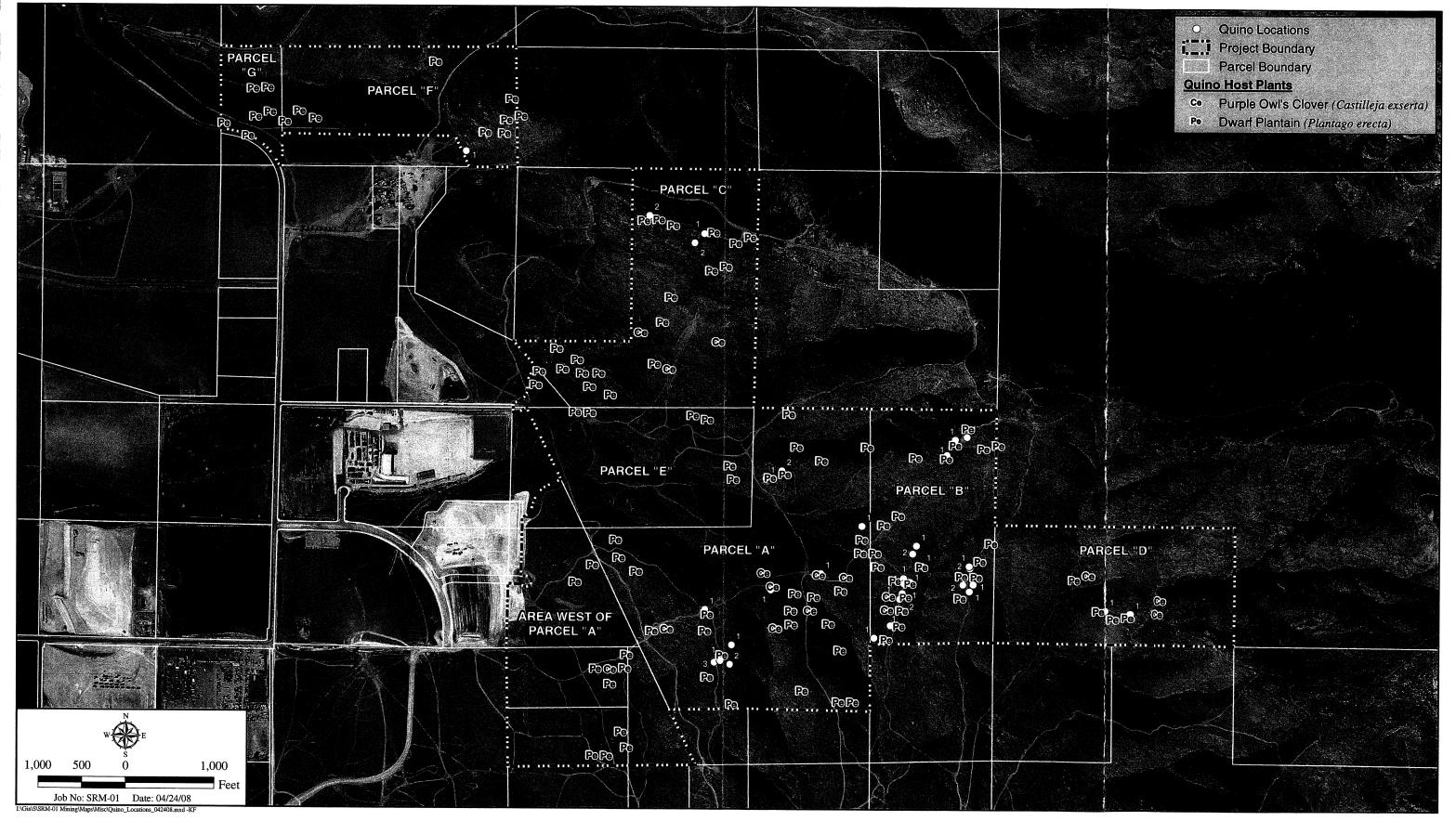
A total of 4,981 butterfly observations were made during the three surveys of the entire project site, representing at least 28 species. A total of 78 adult QCB observations were made, of which it is estimated 45 were unique individuals (Figures 2 and 3)

Copies of QCB survey forms and field notes are included in Appendix B, and copies of USFWS survey plot data sheets are included in Appendix C. Because so many QCB were observed on site (often multiple butterflies at the same time), not all could be photographed. As a result, this report includes representative photos of the QCB observed rather than photos of each observed QCB (Appendix D).

#### **DISCUSSION**

Year-to-year variation in the QCB population on the site is high. Although survey areas have differed each year, the number of QCB observed in repeat-survey areas has varied greatly. Only one QCB was observed during HELIX surveys of Parcel A and the area west of Parcel A in 2000; 13 QCB were observed during HELIX surveys of Parcels B through E in 2001; approximately 51 QCB were observed within the current study area by EDAW surveys of most of the site (excluding Parcels B through D) in 2001; and nine QCB were observed during HELIX surveys of Parcels B through E and part of Parcel A in 2003.

During the current year, Parcel A supported fewer individuals (and those found were located in a smaller area) than in 2001 and no individuals were observed in the western half of the parcel or in the area west of Parcel A. A far greater number of QCB were observed in Parcel B than during previous years. This may be a result of heavy use by Border Patrol vehicles in Parcel A as opposed to Parcel B (there are fewer and less used roads in Parcel B, and the habitat along the roads in Parcel B appears to be less disturbed). Additionally, during the current year's surveys, two QCB were observed in Parcel D, an area where none had previously been detected.



**Quino and Host Plant Locations** 

OTAY HILLS

Figure 3

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  - 2002b. Quino Checkerspot Butterfly 2002 Survey Recommendations. February 12.

## Appendix A SURVEY INFORMATION

|                |                  |             | Survey 1 Information            |                                 |                 |  |
|----------------|------------------|-------------|---------------------------------|---------------------------------|-----------------|--|
| DATE           | BIOLOGIST        | TIME*       | WEATHER O                       | WEATHER CONDITIONS              |                 |  |
|                |                  | (start/end) | Start                           | end                             |                 |  |
|                | Doug Allen       | 1110/1630   | high haze, 66.7°F, wind 0-2 mph | 20% clouds, 71°F, wind 2-3 mph  | 22 QCB‡         |  |
| ·              | Robert Hogenauer | 1045/1520   | 5% clouds, 69°F, wind 2 mph     | 10% clouds, 74°F, wind 7-13 mph | 2 QCB           |  |
|                | Amy Mattson      | 1130/1535   | 0% clouds, 68°F, wind 0-3 mph   | 0% clouds, 63°F, wind 0-3 mph   | 8 QCB           |  |
|                | Stacy Nigro      | 1130/1605   | 0% clouds, 68°F, wind 0-3 mph   | 0% clouds, 68°F, wind 2-5 mph   | 3 QCB           |  |
| March 19, 2008 | Brian Parker     | 1100/1630   | 0% clouds, 67°F, wind 0-2 mph   | 20% clouds, 70°F, wind 2-3 mph  | 7 QCB           |  |
|                | Kathy Pettigrew  | 1300/1600   | 0% clouds, 68°F, wind 2-10 mph  | 0% clouds, 65°F, wind 2-7 mph   | No QCB Observed |  |
|                | Sally Trnka      | 1130/1540   | 0% clouds, 68°F, wind 0-3 mph   | 5% clouds, 65°F, wind 2-7 mph   | 8 QCB           |  |
| ·              | Alison Varner    | 1100/1600   | 0% clouds, 67°F, wind 0-3 mph   | slight haze, 73°F, wind 3-6 mph | 8 QCB           |  |
|                | Jasmine Watts    | 1110/1630   | 0% clouds, 66.7°F, wind 0-2 mph | 0% clouds, 71°F, wind 3-6 mph   | 8 QCB           |  |
|                | Doug Allen       | 1230/1700   | 0% clouds, 74.5°F, wind 3-5 mph | 0% clouds, 67.0°F, wind 4-6 mph | 4 QCB           |  |
|                | Robert Hogenauer | 1045/1530   | 0% clouds, 72°F, wind 2-4 mph   | 0% clouds, 84°F, wind 6-8 mph   | 1 QCB           |  |
| 1 21 2000      | Brian Parker     | 1230/1700   | 0% clouds, 75°F, wind 1-3 mph   | 0% clouds, 67°F, wind 4-5 mph   | 3 QCB           |  |
| March 21, 2008 | Kathy Pettigrew  | 1535/1700   | 0% clouds, 74°F, wind 2-5 mph   | 0% clouds, 78°F, wind 1-4 mph   | 3 QCB           |  |
|                | Sally Trnka      | 1545/1655   | 0% clouds, 74°F, wind 2-5 mph   | 0% clouds, 75°F, wind 0-3 mph   | 2 QCB           |  |
|                | Jasmine Watts    | 1210/1700   | 0% clouds, 75°F, wind 1-3 mph   | 0% clouds, 67°F, wind 4-5 mph   | No QCB Observed |  |
| March 22, 2008 | Greg Mason       | 0930/1400   | 0% clouds, 78°F, wind 0-1 mph   | 0% clouds, 84°F, wind 0-5 mph   | No QCB Observed |  |

<sup>\*</sup>Total survey time = 66.5 hours; survey rate = 10.31 acres per hour †A total of 74 QCB were observed during this survey ‡QCB=Quino checkerspot butterfly

### Appendix A (cont.) **SURVEY INFORMATION**

|                |                  |             | Survey 2 Information          |                                 |                  |
|----------------|------------------|-------------|-------------------------------|---------------------------------|------------------|
| DATE           | BIOLOGIST        | TIME*       | WEATHER C                     | RESULTS†                        |                  |
|                |                  | (start/end) | Start                         | end                             |                  |
|                | Doug Allen       | 1030/1545   | 5% clouds, 80°F, wind 0-2 mph | 20% clouds, 78°F, wind 6-8 mph  | No QCB‡ Observed |
| 3.5 1.07.0000  | Robert Hogenauer | 1030/1545   | 5% clouds, 80°F, wind 1-3 mph | 0% clouds, 78°F, wind 8-12 mph  | No QCB Observed  |
| March 26, 2008 | Brian Parker     | 1100/1620   | 0% clouds, 73°F, wind 3-6 mph | 0% clouds, 74°F, wind 3-7 mph   | No QCB Observed  |
|                | Dale Ritenour    | 1100/1620   | 0% clouds, 73°F, wind 3-6 mph | 0% clouds, 74°F, wind 3-7 mph   | No QCB Observed  |
|                | Doug Allen       | 0955/1455   | 5% clouds, 66°F, wind 0-3 mph | 20% clouds, 82°F, wind 3-7 mph  | 1 QCB            |
| •              | Robert Hogenauer | 0955/1455   | 5% clouds, 66°F, wind 1-3 mph | 0% clouds, 82°F, wind 4-7 mph   | 1 QCB            |
|                | Amy Mattson      | 0955/1455   | 0% clouds, 62°F, wind 0-4 mph | 0% clouds, 69°F, wind 0-4 mph   | 1 QCB            |
| Nr. 1 07 2000  | Stacy Nigro      | 0955/1455   | 0% clouds, 62°F, wind 0-4 mph | slight haze, 69°F, wind 0-6 mph | 1 QCB            |
| March 27, 2008 | Brian Parker     | 1015/1530   | 0% clouds, 63°F, wind 2-5 mph | 0% clouds, 68°F, wind 3-5 mph   | No QCB Observed  |
|                | Dale Ritenour    | 1100/1500   | 0% clouds, 69°F, wind 0-3 mph | 0% clouds, 75°F, wind 0-6 mph   | No QCB Observed  |
|                | Sally Trnka      | 1015/1530   | 0% clouds, 63°F, wind 0-2 mph | 0% clouds, 68°F, wind 3-5 mph   | No QCB Observed  |
|                | Alison Varner    | 1100/1500   | 0% clouds, 69°F, wind 0-3 mph | 0% clouds, 75°F, wind 0-6 mph   | No QCB Observed  |

<sup>\*</sup>Total survey time = 57.4 hours; survey rate = 11.90 acres per hour †A total of 4 QCB were observed during this survey

<sup>‡</sup>QCB=Quino checkerspot butterfly

# Appendix A (cont.) SURVEY INFORMATION

|                |                  |                   | Survey 3 Information            |                                 |                  |  |
|----------------|------------------|-------------------|---------------------------------|---------------------------------|------------------|--|
| DATE           | BIOLOGIST        | TIME* (start/end) | WEATHER C                       | WEATHER CONDITIONS              |                  |  |
|                |                  | (start/end)       | Start                           | end                             |                  |  |
|                | Amy Mattson      | 1455/1630         | 0% clouds, 70°F, wind 0-3 mph   | 20% clouds, 70°F, wind 0-3 mph  | No QCB‡ Observed |  |
|                | Stacy Nigro      | 1420/1535         | % clouds, 71°F, wind 4-7 mph    | 0% clouds, 67°F, wind 4-7 mph   | No QCB Observed  |  |
|                | Brian Parker     | 1420/1535         | 0% clouds, 71°F, wind 5-7 mph   | 0% clouds, 67°F, wind 5-7 mph   | No QCB Observed  |  |
| April 4, 2008  | Dale Ritenour    | 1500/1635         | 5% clouds, 70°F, wind 2-5 mph   | 0% clouds, 78°F, wind 0-4 mph   | No QCB Observed  |  |
| •              | Sally Trnka      | 1420/1535         | 0% clouds, 71°F, wind 5-7 mph   | 0% clouds, 67°F, wind 2-7 mph   | No QCB Observed  |  |
|                | Alison Varner    | 1420/1535         | 0% clouds, 71°F, wind 5-7 mph   | 0% clouds, 67°F, wind 3-5 mph   | No QCB Observed  |  |
|                | Jasmine Watts    | 1455/1630         | 0% clouds, 70°F, wind 1-3 mph   | conditions not available        | No QCB Observed  |  |
|                | A M.             | 1230/1500         | 20% clouds, 73°F, wind 6-10 mph | 0% clouds, 69.8°F, wind 2-6 mph | No QCB Observed  |  |
| ·              | Amy Mattson      | 1530/1635         | 5% clouds, 68°F, wind 7-11 mph  | 30% clouds, 65°F, wind 6-8 mph  | No QCB Observed  |  |
| 4 1 - 2000     | Brian Parker     | 1235/1645         | 30% clouds, 65°F, wind 7-10 mph | 30% clouds, 65°F, wind 6-8 mph  | No QCB Observed  |  |
| April 7, 2008  | Dale Ritenour    | 1230/1515         | 15% clouds, 70°F, wind 6-10 mph | 0% clouds, 68°F, wind 2-4 mph   | No QCB Observed  |  |
|                |                  | 1530/1645         | 0% clouds, 68°F, wind 7-11 mph  | 0% clouds, 68°F, wind 6-8 mph   | No QCB Observed  |  |
|                | Sally Trnka      | 1235/1645         | 30% clouds, 65°F, wind 7-10 mph | 30% clouds, 65°F, wind 6-8 mph  | No QCB Observed  |  |
|                | Stacy Nigro      | 1045/1445         | 0% clouds, 67°F, wind 1-4 mph   | 0% clouds, 77°F, wind 3-4 mph   | No QCB Observed  |  |
| April 10, 2008 | Brian Parker     | 1045/1445         | 0% clouds, 67°F, wind 1-4 mph   | 0% clouds, 77°F, wind 2-4 mph   | No QCB Observed  |  |
| •              | Sally Trnka      | 1045/1445         | 0% clouds, 67°F, wind 1-4 mph   | 0% clouds, 77°F, wind 2-4 mph   | No QCB Observed  |  |
|                | D 1 II           | 1000/1145         | 0% clouds, 78°F, wind 1-5 mph   | 0% clouds, 86°F, wind 12-15 mph | No QCB Observed  |  |
| ,              | Robert Hogenauer | 1220/1525         | 0% clouds, 86°F, wind 7-12 mph  | 0% clouds, 90°F, wind 4-7 mph   | No QCB Observed  |  |
|                | Brian Parker     | 1030/1500         | 0% clouds, 78°F, wind 6-8 mph   | 0% clouds, 88°F, wind 3-5 mph   | No QCB Observed  |  |
|                | D 1 D:           | 1000/1145         | 0% clouds, 78°F, wind 1-5 mph   | 0% clouds, 85°F, wind 12-15 mph | No QCB Observed  |  |
| April 11, 2008 | Dale Ritenour    | 1220/1525         | 0% clouds, 86°F, wind 7-13 mph  | 0% clouds, 86°F, wind 4-7 mph   | No QCB Observed  |  |
|                | Sally Trnka      | 1030/1500         | 0% clouds, 78°F, wind 6-8 mph   | 0% clouds, 88°F, wind 3-5 mph   | No QCB Observed  |  |
|                | Alison Varner    | 1250/1525         | 0% clouds, 86°F, wind 3-12 mph  | 0% clouds, 86°F, wind 4-7 mph   | No QCB Observed  |  |
|                | T                | 0950/1210         | 0% clouds, 79°F, wind 0-2 mph   | 0% clouds, 86°F, wind 4-7 mph   | No QCB Observed  |  |
|                | Jasmine Watts    | 1215/1420         | 0% clouds, 86°F, wind 3-12 mph  | 0% clouds, 89F, wind 4-9 mph    | No QCB Observed  |  |

<sup>\*</sup>Total survey time = 54.3 hours; survey rate = 12.58 acres per hour †No QCB were observed during this survey ‡QCB=Quino checkerspot butterfly

# Appendix B COPIES OF SURVEY FORMS AND FIELD NOTES

| Surveyor: Doug A    | len                  | Date: 3/19/08    |
|---------------------|----------------------|------------------|
| Site Name: Otay H   | ills                 | Site Visit No: 1 |
| Acres Surveyed      | Survey Time: 5.33    | Acres per Hour:  |
| Other Surveyors Pre | esent: Jasmine Watts |                  |
|                     | ·                    |                  |

|       | Field Conditions |                  |                  |             |  |  |
|-------|------------------|------------------|------------------|-------------|--|--|
|       | Time (24 hr)     | Temperature (°F) | Wind Speed (mph) | Cloud Cover |  |  |
| Start | 1110             | 66.7             | 0-2              | High haze   |  |  |
| End   | 1630             | 71               | 2-3              | 20%         |  |  |
| Start |                  |                  |                  |             |  |  |
| End   |                  |                  |                  |             |  |  |

| Vegetation Communities Surveyed (inc. dominant spp.) |  |
|--|--|
|  |  |
|  |  |

| Host Plants                              | Obs. | Nectar Plants                                    | Obs. |
|--|------|--|------|
| dwarf plantain (Plantago erecta)         | X    | popcorn flower (Cryptantha / Plagiobothrys spp.) | X    |
| purple owl's clover (Castilleja exserta) |      | goldfields (Lasthenia spp.)                      | X    |
| snapdragon (Antirrhinum coulterianum)    |      | chia (Salvia columbariae)                        |      |
| birds-beak (Cordylanthus rigidus)        |      | goldenstar (Muilla spp.)                         |      |
| woolly plantain (Plantago patagonica)    |      | fiddleneck (Amsinckia intermedia)                |      |
|  |      | onion (Allium spp.)                              |      |
|  |      | buckwheat (Eriogonum fasciculatum)               | X    |
|  |      |  |      |

| Butterfly Species                                   | No. | Butterfly Species                                      | No. |
|---|-----|--|-----|
| Checkerspots  |     | Hairstreaks  |     |
| California patch (Chlosyne californica)             |     | great purple hairstreak (Atlides halesus corcorani)    |     |
| Gabb's checkerspot (C. gabbii)                      | 4   | brown elfin (Callophrys augustinus)                    |     |
| Quino checkerspot (Euphydryas editha quino)         | 22  | bramble (perplexing) hairstreak (C. dumetorum affinis) | 2   |
| chalcedon checkerspot (E. chalcedona chalcedona)    |     | gray hairstreak (Strymon melinus pudica)               |     |
| Leanira checkerspot (Thessalia leanira wrighti)     |     | Ladies/Admirals  |     |
| Mylitta crescent (Phyciodes mylitta)                |     | California sister (Adelpha bredowii californica)       |     |
| Blues   |     | Lorquin's admiral (Limenitis lorquini)                 |     |
| western pygmy-blue ( <i>Brephidium exila</i> )      | 4   | west coast lady (Vanessa annabella)                    | 5   |
| western tailed blue (Everes amyntula)               |     | red admiral (V. atalanta rubria)                       |     |
| southern blue (Glaucopsyche lygdamus australis)     |     | painted lady (V. cardui)                               | 3   |
| Edward's blue (Hemiargus ceraunus gyas)             |     | American (Virginia) lady (V. virginiensis)             |     |
| Acmon blue (Icaricia acmon acmon)                   |     | unidentified lady (Vanessa sp.)                        |     |
| marine blue ( <i>Leptotes marina</i> )              |     | Swallowtails   |     |
| unidentified blue                                   |     | pale swallowtail (Papilio eurymedon)                   |     |
| Whites  |     | western tiger swallowtail (P. rutulus)                 |     |
| Sara orangetip (Anthocharis sara sara)              | 6   | anise swallowtail (P. zelicaon)                        |     |
| desert (Felder's) orangetip (A. cethura)            |     | Miscellaneous  |     |
| common California ringlet (Coenonympha californica) | 3   | monarch (Danaus plexippus)                             |     |
| cabbage white ( <i>Pieris rapae</i> )               |     | common buckeye (Junonia coenia grisea)                 |     |
| checkered (common) white (Pontia protodice)         | 6   | mourning cloak (Nymphalis antiopa)                     |     |
| spring white ( <i>P. sisymbrii</i> )                |     | Skippers   |     |
| unidentified white                                  |     | funereal duskywing (Erynnis funeralis)                 | 4   |
| Metalmarks  |     | mournful duskywing (Erynnis tristis)                   |     |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> ) | 14  | fiery skipper (Hylephila phyleus)                      |     |
| Wright's metalmark (Calephelis wrighti)             |     | white (common) checkered-skipper (Pyrgus albescens)    |     |
| Sulphurs  |     | Other  |     |
| orange sulphur ( <i>Colias eurytheme</i> )          |     |  |     |
| sleepy orange ( <i>Eurema nicippe</i> )             |     |  |     |
| cloudless sulfur (Phoebus sennae marcellina)        |     |  |     |
| unidentified sulphur                                |     |  |     |
| Column Subtotal                                     | 59  | Column Subtotal  | 14  |
|   |     | Total  | 73  |

| Samoi                            |
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| 3/29/00                          |
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| ACBI  | Fire Brak Plour  | 5  | 2         |  |
| Butherlie<br>Cown<br>Blue Sp<br>Re SAOT<br>FUDW<br>PALA | Fire Brak Ple<br>Popcon stown  | Cuese<br>Brassicas<br>Amsualua<br>Cotus sa | S. gallic |  |

2006 Quino Checkerspot Butterfly Survey Form Surveyor: KobH Date: 3/1分しも Site Name: SPM-01 6TAY H.115 Site Visit No: 1 Acres Surveyed Survey Time: 4 r 35min Acres per Hour: 4.58 Other Surveyors Present: Field Conditions Time (24 hr) Wind Speed (mph) Cloud Cover Temperature (°F) 69 Start 5% Taug Brook 1520 10 % End 74 Start End Vegetation Communities Surveyed (inc. dominant spp.) **Host Plants** Obs. **Nectar Plants** Obs. dwarf plantain (Plantago erecta) popcorn flower (Cryptantha / Plagiobothrys spp.) purple owl's clover (Castilleja exserta) goldfields (Lasthenia spp.) snapdragon (Antirrhinum coulterianum)) chia (Salvia columbariae) birds-beak (Cordylanthus rigidus) goldenstar (Muilla spp.) woolly plantain (Plantago patagonica) fiddleneck (Amsinckia intermedia) onion (Allium spp.) buckwheat (Eriogonum fasciculatum) **Butterfly Species** No. **Butterfly Species** No. Checkerspots Hairstreaks California patch (Chlosyne californica) great purple hairstreak (Atlides halesus corcorani) Gabb's checkerspot (C. gabbii) brown elfin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dumetorum affinis) Quino checkerspot (Euphydryas editha quino) 5 chalcedon checkerspot (E. chalcedona chalcedona) gray hairstreak (Strymon melinus pudica) Leanira checkerspot (Thessalia leanira wrighti) Ladies/Admirals Mylitta crescent (Phyciodes mylitta) California sister (Adelpha bredowii californica) Lorquin's admiral (Limenitis lorquini) Blues western pygmy-blue (Brephidium exila) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) western tailed blue (Everes amyntula) ᇽ southern blue (Glaucopsyche lygdamus australis) painted lady (V. cardui) Edward's blue (Hemiargus ceraunus gyas) American (Virginia) lady (V. virginiensis) 3 Acmon blue (Icaricia acmon acmon) unidentified lady (Vanessa sp.) marine blue (Leptotes marina) **Swallowtails** unidentified blue pale swallowtail (Papilio eurymedon) Whites western tiger swallowtail (P. rutulus) Sara orangetip (Anthocharis sara sara) anise swallowtail (P. zelicaon) desert (Felder's) orangetip (A. cethura) Miscellaneous common California ringlet (Coenonympha californica) monarch (Danaus plexippus) cabbage white (Pieris rapae) common buckeye (Junonia coenia grisea) checkered (common) white (Pontia protodice) 12 mourning cloak (Nymphalis antiopa) spring white (P. sisymbrii) unidentified white 13 funereal duskywing (Erynnis funeralis) 4 Metalmarks mournful duskywing (Erynnis tristis) Behr's metalmark (Apodemia mormo virgulti) fiery skipper (Hylephila phyleus) Wright's metalmark (Calephelis wrighti) white (common) checkered-skipper (Pyrgus albescens) Sulphurs orange sulphur (Colias eurytheme) unidentified noth 30 + sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina) unidentified sulphur Column Subtotal Column Subtotal

Total

|   | Name: Pub H                           | <b>Date:</b> 3/19/05 |
|---|---------------------------------------|----------------------|
| Butterflies Observed (larvae or adults)             | Number                                | Comments:            |
| Pale Swallowtail (Paplio eurymedon)                 |                                       |                      |
| Anise Swallowtail (P. zelicaon)                     |                                       |                      |
| West Tiger Swallowtail (P. rutulus)                 | 11                                    |                      |
| Sara Orangetip (Anthocharis sara)                   | ++++ 1                                |                      |
| Felder's Orangetip (A. cethura)                     | 7117111                               |                      |
| Cabbage White (Artogeia rapae)                      | 7                                     |                      |
| Sleepy Orange (Eurema nicippe)                      |                                       |                      |
| Common White (Pontia protodice)                     | HH HT 11                              |                      |
| California Dogface (Zerene eurydice)                | ATT NII                               |                      |
| Alfalfa Butterfly (Colias eurytheme)                |                                       |                      |
| Harford's Sulfur (C. harfordi)                      |                                       |                      |
| California Ringlet (Coenonympha californica)        | HT II                                 |                      |
| Monarch (Danaus plexippus)                          | MII 11                                | -                    |
| Queen (D. gilippus)                                 |                                       |                      |
| Henne's Checkerspot (Euphydryas chalcedona hennei)  |                                       |                      |
| Calcedon Checkerspot (E. chalcedona chalcedona)     | 11                                    |                      |
| Quino Checkerspot (E. editha quino)                 | 11                                    |                      |
| Gabb's Checkerspot (Charidryas gabbii)              | 11                                    |                      |
| Leanira Checkerspot (Thessalia leanira wrighti)     |                                       |                      |
| Mylitta Cresent (Phyciodes mylitta)                 |                                       |                      |
| Painted Lady (Vannessa cardui)                      |                                       |                      |
| West Coast Lady (V. annabella)                      | 1111                                  |                      |
| Virginia Lady (V. viginiensis)                      | 1                                     |                      |
| Red Admiral (V. atalanta)                           |                                       | <u> </u>             |
| Buckeye (Junonia coenia)                            | · · · · · · · · · · · · · · · · · · · |                      |
| Mourning Cloak (Nymphalis antiopa)                  |                                       |                      |
| California Sister (Adelpha bredowii californica)    |                                       |                      |
| Satyr Anglewing (Polygonia satyrus)                 |                                       |                      |
| Lorquin's Admiral (Basilarchia lorquini)            |                                       |                      |
| Western Tailed Blue (Everes amyntula)               |                                       |                      |
| Southern Blue (Glaucopsyche lygdamus australis)     |                                       |                      |
|   | HT-444 1                              |                      |
| Echo Blue (Celastrina ladon echo)                   |                                       |                      |
| Sonoran Blue (Philotes sonorensis)                  |                                       |                      |
| Marine Blue (Leptotes marina)                       |                                       |                      |
| Acmon Blue (Icaricia acmon)                         |                                       |                      |
| Pygmy Blue (Brephidium exilis)                      |                                       |                      |
| Gray Hairstreak (Strymon melinus)                   |                                       |                      |
| Brown Elfin (Incisalia augustinus)                  | 1                                     |                      |
| Perplexing Hairstreak (Callophrys perplexa)         | HT                                    |                      |
| Grt Purple Hairstreak (Atlides halesus)             |                                       |                      |
| Behr's Metalmark ( <i>Apodemia mormo virgulti</i> ) | JHT 1                                 |                      |
| Wright's Metalmark (Calephelis wrightii)            |                                       |                      |
| California Patch (Chlosyne californica)             |                                       |                      |
| Funereal Duskywing (Erynnis funeralis)              | 1111                                  |                      |
| Blue  | 111 444 1111                          |                      |
| white   | INT UNTIL                             |                      |
| lady  | 111                                   |                      |
| check stip  | 111                                   |                      |

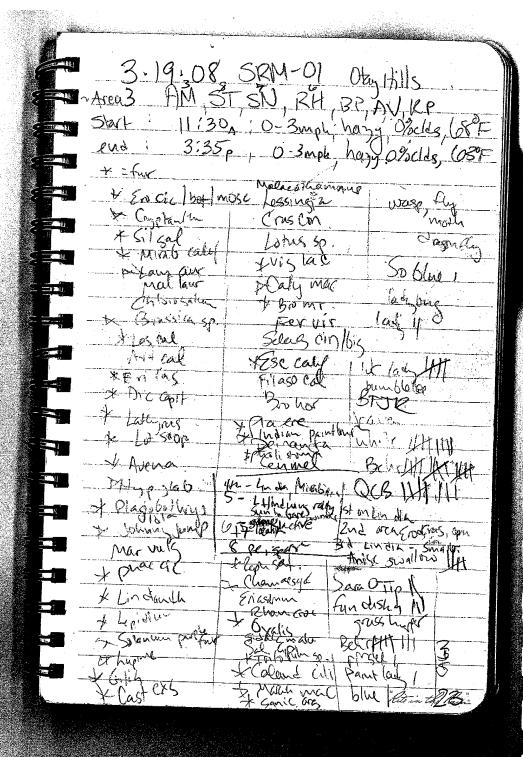
| Surveyo     | r: Arny Mattson   |  |  | Date  | : 03/19/2008                          |                                       |
|-------------|---|--|--|---|---------------------------------------|---------------------------------------|
| Site Nan    | ne: Otay Hills (SRM-01)                                 |  |  |   | Site Visit No: 1                      |                                       |
| Acres S     | urveyed   | Survey Ti                              | me: 4/1  | nours 4.08 Acr  | es per Hour:                          |                                       |
|             | urveyors Present: Rober                                 |  |  | ······································                              |                                       |                                       |
| -           |   | riogenaur, otac                        | y Nigio, Di                                      | ian rainer, Namy remgrew  | , Sally Trika, Alison varner          |                                       |
|             | ·   |  |  |   |                                       | <del></del>                           |
|             |   |  |  | onditions   |                                       | · · · · · · · · · · · · · · · · · · · |
|             | Time (24 hr)  | Tempe                                  | rature (°F)                                      | Wind Speed (m   | ph) Cloud Cov                         | er                                    |
| Start       | 11:30   | 68                                     |  | 0-3   | 0%                                    |                                       |
| End         | 15:35   | 63                                     |  | 0-3   | 0%                                    |                                       |
| Start       |   |  |  |   |                                       | <del> ,</del>                         |
| End         |   |  |  |   |                                       | ·                                     |
| Lilu        |   |  |  |   |                                       |                                       |
| Vegetati    | on Communities Surveyed                                 | (inc. dominant                         | snn )  |   |                                       |                                       |
| 3           |   | (iiioi doiiiiidii)                     | 3pp.)  |   |                                       |                                       |
|             |   |  |  |   |                                       |                                       |
|             |   |  |  |   | •                                     |                                       |
| r           | Host Plants   |  | Oh-  |   |                                       | · · · · · · · · · · · · · · · · · · · |
| dwarf pla   | antain ( <i>Plantago erecta</i> )                       | ······································ | Obs.   |   | r Plants                              | Obs.                                  |
|             | wl's clover ( <i>Castilleja exserta</i>                 | · · · · · · · · · · · · · · · · · · ·  | 1  | popcorn flower (Cryptanti   |                                       | 1 1                                   |
|             | gon ( <i>Antirrhinum coulterianur</i>                   |  | <b>'</b>   | goldfields ( <i>Lasthenia</i> spp. goldenstar ( <i>Muilla</i> spp.) | )                                     | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ |
|             | ak (Cordylanthus rigidus)                               |  |  | fiddleneck (Amsinckia inte  | armadia)                              | +                                     |
|             | antain ( <i>Plantago patagonica</i> )                   |  |  | onion (Allium spp.)   | simedia)                              |                                       |
|             |   |  |  | buckwheat (Eriogonum fa   | sciculatum)                           | 1                                     |
|             |   |  |  | ground pink ( <i>Linanthus di</i>                                   |                                       | 1                                     |
|             |   |  |  |   |                                       | <u> </u>                              |
|             | D. M. G. C.   |  |  |   |                                       | <del></del>                           |
| Checkers    | Butterfly Species                                       |  | No.  |   | y Species                             | No.                                   |
|             | patch ( <i>Chlosyne californica</i> )                   |  |  | Hairstreaks   | (i-l bl                               | <u> </u>                              |
|             | neckerspot (C. gabbii)                                  |  |  | great purple hairstreak (Atabrown elfin (Callophrys au              |                                       |                                       |
|             | eckerspot (Euphydryas edith                             | a auino)                               | 8  | bramble (perplexing) hairst   | -                                     |                                       |
|             | n checkerspot (E. chalcedona                            |  | <del>                                     </del> | gray hairstreak (Strymon n  | ·                                     |                                       |
|             | heckerspot ( <i>Thessalia leanira</i>                   |  | · ·  | Ladies/Admirals   |                                       |                                       |
| Mylitta cre | escent ( <i>Phyciodes mylitta</i> )                     |  |  | California sister (Adelpha I  | <b> </b>                              |                                       |
| Blues       |   | -                                      |  | Lorquin's admiral (Limeniti   |                                       |                                       |
|             | ygmy-blue ( <i>Brephidium exila</i>                     | )                                      |  | west coast lady (Vanessa  | 5                                     |                                       |
|             | ailed blue (Everes amyntula)                            |  |  | red admiral (V. atalanta rubria)                                    |                                       |                                       |
|             | blue (Glaucopsyche lygdamu                              |  | 1  | painted lady (V. cardui)  |                                       |                                       |
|             | blue (Hemiargus ceraunus g<br>ue (Icaricia acmon acmon) | yas)                                   |  | American (Virginia) lady (V   |                                       | ļ <u>.</u>                            |
|             | ue (Leptotes marina)                                    |  | <u> </u>   | unidentified lady (Vanessa<br>Swallowtails                          | sp.)                                  | 2                                     |
| unidentifie | <del></del>   |  | 1  | pale swallowtail (Papilio eu  | (n/modon)                             | -                                     |
| Whites      |   |  | <del>'</del> -                                   | western tiger swallowtail (F  |                                       | <del> </del>                          |
| Sara oran   | getip ( <i>Anthocharis sara sara</i>                    | )                                      | 2  | anise swallowtail (P. zelica  | 5                                     |                                       |
| desert (Fe  | elder's) orangetip (A. cethura                          | )                                      |  | Miscellaneous   | 9.17                                  | -                                     |
| common (    | California ringlet ( <i>Coenonym</i> )                  | oha californica)                       | 1  | monarch (Danaus plexippu  | ıs)                                   |                                       |
|             | white ( <i>Pieris rapae</i> )                           |  |  | common buckeye (Junonia   |                                       |                                       |
|             | d (common) white (Pontia pro                            | otodice)                               |  | mourning cloak (Nymphalis   | s antiopa)                            |                                       |
|             | ite ( <i>P. sisymbrii</i> )                             |  |  | Skippers  |                                       |                                       |
| unidentifie | ·····   |  | 9  | funereal duskywing (Erynn   |                                       | 3                                     |
| Metalmar    |   |  |  | mournful duskywing (Erynr   |                                       |                                       |
|             | etalmark (Apodemia mormo v                              |  | 23   | fiery skipper (Hylephila phy  |                                       |                                       |
| Sulphurs    | netalmark ( <i>Calephelis wright</i>                    | )                                      |  |   | l-skipper ( <i>Pyrgus albescens</i> ) |                                       |
|             | lphur (Colias eurytheme)                                |  |  | Other   |                                       | ļ                                     |
| orange en   |   | '                                      | ı  |   |                                       |                                       |
|             | inge (Eurema nicippe)                                   |  |  |   |                                       | <b>-</b>                              |

Column Subtotal 16

Total 61

unidentified sulphur

Column Subtotal 45



| Surveyor: Stacy Nigro    |  | Date: 3/19/08                             |   |
|--------------------------|--|---|---|
| Site Name: Otay Hills    |  | Site Visit No: 1                          | _ |
| Acres Surveyed 65.7      | Survey Time: 4.58 hrs                              | Acres per Hour: 14.3                      | _ |
| Other Surveyors Present: | A. Varner, S. Trnka, D. Allen, J. Watts, B. Parker | r, K. Pettigrew, A. Mattson, R. Hogenauer |   |

|       | Field Conditions |                  |                    |             |  |  |  |  |  |
|-------|------------------|------------------|--------------------|-------------|--|--|--|--|--|
|       | Time (24 hr)     | Temperature (°F) | . Wind Speed (mph) | Cloud Cover |  |  |  |  |  |
| Start | 11:30            | 68               | 0-3                | 0/clear     |  |  |  |  |  |
| End   | 16:05            | 68               | 2-5                | 0/clear     |  |  |  |  |  |
| Start |                  |                  |                    |             |  |  |  |  |  |
| End   |                  |                  |                    |             |  |  |  |  |  |

Vegetation Communities Surveyed (inc. dominant spp.)DCSS – Art cal, Erio fasc, Vig lac, Mal laur; SMC – Ade fasc, Cean sp.; NNG – Brom di, Dich cap, Avena sp.

| Host Plants                              | Obs. | Nectar Plants                                    | Obs. |  |
|--|------|--|------|--|
| dwarf plantain (Plantago erecta)         | X    | popcorn flower (Cryptantha / Plagiobothrys spp.) | X    |  |
| purple owl's clover (Castilleja exserta) | Х    | goldfields (Lasthenia spp.)                      | X    |  |
| snapdragon (Antirrhinum coulterianum)    |      | chia (Salvia columbariae)                        |      |  |
| birds-beak (Cordylanthus rigidus)        |      | goldenstar (Muilla spp.)                         |      |  |
| woolly plantain (Plantago patagonica)    |      | fiddleneck (Amsinckia intermedia)                |      |  |
|  |      | onion (Allium spp.)                              | X    |  |
|  |      | buckwheat (Eriogonum fasciculatum)               | X    |  |
|  |      |  |      |  |

| Butterfly Species                                   | No. | Butterfly Species  | No.         |
|---|-----|--|-------------|
| Checkerspots  |     | Hairstreaks  |             |
| California patch (Chlosyne californica)             |     | great purple hairstreak (Atlides halesus corcorani)          |             |
| Gabb's checkerspot (C. gabbil)                      | 11  | brown elfin (Callophrys augustinus)                          | 1           |
| Quino checkerspot (Euphydryas editha quino)         | 3   | bramble (perplexing) hairstreak (C. dumetorum affinis)       | 2           |
| chalcedon checkerspot (E. chalcedona chalcedona)    |     | gray hairstreak (Strymon melinus pudica)                     |             |
| Leanira checkerspot (Thessalia leanira wrighti)     |     | Ladies/Admirals  |             |
| Mylitta crescent (Phyciodes mylitta)                |     | California sister (Adelpha bredowii californica)             |             |
| Blues   |     | Lorquin's admiral ( <i>Limenitis lorquini</i> )              |             |
| western pygmy-blue (Brephidium exila)               |     | west coast lady (Vanessa annabella)                          |             |
| western tailed blue (Everes amyntula)               |     | red admiral (V. atalanta rubria)                             |             |
| southern blue (Glaucopsyche lygdamus australis)     | 3   | painted lady (V. cardui)                                     |             |
| Edward's blue (Hemiargus ceraunus gyas)             |     | American (Virginia) lady (V. virginiensis)                   | <del></del> |
| Acmon blue (Icaricia acmon acmon)                   |     | unidentified lady (Vanessa sp.)                              |             |
| marine blue (Leptotes marina)                       |     | Swallowtails   |             |
| unidentified blue                                   | 6   | pale swallowtail (Papilio eurymedon)                         |             |
| Whites  |     | western tiger swallowtail (P. rutulus)                       |             |
| Sara orangetip (Anthocharis sara sara)              | 20  | anise swallowtail (P. zelicaon)                              |             |
| desert (Felder's) orangetip (A. cethura)            |     | Miscellaneous  |             |
| common California ringlet (Coenonympha californica) |     | monarch (Danaus plexippus)                                   |             |
| cabbage white (Pieris rapae)                        |     | common buckeye (Junonia coenia grisea)                       |             |
| checkered (common) white (Pontia protodice)         |     | mourning cloak (Nymphalis antiopa)                           |             |
| spring white (P. sisymbrii)                         |     | Skippers   |             |
| unidentified white                                  | 6   | funereal duskywing (Erynnis funeralis)                       | 1           |
| Metalmarks  |     | mournful duskywing (Erynnis tristis)                         |             |
| Behr's metalmark (Apodemia mormo virgulti)          | - 6 | fiery skipper (Hylephila phyleus)                            |             |
| Wright's metalmark (Calephelis wrighti)             |     | white (common) checkered-skipper ( <i>Pyrgus albescens</i> ) |             |
| Sulphurs  |     | Other  |             |
| orange sulphur (Colias eurytheme)                   |     |  |             |
| sleepy orange (Eurema nicippe)                      |     |  |             |
| cloudless sulfur (Phoebus sennae marcellina)        |     |  |             |
| unidentified sulphur                                |     |  |             |
| Column Subtotal                                     | 55  | Column Subtotal  | 4           |
|   |     | Total  | 59          |

| 3/19/08 5RM-01 Other Hills CRE#1          | 3/19/08 p2/2 coc8#1 Othery Hills |
|---|----------------------------------|
| S. NIGRO W/ AV, BP KP ST AM RH            | + Contact * Assist   Solverel*   |
| 16:05                                     | +A+ col Ade fauc                 |
| 42 2-5 Ara#8                              | Solen parish *                   |
| 68° 655.7 a.                              | Mile laeve                       |
| clear clear = 14.5 ac/he                  | Cet. 27 x                        |
| S- SOM SOLO SOLO SOLO SOLO SOLO SOLO SOLO | 15 Jan 15                        |
| ×   | Size that then wife South soft   |
| blue - 1: = 6                             | با.                              |
| OWNO == 3                                 | Leath cel                        |
| behus - 1: - 6                            | Callind, *                       |
| 511v. blue-1 = 3                          | Cent mat Viola Ap *              |
|   | <del></del>                      |
| green hair = & (perplay bairs)            |                                  |
| ba elf-1 = 1                              | Dich czo* Fer vir                |
| 2 - 1 - prop                              | *                                |
| two dusk - • -                            | $\leftarrow$                     |
|   | Colus mack Kilo bic              |
| DCSS-coon- Amis- At al Sight Will         | Plantere Milhom Cup              |
| Mal laur, Viola, Allium,                  | Lin dien # War mac               |
| SMCTOREN - ADI Frey Com Sp.               |                                  |
| NNG- Brom Di Dic Co.                      | Lating * Minaur*                 |
| + Kreve                                   | Comon Het and                    |
| (-1 0:10:10 + 1cm                         | Compiles   grands hairent        |
|   |                                  |

|  |                            | 2008                 | Quino Ch          | eckersp             | ot But                                | terfly Su           | rvey Form                                 |                        |  |  |
|--|----------------------------|----------------------|-------------------|---------------------|---------------------------------------|---------------------|---|------------------------|--|--|
| Survey                                   | or:                        | Brian Parke          | rian Parker       |                     |                                       |                     | Date: 3/19/2                              |                        | 2008   |  |
| Site Na                                  | me:                        | Otay Hills (         | Otay Hills Quarry |                     |                                       |                     |   | 1                      |  |  |
| Acres 9                                  | Surveyed                   | <del></del>          | Survey Time: 4    |                     |                                       |                     | Acres per Hou                             | ·                      |  |  |
|  | ors Present:               | Dale Riteno          | -                 |                     | Doug                                  | Allon               | Autos per 110                             | 0.00                   |  |  |
|  | oro reconn.                |                      |                   | <del></del> -       | Doug                                  | Allen               | ·   |                        |  |  |
|  |                            | Sally Trnka          | Allson            | Fischer             |                                       |                     |   |                        |  |  |
|  |                            |                      |                   | Field C             | onditio                               | ns                  |   |                        |  |  |
|  | Time (2                    | 24 hr)               | Temper            | ature (°F)          | )                                     | Wind                | Speed (mph)                               | Cloud Cov              | er   |  |
| Start                                    | 1100                       | 67                   | •.                |                     |                                       | 0-2                 |   | 0%                     |  |  |
| End                                      | 1630                       | 70                   | )                 |                     |                                       | 2-3                 |   | 20%                    |  |  |
| Start                                    |                            |                      |                   |                     |                                       |                     |   | %                      |  |  |
| End                                      |                            |                      |                   |                     |                                       |                     | <del></del>                               | %                      |  |  |
|  |                            |                      |                   |                     | 1                                     |                     | ·   | 76                     |  |  |
| Vegetati                                 | on Communities             | s Surveyed (inc.     | dominant          | spp.)               |                                       |                     |   |                        |  |  |
| Diegan o                                 | oastal sage scrut          | b (Eri fas, Vig lac, | Mal lau, ai       | nd numer            | ous ann                               | ual flowers         | 3)  |                        |  |  |
|  |                            | sland (Bromus spp    |                   |                     |                                       |                     |   |                        |  |  |
| 711043 01                                | Tion hauve grass           | siand (bioinus spp   | , Averia)         |                     |                                       |                     |   |                        |  |  |
|  | Host                       | Plants               |                   | Obs.                |                                       |                     | Nectar Plants                             |                        | Obs.   |  |
| dwarf pla                                | ntain ( <i>Plantago e</i>  | erecta)              |                   |                     | popc                                  | orn flower          | (Cryptantha / Plag                        | iobothrys spp.)        |  |  |
| purple owl's clover (Castilleja exserta) |                            |                      |                   |                     |                                       | henia spp.)         | ,   | $\overline{\boxtimes}$ |  |  |
| snapdrag                                 | on ( <i>Antirrhinum</i> d  | coulterianum)        |                   |                     |                                       | nstar ( <i>Mu</i>   |   |                        |  |  |
| birds-beak (Cordylanthus rigidus)        |                            |                      |                   |                     |                                       | sinckia intermedia) |   | 1 =                    |  |  |
| woolly plantain (Plantago patagonica)    |                            |                      |                   | onion (Allium spp.) |                                       |                     |   |                        |  |  |
|  |                            |                      | ·                 |                     |                                       | ·                   | ogonum fasciculatu                        | um)                    |  |  |
|  |                            |                      |                   |                     |                                       |                     | nanthus dianthiflor                       |                        |  |  |
|  |                            | -                    |                   |                     | <u> </u>                              |                     |   |                        | <del>                                     </del> |  |
|  | 5 0                        |                      |                   |                     | · · · · · · · · · · · · · · · · · · · |                     |   |                        |  |  |
| Checkers                                 |                            | y Species            |                   | No.                 | <del> </del>                          |                     | Butterfly Specie                          | 8                      | No.  |  |
|  | patch ( <i>Chlosyne</i>    | a californica)       | <del></del>       |                     | Hairst                                |                     | -1 1 (44) 1 1 1                           | <del></del>            | ļ  |  |
|  | neckerspot (C. ga          |                      |                   |                     |                                       |                     | streak (Atlides hale                      |                        | ļ  |  |
|  |                            | ≀dryas editha quin   | <u> </u>          | 7                   |                                       |                     | ophrys augustinus                         |                        | <del> </del>                                     |  |
|  |                            | . chalcedona chal    |                   |                     |                                       |                     | sing) nairstreak (C.<br>Strymon melinus p | dumetorum affinis)     | <u> </u>   |  |
|  |                            | ssalia leanira wrigi |                   |                     |                                       | s/Admiral           |   | uuica)                 | <del>  '</del>                                   |  |
|  | escent (Phyciodes          |                      | ,                 |                     |                                       |                     | (Adelpha bredowii                         | californica\           | <del> </del>                                     |  |
| Blues                                    |                            |                      |                   |                     |                                       |                     | l (Limenitis lorguin                      |                        | <del> </del>                                     |  |
| western p                                | ygmy-blue ( <i>Brepi</i>   | hidium exila)        |                   |                     |                                       |                     | Vanessa annabel                           |                        | 2  |  |
| western ta                               | ailed blue (Everes         | s amyntula)          |                   |                     | red admiral (V. atalanta rubria)      |                     |   |                        | <del></del>                                      |  |
|  |                            | che lygdamus aus     | tralis)           | 2                   |                                       | lady (V.            |   |                        | <del>  1</del>                                   |  |
| Edward's                                 | blue ( <i>Hemiargus</i>    | ceraunus gyas)       |                   |                     |                                       |                     | ia) lady ( <i>V. virginie</i>             | nsis)                  | <del>                                     </del> |  |
| Acmon bl                                 | ue ( <i>Icaricia acmo</i>  | on acmon)            |                   |                     |                                       |                     | (Vanessa sp.)                             |                        |  |  |
| marine blo                               | ue ( <i>Leptotes mari</i>  | rina)                |                   |                     | Swalle                                | wtails              |   |                        |  |  |
| unidentific                              | ed blue                    |                      |                   |                     | pale s                                | vallowtail          | (Papilio eurymedoi                        | 7)                     | <u> </u>   |  |
| Whites                                   |                            |                      |                   |                     | wester                                | n tiger sw          | allowtail (P. rutulus                     | )                      |  |  |
|  | getip ( <i>Anthochar</i> i |                      |                   | 1                   | anise                                 | wallowtail          | (P. zelicaon)                             |                        | 1  |  |
|  | elder's) orangetip         |                      |                   |                     | Misce                                 | laneous             |   |                        |  |  |
|  |                            | (Coenonympha ca      | lifornica)        |                     | monar                                 | ch ( <i>Danau</i>   | s plexippus)                              |                        |  |  |
|  | vhite ( <i>Pieris rapa</i> |                      |                   | 1                   | comm                                  | on buckey           | e (Junonia coenia                         | grisea)                |  |  |
|  |                            | e (Pontia protodice  | 9)                |                     | mourn                                 | ng cloak (          | Nymphalis antiopa                         | )                      |  |  |
|  | te ( <i>P. sisymbrii</i> ) |                      |                   |                     | Skipp                                 |                     |   |                        |  |  |
| unidentifie                              |                            |                      |                   |                     | funere                                | al duskywi          | ng ( <i>Erynnis funera</i>                | lis)                   | 1  |  |
| Metalmar                                 |                            |                      |                   |                     |                                       |                     | ing ( <i>Erynnis tristis</i> )            |                        |  |  |
|  |                            | nia mormo virgulti)  |                   | 7                   |                                       |                     | lephila phyleus)                          |                        |  |  |
|  | netalmark (Calepi          | helis wrighti)       |                   |                     | white (                               | common)             | checkered-skipper                         | (Pyrgus albescens)     |  |  |
| Sulphurs                                 | <u> </u>                   |                      |                   |                     | Other                                 |                     |   |                        |  |  |
|  | phur ( <i>Colias eur</i> ) |                      |                   |                     |                                       |                     |   |                        |  |  |
|  | nge ( <i>Eurema nic</i>    |                      |                   |                     |                                       |                     |   |                        |  |  |
|  |                            | sennae marcellina    | )                 |                     |                                       |                     |   |                        |  |  |
| unidentifie                              | d sulphur                  | -                    |                   |                     | 1                                     |                     |   |                        | <del></del>                                      |  |

Column Subtotal

18

Column Subtotal Total

23

|  | OTAN Hills Quan | 7 3/19/8                                  | /                                       |
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| =1 .                                   | Luginus         |   | e energie des                           |
|  | bro du          | Behrmmil                                  | entene ente qu                          |
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| *                                      | Medaja          | Michael "                                 |   |
|  | Wir cal         | all w                                     |   |
| <b>3</b> '\                            | lighe           | Ange ST                                   | *                                       |
|  | Dicerp          | WCLIA;                                    |   |
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| 7                                      | Chomaespa       | 5. 302 :                                  | ********                                |
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| 1/  | 2008 Qu                                      | ino Ch                | eckersp           | ot Bu         | tterfly Survey Form  |                      |  |
|---|--|-----------------------|-------------------|---------------|--|----------------------|--|
| Surveyor:                                 | thy tettieren                                | )                     | Date: 3/19/08     |               |  |                      |  |
| Site Name: D                              |  |                       |                   |               |  | isit No:             |  |
| Acres Surveyed                            | 4 9 ,, , , ,                                 | urvey Ti              | me:               | 2./>          |  |                      |  |
| Other Surveyor                            | es Brosonti Book - D                         | orvey in              | ر. — رادان<br>د س | 1)            | Acres per H  | our:                 | - N  |
| Other Surveyor                            | AL.  | <del>دادوی</del><br>ا | STOCU             |               | cossally Troka   | olasmine!            | ubtle  |
|   | H1.5001                                      | arner                 | -, Doug           | AII           | en, Rob Hosenou  |                      | <del></del>                                      |
|   |  |                       | Field C           |               | <u> </u>   |                      |  |
|   | Time (24 hr)                                 |                       | rature (°F)       |               | Wind Speed (mph)   | Cloud Cov            | er   |
| Start 3                                   | ක්   | 108                   | 0                 |               | 2-10mph  | Clearlow             |  |
| End 1/0                                   | 000  | 105                   | 6                 |               | 2 2  | Clear/su             | 204  |
| Start                                     |  |                       |                   |               | d- Imph  | _Crear / Su          | 200  |
| End                                       |  | ···                   |                   |               |  |                      | <u> </u>   |
|   |  | <del></del>           |                   |               |  |                      |  |
| Vegetation Con                            | nmunities Surveyed (inc. d                   | ominant               | spp.)             |               |  |                      | -  |
|   |  | <del></del>           |                   |               |  |                      |  |
| <u> </u>                                  |  |                       |                   | <del></del> - |  |                      |  |
|   |  |                       |                   |               |  |                      |  |
|   | Host Plants                                  | ···                   | Obs.              | T             | Nectar Plants  |                      | Obs.   |
| dwarf plantain (F                         | Plantago erecta)                             |                       | V                 | pope          | corn flower (Cryptantha/Plagiol  | bothrys spp.)        | X X  |
|   | rer (Castilleja exserta)                     |                       | Ŷ                 |               | fields ( <i>Lasthenia</i> spp.)  | у                    | <del>                                     </del> |
|   | tirrhinum coulterianum)                      |                       |                   | gold          | enstar ( <i>Muilla</i> spp.)   |                      |  |
|   | dylanthus rigidus)                           |                       |                   |               | eneck ( <i>Amsinckia intermedia</i> )  |                      |  |
| woolly plantain (                         | Plantago patagonica)                         |                       |                   |               | n ( <i>Allium</i> spp.)  |                      |  |
|   |  | <del></del> .         |                   |               | wheat (Eriogonum fasciculatur  |                      | X_   |
|   |  |                       |                   | grou          | nd pink ( <i>Linanthus dianthifloru</i>  | s)                   |  |
|   |  |                       |                   | ١             |  |                      | <u> </u>   |
|   | Butterfly Species                            |                       | No.               |               | Butterfly Species  | S                    | No.  |
| Checkerspots                              | 011  |                       |                   |               | treaks   |                      |  |
| Gabb's checkers                           | Chlosyne californica)                        |                       |                   |               | purple hairstreak (Atlides hale  | sus corcorani)       |  |
|   | ot ( <i>Euphydryas editha quino</i> )        |                       | <del></del>       |               | elfin (Callophrys augustinus)  |                      |  |
|   | erspot ( <i>E. chalcedona chalce</i>         |                       |                   |               | ble (perplexing) hairstreak (C. nairstreak ( <i>Strymon melinus pu</i>               |                      |  |
|   | pot (Thessalia leanira wright                |                       |                   |               | es/Admirals  | iuica)               | <u> </u>   |
|   | Phyciodes mylitta)                           |                       |                   |               | rnia sister ( <i>Adelpha bredowii c</i>  | alifornica)          |  |
| Blues                                     |  |                       |                   |               | in's admiral ( <i>Limenitis lorquini</i> )   |                      |  |
|   | lue ( <i>Brephidium exila</i> )              |                       |                   |               | coast lady (Vanessa annabella  |                      | 1  |
|   | ie (Everes amyntula)                         |                       |                   |               | dmiral ( <i>V. atalanta rubria</i> )   |                      |  |
|   | laucopsyche lygdamus austr                   | alis)                 |                   | +             | ed lady ( <i>V. cardui</i> )   |                      | 5  |
|   | emiargus ceraunus gyas)<br>icia acmon acmon) |                       |                   |               | ican (Virginia) lady (V. virginier   | nsis)                |  |
| marine blue (Lept                         |  |                       |                   | <del></del>   | ntified lady ( <i>Vanessa</i> sp.)  owtails  |                      |  |
| unidentified blue                         | iotoo mamay                                  |                       |                   |               | wallowtail ( <i>Papilio eurymedon</i> )  |                      |  |
| Whites                                    |  |                       |                   |               | rn tiger swallowtail ( <i>P. rutulus</i> )   |                      |  |
|   | Inthocharis sara sara)                       |                       |                   |               | swallowtail (P. zelicaon)  |                      |  |
|   | orangetip ( <i>A. cethura</i> )              |                       |                   |               | ellaneous  |                      |  |
|   | a ringlet ( <i>Coenonympha cali</i>          | fornica)              | 3_                | mona          | rch ( <i>Danaus plexippus</i> )  |                      |  |
| cabbage white (P                          |  |                       |                   |               | on buckeye ( <i>Junonia coenia g</i>   | risea)               | a  |
|   | non) white (Pontia protodice)                |                       |                   | <del></del>   | ning cloak (Nymphalis antiopa)   |                      |  |
| spring white (P. sa<br>unidentified white |  |                       | a                 | Skipp         |  |                      |  |
| Metalmarks                                |  |                       | _8                |               | eal duskywing ( <i>Erynnis funerali</i><br>Iful duskywing ( <i>Erynnis tristis</i> ) | S)                   |  |
|   | (Apodemia mormo virgulti)                    |                       | 12                |               | kipper ( <i>Hylephila phyleus</i> )  |                      |  |
|   | rk (Calephelis wrighti)                      | 1                     | <u> </u>          |               | (common) checkered-skipper (   | Pyraus alhecons      |  |
| Sulphurs                                  |  |                       |                   | Other         |  | . , iguo aibesceris) |  |
| orange sulphur (C                         |  |                       |                   |               |  |                      |  |
| sleepy orange (Eu                         |  |                       |                   |               |  |                      |  |
|   | Phoebus sennae marcellina)                   |                       |                   |               |  |                      |  |
| unidentified sulphu                       |  | N                     |                   |               |  |                      |  |
|   | Column S                                     | uptotal               | 24                | L             |  | Column Subtotal      | 8  |
| ·   |  |                       |                   |               |  | Total                | ියන  |

CERTA ROTEL PRIKE NOTE VIENE CROP NOTA PORTA W) Prathernak 50 homed here Changer !! Supper 1004/08, 2 BCICA-/Sunny Runs 00/Briss, Stock Stelly Musique S. Iche Buckurant «Mantago» Lotieste V. Kno SPRO Misen, Denx, Rep thopse cons (1000) Bluespidens Dans of Dans da Regional Leashers Letres seef Brabece Tredum Truck

| Surveyor: Sally TRNKA                 |                |          | Date: | 03/19/08       |
|---------------------------------------|----------------|----------|-------|----------------|
| Site Name: Otay Hills Quarry (SRM-01) | )              |          |       | Site Visit No: |
| Acres Surveyed                        | Survey Time: _ | 4.17 hrs | Acres | per Hour:      |
| Other Surveyors Present:              |                |          |       |                |
|                                       |                |          |       |                |

| Field Conditions |              |                  |                  |                  |  |  |  |  |  |
|------------------|--------------|------------------|------------------|------------------|--|--|--|--|--|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover      |  |  |  |  |  |
| Start            | 11:30        | 68               | 0-3              | 0 percent; hazy  |  |  |  |  |  |
| End              | 15:40        | 65               | 2-7, gusts to 12 | 5 percent; sunny |  |  |  |  |  |
| Start            |              |                  |                  |                  |  |  |  |  |  |
| End              |              |                  |                  |                  |  |  |  |  |  |

| Vegetation Communities Surveyed (inc. dominant spp.) | <br> |   |  |
|--|------|---|--|
| Diegan coastal sage scrub                            |      | - / / / / / / / / / / / / / / / / / / / |  |
|  |      | · · · · · · · · · · · · · · · · · · ·   |  |

| Host Plants                              | Obs. | Nectar Plants                                    | Obs. |
|--|------|--|------|
| dwarf plantain (Plantago erecta)         | X    | popcorn flower (Cryptantha / Plagiobothrys spp.) | X    |
| purple owi's clover (Castilleja exserta) | X    | goldfields (Lasthenia spp.)                      | X    |
| snapdragon (Antirrhinum coulterianum)    |      | chia (Salvia columbariae)                        | X    |
| birds-beak (Cordylanthus rigidus)        |      | goldenstar (Muilla spp.)                         | +    |
| woolly plantain (Plantago patagonica)    |      | fiddleneck (Amsinckia intermedia)                |      |
|  |      | onion (Allium spp.)                              | X    |
|  |      | buckwheat (Eriogonum fasciculatum)               |      |
|  |      | ground pink (Linanthus dianthiflorus)            | X    |

| Butterfly Species                                   | No. | Butterfly Species  | No.         |
|---|-----|--|-------------|
| Checkerspots  |     | Hairstreaks  |             |
| California patch (Chlosyne californica)             |     | great purple hairstreak (Atlides halesus corcorani)          |             |
| Gabb's checkerspot (C. gabbii)                      |     | brown elfin (Callophrys augustinus)                          |             |
| Quino checkerspot (Euphydryas editha quino)         | 8   | bramble (perplexing) hairstreak (C. dumetorum affinis)       | 2           |
| chalcedon checkerspot (E. chalcedona chalcedona)    |     | gray hairstreak (Strymon melinus pudica)                     |             |
| Leanira checkerspot (Thessalia leanira wrighti)     |     | Ladies/Admirals  |             |
| Mylitta crescent (Phyciodes mylitta)                |     | California sister (Adelpha bredowii californica)             |             |
| Blues   |     | Lorquin's admiral (Limenitis lorquini)                       |             |
| western pygmy-blue (Brephidium exila)               |     | west coast lady (Vanessa annabella)                          | 1           |
| western tailed blue (Everes amyntula)               |     | red admiral (V. atalanta rubria)                             | <del></del> |
| southern blue (Glaucopsyche lygdamus australis)     | 1   | painted lady (V. cardui)                                     | 1           |
| Edward's blue (Hemiargus ceraunus gyas)             |     | American (Virginia) lady (V. virginiensis)                   | <del></del> |
| Acmon blue (Icaricia acmon acmon)                   |     | unidentified lady (Vanessa sp.)                              | 7           |
| marine blue (Leptotes marina)                       |     | Swallowtails   | <u>:</u>    |
| unidentified blue                                   | 1   | pale swallowtail (Papilio eurymedon)                         |             |
| Whites  |     | western tiger swallowtail (P. rutulus)                       |             |
| Sara orangetip (Anthocharis sara sara)              | 2   | anise swallowtail (P. zelicaon)                              |             |
| desert (Felder's) orangetip (A. cethura)            |     | Miscellaneous  |             |
| common California ringlet (Coenonympha californica) |     | monarch (Danaus plexippus)                                   |             |
| cabbage white ( <i>Pieris rapae</i> )               | 3   | common buckeye (Junonia coenia grisea)                       |             |
| checkered (common) white (Pontia protodice)         |     | mourning cloak (Nymphalis antiopa)                           |             |
| spring white ( <i>P. sisymbrii</i> )                |     | Skippers   |             |
| unidentified white                                  | - 5 | funereal duskywing (Erynnis funeralis)                       | 3           |
| Metalmarks  |     | mournful duskywing ( <i>Erynnis tristis</i> )                |             |
| Behr's metalmark (Apodemia mormo virgulti)          | 7   | fiery skipper (Hylephila phyleus)                            |             |
| Wright's metalmark (Calephelis wrighti)             |     | white (common) checkered-skipper ( <i>Pyrgus albescens</i> ) |             |
| Sulphurs  |     | Other  |             |
| orange sulphur (Colias eurytheme)                   |     |  |             |
| sleepy orange (Eurema nicippe)                      | ~   |  |             |
| cloudless sulfur (Phoebus sennae marcellina)        |     |  |             |
| unidentified sulphur                                |     |  |             |
| Column Subtotal                                     | 27  | Column Subtotal  | 14          |
|   |     | Total  | 41          |

| . Otay                | Hills (SF  | ZM-01)                    | 03/19/08                              |
|-----------------------|--|---------------------------|---------------------------------------|
|                       | Area 7   |                           | Sally T                               |
|                       |  |                           |                                       |
| Start: 11:30 a.       | my suny/hezy   | 0% alords;                | 3-3mph; 68°F                          |
|                       |  |                           |                                       |
| Howeving Plan         |  |                           | unimals                               |
| Mir cal               | Lot stri   | blue 1                    | raven ,                               |
| Erod was              | Lup bic  |                           | w meadowlank                          |
| Viole ped             |  | S                         | so blue 1                             |
| Lot sco               | (hanacy sp.  | For de                    | 25 ky 111                             |
| Lath vest             | Sol cley   |                           | quino IHT IN                          |
| Allium sp.            | Son asp  |                           | nt Utt                                |
| Hyp gla               |  | Pu                        | rpl historik 11                       |
| Hyp gla<br>Silere gal |  |                           | parow bosson cong                     |
| Bras of               |  | bidy                      | · (III                                |
| Lasth stacal          |  | Sidel                     | oltch liz                             |
| Cry sp. lots          |  | Jehr's                    | network It !                          |
| Linanthus             |  | fresh C                   | ATOWhee                               |
| Cast exs              | <u>X -</u>   | Kept landing on           |                                       |
| Cilia sp.             | XB -   | 3low fly-by, bea          | ded down hill                         |
| Caly mac              |  | W coa                     |                                       |
| Dic cap               |  | Saras                     |                                       |
| the cir               |  | Cabbage                   | who III                               |
|                       |  | , very -                  | · · · · · · · · · · · · · · · · · · · |
| Esch cal              | **C  | ,                         | patch , photo                         |
| Dolanin sp.           | X D-   | med qual - on             | bone ground, Willer                   |
| Bras 52- 2            | XE -   | med qual more and medical | ay he D:                              |
| Trif wild             | <i>k</i>   | y buildoner               |                                       |
| VIR LLC               | And the state of t | . <b>⊶</b>                |                                       |

| · ·  |   |
|------|---|
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|      |   |
|      |   |
|      | XF - 12 quino ; 1 w1 3 way (missing of rear)<br>territorial light; med. qual; photo   |
| · "] | tentoral toget, med qual photo  |
|      | by Linaut; Plageo, Cry; on bone rocked ground  XG - I geno - fighting w! F, bod sep, areas  all I wrom fresh; patch of Linauth, on bone good  Xt - I wrom med worm, rock  Stick |
|      | XG-1 guno tightne w1 t, bot sep, areas  |
|      | all I was hear patch of linearth on bone good pack in the way stored.   |
|      | Xt. I way ned worm, rack Stick  |
|      | XI - worn tableted wings - photo on rock wings fourt. ope   |
|      |   |
|      |   |
| * }  | lady III  |
|      | enl: 2116 - ' - / 1 / 1 1 1   |
|      | end: 3:40 pm; sonny/clear 5% clouds; 65° F; 2-7 mph quads to 12   |
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| Surveyor: Alison Varner  |                            |            | Date:                  | March 19, 2008                     |         |
|--------------------------|----------------------------|------------|------------------------|------------------------------------|---------|
| Site Name: SRM-01 Otay   | Hills                      |            |                        | Site Visit No: 1                   |         |
| Acres Surveyed           | Survey Time:               | 5 hrs      | Acre                   | s per Hour:                        |         |
| Other Surveyors Present: | Brian Parker, Amy Mattson, | Sally Trnk | a, Jasmine Watts, Doug | Allen, Stacy Nigro, Kathy Pettigre | <br>:w, |
|                          | Robert Hogenauer           |            |                        |                                    |         |

|   | Field Conditions |    |     |               |  |  |  |
|---|------------------|----|-----|---------------|--|--|--|
| Time (24 hr) Temperature (°F) Wind Speed (mph) Cloud Cove |                  |    |     |               |  |  |  |
| Start   | 1100             | 67 | 0-3 | clear         |  |  |  |
| End   | 1600             | 73 | 3-6 | slightly hazy |  |  |  |
| Start   |                  |    |     |               |  |  |  |
| End   |                  |    |     |               |  |  |  |

### Vegetation Communities Surveyed (inc. dominant spp.)

NNG and CSS, dominated by Artemisia californica, Eriogonum fasciculatum, Viguiera laciniata, and Malosma laurina

| Obs. | Nectar Plants                                    | Obs.   |
|------|--|--|
| ·X   | popcorn flower (Cryptantha / Plagiobothrys spp.) | Х  |
| X    | goldfields (Lasthenia spp.)                      | X  |
|      | chia (Salvia columbariae)                        |  |
|      | goldenstar (Muilla spp.)                         |  |
|      | fiddleneck (Amsinckia intermedia)                |  |
| N    | onion (Allium spp.)                              | X  |
|      | buckwheat (Eriogonum fasciculatum)               | X  |
|      | Obs. X X   | X popcorn flower (Cryptantha / Plagiobothrys spp.)  X goldfields (Lasthenia spp.)  chia (Salvia columbariae)  goldenstar (Muilla spp.)  fiddleneck (Amsinckia intermedia)  onion (Allium spp.) |

| Butterfly Species                                   | No. | Butterfly Species                                      | No.         |
|---|-----|--|-------------|
| Checkerspots  |     | Hairstreaks  |             |
| California patch (Chlosyne californica)             |     | great purple hairstreak (Atlides halesus corcorani)    |             |
| Gabb's checkerspot (C. gabbil)                      |     | brown elfin (Callophrys augustinus)                    |             |
| Quino checkerspot (Euphydryas editha quino)         | 8,  | bramble (perplexing) hairstreak (C. dumetorum affinis) |             |
| chalcedon checkerspot (E. chalcedona chalcedona)    |     | gray hairstreak (Strymon melinus pudica)               |             |
| Leanira checkerspot (Thessalia leanira wrighti)     |     | Ladies/Admirals  |             |
| Mylitta crescent (Phyciodes mylitta)                |     | California sister (Adelpha bredowii californica)       |             |
| Blues   |     | Lorquin's admiral (Limenitis lorquini)                 |             |
| western pygmy-blue (Brephidium exila)               |     | west coast lady (Vanessa annabella)                    |             |
| western tailed blue (Everes amyntula)               |     | red admiral (V. atalanta rubria)                       |             |
| southern blue (Glaucopsyche lygdamus australis)     |     | painted lady (V. cardul)                               |             |
| Edward's blue (Hemiargus ceraunus gyas)             |     | American (Virginia) lady (V. virginiensis)             |             |
| Acmon blue (Icaricia acmon acmon)                   |     | unidentified lady (Vanessa sp.)                        |             |
| marine blue (Leptotes marina)                       |     | Swallowtails   |             |
| unidentified blue                                   | 1   | pale swallowtail (Papilio eurymedon)                   |             |
| Whites  |     | western tiger swallowtail (P. rutulus)                 |             |
| Sara orangetip (Anthocharis sara sara)              |     | anise swallowtail (P. zelicaon)                        | 2           |
| desert (Felder's) orangetip (A. cethura)            |     | Miscellaneous  |             |
| common California ringlet (Coenonympha californica) | ·   | monarch (Danaus plexippus)                             |             |
| cabbage white (Pieris rapae)                        |     | common buckeye (Junonia coenia grisea)                 |             |
| checkered (common) white (Pontia protodice)         |     | mourning cloak (Nymphalis antiopa)                     | 1           |
| spring white (P. sisymbril)                         |     | Skippers   |             |
| unidentified white                                  | 2   | funereal duskywing (Erynnis funeralis)                 | 3           |
| Metalmarks  |     | mournful duskywing (Erynnis tristis)                   |             |
| Behr's metalmark (Apodemia mormo virgulti)          | 8   | fiery skipper (Hylephila phyleus)                      |             |
| Wright's metalmark (Calephelis wrighti)             |     | white (common) checkered-skipper (Pyrgus albescens)    |             |
| Sulphurs  |     | Other  |             |
| orange sulphur ( <i>Colias eurytheme</i> )          |     |  |             |
| sleepy orange ( <i>Eurema nicippe</i> )             |     |  |             |
| cloudless sulfur (Phoebus sennae marcellina)        |     |  | *           |
| unidentified sulphur                                |     |  | <del></del> |
| Column Subtotal                                     | 19. | Column Subtotal  | 6           |
|   |     | Total  | 25          |

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| Surveyor: _ | Jasmine Watts |            |                | •    | <br>Date: | March 31, 2008   |  |
|-------------|---------------|------------|----------------|------|-----------|------------------|--|
| Site Name:  | SRM-01 OTAY   | HILLS AREA | ıs             |      |           | Site Visit No: 1 |  |
| Acres Surve | yed           |            | Survey Time: _ | 5.33 | Acres     | per Hour:        |  |
| Other Surve | yors Present: | Doug Allen | ·              |      | <br>      |                  |  |
|             |               |            |                |      |           |                  |  |

|       | Field Conditions  |      |     |       |  |  |  |
|-------|---|------|-----|-------|--|--|--|
| _     | Time (24 hr) Temperature (°F) Wind Speed (mph) Cloud Cove |      |     |       |  |  |  |
| Start | 1110  | 66.7 | 0-2 | clear |  |  |  |
| End   | 1630  | 71   | 3-6 | clear |  |  |  |
| Start |   |      |     |       |  |  |  |
| End   |   |      |     | ·.    |  |  |  |

| Vegetation Communities Surveyed (inc. dominant spp.)             |  |
|--|--|
| Open DCSS dominated by Lotus scoparius and Artemisia californica |  |
|  |  |
|  |  |

| Host Plants                              | Obs. | Obs. Nectar Plants                               |   |
|--|------|--|---|
| dwarf plantain (Plantago erecta)         | X    | popcorn flower (Cryptantha / Plagiobothrys spp.) | X |
| purple owl's clover (Castilleja exserta) | X    | goldfields (Lasthenia spp.)                      | X |
| snapdragon (Antirrhinum coulterianum)    |      | chia (Salvia columbariae)                        |   |
| birds-beak (Cordylanthus rigidus)        |      | goldenstar (Muilla spp.)                         |   |
| woolly plantain (Plantago patagonica)    |      | fiddleneck (Amsinckia intermedia)                |   |
|  |      | onion (Allium spp.)                              |   |
|  |      | buckwheat (Eriogonum fasciculatum)               | X |
|  |      | ground pink (Linanthus dianthiflorus)            | X |

| Butterfly Species                                   | No. | Butterfly Species                                      | No. |
|---|-----|--|-----|
| Checkerspots  |     | Hairstreaks  |     |
| California patch (Chlosyne californica)             |     | great purple hairstreak (Atlides halesus corcorani)    |     |
| Gabb's checkerspot (C. gabbil)                      | 2   | brown elfin (Callophrys augustinus)                    |     |
| Quino checkerspot (Euphydryas editha quino)         | 8   | bramble (perplexing) hairstreak (C. dumetorum affinis) | 1   |
| chalcedon checkerspot (E. chalcedona chalcedona)    |     | gray hairstreak (Strymon melinus pudica)               | -   |
| Leanira checkerspot (Thessalia leanira wrighti)     |     | Ladies/Admirals  |     |
| Mylitta crescent (Phyciodes mylitta)                |     | California sister (Adelpha bredowii californica)       |     |
| Blues   |     | Lorquin's admiral (Limenitis Iorquini)                 |     |
| western pygmy-blue (Brephidium exila)               |     | west coast lady (Vanessa annabella)                    | 4   |
| western tailed blue (Everes amyntula)               |     | red admiral (V. atalanta rubria)                       |     |
| southern blue (Glaucopsyche lygdamus australis)     |     | painted lady (V. cardui)                               | 1   |
| Edward's blue (Hemiargus ceraunus gyas)             |     | American (Virginia) lady (V. virginiensis)             |     |
| Acmon blue (Icaricia acmon acmon)                   |     | unidentified lady (Vanessa sp.)                        |     |
| marine blue (Leptotes marina)                       |     | Swallowtails   |     |
| unidentified blue                                   |     | pale swallowtail (Papilio eurymedon)                   |     |
| Whites  |     | western tiger swallowtail (P. rutulus)                 |     |
| Sara orangetip (Anthocharis sara sara)              | 3   | anise swallowtail (P. zelicaon)                        |     |
| desert (Felder's) orangetip (A. cethura)            |     | Miscellaneous  |     |
| common California ringlet (Coenonympha californica) | 2   | monarch (Danaus plexippus)                             | -   |
| cabbage white (Pieris rapae)                        | 1   | common buckeye (Junonia coenia grisea)                 |     |
| checkered (common) white (Pontia protodice)         |     | mourning cloak (Nymphalis antiopa)                     |     |
| spring white (P. sisymbrii)                         |     | Skippers   |     |
| unidentified white                                  |     | funereal duskywing (Erynnis funeralis)                 | 1   |
| Metalmarks  |     | mournful duskywing (Erynnis tristis)                   |     |
| Behr's metalmark (Apodemia mormo virgulti)          | 9   | fiery skipper (Hylephila phyleus)                      |     |
| Wright's metalmark (Calephelis wrighti)             |     | white (common) checkered-skipper (Pyrgus albescens)    |     |
| Sulphurs  |     | Other  |     |
| orange sulphur (Colias eurytheme)                   |     |  |     |
| sleepy orange ( <i>Eurema nicippe</i> )             |     |  |     |
| cloudless sulfur (Phoebus sennae marcellina)        |     |  |     |
| unidentified sulphur                                |     |  |     |
| Column Subtotal                                     | 25  | Column Subtotal  | 7   |
|   |     | Total  | 32  |

19 March 2008 SRM-01 OTAY HILLS QCB Surrey #1 JW, DA AREAS 1+2 (58.65+60.87 aurer) START: 10:10, 66.70, clear, 0-2 mph STOP: 4:30m, 71, 20%, 2-3 mph Plant Spp (4= flowery) BUTTERFUES Oxalis-natur \*QCB' (GPS-5-7) Lascal. \* (O. occ.) @ 10:20 AM Lin-olia. + Girliasp. \* W. Coast lady III) Lot,510,\* \* QCB2 11:38 AM Pha.cic. \* Ero.cic.\* Poaler. 1 (GPS-S) Artical. Paplox of Pancheak Crassula p. Lasivas, A Dic.cap. +. Sara Orangetip 11 0x 6"(6") Behis metalmark #1111 Cryptanina sp. \* 1:55pm Commen White 1 Solanum sp. x (JB7 12), Blue 1, Fundisty 1 Mir. cal. 40 pm Calif Ringlat 1 Casiexs. \* OCBE (GRIF) QCB3 CRPS 16) 1:24 ESC.Cal.\* Calimal.\* 4.18pm Gabbis Challer Grall ed. + J QCB+, QCBs (GB2) Vig. lac. \* Vojed. + Chamacigne \*
Ferivir WILDLIFE Western fence lizard Vained Lody 1 black taled Jack 12 bit CORA, AMKE, SACKE, Lup. bic. \* Eri.far.

| Surveyor: _ | Doug Allen      |                  | Date: | 3/21/08        |  |
|-------------|-----------------|------------------|-------|----------------|--|
| Site Name:  | Otay Hills      |                  |       | Site Visit No: |  |
| Acres Surve | yed             | Survey Time: 4.5 | Acres | s per Hour:    |  |
| Other Surve | yors Present: _ | Brian Parker     |       |                |  |
|             |                 |                  |       |                |  |

|       | Field Conditions |                  |                  |             |  |
|-------|------------------|------------------|------------------|-------------|--|
|       | Time (24 hr)     | Temperature (°F) | Wind Speed (mph) | Cloud Cover |  |
| Start | 1230             | 74.5             | 3-5              | 0%          |  |
| End   | 1700             | 67.0             | . 4-6            | 0%          |  |
| Start |                  |                  |                  |             |  |
| End   |                  |                  |                  |             |  |

# Vegetation Communities Surveyed (inc. dominant spp.) Diegan coast sage scrub, southern mixed chaparral, non-native grassland, and disturbed

| Host Plants                              | Obs. | Nectar Plants                                    | Obs |  |
|--|------|--|-----|--|
| dwarf plantain (Plantago erecta)         | Х    | popcorn flower (Cryptantha / Plagiobothrys spp.) |     |  |
| purple owl's clover (Castilleja exserta) | Х    | goldfields (Lasthenia spp.)                      | Х   |  |
| snapdragon (Antirrhinum coulterianum)    |      | chia (Salvia columbariae)                        |     |  |
| birds-beak (Cordylanthus rigidus)        |      | goldenstar (Muilla spp.)                         |     |  |
| woolly plantain (Plantago patagonica)    |      | fiddleneck (Amsinckia intermedia)                |     |  |
|  |      | onion (Allium spp.)                              |     |  |
|  |      | buckwheat (Eriogonum fasciculatum)               | Х   |  |
|  |      |  |     |  |

| Butterfly Species                                     | No.          | Butterfly Species                                      | No. |
|---|--------------|--|-----|
| Checkerspots  |              | Hairstreaks  |     |
| California patch (Chlosyne californica)               |              | great purple hairstreak (Atlides halesus corcorani)    |     |
| Gabb's checkerspot (C. gabbii)                        |              | brown elfin (Callophrys augustinus)                    |     |
| Quino checkerspot (Euphydryas editha quino)           | 4<br>(Sec#1) | bramble (perplexing) hairstreak (C. dumetorum affinis) | 2   |
| chalcedon checkerspot (E. chalcedona chalcedona)      | -            | gray hairstreak (Strymon melinus pudica)               |     |
| Leanira checkerspot (Thessalia leanira wrighti)       |              | Ladies/Admirals  |     |
| Mylitta crescent (Phyciodes mylitta)                  |              | California sister (Adelpha bredowii californica)       |     |
| Blues   |              | Lorquin's admiral (Limenitis lorquini)                 |     |
| western pygmy-blue ( <i>Brephidium exila</i> )        | 4            | west coast lady (Vanessa annabella)                    | 7   |
| western tailed blue (Everes amyntula)                 |              | red admiral (V. atalanta rubria)                       |     |
| southern blue (Glaucopsyche lygdamus australis)       |              | painted lady (V. cardui)                               | 22  |
| Edward's blue (Hemiargus ceraunus gyas)               |              | American (Virginia) lady (V. virginiensis)             |     |
| Acmon blue (Icaricia acmon acmon)                     |              | unidentified lady (Vanessa sp.)                        | ,   |
| marine blue ( <i>Leptotes marina</i> )                |              | Swallowtails   |     |
| unidentified blue                                     |              | pale swallowtail (Papilio eurymedon)                   |     |
| Whites  |              | western tiger swallowtail (P. rutulus)                 |     |
| Sara orangetip (Anthocharis sara sara)                | 2            | anise swallowtail (P. zelicaon)                        |     |
| desert (Felder's) orangetip (A. cethura)              |              | Miscellaneous  |     |
| common California ringlet (Coenonympha californica)   | 9            | monarch (Danaus plexippus)                             |     |
| cabbage white (Pieris rapae)                          |              | common buckeye (Junonia coenia grisea)                 |     |
| checkered (common) white (Pontia protodice)           | 6            | mourning cloak (Nymphalis antiopa)                     |     |
| spring white (P. sisymbrii)                           |              | Skippers   |     |
| unidentified white                                    |              | funereal duskywing (Erynnis funeralis)                 | 4   |
| Metalmarks  |              | mournful duskywing (Erynnis tristis)                   |     |
| Behr's metalmark (Apodemia mormo virgulti)            | 10           | fiery skipper (Hylephila phyleus)                      |     |
| Wright's metalmark (Calephelis wrighti)               |              | white (common) checkered-skipper (Pyrgus albescens)    |     |
| Sulphurs  |              | Other  |     |
| orange sulphur ( <i>Colias eurytheme</i> )            |              | ·  |     |
| sleepy orange ( <i>Eurema nicippe</i> )               |              |  |     |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> ) |              |  |     |
| unidentified sulphur                                  |              |  |     |
| Column Subtotal                                       | 35           | Column Subtotal  | 35  |
|   |              | Total  | 70  |

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| HELIX permit number: TE778195 Site Visit No: 1 2 3 4 5 6 7 8 9 10 Sub-consultant permit number:  | <del></del>  | <b>pot General Form</b> - Ad                          | ult Surve                             | ;y   |                    |
|--|--|---|---------------------------------------|--|--------------------|
| Site Name: OTAL AND Total site acres:  Total acres surveyed: 59.4 Total hours surveyed: 46.4 4/5  Site Location: Total hours surveyed: 47.75  Time (24 hour) SKY Wind (mph) Temperate Start: 64.5 Clear Patchy Overcast/Cloudy Drizzle Showers 1 1-3 47 8-12 12-15 >15  End: 15.30 Clear Patchy Overcast/Cloudy Drizzle Showers 1 1-3 47 8-12 12-15 >15  End: Clear Patchy Overcast/Cloudy Drizzle Showers 1 1-3 47 8-12 12-15 >15  End: Clear Patchy Overcast/Cloudy Drizzle Showers 1 1-3 47 8-12 12-15 >15  End: Clear Patchy Overcast/Cloudy Drizzle Showers 1 1-3 47 8-12 12-15 >15  End: Clear Patchy Overcast/Cloudy Drizzle Showers 1 1-3 47 8-12 12-15 >15  End: Clear Patchy Overcast/Cloudy Drizzle Showers 1 1-3 47 8-12 12-15 >15  End: Clear Patchy Overcast/Cloudy Drizzle Showers 1 1-3 47 8-12 12-15 >15  End: Clear Patchy Overcast/Cloudy Drizzle Showers 1 1-3 47 8-12 12-15 >15  End: Clear Patchy Overcast/Cloudy Drizzle Showers 1 1-3 47 8-12 12-15 >15  End: Clear Patchy Overcast/Cloudy Drizzle Showers 1 1-3 47 8-12 12-15 >15  End: Clear Patchy Overcast/Cloudy Drizzle Showers 1 1-3 47 8-12 12-15 >15  End: Clear Patchy Overcast/Cloudy Drizzle Showers 1 1-3 47 8-12 12-15 >15  End: Clear Patchy Overcast/Cloudy Drizzle Showers 1 1-3 47 8-12 12-15 >15  End: Clear Patchy Overcast/Cloudy Drizzle Showers 1 1-3 47 8-12 12-15 >15  End: Clear Patchy Overcast/Cloudy Drizzle Showers 1 1-3 47 8-12 12-15 >15  End: Clear Patchy Overcast/Cloudy Drizzle Showers 1 1-3 47 8-12 12-15 >15  End: Clear Patchy Overcast/Cloudy Drizzle Showers 1 1-3 47 8-12 12-15 >15  End: Clear Patchy Overcast/Cloudy Drizzle Showers 1 1-3 47 8-12 12-15 >15  End: Clear Patchy Overcast/Cloudy Drizzle Showers 1 1-3 47 8-12 12-15 >15  End: Clear Patchy Overcast/Cloudy Drizzle Showers 1 1-3 47 8-12 12-15 >15  End: Clear Patchy Overcast/Cloudy Drizzle Showers 1 1-3 47 8-12 12-15 >15  End: Clear Patchy Overcast/Cloudy Drizzle Showers 1 1-3 47 8-12 12-15 >15  End: Clear Patchy Overcast/Cloudy Drizzle Showers 1 1-3 47 8-12 12-15 >15  End: Clear Patchy Overcast/Cloudy Drizzle Showers 1 | Surveyor: $\sqrt{60}$  | H   |                                       |  | Date: 3/21/08      |
| Total acres surveyed:  | HELIX permit numb  | oer:TE778195  |                                       | Site Visit No: 1 2   | 345678910          |
| Total acres surveyed:  | Sub-consultant per   | mit number:   |                                       | . ·  |                    |
| Time (24 hour) Start: S | Site Name: _ <u></u> のて♪   | HILLS   | · · · · · · · · · · · · · · · · · · · | Total site acre  | es:                |
| Time (24 hour) Start: S | Total acres surveye  | d: 59.6   | <del> </del>                          | Total hours surveyed   | d: 4hrs 45m        |
| Start:    Clear   Patchy   Overcast/Cloudy   Drizzle   Showers   Clear   Patchy   Patchy  | Site Location:   |   |                                       |  | 4.75               |
| Start:    Start:   Clear   Patchy   Overcast/Cloudy   Drizzle   Showers   Clear   Patchy   | Para   |   | ·<br>                                 |  |                    |
| End:    S 30   Clear Patchy Overcast/Cloudy Drizzle Showers   Showers   Clear Patchy Overcast/Cloudy Drizzle Showers    |  |   |                                       | Wind (mph)   | Temperature '      |
| Start: Clear Patchy Overcast/Cloudy Drizzle Showers <1 1-3 4-7 8-12 12-15 >15  End: Clear Patchy Overcast/Cloudy Drizzle Showers <1 1-3 4-7 8-12 12-15 >15  Start: Clear Patchy Overcast/Cloudy Drizzle Showers <1 1-3 4-7 8-12 12-15 >15  End: Clear Patchy Overcast/Cloudy Drizzle Showers <1 1-3 4-7 8-12 12-15 >15  End: Clear Patchy Overcast/Cloudy Drizzle Showers <1 1-3 4-7 8-12 12-15 >15  End: Clear Patchy Overcast/Cloudy Drizzle Showers <1 1-3 4-7 8-12 12-15 >15  End: Clear Patchy Overcast/Cloudy Drizzle Showers <1 1-3 4-7 8-12 12-15 >15  End: Clear Patchy Overcast/Cloudy Drizzle Showers <1 1-3 4-7 8-12 12-15 >15  End: Clear Patchy Overcast/Cloudy Drizzle Showers <1 1-3 4-7 8-12 12-15 >15  End: Clear Patchy Overcast/Cloudy Drizzle Showers <1 1-3 4-7 8-12 12-15 >15  End: Clear Patchy Overcast/Cloudy Drizzle Showers <1 1-3 4-7 8-12 12-15 >15  End: Clear Patchy Overcast/Cloudy Drizzle Showers <1 1-3 4-7 8-12 12-15 >15  End: Clear Patchy Overcast/Cloudy Drizzle Showers <1 1-3 4-7 8-12 12-15 >15  End: Glar Patchy Overcast/Cloudy Drizzle Showers <1 1-3 4-7 8-12 12-15 >15  End: Clear Patchy Overcast/Cloudy Drizzle Showers <1 1-3 4-7 8-12 12-15 >15  End: Glar Patchy Overcast/Cloudy Drizzle Showers <1 1-3 4-7 8-12 12-15 >15  End: Glar Patchy Overcast/Cloudy Drizzle Showers <1 1-3 4-7 8-12 12-15 >15  End: Glar Patchy Overcast/Cloudy Drizzle Showers <1 1-3 4-7 8-12 12-15 >15  End: Glar Patchy Overcast/Cloudy Drizzle Showers <1 1-3 4-7 8-12 12-15 >15  End: Glar Patchy Overcast/Cloudy Drizzle Showers <1 1-3 4-7 8-12 12-15 >15  End: Glar Patchy Overcast/Cloudy Drizzle Showers <1 1-3 4-7 8-12 12-15 >15  End: Glar Patchy Overcast/Cloudy Drizzle Showers <1 1-3 4-7 8-12 12-15 >15  End: Glar Patchy Overcast/Cloudy Drizzle Showers <1 1-3 4-7 8-12 12-15 >15  End: Glar Patchy Overcast/Cloudy Drizzle Showers <1 1-3 4-7 8-12 12-15 >15  End: Glar Patchy Overcast/Cloudy Drizzle Showers <1 1-3 4-7 8-12 12-15 >15  End: Glar Patchy Overcast/Cloudy Drizzle Showers <1 1-3 4-7 8-12 12-15 >15  End: Glar Patchy Overcast/Cloudy Drizzle Showers <1  | Start:   | Clear Patchy Overcast/Cloudy Drizz                    | le Showers                            |  | 1                  |
| Start:  Clear Patchy Overcast/Cloudy Drizzle Showers  Clear Patchy Overcast/Cloudy Drizzle Showers  Start:  Clear Patchy Overcast/Cloudy Drizzle Showers  Start:  Clear Patchy Overcast/Cloudy Drizzle Showers  Clear Patchy Overcast/Cloudy Drizzle Showers |  | Clear Patchy Overcast/Cloudy Drizz                    | le Showers                            | - 1'   | >15                |
| Start:   Clear Patchy Overcast/Cloudy Drizzle Showers   <1 1-3 4-7 8-12 12-15 >15    End:   Clear Patchy Overcast/Cloudy Drizzle Showers   <1 1-3 4-7 8-12 12-15 >15    Description of areas surveyed & comments:     Fiddleneck (Amsinckia intermedia)   Owl's Clover (Castilleja exserta)   Chia (Salvia columbariae)   Chia (Salvia columbariae)   Chia (Salvia columbariae)   Chia (Salvia columbariae)   Goldfields (Lasthenia sp.)   Goldfields (Lasthenia sp.)   Ground Pink (Linanthus dianthiflorus)   Ground Pink (Linanthus dianthiflorus)   Chia (Salvia columbariae)   Chia (Salvia columbariae)  | The second secon | Clear Patchy Overcast/Cloudy Drizz                    | le Showers                            |  |                    |
| Clear Patchy Overcast/Cloudy Drizzle Showers   | End:   | Clear Patchy Overcast/Cloudy Drizz                    | le Showers                            | <1 1-3 4-7 8-12 12-15  | >15                |
| Description of areas surveyed & comments:  Host & Nectar Plants On-site: Description of areas surveyed & comments:    Description of areas surveyed & comments:   Description of areas surveyed & comments:   Description of areas surveyed & comments:   Description of areas surveyed & comments:   Description of areas surveyed & comments:   Description of areas surveyed & comments:   Description of areas surveyed & comments:   Fiddleneck (Amsinckia intermedia)   Chia (Salvia columbariae)   Popcorn Flower (Cryptantha sp.)   Goldfields (Lasthenia sp.)   Ground Pink (Linanthus dianthiflorus)   (Lotus sp.)   CA Buckwheat (Eriogonum fasciculatum)   Other:  | Start:   | Clear Patchy Overcast/Cloudy Drizz                    | le Showers                            | <1 1-3 4-7 8-12 12-15  | >15                |
| Host & Nectar Plants On-site:  Description Description    Host & Nectar Plants On-site:  Description Description    Description Description    Description Description    Host & Nectar Plants On-site:  Description Description    Description    Description Description     | End:   | Clear Patchy Overcast/Cloudy Drizz                    | le Showers                            | <1 1-3 4-7 8-12 12-15  | >15                |
| □ Snapdragon (Antirrhinum coulterianum) □ Thread-leaved Bird's Beak (Cordylanthus rigidus) □ Woolly plantain (Plantago patagonica) □ Other: □ Observed Butterfly List □ Copy of Field Notes □ Snapdragon (Antirrhinum coulterianum) □ Goldfields (Lasthenia sp.) □ Ground Pink (Linanthus dianthiflorus) □ (Lotus sp.) □ CA Buckwheat (Eriogonum fasciculatum) □ Photographs □ Photographs □ Field Maps  | p Dwarf Plantain (<br>□ Owl's Clover (Ca   | s On-site:<br>(Plantago erecta)<br>astilleja exserta) |                                       | Fiddleneck ( <i>Amsinckia i</i><br>Chia ( <i>Salvia columbaria</i> | intermedia)<br>ne) |
| ☐ Thread-leaved Bird's Beak (Cordylanthus rigidus) ☐ Woolly plantain (Plantago patagonica) ☐ Other: ☐ Observed Butterfly List ☐ Copy of Field Notes ☐ Field Maps ☐ Ground Pink (Linanthus dianthiflorus) ☐ (Lotus sp.) ☐ CA Buckwheat (Eriogonum fasciculatum) ☐ CA Buckwheat (Eriogonum fasciculatum) ☐ Photographs ☐ Photographs ☐ Field Maps  |  |   |                                       |  |                    |
| □ Woolly plantain ( <i>Plantago patagonica</i> )   | ☐ Thread-leaved E  |   | <b>X</b>                              | Ground Pink (Linanthus   |                    |
| Attached:  Observed Butterfly List  Copy of Field Notes  Field Maps  | <ul><li>Woolly plantain</li></ul>  |   |                                       |  | um fasciculatum)   |
| <ul> <li>□ Observed Butterfly List</li> <li>□ Copy of Field Notes</li> <li>□ Field Maps</li> </ul>   | □ Other: <u>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</u>   | um  | ·                                     |  |                    |
| <ul> <li>□ Observed Butterfly List</li> <li>□ Copy of Field Notes</li> <li>□ Field Maps</li> </ul>   | Attached:  |   |                                       |  |                    |
|  | <ul><li>Observed But</li><li>Copy of Field</li></ul>   | d Notes   | <b>V</b>                              |  |                    |
|  |  |   |                                       |  |                    |

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| Name: 2V3 H   |   | Date: 3/21/08 |
|---|---|---------------|
| Butterflies   | Number  | Comments      |
| Checkerspots  |   |               |
| Quino checkerspot (Euphydryas editha quino)   | 1   |               |
| chalcedon checkerspot (E. chalcedona  | 5   |               |
| _eanira checkerspot (Thessalia leanira wrighti)   |   |               |
| Mylitta cresent (Phyciodes mylitta)   | †   |               |
| Gabb's checkerspot (Chlosyne gabbii)  | <b>T</b>  |               |
| California patch (C. californica)   |   |               |
| Blues   |   |               |
| western tailed blue (Everes amyntula)   | <del></del>   |               |
| southern blue (Glaucopsyche lygdamus australis)   | 3   |               |
| echo blue (Celastrina ladon echo)   |   |               |
| Edward's blue (Hemiargus ceraunus gyas)   |   |               |
| Sonoran blue ( <i>Philotes sonorensis</i> )   |   |               |
| marine blue ( <i>Leptotes marina</i> )  | <del></del>   |               |
| Acmon blue (Icaricia acmon acmon)   |   |               |
| bygmy blue (Brephidium exilis)  | <del></del>   |               |
| unidentified blue   | 1   |               |
| Whites  | <del> </del>  |               |
| Sara orangetip (Anthocharis sara sara)  | Ц   |               |
| desert (Felder's) orangetip (A. cethura)  | +7  |               |
| cabbage white (Artogeia rapae)  | <del>  , ,                                   </del> |               |
| common white (Pontia protodice)   | 14  |               |
| spring white ( <i>P. sisymbrii</i> )  | 25  |               |
| California ringlet (Coenonympha californica)  | 143   |               |
| inidentified white  | 10  |               |
| Metalmarks  | -   |               |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )   | + > 1   |               |
| Vright's metalmark ( <i>Calephelis wrightii</i> )   | 21  |               |
| wight's metalmark (Calephelis wrightil)  wallowtails  |   |               |
|   |   |               |
| pale swallowtail ( <i>Papilio eurymedon</i> )<br>anise swallowtail ( <i>P. zelicaon</i> )       | · ·   |               |
| vestern tiger swallowtail ( <i>P. rutulus</i> )   | <del> </del>  |               |
| Sulphurs  |   |               |
|   | <del> </del>  |               |
| eleepy orange (Eurema nicippe)  | <u></u>   |               |
| California dogface (Zerene eurydice)  | <del></del>   |               |
| orange sulphur (Colias eurytheme)   | <del>                                     </del>    |               |
| cloudless sulfur (Phoebus sennae marcellina)  | <del> </del>  |               |
| Hairstreaks   |   |               |
| gray hairstreak (Strymon melinus pudica)  |   |               |
| prown elfin (Callophrys augustinus)   |   |               |
| pramble (perplexing) hairstreak (C. dumetorum)  | <u> </u>  |               |
| reat purple hairstreak (Atlides halesus corcorani)  |   |               |
| adies/Admirals  | ļ.,,  |               |
| painted lady (Vanessa cardui)   | 14  |               |
| vest coast lady (V. annabella)  | 77  |               |
| /irginia lady (V. virginiensis)   |   |               |
| ed admiral (V. atalanta rubria)   |   |               |
| nidentified lady (Vanessa sp.)  | 10  |               |
| alifornia sister (Adelpha bredowii californica)   |   |               |
| orquin's admiral ( <i>Limenitis lorquini</i> )  |   |               |
| liscellaneous   |   |               |
| onarch (Danaus plexippus)   |   |               |
| ueen (D. gilippus)  |   |               |
| atyr anglewing ( <i>Polygonia satyrus</i> )   |   |               |
| uckeye ( <i>Junonia coenia</i> )  | 3   |               |
| mourning cloak ( <i>Nymphalis antiopa</i> )   |   |               |
| kippers   |   |               |
| ommon checkered-skipper (Pyrgus communia)   |   |               |
|   | 0   |               |
| unereal duskywing ( <i>Erynnis funeralis</i> )<br>nournful duskywing ( <i>Erynnis tristis</i> ) | 3   |               |

| Survey       | or:                                     | Brian Parker                           | Checkersp     | ot butterny                           | y Survey Form<br>Date:                      | 3/21/2008                                     |             |
|--------------|---|--|---------------|---------------------------------------|---|---|-------------|
| Site Na      | me:                                     | Otay Hills Quarry                      |               | ·····                                 | Site Visit No:                              |   |             |
| Acres 9      | Surveyed                                |  | / Time:       | 4.50                                  | Acres per Ho                                | <del></del>                                   |             |
|              | ors Present:                            | Doug Allen                             | -             | 4.00                                  | Aores per rie                               | 0.00  |             |
| ou. voy      | 010 . 1000111.                          | Dody Allen                             |               |                                       |   |   |             |
|              |   |  |               |                                       |   |   |             |
|              |   |  | Field C       | onditions                             |   | <del>"</del>                                  |             |
|              | Time (24                                | hr) Temp                               | perature (°F) | V                                     | Vind Speed (mph)                            | Cloud Cov                                     | er          |
| Start        | 1230                                    | 75                                     |               | 1-3                                   |   | 0%  |             |
| End          | 1700                                    | 67                                     |               | 4-5                                   |   | 0%  |             |
| Start        |   |  |               |                                       |   | %   |             |
| End          |   |  |               |                                       |   |   |             |
| LIIU         |   |  |               |                                       |   | %   |             |
| Vegetati     | on Communities                          | Surveyed (inc. domina                  | nt spp.)      |                                       |   | <del></del>                                   |             |
|              |   |  |               |                                       |   |   |             |
| Diegan d     | casiai sage scrub                       | (Eri fas, Vig lac, Mal lau             | , and numer   | ous annual flo                        | owers)                                      |   |             |
|              |   |  |               |                                       |   |   |             |
|              | Host P                                  | lante                                  | Obs.          | T                                     | Nectar Plant                                | _   | 1 0         |
| dwarf pla    | intain ( <i>Plantago ei</i>             |  |               | noncorn flo                           | ower ( <i>Cryptantha / Plag</i>             | <del></del>                                   | Obs.        |
|              | vl's clover (Castille                   |  | □ ⊠           |                                       | ( <i>Lasthenia</i> spp.)                    | giobotinys spp.)                              |             |
|              | gon ( <i>Antirrhinum c</i>              |  |               |                                       | (Muilla spp.)                               |   |             |
| birds-bea    | ak (Cordylanthus r                      | igidus)                                |               |                                       | (Amsinckia intermedia                       | )   |             |
| woolly pl    | antain ( <i>Plantago p</i>              | atagonica)                             |               | onion (Allia                          |   |   |             |
|              |   |  |               | buckwheat                             | t (Eriogonum fasciculat                     | tum)  |             |
|              | · · · · · · · · · · · · · · · · · · ·   |  |               | ground pin                            | k (Linanthus dianthiflo                     | rus)  |             |
|              |   |  |               |                                       |   |   |             |
| ·-           | Butterfly                               | Species                                | No.           | T                                     | Butterfly Speci                             |   | No.         |
| Checkers     |   |  |               | Hairstreaks                           |   |   | NO.         |
| California   | patch (Chlosyne                         | californica)                           |               | <del></del>                           | hairstreak ( <i>Atlides ha</i>              | lesus corcorani)                              |             |
|              | neckerspot ( <i>C. gat</i>              |  |               |                                       | (Callophrys augustinus                      |   |             |
|              | eckerspot ( <i>Euphyd</i>               |  | 3             | bramble (pe                           | erplexing) hairstreak (C                    | . dumetorum affinis)                          |             |
|              |   | chalcedona chalcedona)                 |               |                                       | eak ( <i>Strymon melinus</i> <sub>i</sub>   | pudica)                                       |             |
|              |   | salia leanira wrighti)                 |               | Ladies/Adn                            |   |   |             |
| Blues        | escent ( <i>Phyciodes</i>               | mylitta)                               |               |                                       | ster (Adelpha bredowi                       |   |             |
|              | ygmy-blue ( <i>Breph</i>                | idium evile\                           | 2             | <del></del>                           | dmiral ( <i>Limenitis lorquii</i>           | · · · · · · · · · · · · · · · · · · ·         |             |
|              | ailed blue ( <i>Everes</i>              |  |               |                                       | ady (Vanessa annabe<br>(V. atalanta rubria) | ella)   | 25          |
|              |   | ne lygdamus australis)                 |               | painted lady                          | ·   |   | 57          |
|              | blue (Hemiargus d                       |  |               |                                       | /irginia) lady ( <i>V. virgini</i>          | ensis)  | 3/          |
|              | ue ( <i>Icaricia acmon</i>              |  |               |                                       | lady (Vanessa sp.)                          |   |             |
|              | ue ( <i>Leptotes marir</i>              | na)                                    |               | Swallowtai                            |   |   |             |
| unidentifie  | ed blue                                 |  |               | pale swallov                          | vtail ( <i>Papilio eurymedo</i>             | nn)   |             |
| Whites       | /                                       |  |               | <del>-</del>                          | er swallowtail ( <i>P. rutulu</i>           | s)  |             |
|              | getip (Anthocharis                      |  |               |                                       | owtail (P. zelicaon)                        |   |             |
|              | elder's) orangetip (                    | A. cetnura)<br>Coenonympha californica | ,             | Miscellane                            |   |   |             |
|              | white ( <i>Pieris rapae</i>             |  | ) 5           |                                       | anaus plexippus)<br>ckeye (Junonia coenia   | avio a a\                                     | <u> </u>    |
|              | d (common) white                        | <u> </u>                               |               |                                       | oak ( <i>Nymphalis antiop</i> a             | · ,   |             |
|              | ite ( <i>P. sisymbrii</i> )             | (r emili pretoulee)                    |               | Skippers                              | oak (rymphans antiopi                       | a)  |             |
| unidentifie  | <del> </del>                            |  |               | <del>+ - :</del>                      | skywing ( <i>Erynnis funer</i>              | alis)   | 4.          |
| Metalmar     | ks                                      |  |               |                                       | skywing ( <i>Erynnis tristis</i>            |   | <del></del> |
|              | etalmark ( <i>Apodemi</i>               |  | 23            |                                       | (Hylephila phyleus)                         | <u>, , , , , , , , , , , , , , , , , , , </u> |             |
|              | netalmark ( <i>Caleph</i>               | elis wrighti)                          |               | white (comm                           | non) checkered-skippe                       | r (Pyrgus albescens)                          | -           |
| Sulphurs     |   |  |               | Other                                 |   |   |             |
|              | lphur (Colias eury                      |  |               | ļ                                     |   |   |             |
|              | ange ( <i>Eurema nici</i>               |  |               |                                       | · · · · · · · · · · · · · · · · · · ·       |   | <u> </u>    |
| unidentifie  | sulfur ( <i>Phoebus se</i><br>d sulphur | этае тагсешпа)                         |               | · · · · · · · · · · · · · · · · · · · |   |   |             |
| action thine | a Julphur                               | Column Subtot                          |               |                                       |   | Column Subtet-1                               | 06          |
|              |   | 30.0 000(0)                            |               | 1                                     |   | Column Subtotal Total                         | 86<br>119   |
|              |   |  |               |                                       |   |   | 113         |

124/03 Johns Try we Cryptarthi CALT Copp WERE CABO Crotalus rube 12 hus 50 \* Sel cle Ma Ces - Projections 加加加加加州 " DIL Cap (D) (S) Bro dia I DLD Chancesyne 3515 62 Miccal Lanurcher

| 0           | Val Daa                                   |                | eckersp      |             | rfly Survey Fo   |                 | . 20                                  |             |
|-------------|---|----------------|--------------|-------------|--|-----------------|---------------------------------------|-------------|
| Surveyo     |   | en             |              |             | Date   | : 3/al/         |                                       | ,           |
|             | ne: Otay Hills                            |                |              |             |  | Site Visit No   | ):                                    | ·           |
| Acres Si    | urveyed                                   | Survey Tin     | ne:          | 1.42        | Acre   | s per Hour: _   |                                       |             |
| Other Su    | urveyors Present: Sally                   | Trn Ka.        | Chris        | Cocise      | & present  | for sofet       | ye helps                              | ethno       |
|             | upto                                      | FUSSU          | تمعده        | Cotala      | ノ <u>・</u>   | (               | 0 1                                   | 9           |
| г           |   |                |              | onditions   |  |                 |                                       |             |
| -           | Time (24 hr)                              | Tompor         | ature (°F)   |             | Wind Speed (m  | -6)             | Cloud Cove                            |             |
| Start       | 1 me (24 m)                               | remper         | 1            |             | willa speed (iii   | pri)            |                                       | <u>er</u>   |
|             | 1535                                      |                | 10           |             | <u>25 mp</u>   | b (             | lear                                  | · · · - · - |
| End         | 1700                                      |                | 8°           |             | 1-2/mph  | C               | Jear                                  |             |
| Start       |   |                |              |             | , ,  |                 |                                       |             |
| End         |   |                |              |             |  |                 |                                       |             |
|             |   |                |              |             |  |                 |                                       |             |
| Vegetati    | on Communities Surveyed (in               | nc. dominant   | spp.)        |             |  |                 |                                       |             |
|             |   |                |              |             |  |                 |                                       |             |
|             |   |                |              |             |  |                 |                                       | <del></del> |
|             |   |                |              |             |  |                 |                                       |             |
|             | Host Plants                               |                | Obs.         |             | Necta  | r Plants        |                                       | Obs.        |
|             | intain ( <i>Plantago erecta</i> )         |                | X            | popcorn     | flower (Cryptanth  | a/Plagiobothry: | s spp.)                               | X           |
|             | vl's clover ( <i>Castilleja exserta</i> ) |                |              | goldfield   | ls ( <i>Lasthenia</i> spp.                               | )               |                                       |             |
|             | gon (Antirrhinum coulterianum)            |                |              |             | tar ( <i>Muilla</i> spp.)                                |                 | -                                     |             |
|             | ak (Cordylanthus rigidus)                 |                |              |             | ck ( <i>Amsinckia inte</i>                               | ermedia)        |                                       |             |
| woolly pl   | antain ( <i>Plantago patagonica</i> )     |                |              |             | Mium spp.)   |                 |                                       |             |
|             | · · · · · · · · · · · · · · · · · · ·     |                |              |             | eat ( <i>Eriogonum fa</i>                                |                 |                                       |             |
|             |   |                |              | ground      | pink ( <i>Linanthus di</i>                               | anthiflorus)    | · · ·                                 |             |
|             |   |                |              |             |  |                 | <u> </u>                              |             |
|             | Butterfly Species                         |                | No.          |             | Butterfl   | / Species       |                                       | No.         |
| Checkers    | spots                                     |                |              | Hairstre    | aks  |                 | *                                     |             |
| California  | patch (Chlosyne californica)              |                |              | great pur   | ple hairstreak (Atl                                      | ides halesus co | rcorani)                              |             |
|             | neckerspot ( <i>C. gabbii</i> )           |                |              | brown el    | fin ( <i>Callophrys au</i> ç                             | gustinus)       |                                       |             |
|             | eckerspot ( <i>Euphydryas editha</i> q    |                | 3            |             | (perplexing) hairst                                      | <del></del>     | orum affinis)                         |             |
|             | n checkerspot (E. chalcedona c            |                |              |             | streak ( <i>Strymon rr</i>                               | nelinus pudica) |                                       |             |
|             | heckerspot (Thessalia leanira w           | /righti)       |              | Ladies/A    |  |                 |                                       |             |
| Blues       | escent ( <i>Phyciodes mylitta</i> )       |                |              |             | a sister (Adelpha b                                      |                 | iica)                                 |             |
|             | ygmy-blue ( <i>Brephidium exila</i> )     |                |              |             | admiral (Limenitis                                       |                 |                                       |             |
|             | ailed blue (Everes amyntula)              |                |              |             | st lady ( <i>Vanessa</i><br>ral ( <i>V. atalanta rul</i> |                 |                                       |             |
|             | blue (Glaucopsyche lygdamus               | australis)     |              |             | ady ( <i>V. cardui</i> )                                 | ла)             | · · · · · · · · · · · · · · · · · · · | 45          |
|             | blue (Hemiargus ceraunus gya              |                |              |             | (Virginia) lady (V                                       | virginiensis)   | · · · · · · · · · · · · · · · · · · · | 12          |
|             | ue (Icaricia acmon acmon)                 |                |              |             | ed lady (Vanessa   |                 |                                       |             |
| marine bl   | ue (Leptotes marina)                      |                |              | Swallow     |  |                 |                                       |             |
| unidentifie | ed blue                                   |                | i            | pale swa    | llowtail ( <i>Papilio eu</i>                             | rymedon)        |                                       |             |
| Whites      |   |                |              | western t   | iger swallowtail (F                                      | P. rutulus)     |                                       |             |
|             | ngetip (Anthocharis sara sara)            |                |              |             | allowtail ( <i>P. zelica</i>                             | on)             |                                       |             |
|             | elder's) orangetip (A. cethura)           |                |              | Miscella    |  |                 |                                       |             |
|             | California ringlet (Coenonympha           | a californica) |              | <del></del> | (Danaus plexippu   | <u> </u>        |                                       |             |
|             | white (Pieris rapae)                      |                |              |             | buckeye (Junonia   |                 |                                       |             |
|             | d (common) white (Pontia proto            | uice)          |              |             | ı cloak ( <i>Nymphalis</i>                               | antiopa)        |                                       | <u> </u>    |
| unidentific | ite ( <i>P. sisymbrii</i> )               |                |              | Skippers    |  | in funciolis    |                                       |             |
| Metalmar    |   |                |              |             | duskywing ( <i>Erynn</i><br>duskywing ( <i>Erynn</i>     |                 |                                       | _5          |
|             | etalmark ( <i>Apodemia mormo virg</i>     | uulti\         | <del></del>  |             | per ( <i>Hylephila phy</i>                               |                 |                                       |             |
|             | netalmark ( <i>Calephelis wrighti</i> )   | ,,             |              |             | mmon) checkered  |                 | is alheecene\                         |             |
| Sulphurs    |   |                | <del>.</del> | Other       | on, onconcret  | Onipper (1 yigh | is aivesceris)                        |             |
|             | lphur (Colias eurytheme)                  |                |              | 1           |  |                 | · · · · · · · · · · · · · · · · · · · |             |
|             | ange ( <i>Eurema nicippe</i> )            |                |              | 1           |  |                 |                                       |             |
|             | sulfur ( <i>Phoebus sennae marce</i>      | llina)         |              |             |  |                 | <del>-,</del>                         |             |
|             | ed sulphur                                |                |              |             |  |                 |                                       |             |
|             | Colu                                      | mn Subtotal    |              |             |  | Colu            | mn Subtotal                           | 50          |
| L           |   |                |              |             |  |                 | Total                                 | [0]         |

| Mark Hills Switch Colors of Switch of Colors of The Colors |              |          |          | · · · · · · · · · · · · · · · · · · · |
|--|--------------|----------|----------|---------------------------------------|
| The Branch of the State of the  |              |          |          |                                       |
|  |              |          |          |                                       |
|  | 3/3          |          | 是一個學的學家  |                                       |
| A TOUR STATE OF THE PARTY OF TH |              | <b>注</b> | <b>\</b> |                                       |
|  |              |          |          | 30° che                               |
| 中国的国际 1000 1000 1000 1000 1000 1000 1000 10  | TOWER STATES |          |          |                                       |

| Surveyor: Sally TRNKA                    | Date: 03/21/08  |
|--|-----------------|
| Site Name: Otay Hills Quarry (SRM-01)    | Site Visit No:  |
| Acres Surveyed Survey Time:1.17 hrs      | Acres per Hour: |
| Other Surveyors Present: Kathy Pettigrew |                 |

| Field Conditions |              |                  |                  |   |  |  |
|------------------|--------------|------------------|------------------|---|--|--|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover                             |  |  |
| Start            | 15:45        | 74               | 2-5              | 0 percent; sunny                        |  |  |
| End              | 16:55        | 75               | 0-3              | 0 percent; sunny                        |  |  |
| Start            |              |                  |                  | , |  |  |
| End              |              |                  |                  |   |  |  |

| Vegetation Communities Sur | veyed (inc. dominar | nt spp.) | <u> </u> |  |
|----------------------------|---------------------|----------|----------|--|
| Diegan coastal sage scrub  |                     |          |          |  |
|                            |                     |          |          |  |

| Host Plants                              | Obs. | Nectar Plants                                    | Obs. |
|--|------|--|------|
| dwarf plantain (Plantago erecta)         | X    | popcorn flower (Cryptantha / Plagiobothrys spp.) |      |
| purple owl's clover (Castilleja exserta) |      | goldfields (Lasthenia spp.)                      |      |
| snapdragon (Antirrhinum coulterianum)    |      | chia (Salvia columbariae)                        |      |
| birds-beak (Cordylanthus rigidus)        |      | goldenstar (Muilla spp.)                         |      |
| woolly plantain (Plantago patagonica)    |      | fiddleneck (Amsinckia intermedia)                | -    |
|  |      | onion (Allium spp.)                              | X    |
|  |      | buckwheat (Eriogonum fasciculatum)               |      |
|  |      | ground pink (Linanthus dianthiflorus)            | X    |

| Butterfly Species                                   | No.  | Butterfly Species  | No.         |
|---|------|--|-------------|
| Checkerspots  |      | Hairstreaks  |             |
| California patch (Chlosyne californica)             |      | great purple hairstreak (Atlides halesus corcorani)          |             |
| Gabb's checkerspot (C. gabbii)                      | .1 · | brown elfin (Callophrys augustinus)                          | 1           |
| Quino checkerspot (Euphydryas editha quino)         | 2    | bramble (perplexing) hairstreak (C. dumetorum affinis)       | 1           |
| chalcedon checkerspot (E. chalcedona chalcedona)    | •    | gray hairstreak (Strymon melinus pudica)                     | ·           |
| Leanira checkerspot (Thessalia leanira wrighti)     |      | Ladies/Admirals  |             |
| Mylitta crescent (Phyciodes mylitta)                |      | California sister (Adelpha bredowii californica)             |             |
| Blues   |      | Lorquin's admiral (Limenitis lorquini)                       |             |
| western pygmy-blue (Brephidium exila)               | ···· | west coast lady (Vanessa annabella)                          | 3           |
| western tailed blue (Everes amyntula)               |      | red admiral (V. atalanta rubria)                             | <del></del> |
| southern blue (Glaucopsyche lygdamus australis)     |      | painted lady (V. cardui)                                     | 7           |
| Edward's blue (Hemiargus ceraunus gyas)             |      | American (Virginia) lady (V. virginiensis)                   |             |
| Acmon blue (Icaricia acmon acmon)                   |      | unidentified lady (Vanessa sp.)                              | 18          |
| marine blue (Leptotes marina)                       |      | Swallowtails   |             |
| unidentified blue                                   | 4    | pale swallowtail (Papilio eurymedon)                         |             |
| Whites  |      | western tiger swallowtail (P. rutulus)                       |             |
| Sara orangetip (Anthocharis sara sara)              |      | anise swallowtail (P. zelicaon)                              |             |
| desert (Felder's) orangetip (A. cethura)            |      | Miscellaneous  |             |
| common California ringlet (Coenonympha californica) | 2    | monarch (Danaus plexippus)                                   |             |
| cabbage white (Pieris rapae)                        |      | common buckeye (Junonia coenia grisea)                       |             |
| checkered (common) white (Pontia protodice)         |      | mourning cloak (Nymphalis antiopa)                           | <del></del> |
| spring white ( <i>P. sisymbrii</i> )                |      | Skippers   |             |
| unidentified white                                  |      | funereal duskywing (Erynnis funeralis)                       | 2           |
| Metalmarks  |      | mournful duskywing (Erynnis tristis)                         |             |
| Behr's metalmark (Apodemia mormo virgulti)          | 1    | fiery skipper (Hylephila phyleus)                            |             |
| Wright's metalmark (Calephelis wrighti)             |      | white (common) checkered-skipper ( <i>Pyrgus albescens</i> ) |             |
| Sulphurs  |      | Other  |             |
| orange sulphur ( <i>Colias eurytheme</i> )          |      |  |             |
| sleepy orange (Eurema nicippe)                      |      |  |             |
| cloudless sulfur (Phoebus sennae marcellina)        |      |  |             |
| unidentified sulphur                                |      |  |             |
| Column Subtotal                                     | 10   | Column Subtotal  | 32          |
|   |      | Total  | 42          |

|                                    | 11.00                          |
|------------------------------------|--------------------------------|
| <br>SRM-01 040<br>Area 13          | my Hills 03/21/108             |
| Tyea 15                            | Sally T                        |
|                                    | co-sorv. Kathy F               |
| Start: Clear Soming, 0%<br>3:45 pm | ,2.5mph; 74°F                  |
| 3.45pm                             |                                |
| C                                  |                                |
| flowering plats                    | animals                        |
| <br>Viola pod                      | Behn's not work 1              |
| 1201 300                           | Fun dusky 11                   |
| Sanicola sp.                       | Fon dosky 11<br>6 gepten snake |
| Min our                            | Blue IIII                      |
| Dodac.                             | w meadowlak                    |
| <br>Die cap                        | raven                          |
| <br>Allum sp. lots!                | lady Ift Ift INT (1)           |
| Bros sp                            | W coast long //                |
| Lath vest.                         | Ptd lady (AK 1)                |
| Caly mac.                          | Moss                           |
| Calirolu.                          | perply history                 |
| Esch cal                           | bry elfon 1                    |
| Linanth                            | guino 11 (photo of             |
| Pla ere                            | (anger)                        |
|                                    | Gabb's chk 1                   |
| end: 4:55pm; anny Clear            | O7 Ch ( )                      |
| 0-3 mph ; 75°F                     | CA Might 11                    |
|                                    |                                |
|                                    |                                |
|                                    |                                |
|                                    |                                |

| Surveyor: _ Jasmine Watts    |                                    | Date: March 21, 2008 |  |
|------------------------------|------------------------------------|----------------------|--|
| Site Name: SRM-01 OTAY HILLS |                                    | Site Visit No: 1     |  |
| Acres Surveyed               | Survey Time: 4.83                  | Acres per Hour:      |  |
| Other Surveyors Present:     | Supervised individual Jason Kurnow |                      |  |

|       | Field Conditions |                  |                  |             |  |
|-------|------------------|------------------|------------------|-------------|--|
|       | Time (24 hr)     | Temperature (°F) | Wind Speed (mph) | Cloud Cover |  |
| Start | 1210             | 75               | 1-3              | clear       |  |
| End   | 1700             | 67               | 4-5              | clear       |  |
| Start |                  |                  |                  |             |  |
| End   |                  |                  |                  |             |  |

| Vegetation Communities Surveyed (inc. dominant spp.)                               |   |
|--|---|
| Open DCSS dominated by Erigonum fasciculatum and understory og NNG (Avena, Bromus) |   |
|  | * |

| Host Plants                              | Obs. | Nectar Plants                                    | Obs. |
|--|------|--|------|
| dwarf plantain (Plantago erecta)         | X    | popcorn flower (Cryptantha / Plagiobothrys spp.) | X    |
| purple owl's clover (Castilleja exserta) | Х    | goldfields (Lasthenia spp.)                      | X    |
| snapdragon (Antirrhinum coulterianum)    |      | chia (Salvia columbariae)                        |      |
| birds-beak (Cordylanthus rigidus)        |      | goldenstar (Muilla spp.)                         |      |
| woolly plantain (Plantago patagonica)    |      | fiddleneck (Amsinckia intermedia)                |      |
|  |      | onion (Allium spp.)                              | X    |
|  |      | buckwheat (Eriogonum fasciculatum)               | X    |
|  |      | ground pink ( <i>Linanthus dianthiflorus</i> )   | X    |

| Butterfly Species                                     | No. | Butterfly Species                                      | No.          |
|---|-----|--|--------------|
| Checkerspots  |     | Hairstreaks  |              |
| California patch (Chlosyne californica)               |     | great purple hairstreak (Atlides halesus corcorani)    |              |
| Gabb's checkerspot (C. gabbii)                        |     | brown elfin (Callophrys augustinus)                    | <del> </del> |
| Quino checkerspot (Euphydryas editha quino)           |     | bramble (perplexing) hairstreak (C. dumetorum affinis) | <u> </u>     |
| chalcedon checkerspot (E. chalcedona chalcedona)      |     | gray hairstreak (Strymon melinus pudica)               | <del></del>  |
| Leanira checkerspot (Thessalia leanira wrighti)       |     | Ladies/Admirals  |              |
| Mylitta crescent (Phyciodes mylitta)                  |     | California sister (Adelpha bredowii californica)       |              |
| Blues   |     | Lorquin's admiral (Limenitis lorquini)                 |              |
| western pygmy-blue (Brephidium exila)                 | 3   | west coast lady (Vanessa annabella)                    | 13           |
| western tailed blue (Everes amyntula)                 |     | red admiral (V. atalanta rubria)                       |              |
| southern blue (Glaucopsyche lygdamus australis)       |     | painted lady (V. cardui)                               | 49           |
| Edward's blue (Hemiargus ceraunus gyas)               |     | American (Virginia) lady (V. virginiensis)             |              |
| Acmon blue (Icaricia acmon acmon)                     |     | unidentified lady (Vanessa sp.)                        |              |
| marine blue (Leptotes marina)                         |     | Swallowtails   |              |
| unidentified blue                                     | 1   | pale swallowtail (Papilio eurymedon)                   |              |
| Whites  |     | western tiger swallowtail (P. rutulus)                 |              |
| Sara orangetip (Anthocharis sara sara)                | 3   | anise swallowtail (P. zelicaon)                        |              |
| desert (Felder's) orangetip (A. cethura)              |     | Miscellaneous  | 1            |
| common California ringlet (Coenonympha californica)   | 11  | monarch (Danaus plexippus)                             |              |
| cabbage white (Pieris rapae)                          |     | common buckeye (Junonia coenia grisea)                 |              |
| checkered (common) white (Pontia protodice)           | 4   | mourning cloak (Nymphalis antiopa)                     |              |
| spring white ( <i>P. sisymbrii</i> )                  |     | Skippers   |              |
| unidentified white                                    |     | funereal duskywing (Erynnis funeralis)                 | 8            |
| Metalmarks  |     | mournful duskywing ( <i>Erynnis tristis</i> )          |              |
| Behr's metalmark (Apodemia mormo virgulti)            | 33  | fiery skipper (Hylephila phyleus)                      |              |
| Wright's metalmark (Calephelis wrighti)               |     | white (common) checkered-skipper (Pyrgus albescens)    | 1            |
| Sulphurs  |     | Other  | <del></del>  |
| orange sulphur ( <i>Colias eurytheme</i> )            |     |  | -            |
| sleepy orange ( <i>Eurema nicippe</i> )               |     |  |              |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> ) |     |  |              |
| unidentified sulphur                                  |     |  |              |
| Column Subtotal                                       | 55  | Column Subtotal  | 72           |
|   |     | Total  |              |

SRM-01 OTAY HILLS 21 March 2000 AREA 4 JW (assistantly) 5:00 ) 1-3mph, clear, 24°C 5:00 pm, 4-5mph, clear, 67 STAPPI 500P: PLANT SPP. BUTTERFUES Pla. ere 2 Colina . -Behis mehlmark WILHT M Dicatera Lotus sp. Fun. duskyning HTIII 6 p. d. am Plagiobanys q. Painted Lady MY MKHT UK Lindia: Erifas. + Comm white III Las.cat. Vig. lac. West loas lady WAIII Lupika, + Artical. Arise suniboring Aveira Sp. Ferviri. so at b. \* Siligal. -Balis HTHTHT III Filmso pix Silia Casiers Mir.col. \* -Painted Lady HK HHY IK Checkened Skyren 1 Calispl. \* allium sp. \* Violed + Lauration sp. + figny blue 11 Dyalocc. Sona Oronge p 111 - Painted lady All HI

| Survey                   | or:                                    | Greg Mason                                   | ieckersp   | ot But                             | terfly Survey Form Date:   | 2/20/2008                                  |  |
|--------------------------|--|--|--|------------------------------------|--|--|--|
| Site Name: Otay Hills Qu |  | Otay Hills Quarry                            |  |                                    | Site Visit No:   | 3/22/2008                                  | <del>-</del> ,                                   |
|                          |  |  |  |                                    |  | 2  |  |
|                          |  | Survey I                                     | ime: _   | 4.50                               | Acres per Hou  | ır: 0.00                                   |  |
| Survey                   | ors Present:                           |  |  |                                    |  |  |  |
|                          | ÷                                      |  | . <u>-</u>                                       |                                    |  |  |  |
| [                        |  | · · · · · · · · · · · · · · · · · · ·        | Field C  | onditio                            | ns   |  |  |
|                          | Time (24                               | hr) Temper                                   | ature (°F)                                       |                                    | Wind Speed (mph)   | Cloud Cov                                  | er   |
| Start                    | 0930                                   | 78   |  |                                    | 0-1  | 0%   |  |
| End                      | 1400                                   | 84   |  | ``.                                | 0-5  | 0%   |  |
| Start                    |  |  |  |                                    |  |  | ··   |
| End                      |  |  |  |                                    |  | %  |  |
| Liiu                     |  |  |  |                                    | ·,   | %  |  |
| Vegetati                 | on Communities                         | Surveyed (inc. dominant                      | spp.)  |                                    |  |  |  |
|                          |  |  | ~FF./  |                                    |  |  |  |
|                          |  |  |  |                                    |  | ·  |  |
|                          |  |  |  |                                    |  |  |  |
|                          | Host P                                 | lants  | Obs.   |                                    | Nectar Plants  |  | Obs.   |
| dwarf pla                | ıntain ( <i>Plantago er</i>            | ecta)  | ☒  | poped                              | orn flower (Cryptantha / Plag  |  | ⊠ ⊠  |
| purple ov                | vl's clover ( <i>Castille</i>          | eja exserta)                                 | ×  |                                    | elds (Lasthenia spp.)  |  | Ø  |
|                          | gon ( <i>Antirrhinum c</i> o           |  |  |                                    | nstar ( <i>Muilla</i> spp.)  |  | <del>                                     </del> |
|                          | ak ( <i>Cordylanthus ri</i>            |  |  |                                    | neck ( <i>Amsinckia intermedia</i> )   |  |  |
| woolly pl                | antain ( <i>Plantago p</i>             | atagonica)                                   |  |                                    | (Allium spp.)  |  |  |
|                          |  |  |  |                                    | vheat ( <i>Eriogonum fasciculat</i> u  |  |  |
|                          |  |  | <del>                                     </del> | groun                              | d pink ( <i>Linanthus dianthiflort</i>                                       | is)  | <u> </u>   |
| L <u></u> .              |  |  | <u> </u>   | l                                  |  |  |  |
|                          | Butterfly                              | Species                                      | No.  |                                    | Butterfly Specie   | s  | No.  |
| Checkers                 |  |  |  | Hairst                             | reaks  |  |  |
|                          | patch (Chlosyne d                      |  |  |                                    | ourple hairstreak (Atlides hale  | sus corcorani)                             |  |
|                          | neckerspot (C. gab                     |  | 1 .  | (Sumpring adgastinas)              |  |  |  |
|                          | eckerspot (Euphyd                      | ryas editna quino)<br>chalcedona chalcedona) |  |                                    | e (perplexing) hairstreak (C.  |  |  |
|                          |  | alia leanira wrighti)                        |  |                                    | airstreak ( <i>Strymon melinus p</i><br>b <b>/Admirals</b>                   | udica)                                     |  |
|                          | escent (Phyciodes                      |  |  | +                                  | nia sister ( <i>Adelpha bredowii</i> d                                       | nalifornias)                               |  |
| Blues                    | , , , , , , , , , , , , , , , , , , ,  |  |  |                                    | n's admiral ( <i>Limenitis lorquini</i>                                      |  | <del></del>                                      |
| western p                | ygmy-blue ( <i>Brephi</i>              | idium exila)                                 | 3  |                                    | past lady (Vanessa annabeli  |  | 3  |
|                          | ailed blue ( <i>Everes</i> a           |  |  |                                    | miral (V. atalanta rubria)   |  |  |
|                          |  | e lygdamus australis)                        | 3  | painted                            | l lady (V. cardui)   |  | 13   |
|                          | blue (Hemiargus o                      |  |  |                                    | an (Virginia) lady ( <i>V. virginie</i>                                      | nsis)                                      |  |
|                          | ue (Icaricia acmon                     |  |  |                                    | tified lady ( <i>Vanessa</i> sp.)  |  |  |
| unidentifie              | ue ( <i>Leptotes marin</i>             | a)   |  | Swallo                             |  |  |  |
| Whites                   | od blue                                |  |  |                                    | vallowtail ( <i>Papilio eurymedor</i>  |  | 1  |
|                          | getip (Anthocharis                     | sara sara)                                   | 8  |                                    | n tiger swallowtail ( <i>P. rutulus</i><br>wallowtail ( <i>P. zelicaon</i> ) |  | 4:   |
|                          | elder's) orangetip (/                  |  |  | <del></del>                        | laneous  |  | 1  |
| common (                 | California ringlet (C                  | oenonympha californica)                      |  |                                    | ch (Danaus plexippus)  |  |  |
|                          | white ( <i>Pieris rapae</i> )          |  |  |                                    | n buckeye (Junonia coenia o  | grisea)                                    |  |
|                          | (common) white (                       | Pontia protodice)                            | 8  | mourning cloak (Nymphalis antiopa) |  |  |  |
|                          | ite ( <i>P. sisymbrii</i> )            |  |  | Skippe                             |  |  |  |
| unidentifie              |  |  |  |                                    | ll duskywing ( <i>Erynnis funeral</i>  | is)  | 1  |
| Metalmar<br>Behr's me    | <b>ks</b><br>talmark ( <i>Apodemia</i> | mormo viraultà                               | 45   |                                    | ul duskywing (Erynnis tristis)   |  |  |
|                          | netalmark ( <i>Calephe</i>             |  | 15   |                                    | ipper (Hylephila phyleus)  | (D) 117 117 117 117 117 117 117 117 117 11 |  |
| Sulphurs                 | - Land (Outophie                       | · · · · · · · · · · · · · · · · · · ·        |  | Other                              | common) checkered-skipper  | (ryrgus albescens)                         | 25   |
|                          | phur (Colias euryti                    | heme)  |  | 5.11.61                            | <u> </u>   |  |  |
|                          | nge ( <i>Eurema nicip</i>              |  |  |                                    |  |  |  |
|                          | sulfur ( <i>Phoebus se</i>             | nnae marcellina)                             |  |                                    |  |  |  |
| unidentifie              | d sulphur                              |  | 1  |                                    |  |  |  |
| ······                   | · · · · · · · · · · · · · · · · · · ·  | Column Subtotal                              | 39   |                                    |  | Column Subtotal                            | 44   |
|                          |  |  |  |                                    |  | Total                                      | 83   |

| 3/22/08 QCB   | smet SRM-c                              | U Area 12                             |
|---|---|---------------------------------------|
| China not ab  | seved GM                                | Sime-ke                               |
| Start 0930, sunnt<br>End 1400, Sunnts<br>Plants & in Flaver | +clra, O-Inithuind                      | 78° F                                 |
| End 1400, Sunny   | (lear, 0-5 gusts                        | 1,84°F                                |
| plants in Flavor  | BFILES WITH                             | other                                 |
| EnF. New Lrown  | Ringlet HILLIAM                         |                                       |
| AUBER LUSE / GARANT   | P.L. HITH                               | Lading April Mal                      |
| Silled Safe Many  |   | dugafly in atis                       |
| Hirsh & Selvic Otay & Se Bi                                 | 5 blue 14                               | ravin                                 |
| BNIO Harley Copy &  | Guhitz MALL                             | grate.                                |
| Arce PlEr Seci  |   | 91635 60717-02                        |
| SaTu jepsuis tevi   | - · · · · · · · · · · · · · · · · · · · | cottanta!                             |
| Bing Minutis Ychi   |   | Sulter 12rt                           |
| Breader CVO Tamanist  | ,                                       |                                       |
| Erodin & Physica Vila                                       |   |                                       |
| ande Allin* PoEd  |   |                                       |
| Cene MiAJA IsMe   | 4 '                                     |                                       |
| Fa Jajour Hs.   |   |                                       |
| Loft & Shorts Swall 45                                      |   |                                       |
| melidis Mala HCI  |   |                                       |
| LB: Fern multi-) 147  | Cotitate 18/23430                       | · · · · · · · · · · · · · · · · · · · |
| Frair RhCx Cheanets 44                                      | 1/21/20                                 | 71 Pe 6x6                             |
| Chief Crypthantic 49  |   | 32 Pe 3x3                             |
| RuIn Painthing \$ 50  | ants/1041 Pezox20                       | 23 PC 16412                           |
| G.C. S.Ch 516   | thanks Ha Par 2                         | 34 CHIH HE SUX 30                     |
| Dicat Malvat 152  | 1 hard 47 Pe15x3                        | "Rite in the Rain                     |
| Laid, (Ohrania)   | 50K30 74 15 686                         | of Addition as Assess                 |

| SRM   | -01 QCB Area 12 3/22/08 GM   |
|---|--|
| Plants conti  | Paints cont  |
| manilgin  | 53 PIEVLala  |
| exampliants X   | ncy projety b  |
| Ruch  | 54 le 6715<br>55 ly 12x4   |
|   | 56 /e 4010   |
| Mark Committee of Section Committee | 57 1 6 6 6 1   |
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| Surveyor: Doug Allen               | ·                   | Date:      | 3/26/08        |
|------------------------------------|---------------------|------------|----------------|
| Site Name: Otay Hills              |                     |            | Site Visit No: |
| Acres Surveyed                     | Survey Time: 8.0 hr | 5.25 Acres | per Hour:      |
| Other Surveyors Present: Robert Ho | genauer             |            |                |

|       | Field Conditions |                  |                  |             |  |
|-------|------------------|------------------|------------------|-------------|--|
|       | Time (24 hr)     | Temperature (°F) | Wind Speed (mph) | Cloud Cover |  |
| Start | 1030             | 80               | 0-2              | 5%          |  |
| End   | 1330             | 82               | 6-8              | 0%          |  |
| Start | 1330             | 72               | 6-8              | 070         |  |
| End   | 1545             | 77               | 7-10             | 05%         |  |

| Vegetation Communities Surveyed (inc. dominant spp.)         |  |
|--|--|
| Diegan coast sage scrub, non-native grassland, and disturbed |  |
|  |  |

| Host Plants                              | Obs. | Nectar Plants                                    | Obs.           |
|--|------|--|----------------|
| dwarf plantain (Plantago erecta)         | Х    | popcorn flower (Cryptantha / Plagiobothrys spp.) | X              |
| purple owl's clover (Castilleja exserta) |      | goldfields (Lasthenia spp.)                      | X              |
| snapdragon (Antirrhinum coulterianum)    |      | chia (Salvia columbariae)                        |                |
| birds-beak (Cordylanthus rigidus)        |      | goldenstar (Muilla spp.)                         | 1              |
| woolly plantain (Plantago patagonica)    |      | fiddleneck (Amsinckia intermedia)                |                |
|  |      | onion (Allium spp.)                              |                |
|  |      | buckwheat (Eriogonum fasciculatum)               | X              |
|  |      |  | <del>-  </del> |

| Butterfly Species                                   | No. | Butterfly Species                                      | No.         |
|---|-----|--|-------------|
| Checkerspots  |     | Hairstreaks  | 1.0.        |
| California patch (Chlosyne californica)             |     | great purple hairstreak (Atlides halesus corcorani)    | <u> </u>    |
| Gabb's checkerspot (C. gabbii)                      | 1   | brown elfin (Callophrys augustinus)                    |             |
| Quino checkerspot (Euphydryas editha quino)         |     | bramble (perplexing) hairstreak (C. dumetorum affinis) | 2           |
| chalcedon checkerspot (E. chalcedona chalcedona)    |     | gray hairstreak (Strymon melinus pudica)               |             |
| Leanira checkerspot (Thessalia leanira wrighti)     |     | Ladies/Admirals  | ļ           |
| Mylitta crescent (Phyciodes mylitta)                |     | California sister (Adelpha bredowii californica)       |             |
| Blues   |     | Lorquin's admiral (Limenitis lorquini)                 | <del></del> |
| western pygmy-blue (Brephidium exila)               | 1   | west coast lady (Vanessa annabella)                    | 3           |
| western tailed blue (Everes amyntula)               |     | red admiral (V. atalanta rubria)                       | ļ -         |
| southern blue (Glaucopsyche lygdamus australis)     |     | painted lady (V. cardui)                               | 14          |
| Edward's blue (Hemiargus ceraunus gyas)             |     | American (Virginia) lady (V. virginiensis)             |             |
| Acmon blue (Icaricia acmon acmon)                   |     | unidentified lady (Vanessa sp.)                        |             |
| marine blue (Leptotes marina)                       |     | Swallowtails   | -           |
| unidentified blue                                   |     | pale swallowtail (Papilio eurymedon)                   |             |
| Whites  |     | western tiger swallowtail (P. rutulus)                 |             |
| Sara orangetip (Anthocharis sara sara)              | 1`  | anise swallowtail (P. zelicaon)                        |             |
| desert (Felder's) orangetip (A. cethura)            |     | Miscellaneous  |             |
| common California ringlet (Coenonympha californica) | 1   | monarch (Danaus plexippus)                             |             |
| cabbage white (Pieris rapae)                        |     | common buckeye (Junonia coenia grisea)                 |             |
| checkered (common) white (Pontia protodice)         | 5   | mourning cloak (Nymphalis antiopa)                     |             |
| spring white (P. sisymbrii)                         |     | Skippers   |             |
| unidentified white                                  |     | funereal duskywing (Erynnis funeralis)                 | 1           |
| Metalmarks  |     | mournful duskywing (Erynnis tristis)                   | ·           |
| Behr's metalmark (Apodemia mormo virgulti)          | 11  | fiery skipper (Hylephila phyleus)                      |             |
| Wright's metalmark (Calephelis wrighti)             |     | white (common) checkered-skipper (Pyrgus albescens)    |             |
| Sulphurs  |     | Other Other  |             |
| orange sulphur ( <i>Colias eurytheme</i> )          |     |  |             |
| sleepy orange ( <i>Eurema nicippe</i> )             |     |  |             |
| cloudless sulfur (Phoebus sennae marcellina)        |     |  | <u> </u>    |
| unidentified sulphur                                | ,   |  |             |
| Column Subtotal                                     | 20  | Column Subtotal  | 20          |
|   |     | Total  | 40          |

| 3/26/08 DAINER.<br>Sem-01 | Sec 4/Sec 5  | 80°6 6 | 4030 82°F Clear 6-8 | 20 |      | 0 Wh 1: | .;. <b>X</b> |       |       |      | AOT  |      | ۷c La 🖫 |  |  |  |  |  |
|---------------------------|--|--------|---------------------|----|------|---------|--------------|-------|-------|------|------|------|---------|--|--|--|--|--|
| 3/26/08<br>Sem-01         | 15 735<br>15 15 15 15 15 15 15 15 15 15 15 15 15 1 | 1030   | 134030              |    | BEMM | Cour    | PALA         | T. O. | AB CT | 1846 | SACT | CARE | Wela    |  |  |  |  |  |

| Cowl   | Spm-01   |                 |
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| Scop S   | 3/26/08  | The profession  |
| 1330   | 2528   | of clear : 6-18 |
| 1545   | 78   |                 |
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|--|--|----------|--|-----------------------|-------------|
| Surveyor: \( \lambda \)  | of H w/ Doug A.  |          | ·  | Date                  | 3/26/       |
| HELIX permit nur   | nber: <u>TE778195</u>  |          | Site Visit No: 1   |                       | •           |
| Sub-consultant pe  | ermit number:  |          | 1  | 2373                  | 0 / 9 9 10  |
| Site Name:   | Tay Hills  |          |  |                       |             |
| Total acres survey   | ved: ~ 17 \tag{7}  |          | Total site acr   |                       |             |
| Site Location: $\frac{1}{2}$   |  |          | Total hours surveye  |                       |             |
| Site Location. 14 9  | 700  |          |  | 3                     | . 25        |
| Time (24 hour)   | SKY  |          | Mind (   |                       |             |
| Start: 10 30   | Clear Patchy Overcast/Cloudy Drizzle   | Showers  | <1 (1-3) 4-7 8-12 12-15  | >15                   | Temperatu   |
| End:   | Clear Patchy Overcast/Cloudy Drizzle   | Showere  | <1 1-3 4-7 8-13 17-45  |                       | 80° F       |
| 1545   |  | •        | <1 1-3 4-7 8-12 12-15  | >15                   | 78° F       |
| Start:   | Clear Patchy Overcast/Cloudy Drizzle   | Showers  | <1 1-3 4-7 8-12 12-15  | >15                   | 18 1-       |
| End:   | Clear Patchy Overcast/Cloudy Drizzle   | Showers  | <1 1-3 4-7 8-12 12-15  |                       |             |
| Start:   |  | , 1      | <1 1-3 4-7 8-12 12-15  | >15                   |             |
| Start.   | Clear Patchy Overcast/Cloudy Drizzle   | Showers  | <1 1-3 4-7 8-12 12-15  | >15                   |             |
|  |  |          |  |                       |             |
| escription of area   | Clear Patchy Overcast/Cloudy Drizzle :   |          | <1 1-3 4-7 8-12 12-15<br>+5 Hall Side c  | >15                   | script      |
|  | S surveyed & comments: Ar  |          | 12 17 6-12 12-15   | >15                   | scrip       |
| escription of areases  St & Nectar Plant Dwarf Plantain ( Owl's Clover (Ca Chinese Houses Snapdragon (And Thread-leaved B rigidus) Woolly plantain ( | s surveyed & comments: Ar  Chaparal Sone  Sone  s On-site:   | 9 ms     | 12 17 6-12 12-15   | otermedia<br>tha sp.) | a)<br>orus) |
| escription of areases Shapdragon (Anti-Thread-leaved Brigidus) Woolly plantain (Other:   | s surveyed & comments: Are Some  s On-site: Plantago erecta) Instilleja exserta) (Collinsia concolor) Stirrhinum coulterianum) Sird's Beak (Cordylanthus (Plantago patagonica) | 9 ms     | Fiddleneck (Amsinckia in Chia (Salvia columbariae Copcorn Flower (Cryptan Goldfields (Lasthenia sp. iround Pink (Linanthus of Lotus sp.) | otermedia<br>tha sp.) | a)<br>orus) |
| escription of areases  St & Nectar Plant Dwarf Plantain ( Owl's Clover (Ca Chinese Houses Snapdragon (And Thread-leaved B rigidus) Woolly plantain ( | s surveyed & comments: Are Some Some Some Some Some Some Some Som  | 9 ms     | Fiddleneck (Amsinckia in Chia (Salvia columbariae Copcorn Flower (Cryptan Goldfields (Lasthenia sp. iround Pink (Linanthus of Lotus sp.) | otermedia<br>tha sp.) | a)<br>orus) |

| Site: 5KW -01  | rea 4+5  |               |
|--|----------|---------------|
| Name: Rub H  |          | Date: 3/26/08 |
| Butterflies  | Number   | Comments      |
| Checkerspots   |          |               |
| Quino checkerspot (Euphydryas editha quino)          |          |               |
| chalcedon checkerspot (E. chalcedona                 |          |               |
| Leanira checkerspot (Thessalia leanira wrighti)      |          |               |
| Mylitta cresent (Phyciodes mylitta)                  |          |               |
| Gabb's checkerspot (Chlosyne gabbii)                 |          |               |
| California patch (C. californica)                    |          |               |
| Blues  |          |               |
| western tailed blue (Everes amyntula)                |          |               |
| southern blue (Glaucopsyche lygdamus australis)      |          |               |
| echo blue (Celastrina ladon echo)                    |          |               |
| Edward's blue (Hemiargus ceraunus gyas)              | <u> </u> |               |
| Sonoran blue (Philotes sonorensis)                   |          |               |
| marine blue (Leptotes marina)                        |          |               |
|  |          |               |
| Acmon blue (Icaricia acmon acmon)                    | 2        |               |
| pygmy blue (Brephidium exilis)                       | 3        |               |
| unidentified blue                                    | 1        |               |
| Whites   |          |               |
| Sara orangetip (Anthocharis sara sara)               | 7        |               |
| desert (Felder's) orangetip (A. cethura)             |          |               |
| cabbage white (Artogeia rapae)                       | 1        |               |
| common white (Pontia protodice)                      | 8        |               |
| spring white (P. sisymbrii)                          |          |               |
| California ringlet (Coenonympha californica)         | 3        |               |
| unidentified white                                   | 22       |               |
| Metalmarks   |          |               |
| Behr's metalmark (Apodemia mormo virgulti)           | 18       |               |
| Wright's metalmark (Calephelis wrightii)             |          |               |
| Swallowtails   |          |               |
| pale swallowtail (Papilio eurymedon)                 |          |               |
| anise swallowfail (P. zelicaon)                      |          |               |
| western tiger swallowtail (P. rutulus)               |          |               |
| Sulphurs   |          |               |
| sleepy orange (Eurema nicippe)                       |          |               |
| California dogface (Zerene eurydice)                 |          |               |
| orange sulphur (Colias eurytheme)                    |          |               |
| cloudless sulfur (Phoebus sennae marcellina)         |          |               |
| Hairstreaks  |          |               |
| gray hairstreak (Strymon melinus pudica)             |          |               |
| brown elfin (Callophrys augustinus)                  |          |               |
| bramble (perplexing) hairstreak (C. dumetorum)       |          |               |
| great purple hairstreak (Atlides halesus corcorani). |          |               |
| Ladies/Admirals                                      |          |               |
| painted lady (Vanessa cardui)                        | 16       |               |
| west coast lady (V. annabella)                       | 31       |               |
| Virginia lady (V. virginiensis)                      |          |               |
| red admiral (V. atalanta rubria)                     |          |               |
| unidentified lady (Vanessa sp.)                      |          |               |
| California sister (Adelpha bredowii californica)     |          |               |
| Lorquin's admiral (Limenitis Iorquini)               |          |               |
| Miscellaneous  |          |               |
| monarch (Danaus plexippus)                           |          |               |
| queen (D. gilippus)                                  |          |               |
| satyr anglewing (Polygonia satyrus)                  |          |               |
| buckeye (Junonia coenia)                             |          |               |
| mourning cloak (Nymphalis antiopa)                   |          |               |
| Skippers   |          |               |
| common checkered-skipper (Pyrgus communia)           |          |               |
| funereal duskywing (Erynnis funeralis)               |          |               |
| mournful duskywing (Erynnis tristis)                 |          |               |
| ,              |          |               |
|  |          |               |
| <u> </u>   | l        | <u> </u>      |

| 3/26/08<br>PUBH WEA | 10-8 52 Jan 28       |                    |                     | Can han a most |                      |            | 4             |               | 014               |         |             |       |                |         |           |       |          |            |
|---------------------|----------------------|--------------------|---------------------|----------------|----------------------|------------|---------------|---------------|-------------------|---------|-------------|-------|----------------|---------|-----------|-------|----------|------------|
| S. P.M 01 3/26      | 5th 1030<br>5tp 1370 | Ares 4 Sofue Co.S. | Copher Suluga, Dink | Blue back +V   | Protein to michalink | to by CACH | AUNIA LO SAMA | Aprismy Sishm | Dig gress Chap or | DOUNTED | SX santland | 4 + M | 5124 block 112 | Ma. 610 | Bes. Cac. | Basho | esch Ca1 | tooth bash |

|                            |              |  | er a visuality |             |
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| SEM-OI                     | 3/26/08      | Rus 1  | let ve         |             |
| Area                       | 5/20/08      | 1-612.1  | WD.A.          | _           |
|                            | 1310 6-8     | - ^  | 0.             |             |
| Same                       | 1545 7-10    | _ 82 -   | 6              | -           |
|                            |              |  | ,~             |             |
| Kustrel !                  | al Jai   P   |  |                | - 7         |
| Bludrek 1                  | nce val er   | L  |                | - 10        |
| BASSTA                     |              | 1 500  |                |             |
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| Ma Glo                     | las          | Thepre   |                | - 158<br>24 |
| S.D. Suntlow               |              |  |                |             |
| 4th 5tur                   |              |  |                |             |
|                            |              |  |                |             |
| Photelia                   |              |  |                |             |
| - Jayon 156m               |              |  | 3              |             |
| 115mga                     |              |  |                | 175         |
| Johnny Junkips Dudlog var. |              |  |                |             |
| gant pink                  |              |  |                |             |
| Syl Ind                    |              |  |                |             |
| fennel                     |              |  |                |             |
| Crayhlanon                 |              |  |                |             |
| Glago                      |              |  |                | 374         |
| A dran                     |              | 16 m 10 m  |                |             |
| Henr                       | <del></del>  |  |                |             |
|                            |              | to the same of | .5.<br>        |             |
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|---------------------------------------|--|----------------------|---------------------------------------|------------|--------------|-----------------------------|---|--------------------|--|
| Survey                                | or:  | Brian Parker         |                                       |            |              |                             | Date:                                       | 3/26/2008          |  |
| Site Na                               | me:  | Otay Hills Qu        | arry                                  |            |              |                             | Site Visit No:                              | 2                  |  |
| Acres S                               | Surveyed   | Su                   | ırvey Ti                              | me:        | 4.33         |                             | Acres per Hou                               | ır: 0.00           |  |
| Survey                                | ors Present:   | Dale Ritenou         | =                                     |            |              |                             | •   |                    |  |
|                                       |  | - Daio ( intorioa)   |                                       |            |              |                             |   |                    |  |
|                                       |  |                      | *                                     |            |              |                             | <u> </u>                                    |                    |  |
|                                       |  |                      |                                       | Field C    | onditio      | ons                         |   |                    |  |
|                                       | Time (24   | hr)                  | Tempera                               | ature (°F) |              | Wind                        | Speed (mph)                                 | Cloud Cov          | er   |
| Start                                 | 1100   | 73                   |                                       |            |              | 3-6                         |   | 0%                 |  |
| End                                   | 1620   | 74                   |                                       |            |              | 3-7                         |   | 0%                 | <del></del>                                      |
| Start                                 | -  |                      |                                       |            |              |                             |   | %                  |  |
|                                       |  |                      |                                       |            |              |                             | ·   |                    |  |
| End                                   |  |                      |                                       |            |              |                             | · · · · · · · · · · · · · · · · · · ·       | %                  |  |
| Vegetat                               | ion Communities  | Surveyed (inc. do    | minant                                | enn )      | •            | ············                |   |                    |  |
| · · · · · · · · · · · · · · · · · · · |  |                      |                                       |            |              |                             | \ .   |                    |  |
| Diegan                                | coastal sage scrub                                       | (Eri fas, Vig lac, M | ai iau, ar                            | na numero  | ous ani      | nual flowers                | )   |                    |  |
|                                       |  |                      |                                       |            |              |                             |   |                    |  |
| <u> </u>                              | Host P   | lante                |                                       | Obs.       | 1            |                             | Nectar Plants                               |                    | Obs.   |
| dwarf pla                             | antain ( <i>Plantago en</i>                              |                      |                                       | <u> </u>   | popo         | corn flower                 | (Cryptantha / Plag                          |                    | ⊠ ⊠  |
|                                       | wl's clover (Castille                                    |                      |                                       |            |              | fields (Lasti               |   | оронную арр.у      | + 👸  |
|                                       | gon (Antirrhinum co                                      |                      |                                       |            | +            | enstar ( <i>Mui</i>         |   |                    | 1 6  |
| birds-be                              | ak ( <i>Cordylanthus ri</i>                              | gidus)               |                                       |            | fiddl        | eneck (Ams                  | sinckia intermedia)                         |                    |  |
| woolly pl                             | antain ( <i>Plantago p</i>                               | atagonica)           |                                       |            |              | n ( <i>Allium</i> sp        | <del></del>                                 |                    |  |
|                                       |  |                      |                                       |            |              |                             | ogonum fasciculatu                          |                    |  |
| <del></del>                           | · · · · · · · · · · · · · · · · · · ·                    |                      |                                       |            | grou         | ınd pink ( <i>Lir</i>       | nanthus dianthiflori                        | us)                |  |
|                                       |  |                      |                                       |            | 1            |                             |   |                    |  |
|                                       | Butterfly  | Species              |                                       | No.        |              |                             | Butterfly Specie                            | s                  | No.  |
| Checker                               |  |                      |                                       |            | Hairs        | streaks                     |   |                    |  |
|                                       | patch ( <i>Chlosyne d</i>                                |                      |                                       |            |              |                             | streak ( <i>Atlides hale</i>                |                    |  |
|                                       | heckerspot (C. gab                                       |                      |                                       | 2          |              |                             | ophrys augustinus)                          |                    |  |
|                                       | eckerspot (Euphyd  | <del></del>          | -1                                    |            |              |                             |   | dumetorum affinis) | ļ  |
|                                       | n checkerspot ( <i>E. d</i><br>heckerspot ( <i>Thess</i> |                      |                                       |            |              | nairstreak (<br>es/Admirals | Strymon melinus p                           | udica)             | 1  |
|                                       | escent (Phyciodes  |                      | ,                                     |            |              |                             | Adelpha bredowii                            | californica)       | <del>                                     </del> |
| Blues                                 |  | <u>y</u>             |                                       |            |              |                             | (Limenitis lorquin                          | <del></del>        | <del> </del>                                     |
| western                               | oygmy-blue ( <i>Brephi</i>                               | idium exila)         |                                       |            |              |                             | Vanessa annabel                             |                    | 12   |
|                                       | ailed blue ( <i>Everes</i>                               |                      |                                       |            |              |                             | talanta rubria)                             |                    |  |
|                                       | blue (Glaucopsych  |                      | alis)                                 |            |              | ed lady (V.                 |   |                    | 65   |
|                                       | blue (Hemiargus d  |                      | · · · · · · · · · · · · · · · · · · · |            | +            |                             | ia) lady ( <i>V. virginie</i>               | nsis)              |  |
|                                       | lue (Icaricia acmon                                      |                      |                                       |            | +            |                             | (Vanessa sp.)                               |                    | ļ  |
| unidentifi                            | lue (Leptotes marin                                      | ia)                  |                                       |            |              | lowtails                    | (D#:-                                       |                    | ļ  |
| Whites                                | eu blue  |                      |                                       |            | -            |                             | (Papilio eurymedor<br>allowtail (P. rutulus | <del></del>        | <del> </del> -                                   |
|                                       | ngetip (Anthocharis                                      | sara sara)           |                                       | 1          | +            |                             | (P. zelicaon)                               | )                  |  |
|                                       | elder's) orangetip (                                     |                      |                                       |            | +            | ellaneous                   | (7. 201104011)                              |                    | <del> </del>                                     |
|                                       | California ringlet (C                                    |                      | ornica)                               | 7          | <del> </del> | ••                          | s plexippus)                                |                    | <del> </del> -                                   |
| cabbage                               | white (Pieris rapae                                      | )                    |                                       | 1          |              |                             | e (Junonia coenia                           | grisea)            | 5  |
| checkere                              | d (common) white   | (Pontia protodice)   |                                       | 3          | mour         | ning cloak (                | Nymphalis antiopa                           | )                  |  |
|                                       | nite ( <i>P. sisymbrii</i> )                             |                      |                                       |            | Skip         |                             |   |                    |  |
| unidentifi                            |  |                      |                                       |            |              |                             | ng ( <i>Erynnis funera</i>                  |                    | <b></b>  |
| Metalma<br>Behr's m                   |  | a marma viravita     |                                       | 10         |              |                             | ing ( <i>Erynnis tristis</i> )              |                    | <del> </del>                                     |
|                                       | etalmark ( <i>Apodemi</i><br>metalmark ( <i>Caleph</i>   |                      |                                       | 13         | <del></del>  |                             | ephila phyleus)                             | (Pyrgus albescens) | <del> </del>                                     |
| Sulphurs                              |  | ona wngnu)           |                                       |            | Other        |                             | oneckered-skipper                           | (Fyrgus albescens) |  |
|                                       | ulphur ( <i>Colias euryt</i>                             | theme)               |                                       |            | JG           | -                           |   |                    | <u> </u>   |
| <del></del>                           | ange ( <i>Eurema nicip</i>                               |                      |                                       |            |              |                             |   |                    | <del> </del>                                     |
| cloudless                             | sulfur ( <i>Phoebus se</i>                               |                      |                                       |            |              |                             |   |                    |  |
| unidentifi                            | ed sulphur   |                      |                                       |            |              |                             |   |                    |  |
| 1                                     |  | Column S             | ubtotal                               | 27         | 1            |                             |   | Column Subtotal    | 83   |

Total

Grama Legion Lanceton. Q May been · Chamaesyo Busta Nono CORA Vin tee Mogo Stulo-line Oas III BASSI CEN Caland. Chk Man JU Brokles Mic cal Fer is Champolin : Excel ANGE

| Surveyor: Dale Ritenour  |                                     |         | Date:    | March 26, 2008 |  |
|--------------------------|-------------------------------------|---------|----------|----------------|--|
| Site Name: Otay Hills    | ·                                   |         | Sit      | te Visit No: 2 |  |
| Acres Surveyed           | Survey Time: 4:20                   | 4.33    | Acres pe | er Hour:       |  |
| Other Surveyors Present: | Robert Hogenauer, Brian Parker, Dou | g Allen |          |                |  |

|       |              | Field Cond       | litions          |             |
|-------|--------------|------------------|------------------|-------------|
|       | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
| Start | 1100         | 73               | 3-6              | 0 percent   |
| End   | 1620         | 74               | 3-7              | 0 percent   |
| Start |              |                  | -                |             |
| End   |              |                  |                  |             |

| Vegetation Communities Surveyed (inc. dominant spp.)                   |  |
|--|--|
| NNG- Avena fatua, Brassica nigra, Erodium bothrys                      |  |
| DCSS- Artemisia californica, Vigueria lacinata, Eriogonum fasciculatum |  |
|  |  |

| Host Plants                              | Obs. | Nectar Plants                                    | Obs.   |
|--|------|--|--|
| dwarf plantain (Plantago erecta)         | X    | popcorn flower (Cryptantha / Plagiobothrys spp.) | X  |
| purple owl's clover (Castilleja exserta) |      | goldfields (Lasthenia spp.)                      | <del></del>                                      |
| snapdragon (Antirrhinum coulterianum)    |      | chia (Salvia columbariae)                        |  |
| birds-beak (Cordylanthus rigidus)        |      | goldenstar (Muilla spp.)                         |  |
| woolly plantain (Plantago patagonica)    |      | fiddleneck (Amsinckia intermedia)                |  |
|  |      | onion (Allium spp.)                              |  |
|  |      | buckwheat (Eriogonum fasciculatum)               |  |
|  |      |  | <del>                                     </del> |

| Butterfly Species                                   | No. | Butterfly Species  | No. |
|---|-----|--|-----|
| Checkerspots  |     | Hairstreaks  |     |
| California patch (Chlosyne californica)             |     | great purple hairstreak (Atlides halesus corcorani)          |     |
| Gabb's checkerspot (C. gabbii)                      | 3   | brown elfin (Callophrys augustinus)                          |     |
| Quino checkerspot (Euphydryas editha quino)         |     | bramble (perplexing) hairstreak (C. dumetorum affinis)       |     |
| chalcedon checkerspot (E. chalcedona chalcedona)    |     | gray hairstreak (Strymon melinus pudica)                     |     |
| Leanira checkerspot (Thessalia leanira wrighti)     |     | Ladies/Admirals  |     |
| Mylitta crescent (Phyciodes mylitta)                |     | California sister (Adelpha bredowii californica)             |     |
| Blues   |     | Lorquin's admiral (Limenitis lorquini)                       |     |
| western pygmy-blue (Brephidium exila)               |     | west coast lady (Vanessa annabella)                          | 16  |
| western tailed blue (Everes amyntula)               |     | red admiral (V. atalanta rubria)                             | 1   |
| southern blue (Glaucopsyche lygdamus australis)     |     | painted lady (V. cardui)                                     | 70  |
| Edward's blue (Hemiargus ceraunus gyas)             |     | American (Virginia) lady (V. virginiensis)                   |     |
| Acmon blue (Icaricia acmon acmon)                   |     | unidentified lady (Vanessa sp.)                              |     |
| marine blue (Leptotes marina)                       |     | Swallowtails   |     |
| unidentified blue                                   | 1   | pale swallowtail (Papilio eurymedon)                         |     |
| Whites  |     | western tiger swallowtail (P. rutulus)                       |     |
| Sara orangetip (Anthocharis sara sara)              | 1   | anise swallowtail (P. zelicaon)                              | 2   |
| desert (Felder's) orangetip (A. cethura)            |     | Miscellaneous  | -   |
| common California ringlet (Coenonympha californica) | 4   | monarch (Danaus plexippus)                                   |     |
| cabbage white (Pieris rapae)                        |     | common buckeye (Junonia coenia grisea)                       | 4   |
| checkered (common) white (Pontia protodice)         | 6   | mourning cloak (Nymphalis antiopa)                           |     |
| spring white (P. sisymbrii)                         |     | Skippers   |     |
| unidentified white                                  |     | funereal duskywing (Erynnis funeralis)                       | 3   |
| Metalmarks  |     | mournful duskywing (Erynnis tristis)                         |     |
| Behr's metalmark (Apodemia mormo virgulti)          | 7   | fiery skipper (Hylephila phyleus)                            |     |
| Wright's metalmark (Calephelis wrighti)             |     | white (common) checkered-skipper ( <i>Pyrgus albescens</i> ) |     |
| Sulphurs  |     | Other  |     |
| orange sulphur (Colias eurytheme)                   |     |  | ,   |
| sleepy orange (Eurema nicippe)                      |     |  |     |
| cloudless sulfur (Phoebus sennae marcellina)        |     |  |     |
| unidentified sulphur                                |     |  |     |
| Column Subtotal                                     | 22  | Column Subtotal  | 95  |
|   |     | Total  | 117 |

NAV-02.13 3/26/08 GTF FS -211 dry De SRM-01 3/26/08 Dale P 1/24, B7 + DA Start 1100 3-6 mgh 73-1-Buckeye: Fodusky: Behrs MM 1 Con White 1: W. Coast L. AL U4 Blue & Red Admiral end 1620 3-7 mg 74°F Off ce NNG - Melind Ave Pat Dreen Erobot Erocce
Chlorogal, Sishel Brang Foeval Calmor Sisymal,
Lepnit Bacsar Hedore Hornan Plaguspi Hypg/2 Cennel 1.8 Sa tackroby+ SOSP MELA BUSH CORA WREN MOCK Kingled SPTO CALQ Rattlesnek: Syland: Sperm. boch. horned Liz

| SRM-01 3/28/08 13242   |
|--|
| DCSS - Exites Artal Vigles Mallau  |
| Mel. d Lepnt Lomaur Bromed Count   |
| Pler Elocic Fervir Dicap Gille Cracon Selin Stylein Erobil Silgel Emaion the Chills Calmer Mirse Plago Chaelb                    |
| Chaunistic Escase Reading Acadia Sallaio   |
| (Chrosel Pan) Phacelia- Eight puple)   |
| Channel Par ) Phacelia- Eight puple!  And come Lindia Vulague Deupus  (ting havy lupue  Milores Sayob Salde ) Rhacro Tecolo Gpus |
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| lectile expres   |
| VPP-CoAq PIEl Psiten Cracon Calcil F.<br>PIEr Plazer (few)   |
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の記念

| Surveyor: Doug Allen   |                      | Date: 3/27/08   |
|------------------------|----------------------|-----------------|
| Site Name: Otay Hills  |                      | Site Visit No:  |
| Acres Surveyed         | Survey Time: 5.0 hr  | Acres per Hour: |
| Other Surveyors Preser | nt: Robert Hogenauer |                 |
|                        |                      |                 |

|       |              | Field Cond       | Field Conditions |             |  |  |  |
|-------|--------------|------------------|------------------|-------------|--|--|--|
|       | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |  |  |  |
| Start | 0955         | 66               | 0-3              | 5%          |  |  |  |
| End   | 1455         | 82               | 3-7              | 0%          |  |  |  |
| Sţart |              |                  |                  |             |  |  |  |
| End   |              |                  |                  |             |  |  |  |

# Vegetation Communities Surveyed (inc. dominant spp.) Diegan coast sage scrub, southern mixed chaparral, non-native grassland, and disturbed

| Host Plants                              | Obs. | Nectar Plants                                    | Obs.           |
|--|------|--|----------------|
| dwarf plantain (Plantago erecta)         | X    | popcorn flower (Cryptantha / Plagiobothrys spp.) | X              |
| purple owl's clover (Castilleja exserta) | Х    | goldfields (Lasthenia spp.)                      | X              |
| snapdragon (Antirrhinum coulterianum)    |      | chia (Salvia columbariae)                        | <del>-  </del> |
| birds-beak (Cordylanthus rigidus)        |      | goldenstar (Muilla spp.)                         |                |
| woolly plantain (Plantago patagonica)    |      | fiddleneck (Amsinckia intermedia)                |                |
|  |      | onion (Allium spp.)                              |                |
|  |      | buckwheat (Eriogonum fasciculatum)               | X              |
|  |      |  | T              |

| Butterfly Species                                     | No.            | Butterfly Species                                      | No |
|---|----------------|--|----|
| Checkerspots  |                | Hairstreaks  |    |
| California patch (Chlosyne californica)               |                | great purple hairstreak (Atlides halesus corcorani)    |    |
| Gabb's checkerspot (C. gabbii)                        | 2              | brown elfin (Callophrys augustinus)                    |    |
| Quino checkerspot (Euphydryas editha quino)           | 1. (Sec<br>11) | bramble (perplexing) hairstreak (C. dumetorum affinis) | 2  |
| chalcedon checkerspot (E. chalcedona chalcedona)      |                | gray hairstreak (Strymon melinus pudica)               |    |
| Leanira checkerspot (Thessalia leanira wrighti)       |                | Ladies/Admirals  |    |
| Mylitta crescent (Phyciodes mylitta)                  |                | California sister (Adelpha bredowii californica)       |    |
| Blues   |                | Lorquin's admiral ( <i>Limenitis lorquini</i> )        |    |
| western pygmy-blue (Brephidium exila)                 | 1              | west coast lady (Vanessa annabella)                    | 10 |
| western tailed blue (Everes amyntula)                 |                | red admiral (V. atalanta rubria)                       |    |
| southern blue (Glaucopsyche lygdamus australis)       | 3              | painted lady (V. cardui)                               | 13 |
| Edward's blue (Hemiargus ceraunus gyas)               |                | American (Virginia) lady (V. virginiensis)             | T  |
| Acmon blue (Icaricia acmon acmon)                     |                | unidentified lady (Vanessa sp.)                        |    |
| marine blue ( <i>Leptotes marina</i> )                |                | Swallowtails   |    |
| unidentified blue                                     |                | pale swallowtail (Papilio eurymedon)                   | 1  |
| Whites  |                | western tiger swallowtail (P. rutulus)                 |    |
| Sara orangetip (Anthocharis sara sara)                | 9,             | anise swallowtail (P. zelicaon)                        |    |
| desert (Felder's) orangetip (A. cethura)              |                | Miscellaneous  |    |
| common California ringlet (Coenonympha californica)   | 6              | monarch (Danaus plexippus)                             | -  |
| cabbage white ( <i>Pieris rapae</i> )                 |                | common buckeye (Junonia coenia grisea)                 |    |
| checkered (common) white (Pontia protodice)           | 12             | mourning cloak (Nymphalis antiopa)                     |    |
| spring white ( <i>P. sisymbrii</i> )                  |                | Skippers   |    |
| unidentified white                                    |                | funereal duskywing (Erynnis funeralis)                 | 1  |
| Metalmarks  |                | mournful duskywing (Erynnis tristis)                   |    |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )   | 8              | fiery skipper (Hylephila phyleus)                      |    |
| Wright's metalmark ( <i>Calephelis wrighti</i> )      |                | white (common) checkered-skipper (Pyrgus albescens)    |    |
| Sulphurs  |                | Other  | -  |
| orange sulphur (Colias eurytheme)                     |                | Buckeye (Junonia coenia)                               | 2  |
| sleepy orange ( <i>Eurema nicippe</i> )               |                |  |    |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> ) |                |  |    |
| unidentified sulphur                                  |                |  |    |
| Column Subtotal                                       | 42             | Column Subtotal  | 29 |
|   |                | Total  | 71 |

|             | 11/12/13 (8) | 5)         |                | *            |
|-------------|--------------|------------|----------------|--------------|
|             |              |            |                |              |
| M           | 3/24/08      |            |                | D Allen      |
| U)          |              | acs        |                | P. H. S      |
| ine and     |              |            | ***            |              |
| S           | START: 09.55 | 2099       | U              | Cler 0-3     |
|             | 1655         | BZOF       | Y              | Cle 8-7      |
|             | PAST 78A     |            | Ben            |              |
|             | BEALIN ES    | 8          | S4.5P          |              |
|             | STATE AND    | U          | 40°C           | 70<br>あ<br>7 |
| 3-4<br>14-4 |              |            | \$<br>\$<br>\$ |              |
|             | . 87         |            | Spro           | いてつとい        |
|             | CALC OF      |            | Town           |              |
|             | SEA MULTIPLE |            | 1770           |              |
|             | Gasts 7      |            | S. and         |              |
|             | Sacre        |            | 3 ×            |              |
| •           | Town         |            | 75.45          |              |
|             | : 2908       |            | Vamo           |              |
| Ge<br>Grant |              |            | Bus H          |              |
| •           |              |            | AT TA          |              |
| ***         |              | **         |                |              |
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| 2.2         |              |            |                |              |
|             |              | <i>f</i> . |                |              |
|             |              |            |                |              |
|             |              |            |                |              |
|             |              |            |                | *            |
|             |              |            |                |              |

|   | by H of Doug A.  | Date: 3/27/08  |
|---|--|--|
| IELIX permit nu   | umber: TE778195 Site \   | /isit No: 1 2 3 4 5 6 7 8 9 10   |
| ub-consultant   | permit number:   |  |
| ite Name:   | TO TAY WILLS   | tal site acres:  |
| otal acres surv   | eyed: Total hou  |  |
|   |  |  |
| Time (24 have   |  |  |
| <u>Time (24 hour</u><br>Start:  | Clear Patchy Overcast/Cloudy Drizzle Showers <1 (1-3) 4-7  | d (mph) Temperature  |
| 0955  | 5% (over   | 1,100  |
| End: 1455   | Clear Patchy Overcast/Cloudy Drizzle Showers <1 1-3 (4-7)  | 8-12 12-15 >15 8 2° F  |
| Start:  | Clear Patchy Overcast/Cloudy Drizzle Showers <1 1-3 4-7  | 8-12 12-15 >15   |
| End;  | Clear Patchy Overcast/Cloudy Drizzle Showers <1 1-3 4-7  | 8-12 - 12-15 > 15  |
| Start:  | Clear Patchy Overcast/Cloudy Drizzle Showers <1 1-3 4-7  | 8-12 12-15 >15   |
|   |  |  |
| Ena:  | Clear Patchy Overcast/Cloudy Drizzle Showers <1 1-3 4-7  | 8-12 12-15 >15   |
| End:  | Clear Patchy Overcast/Cloudy Drizzle Showers <1 1-3 4-7  | 8-12 12-15 >15   |
|   |  |  |
|   | Clear Patchy Overcast/Cloudy Drizzle Showers <1 1-3 4-7  |  |
|   |  |  |
|   |  |  |
| scription of are  | eas surveyed & comments: Areas 11, 12, 13  |  |
| scription of are  | nts On-site:   | s + westendof 8  |
| st & Nectar Plai<br>Dwarf Plantain<br>Owl's Clover (0   | nts On-site:  (Plantago erecta)  Castilleja exserta)   | msinckia intermedia)   |
| st & Nectar Plai<br>Dwarf Plantain<br>Owl's Clover (C<br>Chinese House  | nts On-site:  (Plantago erecta)  Castilleja exserta)  (Collinsia concolor)  Popogra Flavora  | msinckia intermedia)   |
| st & Nectar Plai<br>Dwarf Plantain<br>Owl's Clover (C<br>Chinese House<br>Snapdragon (A   | nts On-site:  (Plantago erecta)  Castilleja exserta)  SS (Collinsia concolor)  Intirrhinum coulterianum)  Castilleja (Lastilleja (Lastille | msinckia intermedia) plumbariae) r (Cryptantha sp.)  |
| st & Nectar Plantain Owl's Clover (C Chinese House Snapdragon (A Thread-leaved  | nts On-site:  (Plantago erecta)  Sis (Collinsia concolor)  Intirrhinum coulterianum)  Bird's Beak (Cordylanthus  | msinckia intermedia) plumbariae) r (Cryptantha sp.)  |
| st & Nectar Plantain Owl's Clover (C Chinese House Snapdragon (A Thread-leaved rigidus)   | nts On-site:  (Plantago erecta)  Sis (Collinsia concolor)  Intirrhinum coulterianum)  Bird's Beak (Cordylanthus  Parens II, 12, 13  Fiddleneck (Arecta)  Chia (Salvia concolor)  Popcorn Flower  Goldfields (Lass  Ground Pink (Lass)  | msinckia intermedia) plumbariae) or (Cryptantha sp.) othenia sp.) Linanthus dianthiflorus)                         |
| st & Nectar Plai<br>Dwarf Plantain<br>Owl's Clover (C<br>Chinese House<br>Snapdragon (A<br>Thread-leaved<br>rigidus)<br>Woolly plantair           | nts On-site:  (Plantago erecta)  Sis (Collinsia concolor)  Intirrhinum coulterianum)  Bird's Beak (Cordylanthus  (Plantago patagonica)  Directed 11, 12, 13  Fiddleneck (Ar  Chia (Salvia co  Popcorn Flowe  Goldfields (Las  Ground Pink (Las  (Lotus sp.)  CA Buckwheat  | msinckia intermedia) plumbariae) r (Cryptantha sp.)  |
| st & Nectar Plai<br>Dwarf Plantain<br>Owl's Clover (C<br>Chinese House<br>Snapdragon (A<br>Thread-leaved<br>rigidus)<br>Woolly plantair           | nts On-site:  (Plantago erecta)  (Sastilleja exserta)  (Sa(Collinsia concolor)  (Intirrhinum coulterianum)  (Bird's Beak (Cordylanthus)  (Collinsia concolor)  | msinckia intermedia) plumbariae) or (Cryptantha sp.) othenia sp.) Linanthus dianthiflorus)                         |
| st & Nectar Plan<br>Dwarf Plantain<br>Owl's Clover (C<br>Chinese House<br>Snapdragon (A<br>Thread-leaved<br>rigidus)<br>Woolly plantair           | nts On-site:  (Plantago erecta)  Sis (Collinsia concolor)  Intirrhinum coulterianum)  Bird's Beak (Cordylanthus  (Plantago patagonica)  Directed 11, 12, 13  Fiddleneck (Ar  Chia (Salvia co  Popcorn Flowe  Goldfields (Las  Ground Pink (Las  (Lotus sp.)  CA Buckwheat  | msinckia intermedia) plumbariae) or (Cryptantha sp.) othenia sp.) Linanthus dianthiflorus)                         |
| st & Nectar Plai<br>Dwarf Plantain<br>Owl's Clover (C<br>Chinese House<br>Snapdragon (A<br>Thread-leaved<br>rigidus)<br>Woolly plantair<br>Other: | nts On-site:  (Plantago erecta)  is (Collinsia concolor)  intirrhinum coulterianum)  Bird's Beak (Cordylanthus  in (Plantago patagonica)  Directed 10, 12, 13  Fiddleneck (Ar  Chia (Salvia co  Popcorn Flowe  Goldfields (Las  Ground Pink (Las  (Lotus sp.)  CA Buckwheat  | msinckia intermedia) plumbariae) or (Cryptantha sp.) othenia sp.) Linanthus dianthiflorus)                         |
| st & Nectar Plan<br>Dwarf Plantain<br>Owl's Clover (C<br>Chinese House<br>Snapdragon (A<br>Thread-leaved<br>rigidus)<br>Woolly plantair           | nts On-site:  (Plantago erecta)  Sis (Collinsia concolor)  International content of the international concolor of the internat | msinckia intermedia) plumbariae) r (Cryptantha sp.) sthenia sp.) Linanthus dianthiflorus) (Eriogonum fasciculatum) |

| Site: 5@W-01  | 11,12,13 p  | -+8                  |
|---|---|----------------------|
| Site: SEW-01  Name: ROBH (Doc   | (a A)   | Date: 3/27/08        |
| Butterflies   | Number  | Comments             |
| Checkerspots  |   |                      |
| Quino checkerspot (Euphydryas editha quino)                                       | /   | observed in point 82 |
| chalcedon checkerspot (E. chalcedona  |   |                      |
| Leanira checkerspot (Thessalia leanira wrighti)                                   |   |                      |
| Mylitta cresent (Phyciodes mylitta)   |   |                      |
| Gabb's checkerspot (Chlosyne gabbii)  | //  |                      |
| California patch (C. californica)   |   |                      |
| Blues   |   |                      |
| western tailed blue (Everes amyntula)   |   |                      |
| southern blue (Glaucopsyche lygdamus australis)                                   | ļ/  |                      |
| echo blue (Celastrina ladon echo)  Edward's blue (Hemiargus ceraunus gyas)        |   |                      |
| Sonoran blue (Philotes sonorensis)  |   |                      |
| marine blue (Leptotes marina)   |   |                      |
| Acmon blue (Icaricia acmon acmon)   |   |                      |
| pygmy blue (Brephidium exilis)  | 1   |                      |
| unidentified blue   |   |                      |
| Whites  | <del>                                     </del>  |                      |
| Sara orangetip (Anthocharis sara sara)  |   |                      |
| desert (Felder's) orangetip (A. cethura)  | <del>  , ,                                 </del> |                      |
| cabbage white (Artogeia rapae)  | <del>                                     </del>  |                      |
| common white (Pontia protodice)   | 26  |                      |
| spring white (P. sisymbril)   |   |                      |
| California ringlet (Coenonympha californica)                                      | 28  |                      |
| unidentified white  |   |                      |
| Metalmarks  |   |                      |
| Behr's metalmark (Apodemia mormo virgulti)  | 5   |                      |
| Wright's metalmark (Calephelis wrightii)  |   |                      |
| Swallowtails  |   |                      |
| pale swallowtail ( <i>Papilio eurymedon</i> )                                     |   |                      |
| anise swallowtail (P. zelicaon)   | 2   |                      |
| western tiger swallowtail (P. rutulus)  |   |                      |
| Sulphurs  |   |                      |
| sleepy orange (Eurema nicippe)  |   |                      |
| California dogface (Zerene eurydice)  |   |                      |
| orange sulphur (Colias eurytheme)<br>cloudless sulfur (Phoebus sennae marcellina) |   |                      |
| Hairstreaks   |   |                      |
| gray hairstreak (Strymon melinus pudica)  |   |                      |
| brown elfin (Callophrys augustinus)   |   |                      |
| bramble (perplexing) hairstreak (C. dumetorum)                                    |   |                      |
| great purple hairstreak (Atlides halesus corcorani)                               |   |                      |
| Ladies/Admirals   |   |                      |
| painted lady (Vanessa cardui)   | 13  |                      |
| west coast lady (V. annabella)  | <u> </u>  |                      |
| Virginia lady (V. virginiensis)   | 3 !   |                      |
| red admiral (V. atalanta rubria)  |   |                      |
| unidentified lady (Vanessa sp.)   | 2   |                      |
| California sister (Adelpha bredowii californica)                                  |   |                      |
| orquin's admiral ( <i>Limenitis lorquini</i> )                                    |   |                      |
| Miscellaneous   |   |                      |
| nonarch ( <i>Danaus plexippus</i> )   | *···* Air   |                      |
| queen (D. gilippus)   |   |                      |
| satyr anglewing (Polygonia satyrus)   |   |                      |
| ouckeye ( <i>Junonia coenia</i> )   | 3   |                      |
| mourning cloak (Nymphalis antiopa)  |   |                      |
| Skippers  |   |                      |
| common checkered-skipper ( <i>Pyrgus communia</i> )                               |   |                      |
| unereal duskywing ( <i>Erynnis funeralis</i> )                                    |   |                      |
| mournful duskywing (Erynnis tristis)  |   |                      |
|   |   |                      |
|   |   |                      |

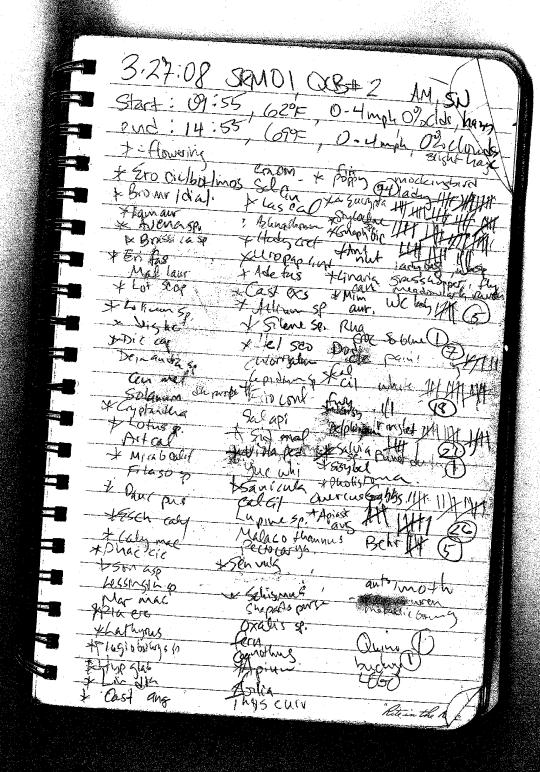
| 108 Road DA    | 1 4     | Plea Jego          | John 560 | On tar            |            |                 |                 |               |        |      |             |  |
|----------------|---------|--------------------|----------|-------------------|------------|-----------------|-----------------|---------------|--------|------|-------------|--|
| 56m 01 3/27/08 | 145 82° | existing (susplana |          | P. G. Smit Allina | 11 - 11 11 | Average Clapper | J.C. Phuch benz |               |        |      | or Georales | The state of the s |
| 200            | 5       | 6                  | 75.5     |                   | 142        | ALTON           | 67, J.C.        | Gundre Gundre | M2 6/0 | Jut. | 164°        | OND WIND   |

| our veyor | r: Amy Mattson          |                      | Date: _03        | /27/2008        |
|-----------|-------------------------|----------------------|------------------|-----------------|
| Site Nam  | ne: Otay Hills (SRM-01) |                      | Site             | Visit No: 2     |
| Acres Su  | ırveyed                 | Survey Time: 5.0 hou | rs Acres per     | Hour:           |
| Other Su  | rveyors Present:        |                      |                  |                 |
|           |                         |                      |                  |                 |
|           |                         | Field Cond           | litions          |                 |
|           | Time (24 hr)            | Temperature (°F)     | Wind Speed (mph) | Cloud Cover     |
| Start     | 09:55                   | 62                   | 0-4              | 0%, hazy        |
| End       | 14:55                   | 69                   | 0-4              | 0%, slight haze |
| Start     |                         |                      |                  |                 |
|           |                         |                      |                  |                 |

Γ

| popcom flower ( <i>Cryptantha/Plagiobothrys</i> spp.) goldfields ( <i>Lasthenia</i> spp.) goldenstar ( <i>Muilla</i> spp.) fiddleneck ( <i>Amsinckia intermedia</i> ) | 1                                  |
|---|------------------------------------|
| goldfields ( <i>Lasthenia</i> spp.) goldenstar ( <i>Muilla</i> spp.)  | <b>V</b>                           |
|   |                                    |
| fiddleneck (Ameinckia intermedia)   | <del></del>                        |
| induction (Amaineria intermedia)  | ì                                  |
| onion (Allium spp.)   | 1                                  |
| buckwheat (Eriogonum fasciculatum)  | 1                                  |
| ground pink (Linanthus dianthiflorus)   | V                                  |
|   | buckwheat (Eriogonum fasciculatum) |

| Butterfly Species                                   | No. | Butterfly Species                                      | No.      |
|---|-----|--|----------|
| Checkerspots  |     | Hairstreaks  |          |
| California patch (Chlosyne californica)             |     | great purple hairstreak (Atlides halesus corcorani)    |          |
| Gabb's checkerspot ( <i>C. gabbil</i> )             | 26  | brown elfin (Callophrys augustinus)                    |          |
| Quino checkerspot (Euphydryas editha quino)         | 1   | bramble (perplexing) hairstreak (C. dumetorum affinis) |          |
| chalcedon checkerspot (E. chalcedona chalcedona)    |     | gray hairstreak (Strymon melinus pudica)               |          |
| Leanira checkerspot (Thessalia leanira wrighti)     |     | Ladies/Admirals  |          |
| Mylitta crescent (Phyciodes mylitta)                |     | California sister (Adelpha bredowil californica)       |          |
| Blues   |     | Lorquin's admiral (Limenitis lorquini)                 |          |
| western pygmy-blue ( <i>Brephidium exila</i> )      |     | west coast lady (Vanessa annabella)                    | 5        |
| western tailed blue (Everes amyntula)               |     | red admiral (V. atalanta rubria)                       |          |
| southern blue (Glaucopsyche lygdamus australis)     | 1   | painted lady (V. cardui)                               | 7        |
| Edward's blue (Hemiargus ceraunus gyas)             |     | American (Virginia) lady (V. virginiensis)             | -        |
| Acmon blue (Icaricia acmon acmon)                   |     | unidentified lady (Vanessa sp.)                        | 74       |
| marine blue ( <i>Leptotes marina</i> )              |     | Swallowtails   |          |
| unidentified blue                                   |     | pale swallowtail (Papilio eurymedon)                   |          |
| Whites  |     | western tiger swallowtail (P. rutulus)                 |          |
| Sara orangetip (Anthocharis sara sara)              |     | anise swallowtail (P. zelicaon)                        |          |
| desert (Felder's) orangetip (A. cethura)            |     | Miscellaneous  |          |
| common California ringlet (Coenonympha californica) | 21  | monarch (Danaus plexippus)                             |          |
| cabbage white ( <i>Pieris rapae</i> )               |     | common buckeye (Junonia coenia grisea)                 | 1        |
| checkered (common) white (Pontia protodice)         |     | mourning cloak (Nymphalis antiopa)                     | -        |
| spring white ( <i>P. sisymbrii</i> )                |     | Skippers   |          |
| unidentified white                                  | 18  | funereal duskywing (Erynnis funeralis)                 | 1        |
| Metalmarks  |     | mournful duskywing (Erynnis tristis)                   | <u> </u> |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> ) | 5   | fiery skipper (Hylephila phyleus)                      |          |
| Wright's metalmark ( <i>Calephelis wrighti</i> )    |     | white (common) checkered-skipper (Pyrgus albescens)    |          |
| Sulphurs  | -   | Other  |          |
| orange sulphur (Colias eurytheme)                   |     |  |          |
| leepy orange ( <i>Eurema nicippe</i> )              |     |  | · ·      |
| cloudless sulfur (Phoebus sennae marcellina)        |     |  |          |
| unidentified sulphur                                |     |  |          |
| Column Subtotal                                     | 72  | Column Subtotal  | 88       |
|   |     | Total  | 160      |



| Surveyor: Stacy Nigro    |  | Date:3/27/08                     |  |
|--------------------------|--|----------------------------------|--|
| Site Name: Otay Hills    |  | Site Visit No: 2                 |  |
| Acres Surveyed 59        | Survey Time: 5 hrs                               | Acres per Hour: 11.8             |  |
| Other Surveyors Present: | A. Varner, S. Trnka, D. Allen, B. Parker, D. Rit | tenour, A. Mattson, R. Hogenauer |  |

| Field Conditions |              |                  |                  |             |
|------------------|--------------|------------------|------------------|-------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
| Start            | 9:55         | 62               | 0-4              | 0/clear     |
| End              | 14:55        | 69               | 0-6              | 0/clear     |
| Start            |              |                  |                  |             |
| End              |              |                  |                  |             |

| Vegetation Communities Surveyed (inc. dominant spp.)DCSS - | Art cal, Erio fasc, Vig lac, Crypt sp; |
|--|--|
| CC – Ade fasc, Salv sp, Erodium sp.                        |  |
|  |  |

| Host Plants Obs.  dwarf plantain ( <i>Plantago erecta</i> ) X popcorn f |   | Nectar Plants                                    |              |
|---|---|--|--------------|
|   |   | popcorn flower (Cryptantha / Plagiobothrys spp.) | x            |
| purple owl's clover (Castilleja exserta)                                | Х | goldfields (Lasthenia spp.)                      | X            |
| snapdragon (Antirrhinum coulterianum)                                   |   | chia (Salvia columbariae)                        | X            |
| birds-beak (Cordylanthus rigidus)                                       |   | goldenstar (Muilla spp.)                         | <del> </del> |
| woolly plantain (Plantago patagonica)                                   |   | fiddleneck (Amsinckia intermedia)                |              |
|   |   | onion (Allium spp.)                              | X            |
|   |   | buckwheat (Eriogonum fasciculatum)               | X            |
|   |   |  | 27           |

| Butterfly Species                                   | No. | Butterfly Species  | No. |
|---|-----|--|-----|
| Checkerspots  | -   | Hairstreaks  |     |
| California patch (Chlosyne californica)             |     | great purple hairstreak (Atlides halesus corcorani)          |     |
| Gabb's checkerspot (C. gabbii)                      | 4   | brown elfin (Callophrys augustinus)                          |     |
| Quino checkerspot (Euphydryas editha quino)         | 1   | bramble (perplexing) hairstreak (C. dumetorum affinis)       |     |
| chalcedon checkerspot (E. chalcedona chalcedona)    |     | gray hairstreak (Strymon melinus pudica)                     |     |
| Leanira checkerspot (Thessalia leanira wrighti)     |     | Ladies/Admirals  |     |
| Mylitta crescent (Phyciodes mylitta)                |     | California sister (Adelpha bredowii californica)             |     |
| Blues   |     | Lorquin's admiral ( <i>Limenitis lorquini</i> )              |     |
| western pygmy-blue (Brephidium exila)               |     | west coast lady (Vanessa annabella)                          |     |
| western tailed blue (Everes amyntula)               |     | red admiral (V. atalanta rubria)                             |     |
| southern blue (Glaucopsyche lygdamus australis)     |     | painted lady (V. cardui)                                     |     |
| Edward's blue (Hemiargus ceraunus gyas)             |     | American (Virginia) lady (V. virginiensis)                   |     |
| Acmon blue (Icaricia acmon acmon)                   |     | unidentified lady (Vanessa sp.)                              | 27  |
| marine blue (Leptotes marina)                       |     | Swallowtails   |     |
| unidentified blue                                   |     | pale swallowtail (Papilio eurymedon)                         |     |
| Whites  |     | western tiger swallowtail (P. rutulus)                       |     |
| Sara orangetip (Anthocharis sara sara)              | 3   | anise swallowtail (P. zelicaon)                              |     |
| desert (Felder's) orangetip (A. cethura)            |     | Miscellaneous  |     |
| common California ringlet (Coenonympha californica) | 1   | monarch (Danaus plexippus)                                   |     |
| cabbage white (Pieris rapae)                        |     | common buckeye (Junonia coenia grisea)                       |     |
| checkered (common) white (Pontia protodice)         |     | mourning cloak (Nymphalis antiopa)                           |     |
| spring white ( <i>P. sisymbrii</i> )                |     | Skippers   |     |
| unidentified white                                  | 32  | funereal duskywing (Erynnis funeralis)                       | 1   |
| Metalmarks  |     | mournful duskywing (Erynnis tristis)                         |     |
| Behr's metalmark (Apodemia mormo virgulti)          | 11  | fiery skipper (Hylephila phyleus)                            |     |
| Wright's metalmark (Calephelis wrighti)             |     | white (common) checkered-skipper ( <i>Pyrgus albescens</i> ) |     |
| Sulphurs  |     | Other  |     |
| orange sulphur (Colias eurytheme)                   |     |  |     |
| sleepy orange (Eurema nicippe)                      |     |  |     |
| cloudless sulfur (Phoebus sennae marcellina)        |     |  |     |
| unidentified sulphur                                |     |  |     |
| Column Subtotal                                     | 52  | Column Subtotal  | 28  |
|   |     | Total  | 80  |

| SRM-OI 3/27/08  Start end 9:55 14:55 62° 69° 0-4 0-6 0202 Usar 11.8 ac/hr (wa 11. | Otay Hills  CCC # 2 d Pils  W. A. Matton, D. Aller  R. Hegeram, B. Parter,  S. Tenka, A. Upmen | D. Riteroux<br>Surveyed = 470<br>Surveyed = 470<br>(2,13,12,13,13) | 4718<br>0470<br>NOMO<br>CORA<br>Porud liz | Class RTHA RTHA |
|--|--|--|---|-----------------|
|  | M-01<br>M-01<br># + 5<br># + 5   | 69°<br>0-6<br>Wear   | 1   |                 |

S. N(GRO \* + 2 dom SM-01 028#2 3/27/08 XI the Garding Mec 10 met Smeal Chemicay. Apr Glia opk Medicoth Ap Eriodi conf. to Solv. col Solar per\* Sate colt Achieva Comera) Anton Dary OCSS = Dem veg commu. Lot scapt Him by 11 Allien pra Urop Ind \* 12.0.1 Dank, pus" Cears. tour Sils trag Cam Sp\* Sacra المعدد دور Vigor. ठठव Phec. rank Med law Bach car Plagne part (2st. ensk +Cent mod Caly Mac\* Brom made Arona 20,00 Min | 200 th Coryet, sp. 1-500A+ Plant enex (einid of +End wort Lengelick \* \* A+ Ce + Vig lac K MUSTERS 45192

| Survey         | or:  | Brian Parke      |                 | ecker 5                            | ot But       | lerny Sur           | vey Form<br>Date:               | 3/27/2008                             | <b>;</b>   |
|----------------|--|------------------|-----------------|------------------------------------|--------------|---------------------|---------------------------------|---------------------------------------|--|
| Site Na        | me:  | Otay Hills Q     | uarry           |                                    |              |                     | Site Visit No                   | 2                                     |  |
| Acres S        | Surveyed   |                  | Survey Ti       | ey Time: 5.25 Acres per Hour: 0.00 |              |                     |                                 |                                       |  |
| Survey         | Surveyors Present:                                     |                  | •               | _                                  |              |                     |                                 |                                       | <del> </del>                                     |
| ,              |  |                  |                 |                                    | •            |                     |                                 |                                       |  |
|                |  |                  |                 |                                    |              | <del></del> .       |                                 | · · · · · · · · · · · · · · · · · · · |  |
|                |  |                  |                 | Field C                            | onditio      | ns                  |                                 |                                       |  |
|                | Time (24   | hr)              | Tempera         | ture (°F)                          |              | Wind 9              | Speed (mph)                     | Cloud Cov                             | /er  |
| Start          | 1015   | 63               |                 |                                    |              | 2-5                 |                                 | 0%                                    |  |
| End            | 1530   | 68               |                 |                                    |              | 3-5                 |                                 | 0%                                    |  |
| Start          |  |                  |                 |                                    |              |                     |                                 |                                       |  |
|                |  |                  | <del></del>     |                                    | -            |                     |                                 | %                                     |  |
| End            | <u> </u>   |                  |                 |                                    |              |                     |                                 | %                                     |  |
| Vegetati       | on Communities   | Surveyed (inc. o | iominant s      | nn \                               |              | - <del></del>       |                                 |                                       |  |
|                |  |                  |                 |                                    |              |                     |                                 |                                       |  |
|                | coastal sage scrub                                     |                  |                 | d numer                            | ous anni     | ual flowers         |                                 |                                       |  |
| Areas of       | non-native grassla                                     | ınd (Bromus spp, | Avena)          |                                    |              |                     |                                 |                                       |  |
|                | Host P   | lante            |                 | Oha                                | 1            |                     |                                 |                                       |  |
| dwarf nla      | antain ( <i>Plantago en</i>                            |                  |                 | Obs.                               | Popo         | en flavor (         | Nectar Plan                     |                                       | Obs.   |
|                | wl's clover (Castille                                  |                  |                 |                                    |              | elds ( <i>Lasth</i> |                                 | giobothrys spp.)                      |  |
|                | gon ( <i>Antirrhinum co</i>                            |                  |                 |                                    |              | nstar ( <i>Muil</i> |                                 |                                       |  |
|                | ak (Cordylanthus ri                                    |                  |                 |                                    |              |                     | inckia intermedia               | <del></del>                           | +  |
| woolly pl      | antain ( <i>Plantago pa</i>                            | atagonica)       |                 |                                    |              | (Allium sp          |                                 | -/                                    | 1 8  |
|                |  |                  |                 |                                    |              |                     | gonum fascicula                 | tum)                                  | Ø  |
|                |  |                  |                 |                                    |              |                     | anthus dianthifle               |                                       |  |
|                |  |                  |                 |                                    |              | ·                   |                                 |                                       |  |
|                | Butterfly 9  | Species          |                 | No.                                | 1            |                     | Butterfly Spec                  | ion                                   | T No.  |
| Checkers       | ····   |                  |                 |                                    | Hairst       | reaks               | Dutterny Spec                   | 165                                   | No.  |
|                | patch (Chlosyne c                                      | californica)     |                 |                                    |              |                     | treak ( <i>Atlides ha</i>       | lesus corcorani)                      | <del> </del>                                     |
|                | neckerspot ( <i>C. gab</i>                             |                  |                 |                                    |              |                     | phrys augustinu                 |                                       | <del>                                     </del> |
|                | eckerspot ( <i>Euphyd</i> i                            |                  |                 |                                    |              |                     |                                 | c. dumetorum affinis)                 |  |
|                | n checkerspot (E. c                                    |                  |                 |                                    |              |                     | Strymon melinus                 | pudica)                               |  |
|                | heckerspot (Thess                                      |                  | ti)             |                                    |              | /Admirals           |                                 |                                       |  |
| Blues          | escent ( <i>Phyciodes</i>                              | mylitta)         |                 |                                    |              |                     | Adelpha bredow                  |                                       |  |
|                | ygmy-blue ( <i>Brephi</i>                              | idium avila      |                 | 40                                 |              |                     | (Limenitis lorqui               |                                       | <del> </del>                                     |
|                | ailed blue ( <i>Everes a</i>                           |                  |                 | 18                                 |              |                     | Vanessa annab<br>alanta rubria) | ella)                                 | 6  |
|                | blue (Glaucopsych                                      |                  | ralis)          |                                    |              | l lady (V. a        |                                 |                                       | 6  |
|                | blue (Hemiargus c                                      |                  | -               |                                    |              |                     | a) lady (V. virgin              | iensis)                               | + -  |
| Acmon bl       | ue (Icaricia acmon                                     | acmon)           | 1               |                                    |              |                     | Vanessa sp.)                    |                                       | <u> </u>   |
| marine bl      | ue ( <i>Leptotes marin</i>                             | a)               |                 |                                    | Swallo       |                     |                                 |                                       | <del>                                     </del> |
| unidentifie    | ed blue  |                  |                 |                                    | pale sv      | vallowtail (        | Papilio eurymed                 | on)                                   | 1  |
| Whites         |  |                  |                 |                                    |              |                     | llowtail ( <i>P. rutulu</i>     | ıs)                                   |  |
|                | getip (Anthocharis                                     |                  |                 |                                    | <del> </del> |                     | (P. zelicaon)                   |                                       |  |
|                | elder's) orangetip (/<br>California ringlet ( <i>C</i> |                  | 16 - wa ( - a ) |                                    |              | laneous             | <del></del>                     |                                       | ļ  |
|                | white ( <i>Pieris rapae</i> )                          |                  | itornica)       |                                    |              |                     | plexippus)                      |                                       | ļ  |
|                | d (common) white (                                     |                  |                 | 5                                  |              |                     | (Junonia coenia                 |                                       | <del> </del>                                     |
|                | ite ( <i>P. sisymbrii</i> )                            | TOTAL PROTOGRA   | <u>'</u>        |                                    | Skippe       |                     | lymphalis antiop                | a)                                    |  |
| unidentifie    |  |                  | ·               |                                    |              |                     | g ( <i>Erynnis fune</i> i       | ralis)                                | 4  |
| Metalmar       | 'ks  |                  |                 |                                    |              |                     | ng ( <i>Erynnis tristi</i>      |                                       | <del>                                     </del> |
|                | etalmark ( <i>Apodemia</i>                             |                  |                 |                                    |              |                     | phila phyleus)                  | · <u>·</u>                            | 1  |
|                | netalmark ( <i>Calephe</i>                             | elis wrighti)    |                 | _                                  | white (d     | common) c           | heckered-skippe                 | r (Pyrgus albescens)                  | 1  |
| Sulphurs       |  |                  |                 | -                                  | Other        |                     |                                 |                                       |  |
|                | lphur (Colias euryti                                   |                  |                 | 1                                  |              |                     |                                 |                                       |  |
|                | inge ( <i>Eurema nicip</i>                             |                  |                 |                                    | <u> </u>     |                     |                                 |                                       |  |
| unidentifie    | sulfur ( <i>Phoebus se</i>                             | imae marcellina) |                 |                                    |              |                     |                                 | ·                                     | <u></u>  |
| an note ittile | a sulpitul   | Column           | Subtotal        | 24                                 | <del> </del> |                     | ···                             | Caluma Calair                         |  |
|                |  | - Joidinii       | Cubiolai        |                                    | <u> </u>     |                     |                                 | Column Subtotal                       | 19   |
|                |  |                  |                 |                                    |              |                     |                                 | Total                                 | 43   |

| Washington And Andrews   | 3123108  |
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|  | 1012 - 1530  |
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| = 300 ht : Est cal Stylochine  | WEME LASP  |
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| Nasha Pago P. Lady DX  | 4  |
|  | The same server with the server server   |

| Surveyor: Dale Ritenour  |                      | <b>Date:</b> March 27, 2008 |  |
|--------------------------|----------------------|-----------------------------|--|
| Site Name: Otay Hills    |                      | Site Visit No:              |  |
| Acres Surveyed           | Survey Time: 5 hours | Acres per Hour:             |  |
| Other Surveyors Present: | Alison Varner        |                             |  |

|       | Field Conditions |                  |                  |             |  |  |
|-------|------------------|------------------|------------------|-------------|--|--|
|       | Time (24 hr)     | Temperature (°F) | Wind Speed (mph) | Cloud Cover |  |  |
| Start | 1000             | 69               | 0-3              | 0 percent   |  |  |
| End   | 1500             | 75               | 0-6              | 0 percent   |  |  |
| Start |                  |                  |                  |             |  |  |
| End   |                  |                  |                  |             |  |  |

| Vegetation Communities Surveyed (inc. dominant spp.)                    |  |
|---|--|
| DCSS – Artemisia californica, Vigueria lacinata, Eriogonum fasciculatum |  |
|   |  |

| Host Plants                              | Obs. | Nectar Plants                                    | Obs. |
|--|------|--|------|
| dwarf plantain (Plantago erecta)         | X    | popcorn flower (Cryptantha / Plagiobothrys spp.) | X    |
| purple owl's clover (Castilleja exserta) | Χ    | goldfields (Lasthenia spp.)                      | X    |
| snapdragon (Antirrhinum coulterianum)    |      | chia (Salvia columbariae)                        |      |
| birds-beak (Cordylanthus rigidus)        |      | goldenstar (Muilla spp.)                         |      |
| woolly plantain (Plantago patagonica)    |      | fiddleneck (Amsinckia intermedia)                |      |
|  |      | onion (Allium spp.)                              | X    |
|  |      | buckwheat (Eriogonum fasciculatum)               | X    |
|  |      |  | 1    |

| Butterfly Species                                   | No.                                   | Butterfly Species                                      | No. |
|---|---------------------------------------|--|-----|
| Checkerspots  |                                       | Hairstreaks  |     |
| California patch (Chlosyne californica)             |                                       | great purple hairstreak (Atlides halesus corcorani)    |     |
| Gabb's checkerspot (C. gabbii)                      | 18                                    | brown elfin (Callophrys augustinus)                    |     |
| Quino checkerspot (Euphydryas editha quino)         |                                       | bramble (perplexing) hairstreak (C. dumetorum affinis) |     |
| chalcedon checkerspot (E. chalcedona chalcedona)    |                                       | gray hairstreak (Strymon melinus pudica)               | -   |
| Leanira checkerspot (Thessalia leanira wrighti)     |                                       | Ladies/Admirals  |     |
| Mylitta crescent (Phyciodes mylitta)                |                                       | California sister (Adelpha bredowii californica)       |     |
| Blues   |                                       | Lorquin's admiral (Limenitis Iorquini)                 |     |
| western pygmy-blue (Brephidium exila)               | · · · · · · · · · · · · · · · · · · · | west coast lady (Vanessa annabella)                    | 7   |
| western tailed blue (Everes amyntula)               |                                       | red admiral (V. atalanta rubria)                       |     |
| southern blue (Glaucopsyche lygdamus australis)     |                                       | painted lady (V. cardui)                               | 60  |
| Edward's blue (Hemiargus ceraunus gyas)             |                                       | American (Virginia) lady (V. virginiensis)             |     |
| Acmon blue (Icaricia acmon acmon)                   |                                       | unidentified lady (Vanessa sp.)                        |     |
| marine blue (Leptotes marina)                       | <u> </u>                              | Swallowtails   |     |
| unidentified blue                                   |                                       | pale swallowtail (Papilio eurymedon)                   |     |
| Whites  |                                       | western tiger swallowtail (P. rutulus)                 |     |
| Sara orangetip (Anthocharis sara sara)              | 20                                    | anise swallowtail (P. zelicaon)                        | 1   |
| desert (Felder's) orangetip (A. cethura)            |                                       | Miscellaneous  |     |
| common California ringlet (Coenonympha californica) | 9                                     | monarch (Danaus plexippus)                             |     |
| cabbage white (Pieris rapae)                        |                                       | common buckeye (Junonia coenia grisea)                 | 2   |
| checkered (common) white (Pontia protodice)         | 3                                     | mourning cloak (Nymphalis antiopa)                     |     |
| spring white (P. sisymbrii)                         |                                       | Skippers   |     |
| unidentified white                                  |                                       | funereal duskywing (Erynnis funeralis)                 |     |
| Metalmarks  |                                       | mournful duskywing (Erynnis tristis)                   |     |
| Behr's metalmark (Apodemia mormo virgulti)          | 7                                     | fiery skipper (Hylephila phyleus)                      |     |
| Wright's metalmark (Calephelis wrighti)             |                                       | white (common) checkered-skipper (Pyrgus albescens)    |     |
| Sulphurs  |                                       | Other  |     |
| orange sulphur (Colias eurytheme)                   |                                       |  |     |
| sleepy orange (Eurema nicippe)                      |                                       |  |     |
| cloudless sulfur (Phoebus sennae marcellina)        |                                       |  |     |
| unidentified sulphur                                |                                       |  |     |
| Column Subtotal                                     | 39                                    | Column Subtotal  | 70  |
|   |                                       | Total  | 109 |

| 4         | SRM-01 Otay Hills 3/27/08   |
|-----------|---|
|           | QCB Survey Pale Ru/AV. Areas  |
|           | Start \$600 69°F Of co slight home O Say!   |
|           | Behis MM I Gabbs Ch DT Pounted Lady DID Buckeye   |
| •         | Founted Lady DE Buckeye   |
|           | WC, Lady 1 Anise ST .   |
|           | CA Ringled A  |
|           | Sara OT Ø Ø   |
|           |   |
| <b>13</b> |   |
|           |   |
|           | end 1560 754 Obryk Ofice  |
|           | Plants in DESS include Arteal Erifas Viella   |
| 13        | Viglait Deitas Lamaux Bromado Avetat  |
|           | Criplanthe ST. Mirles Colore Land's Lind  |
|           | Cennel Hypota Cracon Diccap Daupes Calspl' Cryptanthe sp. Mirlze Calmac Lepait Lindia Erocir Lotsce Selcin Laral Lestil Calcil Escesa |
|           | Achoor Ferrir Branco Phacic Charle Malter Yucuhi  |
| L.        | Marmic Lasses' Solkan Lolmul Brodia Chaenactis  |
|           | Plageobeth. Valmyn Schber Cascar Dicoce Silgel Porgra   |
|           | Sisymbrium Pena Saltra Sonole Alimen  |
|           | Emmuthe Steeri Mingat   |
|           | Bobesta   |
|           | CALQ CORA SOSP CALT ANHY CAKT   |
|           | W. Fence SPEO WEME BRRO WREIV Rite in the Rain 1  |
| 46.00     |   |

| Surveyor: Sally TRNKA     |                       | Date: 03/27/08  |  |
|---------------------------|-----------------------|-----------------|--|
| Site Name: Otay Hills Qua | rry (SRM-01)          | Site Visit No:  |  |
| Acres Surveyed            | Survey Time: 5.25 hrs | Acres per Hour: |  |
| Other Surveyors Present:  | Brian Parker          |                 |  |

|       | Field Conditions |                  |                  |                  |  |  |
|-------|------------------|------------------|------------------|------------------|--|--|
|       | Time (24 hr)     | Temperature (°F) | Wind Speed (mph) | Cloud Cover      |  |  |
| Start | 10:15            | 63               | 0-2              | 0 percent; sunny |  |  |
| End   | 15:30            | 68               | 3-5              | 0 percent; sunny |  |  |
| Start |                  |                  |                  |                  |  |  |
| End   |                  |                  |                  | <u> </u>         |  |  |

| Vegetation Communities Surveyed (inc. dominant spp.) |  |  |
|--|--|--|
| Diegan coastal sage scrub                            |  |  |
|  |  |  |

| Host Plants                              | Obs. | Nectar Plants                                    | Obs.     |
|--|------|--|----------|
| dwarf plantain (Plantago erecta)         | X    | popcorn flower (Cryptantha / Plagiobothrys spp.) | <u> </u> |
| purple owl's clover (Castilleja exserta) |      | goldfields (Lasthenia spp.)                      | X        |
| snapdragon (Antirrhinum coulterianum)    |      | chia (Salvia columbariae)                        |          |
| birds-beak (Cordylanthus rigidus)        |      | goldenstar (Muilla spp.)                         |          |
| woolly plantain (Plantago patagonica)    |      | fiddleneck (Amsinckia intermedia)                |          |
|  |      | onion (Allium spp.)                              | X        |
|  |      | buckwheat (Eriogonum fasciculatum)               |          |
|  |      | ground pink (Linanthus dianthiflorus)            | X        |

| Butterfly Species                                   | No. | Butterfly Species  | No.  |
|---|-----|--|------|
| Checkerspots  |     | Hairstreaks  |      |
| California patch (Chlosyne californica)             |     | great purple hairstreak (Atlides halesus corcorani)          |      |
| Gabb's checkerspot (C. gabbii)                      |     | brown elfin (Callophrys augustinus)                          |      |
| Quino checkerspot (Euphydryas editha quino)         |     | bramble (perplexing) hairstreak (C. dumetorum affinis)       |      |
| chalcedon checkerspot (E. chalcedona chalcedona)    |     | gray hairstreak (Strymon melinus pudica)                     |      |
| Leanira checkerspot (Thessalia leanira wrighti)     |     | Ladies/Admirals  |      |
| Mylitta crescent (Phyciodes mylitta)                |     | California sister (Adelpha bredowii californica)             |      |
| Blues   |     | Lorquin's admiral ( <i>Limenitis lorquini</i> )              |      |
| western pygmy-blue (Brephidium exila)               | 1   | west coast lady (Vanessa annabella)                          | 10   |
| western tailed blue (Everes amyntula)               |     | red admiral (V. atalanta rubria)                             |      |
| southern blue (Glaucopsyche lygdamus australis)     |     | painted lady (V. cardui)                                     | 7    |
| Edward's blue (Hemiargus ceraunus gyas)             |     | American (Virginia) lady (V. virginiensis)                   |      |
| Acmon blue (Icaricia acmon acmon)                   |     | unidentified lady (Vanessa sp.)                              | 33   |
| marine blue (Leptotes marina)                       |     | Swallowtails   |      |
| unidentified blue                                   |     | pale swallowtail (Papilio eurymedon)                         |      |
| Whites  |     | western tiger swallowtail (P. rutulus)                       |      |
| Sara orangetip (Anthocharis sara sara)              | 1   | anise swallowtail (P. zelicaon)                              | 1    |
| desert (Felder's) orangetip (A. cethura)            |     | Miscellaneous  |      |
| common California ringlet (Coenonympha californica) | 2   | monarch (Danaus plexippus)                                   | ···· |
| cabbage white (Pieris rapae)                        |     | common buckeye (Junonia coenia grisea)                       |      |
| checkered (common) white (Pontia protodice)         |     | mourning cloak (Nymphalis antiopa)                           |      |
| spring white ( <i>P. sisymbrii</i> )                |     | Skippers   |      |
| unidentified white                                  | 1   | funereal duskywing (Erynnis funeralis)                       |      |
| Metalmarks  |     | mournful duskywing (Erynnis tristis)                         |      |
| Behr's metalmark (Apodemia mormo virgulti)          | 18  | fiery skipper (Hylephila phyleus)                            |      |
| Wright's metalmark (Calephelis wrighti)             |     | white (common) checkered-skipper ( <i>Pyrgus albescens</i> ) |      |
| Sulphurs  |     | Other  |      |
| orange sulphur ( <i>Colias eurytheme</i> )          |     |  |      |
| sleepy orange ( <i>Eurema nicippe</i> )             |     |  |      |
| cloudless sulfur (Phoebus sennae marcellina)        |     |  |      |
| unidentified sulphur                                |     |  |      |
| Column Subtotal                                     | 23  | Column Subtotal  | 51   |
|   |     | Total  | 74   |

|   | SRM-01 Otay ld  | 201/02/02        |
|---|---|------------------|
|   |   | Sally T; Brian + |
|   | start: clear/sonny : 0% clouds                            | Joseph Johnson I |
|   | Start: clear/sonny; 0% clouds;<br>0-2mph; 63°F; 10:15 a.v | <b>\</b>         |
|   |   |                  |
|   | animals   | flowering plate  |
|   | lady JUM MM W +5 +5                                       | Mig lac          |
|   | lark spanow   | Lot soo          |
|   | Sideblotched liz.   | Caly was         |
|   | white   | Hyp gla          |
|   | Behris HT HT IH M   | Horsch inc       |
|   | w coast lady Ist still                                    | the cic          |
|   | raven   | Mir cal          |
|   | Anna's hom  | Cry sq.          |
|   | And lady HP 11  | Look al          |
|   | arise swhit !   | Dic cop          |
|   | mack, bird  | Esch'al          |
|   | red - fail hamile   | Pla eve - dry    |
|   | red-fail hawk<br>wht-stepol sparrow                       | Cost os.         |
|   | Ch towhere  | Lathy best       |
|   | checkened stopper   | Sil gal          |
|   | w orderle   | Cilia 2p         |
|   | CA ringlet 11   | Calande 22,      |
|   | Saras 6-HP  | Allow sp.        |
|   | Pygny blue  | Viola ped.       |
|   |   | Graph al         |
| 7 | end: 15:30pm; clear/somy 6%;                              |                  |
|   | 3-5 mph 168 ap  |                  |

| Surveyor: _ Alison Varner    |  |                  | March 27, 2008                      |
|------------------------------|--|------------------|-------------------------------------|
| Site Name: SRM-01 Otay Hills |  |                  | Site Visit No: 2                    |
| Acres Surveyed               | Survey Time: 5 hrs                           | Acres            | s per Hour:                         |
| Other Surveyors Present:     | Brian Parker, Amy Mattson, Sally Trnka, Doug | Allen, Stacy Nig | ro, Robert Hogenauer, Dale Ritenour |

|       |              | Field Cond       | itions           |             |
|-------|--------------|------------------|------------------|-------------|
|       | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
| tart  | 1000         | 69               | 0-3              | Clear       |
| End   | 1500         | 75               | 0-6              | Clear       |
| Start |              |                  |                  |             |
| End   |              |                  |                  |             |

## Vegetation Communities Surveyed (inc. dominant spp.)

NNG and CSS, dominated by Artemisia californica, Eriogonum fasciculatum, Viguiera laciniata, and Malosma laurina

| Host Plants                              | Obs. | Nectar Plants                                    | Obs.          |
|--|------|--|---------------|
| dwarf plantain (Plantago erecta)         | X    | popcorn flower (Cryptantha / Plagiobothrys spp.) | x             |
| purple owl's clover (Castilleja exserta) | X    | goldfields (Lasthenia spp.)                      | X             |
| snapdragon (Antirrhinum coulterianum)    |      | chia (Salvia columbariae)                        | <del></del> - |
| birds-beak (Cordylanthus rigidus)        |      | goldenstar (Muilla spp.)                         |               |
| woolly plantain (Plantago patagonica)    |      | fiddleneck (Amsinckia intermedia)                |               |
|  |      | onion (Allium spp.)                              | X             |
|  |      | buckwheat (Eriogonum fasciculatum)               | <u> </u>      |
|  |      |  |               |

| Butterfly Species                                   | No. | Butterfly Species                                      | No.                                   |
|---|-----|--|---------------------------------------|
| Checkerspots  |     | Hairstreaks  | <del> </del>                          |
| California patch (Chlosyne californica)             |     | great purple hairstreak (Atlides halesus corcorani)    |                                       |
| Gabb's checkerspot (C. gabbii)                      | 2   | brown elfin (Callophrys augustinus)                    |                                       |
| Quino checkerspot (Euphydryas editha quino)         |     | bramble (perplexing) hairstreak (C. dumetorum affinis) |                                       |
| chalcedon checkerspot (E. chalcedona chalcedona)    |     | gray hairstreak (Strymon melinus pudica)               |                                       |
| Leanira checkerspot (Thessalia leanira wrighti)     |     | Ladies/Admirals  |                                       |
| Mylitta crescent (Phyciodes mylitta)                |     | California sister (Adelpha bredowii californica)       |                                       |
| Blues   |     | Lorquin's admiral (Limenitis Iorquini)                 |                                       |
| western pygmy-blue (Brephidium exila)               |     | west coast lady (Vanessa annabella)                    |                                       |
| western tailed blue (Everes amyntula)               |     | red admiral (V. atalanta rubria)                       |                                       |
| southern blue (Glaucopsyche lygdamus australis)     |     | painted lady (V. cardui)                               | 21                                    |
| Edward's blue (Hemiargus ceraunus gyas)             |     | American (Virginia) lady (V. virginiensis)             |                                       |
| Acmon blue (Icaricia acmon acmon)                   |     | unidentified lady (Vanessa sp.)                        |                                       |
| marine blue (Leptotes marina)                       |     | Swallowtails   |                                       |
| unidentified blue                                   | 1   | pale swallowtail (Papilio eurymedon)                   | 1                                     |
| Whites  |     | western tiger swallowtail (P. rutulus)                 |                                       |
| Sara orangetip (Anthocharis sara sara)              | 15  | anise swallowtail (P. zelicaon)                        |                                       |
| desert (Felder's) orangetip (A. cethura)            |     | Miscellaneous  |                                       |
| common California ringlet (Coenonympha californica) |     | monarch (Danaus plexippus)                             |                                       |
| cabbage white (Pieris rapae)                        |     | common buckeye (Junonia coenia grisea)                 |                                       |
| checkered (common) white (Pontia protodice)         |     | mourning cloak (Nymphalis antiopa)                     | -                                     |
| spring white (P. sisymbrii)                         |     | Skippers   |                                       |
| unidentified white                                  | 8   | funereal duskywing (Erynnis funeralis)                 | 1                                     |
| Metalmarks  |     | mournful duskywing (Erynnis tristis)                   | · · · · · · · · · · · · · · · · · · · |
| Behr's metalmark (Apodemia mormo virgulti)          | 9   | fiery skipper (Hylephila phyleus)                      |                                       |
| Wright's metalmark (Calephelis wrighti)             |     | white (common) checkered-skipper (Pyrgus albescens)    |                                       |
| Sulphurs  |     | Other  |                                       |
| orange sulphur ( <i>Colias eurytheme</i> )          | -   |  |                                       |
| sleepy orange ( <i>Eurema nicippe</i> )             |     |  |                                       |
| cloudless sulfur (Phoebus sennae marcellina)        |     |  |                                       |
| unidentified sulphur                                |     |  |                                       |
| Column Subtotal                                     | 35  | Column Subtotal  | 23                                    |
|   |     | Total  | 58                                    |

| A A A            |  |                  |                    |          |                      |             | <b>A A</b>                 |                             |
|------------------|--|------------------|--------------------|----------|----------------------|-------------|----------------------------|-----------------------------|
| Ay Hills (2013#2 | CIEBY, SWYNNY, LOTE<br>MACCIFECTES, JISTOC | Widife           | Behrs mm IIP 111/  | 1115     | Samo D-tro Utt ##    | Gabbs 11    | Cothertail<br>FDWSKywyng 1 | Pale sellata 1              |
| My DR            | Habitats: North CSS don DAR apporter       | Flowering Plants | Lot 500<br>Dic (Ap | Exodium. | Lin dia<br>Cruphntha | Pricela Cic | Existas<br>Lascel          | likeys<br>Malden<br>Esc cal |

| (emt       |                              | pugle  | ear, 754, mph | "the on the Paris" |
|------------|------------------------------|--|---------------|--------------------|
| Ohry Hills | (Butsank)                    | WIM (114+  | Joy Kint      |                    |
| 3/27/08    | Flow-Erical Soldinmad Platve | And colling of the co | End 1500      |                    |

| Surveyo  | or: Amy Mattson     | 2008 Quino Checkerspot       |                  | 24/04/2008                            |
|----------|---------------------|------------------------------|------------------|---------------------------------------|
| 1,5      |                     |                              | Date: _(         | 04/04/2008                            |
| Site Nan | ne: Otay Hills (SRI | M-01)                        | Sit              | e Visit No: 3                         |
| Acres S  | urveyed             | Survey Time: 1.6 hou         | rs 1.5V Acres pe | r Hour:                               |
| Other S  | urveyors Present:   | Dale Ritenour, Jasmine Watts |                  |                                       |
|          |                     |                              |                  |                                       |
|          |                     | Field Cond                   | litions          |                                       |
|          | Time (24 h          | r) Temperature (°F)          | Wind Speed (mph) | Cloud Cover                           |
| Start    | 14:55               | 70                           | 0-3              | 0%                                    |
| End      | 16:30               | 70                           | 0-3              | 0%                                    |
| Start    |                     |                              |                  |                                       |
| End      |                     | ·                            |                  |                                       |
|          |                     |                              |                  |                                       |
| Vegetati | ion Communities S   | urveyed (inc. dominant spp.) |                  |                                       |
|          |                     |                              |                  |                                       |
|          |                     |                              |                  |                                       |
|          | <del></del>         |                              |                  | · · · · · · · · · · · · · · · · · · · |

| Obs.     | Nectar Plants                                  | Obs   |
|----------|--|---|
| <b>√</b> | popcorn flower (Cryptantha/Plagiobothrys spp.) | ·   · · · ·   |
|          | goldfields (Lasthenia spp.)                    | 1   |
|          | goldenstar (Muilla spp.)                       |   |
|          | fiddleneck (Amsinckia intermedia)              |   |
|          | onion (Allium spp.)                            |   |
|          | buckwheat (Eriogonum fasciculatum)             | 1   |
|          | ground pink (Linanthus dianthiflorus)          |   |
|          | Obs. √   | □ popcom flower (Cryptantha/Plagiobothrys spp.)     □ goldfields (Lasthenia spp.)     □ goldenstar (Muilla spp.)     □ fiddleneck (Amsinckia intermedia)     □ onion (Allium spp.)     □ buckwheat (Eriogonum fasciculatum) |

| Butterfly Species                                   | No. | Butterfly Species                                      | No. |
|---|-----|--|-----|
| Checkerspots  |     | Hairstreaks  |     |
| California patch (Chlosyne californica)             |     | great purple hairstreak (Atlides halesus corcorani)    |     |
| Gabb's checkerspot ( <i>C. gabbil</i> )             | 1   | brown elfin (Callophrys augustinus)                    | 1   |
| Quino checkerspot (Euphydryas editha quino)         |     | bramble (perplexing) hairstreak (C. dumetorum affinis) |     |
| chalcedon checkerspot (E. chalcedona chalcedona)    |     | gray hairstreak (Strymon melinus pudica)               |     |
| Leanira checkerspot (Thessalia leanira wrighti)     |     | Ladies/Admirals  |     |
| Mylitta crescent (Phyciodes mylitta)                |     | California sister (Adelpha bredowii californica)       |     |
| Blues   |     | Lorquin's admiral (Limenitis lorquini)                 |     |
| western pygmy-blue (Brephidium exila)               |     | west coast lady (Vanessa annabella)                    | 2   |
| western tailed blue (Everes amyntula)               |     | red admiral (V. atalanta rubria)                       |     |
| southern blue (Glaucopsyche lygdamus australis)     |     | painted lady (V. cardui)                               |     |
| Edward's blue (Hemiargus ceraunus gyas)             |     | American (Virginia) lady (V. virginiensis)             |     |
| Acmon blue (Icaricia acmon acmon)                   |     | unidentified lady (Vanessa sp.)                        | 2   |
| marine blue ( <i>Leptotes marina</i> )              |     | Swallowtails   |     |
| unidentified blue                                   |     | pale swallowtail (Papilio eurymedon)                   |     |
| Whites  |     | western tiger swallowtail (P. rutulus)                 |     |
| Sara orangetip (Anthocharis sara sara)              | 6   | anise swallowtail (P. zelicaon)                        |     |
| desert (Felder's) orangetip (A. cethura)            |     | Miscellaneous  |     |
| common California ringlet (Coenonympha californica) | 48  | monarch (Danaus plexippus)                             |     |
| cabbage white ( <i>Pieris rapae</i> )               |     | common buckeye (Junonia coenia grisea)                 |     |
| checkered (common) white (Pontia protodice)         |     | mourning cloak (Nymphalis antiopa)                     |     |
| spring white ( <i>P. sisymbrii</i> )                |     | Skippers   |     |
| unidentified white                                  | 1   | funereal duskywing (Erynnis funeralis)                 | 1   |
| Metalmarks  |     | mournful duskywing (Erynnis tristis)                   |     |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> ) |     | fiery skipper (Hylephila phyleus)                      |     |
| Wright's metalmark ( <i>Calephelis wrighti</i> )    |     | white (common) checkered-skipper (Pyrgus albescens)    |     |
| Sulphurs  |     | Other  |     |
| orange sulphur ( <i>Colias eurytheme</i> )          |     |  |     |
| sleepy orange ( <i>Eurema nicippe</i> )             |     |  |     |
| cloudless sulfur (Phoebus sennae marcellina)        |     |  |     |
| unidentified sulphur                                |     |  |     |
| Column Subtotal                                     | 56  | Column Subtotal  | 5   |
|   |     | Total  | 61  |

1.08 SRM 01 Area 12, AM, JW, DR 4:55 6:30 1 man salapi Back sw Rhacoc Kidal mal \* 3 nomed hor Lotium Chu inf prichly peer Losingia Swithter fillian. Siden maarv Clu mel SAchil mit enas pul End bar Tox do t Johnny Jump Tad 11 Art Cal \* Pla ere + Dicap GAOP yn digly Galiversp. Focully Calman & Tamarix Gabbs Grandellia honeybea the has Jun acu Mrabaly At Cal A ly luc lar mal Simmichi, Serremins + Astrajatu Baryl + Ferti maller tan Hair Chaenacks

| Surveyor: Stacy Nigro         |                            | Date: 4/4/08       |   |
|-------------------------------|----------------------------|--------------------|---|
| Site Name: Otay Hills         |                            | Site Visit No: 3   | _ |
| Acres Surveyed 60             | Survey Time: 1.25 HRS      | Acres per Hour: 12 |   |
| Other Surveyors Present: A. V | arner, S. Trnka, B. Parker |                    |   |

|       | Field Conditions |                  |                  |             |  |
|-------|------------------|------------------|------------------|-------------|--|
|       | Time (24 hr)     | Temperature (°F) | Wind Speed (mph) | Cloud Cover |  |
| Start | 14:20            | 71               | 4-7              | 0/clear     |  |
| End   | 15:35            | 67               | 4-7              | 0/clear     |  |
| Start |                  |                  |                  |             |  |
| End   |                  |                  |                  |             |  |

| ١ | Vegetation Communities Surveyed (inc. dominant spp.)DCSS -Erio fasc, Vig lac,; NNG- Avena, Bromus mad. |
|---|--|
|   |  |
| I |  |

| Host Plants                              | Obs. | Nectar Plants                                    | Obs. |
|--|------|--|------|
| dwarf plantain (Plantago erecta)         |      | popcorn flower (Cryptantha / Plagiobothrys spp.) | -    |
| purple owl's clover (Castilleja exserta) |      | goldfields (Lasthenia spp.)                      |      |
| snapdragon (Antirrhinum coulterianum)    |      | chia (Salvia columbariae)                        |      |
| birds-beak (Cordylanthus rigidus)        |      | goldenstar (Muilla spp.)                         |      |
| woolly plantain (Plantago patagonica)    |      | fiddleneck (Amsinckia intermedia)                |      |
|  |      | onion (Allium spp.)                              | X    |
|  |      | buckwheat (Eriogonum fasciculatum)               | X    |
|  |      |  |      |

| Butterfly Species                                   | No. | Butterfly Species  | No. |
|---|-----|--|-----|
| Checkerspots  |     | Hairstreaks  |     |
| California patch (Chlosyne californica)             |     | great purple hairstreak (Atlides halesus corcorani)          |     |
| Gabb's checkerspot (C. gabbii)                      |     | brown elfin (Callophrys augustinus)                          |     |
| Quino checkerspot (Euphydryas editha quino)         |     | bramble (perplexing) hairstreak (C. dumetorum affinis)       |     |
| chalcedon checkerspot (E. chalcedona chalcedona)    |     | gray hairstreak (Strymon melinus pudica)                     |     |
| Leanira checkerspot (Thessalia leanira wrighti)     |     | Ladies/Admirals  |     |
| Mylitta crescent (Phyciodes mylitta)                |     | California sister (Adelpha bredowii californica)             |     |
| Blues   |     | Lorquin's admiral ( <i>Limenitis lorquini</i> )              |     |
| western pygmy-blue (Brephidium exila)               |     | west coast lady (Vanessa annabella)                          |     |
| western tailed blue (Everes amyntula)               |     | red admiral (V. atalanta rubria)                             |     |
| southern blue (Glaucopsyche lygdamus australis)     |     | painted lady (V. cardul)                                     | 2   |
| Edward's blue (Hemiargus ceraunus gyas)             |     | American (Virginia) lady (V. virginiensis)                   |     |
| Acmon blue (Icaricia acmon acmon)                   |     | unidentified lady (Vanessa sp.)                              | 4   |
| marine blue (Leptotes marina)                       |     | Swallowtails   |     |
| unidentified blue                                   |     | pale swallowtail (Papilio eurymedon)                         |     |
| Whites  |     | western tiger swallowtail (P. rutulus)                       |     |
| Sara orangetip (Anthocharis sara sara)              | . 1 | anise swallowtail (P. zelicaon)                              |     |
| desert (Felder's) orangetip (A. cethura)            |     | Miscellaneous  |     |
| common California ringlet (Coenonympha californica) | 4   | monarch (Danaus plexippus)                                   |     |
| cabbage white (Pieris rapae)                        |     | common buckeye (Junonia coenia grisea)                       |     |
| checkered (common) white (Pontia protodice)         |     | mourning cloak (Nymphalis antiopa)                           |     |
| spring white (P. sisymbrii)                         |     | Skippers   |     |
| unidentified white                                  | 3   | funereal duskywing (Erynnis funeralis)                       |     |
| Metalmarks  |     | mournful duskywing (Erynnis tristis)                         |     |
| Behr's metalmark (Apodemia mormo virgulti)          | 6   | fiery skipper (Hylephila phyleus)                            |     |
| Wright's metalmark (Calephelis wrighti)             |     | white (common) checkered-skipper ( <i>Pyrgus albescens</i> ) |     |
| Sulphurs  |     | Other  |     |
| orange sulphur (Colias eurytheme)                   |     |  |     |
| sleepy orange (Eurema nicippe)                      |     |  |     |
| cloudless sulfur (Phoebus sennae marcellina)        |     |  |     |
| unidentified sulphur                                |     |  |     |
| Column Subtotal                                     | 14  | Column Subtotal  | 6   |
|   |     | Total  | 20  |

|          |               |              | 4               |
|----------|---------------|--------------|-----------------|
|          | Area 4        | ZINIGRO N    | 1 A. Varner     |
| 3        |               | S. Trake B.  | Parker,         |
|          | 60ac          |              | 125hr 12 /1     |
|          | 14:20         | <i>15:35</i> | 125hr = 12ac/hR |
| 7        | 71            | 67°          |                 |
|          | 4-7           | 3-7          |                 |
|          | clear         | clear        |                 |
|          |               | ig +=dom     | CSS I don MNG   |
|          | CSS + NN      |              | behrs - 6       |
|          | + Eno fasc*   |              |                 |
|          | Dich cap*     | 51           | ninglet -: = 4. |
|          | Garant .      | 22W 2B       |                 |
| -,6      | Bac poil      | Allin        |                 |
|          | Art CST       | ATTIVM DIRE, | org 1:0- = 1    |
|          | + Via lac*    | Challe pi-   | pta/24 = = 2    |
|          |               | Sidi malv    | 20              |
|          | + Erod Ap     | Rhus int     |                 |
|          | Calys mac     |              |                 |
|          | alo: splx     |              |                 |
|          |               | Maleco, *    | wcsp            |
|          | Sals to       | Sil gal"     | BTJR            |
|          | Bran was      | Sela big     | u, lenke        |
|          | Less fil      | Dei Pusa     | moths           |
| <b>*</b> | A Bloom croc* | Chlo par     | Bot og.         |
|          | Mel lun       | Leo, not     | RTHA            |
|          | Galapa        | Lanarka.     |                 |
| 1        | Phac op       | HBron med    |                 |
|          | V.            |              |                 |

| Survey      | or   | 2008 Quino (<br>Brian Parker   | Jneckersp   | oot Butterfly S  | _ •  | 41410000           |  |           |
|-------------|--|--|---|------------------|--|--------------------|--|-----------|
| -           |  |  |   | ·                | _ Date:  | 4/4/2008           |  |           |
| Site Na     |  | Otay Hills Quarry  |   |                  | Site Visit No:   | 3                  |  |           |
|             | Surveyed   |  | y Time: 1.25                                      |                  | Acres per Hou  | ir: 0.00           |  |           |
| Survey      | ors Present:   | Stacy Nigro Aliso  | on Varner   | Sally Trnka      |  |                    |  |           |
|             |  |  |   |                  | •  |                    |  |           |
|             |  |  | Fiold C   | onditions        |  |                    |  |           |
|             | Time (24   | hr) Temp   | erature (°F                                       |                  | d Speed (mph)  | Cloud Cov          |  |           |
| Start       | 1420   | 71   | (1)   | 5-7              | - opeca (mpn)  | 0%                 | <u></u>  |           |
| End         | 1535   | 67   |   | 5-7              |  |                    |  |           |
| Start       | 1000   | 07   |   | -   3-7          |  | 0%                 | <del></del>                                      |           |
|             | ·  |  |   |                  |  | %                  |  |           |
| End         |  |  | •   |                  |  | %                  |  |           |
| Vegetati    | on Communities   | Surveyed (inc. domina  | nt snn )  |                  |  |                    |  |           |
|             |  |  |   |                  |  |                    |  |           |
| Dieganic    | oasiai sage scrub                                      | (Eri fas, Vig lac, Mal lau   | and numer   | ous annual flow  | ers)   |                    |  |           |
|             |  |  |   |                  |  |                    |  |           |
| <del></del> | Host I   | Plants   | Obs.  | T                | Nectar Plants  |                    | Ob   |           |
| dwarf pla   | ıntain ( <i>Plantago e</i>                             | recta)   |   | popcorn flow     | er ( <i>Cryptantha / Plagi</i>                               | obothrys spp.)     |  |           |
| purple ov   | vl's clover ( <i>Castill</i>                           | eja exserta)   |   | goldfields (La   |  | <del>-</del>       |  |           |
|             | gon ( <i>Antirrhinum d</i>                             | The second secon |   | goldenstar (A    | fuilla spp.)   |                    |  |           |
|             | ak (Cordylanthus i                                     |  |   |                  | msinckia intermedia)   |                    | [ C  |           |
| woolly pla  | antain ( <i>Plantago <sub>I</sub></i>                  | patagonica)  |   | onion (Allium    |  |                    |  |           |
|             |  |  | <del>-                                     </del> |                  | Friogonum fasciculatu  | <del></del>        |  |           |
|             |  |  | <del>                                     </del>  | ground pink (    | Linanthus dianthifloru                                       | IS)                | ┞╌┣  | ╅_        |
|             |  |  | <u> </u>  |                  |  |                    |  | <u>-1</u> |
|             | Butterfly  | Species  | No.   |                  | Butterfly Specie   | s                  | No   | <b>5.</b> |
| Checkers    |  |  |   | Hairstreaks      |  |                    |  |           |
|             | patch (Chlosyne<br>neckerspot (C. gal                  |  | -   |                  | airstreak (Atlides hale                                      | sus corcorani)     | -  |           |
|             |  | dryas editha quino)  |   |                  | allophrys augustinus)<br>lexing) hairstreak (C.              | dum starum affinia |  |           |
|             |  | chalcedona chalcedona)   |   |                  | k (Strymon melinus p   |                    | <u> </u>   |           |
|             |  | salia leanira wrighti)   | <del> </del>                                      | Ladies/Admir     |  | udica)             | <del>                                     </del> |           |
|             | escent ( <i>Phyciodes</i>                              |  |   | California siste | er (Adelpha bredowii d                                       | californica)       |  |           |
| Blues       |  |  |   |                  | iral ( <i>Limenitis lorquini</i>                             |                    |  |           |
|             | ygmy-blue ( <i>Breph</i>                               |  |   |                  | y (Vanessa annabeli  | a)                 |  |           |
|             | ailed blue (Everes                                     |  |   | ·                | '. atalanta rubria)  |                    | L  |           |
|             | blue ( <i>Giaucopsyc</i> i<br>blue ( <i>Hemiargus</i>  | he lygdamus australis)   |   | painted lady (   |  |                    | 4  |           |
|             | ue ( <i>Icaricia acmor</i>                             |  | -   |                  | ginia) lady ( <i>V. virginie</i><br>dy ( <i>Vanessa</i> sp.) | nsis)              |  |           |
|             | ue ( <i>Leptotes mari</i>                              |  |   | Swallowtails     | ay (vanessa sp.)   |                    | <u> </u>   |           |
| unidentifie |  |  |   |                  | il (Papilio eurymedor  | )                  |  |           |
| Whites      |  |  |   |                  | wallowtail (P. rutulus)                                      |                    |  |           |
|             | getip (Anthochari                                      |  | 2   |                  | ail ( <i>P. zelicaon</i> )                                   |                    |  |           |
|             | elder's) orangetip                                     | ·  |   | Miscellaneou     |  |                    |  |           |
|             |  | Coenonympha californica  | ·   | monarch (Dan     |  |                    | <u> </u>   |           |
|             | white ( <i>Pieris rapae</i>                            | (Pontia protodice)   | 1 1   |                  | eye (Junonia coenia g  |                    | <del></del>                                      |           |
|             | ite ( <i>P. sisymbrii</i> )                            | (r onia protodice)   | <del>-   '</del> -                                | Skippers         | k (Nymphalis antiopa,  | ,                  | <del> </del>                                     |           |
| unidentifie |  |  |   |                  | wing ( <i>Erynnis funeral</i>                                | lis)               | 2  |           |
| Metalmar    | ks   |  |   |                  | ywing ( <i>Erynnis tristis</i> )                             | ,                  |  |           |
| Behr's me   | etalmark ( <i>Apodem</i>                               | ia mormo virgulti)   | 10  |                  | lylephila phyleus)   |                    |  |           |
| ·           | netalmark ( <i>Calepl</i>                              | nelis wrighti)   |   | white (commor    | n) checkered-skipper   | (Pyrgus albescens) | 1  |           |
| Sulphurs    | h-1  |  |   | Other            |  |                    |  |           |
|             | lphur (Colias eury                                     |  |   | Comstock's frit  | tillary  |                    |  |           |
|             | inge ( <i>Eurema nici</i><br>sulfur ( <i>Phoebus s</i> | ope)<br>ennae marcellina)  |   | <u> </u>         |  |                    | <del></del>                                      |           |
| unidentifie |  | omae marcennia)  |   |                  | · · · · · · · · · · · · · · · · · · ·                        |                    |  |           |
|             |  | Column Subtot  | al 14   |                  |  | Column Subtotal    | 7  |           |
|             |  |  |   | .L               |  | Total              | 21   |           |

|  | >-          |  |  |  |
|--|-------------|--|--|--|
| <b></b>  | 1 Dan       | Jan, AV,   | 20 74  | 4/4/67   |
|  |             | STEN SIL   | ソゆう  | 4/4/08<br>1420 1535  |
|  | \\\0\       | J-3.) NV   | 5)   | 7/ 67  |
| =  | Ça          | Lamarckia  |  | V-7 (-7  |
|  | 11          |  |  | 57 5-7   |
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|  |             | Cennil   | Charles Control  | ablit  |
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| <b>#3</b> (4)  | 9/6         |  |  | - S  |
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|  | M col       | •  | Play   |  |
| #30/   | h ere       |  | Chrs   | 1808X  |
| <b>43</b> Chi  | orogalom    |  |  | * * *  |
|  | V           |  |  | Attimated Reins L  |

| Surveyor: _Dale Ritenour |                            | Date: April 4, 2008 |
|--------------------------|----------------------------|---------------------|
| Site Name: Otay Hills    |                            | Site Visit No:      |
| Acres Surveyed           | Survey Time: 1:350 / 55/   | Acres per Hour:     |
| Other Surveyors Present: | Jasmine Watts, Amy Mattson |                     |

|       | Field Conditions |                  |                  |             |  |
|-------|------------------|------------------|------------------|-------------|--|
|       | Time (24 hr)     | Temperature (°F) | Wind Speed (mph) | Cloud Cover |  |
| Start | 1500             | 70               | 2-5              | 0 percent   |  |
| End   | 1635             | 70               | 0-4              | 0 percent   |  |
| Start |                  |                  |                  |             |  |
| End   |                  |                  |                  |             |  |

| Vegetation Communities Surveyed (inc. dominant spp.) | <br> |
|--|------|
| DCSS- Malosma laurina, Vigueria lacinata             |      |
|  |      |

| Host Plants                              | Obs. | Nectar Plants                                    | Obs. |
|--|------|--|------|
| dwarf plantain (Plantago erecta)         | X    | popcorn flower (Cryptantha / Plagiobothrys spp.) |      |
| purple owl's clover (Castilleja exserta) |      | goldfields (Lasthenia spp.)                      | X    |
| snapdragon (Antirrhinum coulterianum)    |      | chia (Salvia columbariae)                        |      |
| birds-beak (Cordylanthus rigidus)        |      | goldenstar (Muilla spp.)                         | X    |
| woolly plantain (Plantago patagonica)    |      | fiddleneck (Amsinckia intermedia)                |      |
|  |      | onion (Allium spp.)                              |      |
|  |      | buckwheat (Eriogonum fasciculatum)               | X    |
|  |      |  |      |

| Butterfly Species                                   | No. | Butterfly Species  | No. |
|---|-----|--|-----|
| Checkerspots  |     | Hairstreaks  |     |
| California patch (Chlosyne californica)             |     | great purple hairstreak (Atlides halesus corcorani)          |     |
| Gabb's checkerspot (C. gabbii)                      |     | brown elfin (Callophrys augustinus)                          |     |
| Quino checkerspot (Euphydryas editha quino)         |     | bramble (perplexing) hairstreak (C. dumetorum affinis)       |     |
| chalcedon checkerspot (E. chalcedona chalcedona)    |     | gray hairstreak (Strymon melinus pudica)                     |     |
| Leanira checkerspot (Thessalia leanira wrighti)     |     | Ladies/Admirals  |     |
| Mylitta crescent (Phyciodes mylitta)                |     | California sister (Adelpha bredowii californica)             |     |
| Blues   |     | Lorquin's admiral ( <i>Limenitis lorquini</i> )              |     |
| western pygmy-blue (Brephidium exila)               |     | west coast lady (Vanessa annabella)                          |     |
| western tailed blue (Everes amyntula)               |     | red admiral (V. atalanta rubria)                             |     |
| southern blue (Glaucopsyche lygdamus australis)     |     | painted lady (V. cardui)                                     |     |
| Edward's blue (Hemiargus ceraunus gyas)             |     | American (Virginia) lady (V. virginiensis)                   | *** |
| Acmon blue (Icaricia acmon acmon)                   |     | unidentified lady (Vanessa sp.)                              |     |
| marine blue (Leptotes marina)                       |     | Swallowtails   |     |
| unidentified blue                                   |     | pale swallowtail (Papilio eurymedon)                         |     |
| Whites  |     | western tiger swallowtail (P. rutulus)                       |     |
| Sara orangetip (Anthocharis sara sara)              | 2   | anise swallowtail (P. zelicaon)                              |     |
| desert (Felder's) orangetip (A. cethura)            |     | Miscellaneous  |     |
| common California ringlet (Coenonympha californica) | 31  | monarch (Danaus plexippus)                                   |     |
| cabbage white (Pieris rapae)                        |     | common buckeye (Junonia coenia grisea)                       |     |
| checkered (common) white (Pontia protodice)         | 1   | mourning cloak (Nymphalis antiopa)                           |     |
| spring white (P. sisymbrii)                         |     | Skippers   |     |
| unidentified white                                  |     | funereal duskywing (Erynnis funeralis)                       |     |
| Metalmarks  |     | mournful duskywing (Erynnis tristis)                         |     |
| Behr's metalmark (Apodemia mormo virgulti)          | 1   | fiery skipper (Hylephila phyleus)                            |     |
| Wright's metalmark (Calephelis wrighti)             |     | white (common) checkered-skipper ( <i>Pyrgus albescens</i> ) |     |
| Sulphurs  |     | Other  |     |
| orange sulphur ( <i>Colias eurytheme</i> )          |     |  |     |
| sleepy orange ( <i>Eurema nicippe</i> )             |     |  |     |
| cloudless sulfur (Phoebus sennae marcellina)        |     |  |     |
| unidentified sulphur                                |     |  |     |
| Column Subtotal                                     | 35  | Column Subtotal  | 0   |
|   |     | Total  | 35  |

| 3          | SRM-01 Of my Hills 4/4/08  |
|------------|--|
| 7)         | Dale Ru/INW +1M  |
| 4) -       | Start 1500 70°F 2-Smph 070cc   |
|            | CA Ringlet DX A  |
| -          | Behr's 1919  |
|            | Cheek White  |
|            | There is the contract of the c |
|            |  |
| 100        |  |
| - 1        | South signe-Ntacing-lots of Mer Hower  |
| <b>1</b> 3 | Sisbel Naspul Pler Silgal Sidned Branig  |
|            | Sisbel Naspul Pler Silgal Sidnal Branig<br>Ericon Rhuint Hypyla Artcol Salapi Hatorh<br>Avebar Mimaur Bromadr Blocco P B. Fritas   |
|            | Rucher 1 Lat 1 30h 110 18 1 P1   |
|            | Enmel Galapi Erucic Casaff, Sinch: Diccop  |
|            | Vahay Junach Senvul Chart Phacelia Saltra  |
|            | Tamzrid Willow spp. Marlze Clemetis  |
|            | Colcon Selbig Dudedn Helimi Marmac   |
|            |  |
| 1          |  |
|            | end 1635 70% 0-4-1 07-   |
| 1          | end 1635 70% 0-4 mpl 07.00   |
|            | BUSH   |
| 7          | ANHU CORA CATO WREN  |
|            | Rite in the Rain   |

| Surveyor: _ | Sally TRNKA                |                    |             | Date: | 04/04/08       |  |
|-------------|----------------------------|--------------------|-------------|-------|----------------|--|
| Site Name:  | Otay Hills Quarry (SRM-01) |                    | <u> </u>    |       | Site Visit No: |  |
| Acres Surve | eyed                       | Survey Time:       | 1.25 hrs    | Acres | per Hour:      |  |
| Other Surve | yors Present: Brian Parke  | er; Alison Varner; | Stacy Nigro |       |                |  |
|             |                            |                    |             |       |                |  |

| Field Conditions |              |                  |                  |                  |  |  |  |  |
|------------------|--------------|------------------|------------------|------------------|--|--|--|--|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover      |  |  |  |  |
| Start            | 14:20        | 71               | 5-7              | Sunny; 0% clouds |  |  |  |  |
| End              | 15:35        | 67               | 2-7              | Sunny; 0% clouds |  |  |  |  |
| Start            |              |                  |                  |                  |  |  |  |  |
| End              |              |                  |                  |                  |  |  |  |  |

| Vegetation Communities Surveyed ( | (inc. dominant spp.) |  |  |
|-----------------------------------|----------------------|--|--|
| Diegan coastal sage scrub         |                      |  |  |
|                                   |                      |  |  |

| Host Plants                              | Obs. | Nectar Plants                                  | Obs.     |  |
|--|------|--|----------|--|
| dwarf plantain (Plantago erecta)         | X    | popcorn flower (Cryptantha/Plagiobothrys spp.) | ×        |  |
| purple owl's clover (Castilleja exserta) |      | goldfields (Lasthenia spp.)                    | <u> </u> |  |
| snapdragon (Antirrhinum coulterianum)    |      | goldenstar (Muilla spp.)                       |          |  |
| birds-beak (Cordylanthus rigidus)        |      | fiddleneck (Amsinckia intermedia)              | <b>—</b> |  |
| woolly plantain (Plantago patagonica)    |      | onion (Allium spp.)                            |          |  |
|  |      | buckwheat (Eriogonum fasciculatum)             | X        |  |
|  |      | ground pink (Linanthus dianthiflorus)          |          |  |
|  |      |  |          |  |

| Butterfly Species                                   | No. | Butterfly Species                                      | No. |
|---|-----|--|-----|
| Checkerspots  |     | Hairstreaks  |     |
| California patch (Chlosyne californica)             |     | great purple hairstreak (Atlides halesus corcorani)    |     |
| Gabb's checkerspot (C. gabbii)                      |     | brown elfin (Callophrys augustinus)                    |     |
| Quino checkerspot (Euphydryas editha quino)         | " " | bramble (perplexing) hairstreak (C. dumetorum affinis) |     |
| chalcedon checkerspot (E. chalcedona chalcedona)    |     | gray hairstreak (Strymon melinus pudica)               |     |
| Leanira checkerspot (Thessalia leanira wrighti)     |     | Ladies/Admirals  |     |
| Mylitta crescent (Phyciodes mylitta)                |     | California sister (Adelpha bredowii californica)       |     |
| Blues   |     | Lorquin's admiral (Limenitis lorquini)                 |     |
| western pygmy-blue (Brephidium exila)               |     | west coast lady (Vanessa annabella)                    | 2   |
| western tailed blue (Everes amyntula)               |     | red admiral (V. atalanta rubria)                       |     |
| southern blue (Glaucopsyche lygdamus australis)     |     | painted lady (V. cardui)                               | 6   |
| Edward's blue (Hemiargus ceraunus gyas)             |     | American (Virginia) lady (V. virginiensis)             |     |
| Acmon blue (Icaricia acmon acmon)                   |     | unidentified lady (Vanessa sp.)                        | 4   |
| marine blue ( <i>Leptotes marina</i> )              |     | Swallowtails   |     |
| unidentified blue                                   |     | pale swallowtail (Papilio eurymedon)                   |     |
| Whites  |     | western tiger swallowtail (P. rutulus)                 |     |
| Sara orangetip (Anthocharis sara sara)              | 2   | anise swallowtail (P. zelicaon)                        |     |
| desert (Felder's) orangetip (A. cethura)            |     | Miscellaneous  |     |
| common California ringlet (Coenonympha californica) |     | monarch (Danaus plexippus)                             |     |
| cabbage white ( <i>Pieris rapae</i> )               |     | common buckeye (Junonia coenia grisea)                 | 1   |
| checkered (common) white (Pontia protodice)         |     | mourning cloak (Nymphalis antiopa)                     |     |
| spring white ( <i>P. sisymbrii</i> )                |     | Skippers   |     |
| unidentified white                                  |     | funereal duskywing (Erynnis funeralis)                 |     |
| Metalmarks  |     | mournful duskywing (Erynnis tristis)                   |     |
| Behr's metalmark (Apodemia mormo virgulti)          | 2   | fiery skipper (Hylephila phyleus)                      |     |
| Wright's metalmark (Calephelis wrighti)             |     | white (common) checkered-skipper (Pyrgus albescens)    |     |
| Sulphurs  |     | Other  |     |
| orange sulphur (Colias eurytheme)                   |     | Comstock's fritillary (Speyeria callippe comstocki)    |     |
| sleepy orange (Eurema nicippe)                      |     |  |     |
| cloudless sulfur (Phoebus sennae marcellina)        |     |  |     |
| unidentified sulphur                                |     | ,  |     |
| Column Subtotal                                     | 4   | Column Subtotal  | 13  |
|   |     | Total  | 17  |

| Otay Hills (SRM-01) 04(04(08)  Sorvey 3 Sally T  Start: Av; SN; BP  clear (Surry; O76; 2:20pm)  F1°F; 5-7 mph  flowering pluts animals  Via lac lady MI  Caty nec PLA lady MY  Caty nec PLA lady MY  Eni feo wondoly  Lot Sco reason  Cry sp (Gw) roadrumur  Pla are (dry) with and spru  Soris ottp II  A tombee  Bahris II  Bahockeye I  end: clear (surry, 15:35 pm; w St lady II  O76; 12-8 mph w long liz. |  |  |
|---|--|--|
| Start:  Start:  Clear/suny; 0%; 2:20pm;  Flowering pluts  animals  Vig lac  Caty nac  Phot lady It!  Cat spl  Cottondail  Eni fas  undult  Lot Sco  raver  Cry sp- (few)  Pla ere (dry)  Serais oftp 11  CA towhere  Bahis 11  End: clear/sunny; 15:35 pm; w oft lady 11  |  | Otay Hills (SRM-01) 04104108           |
| clear/suny', 0% ', 2:20pm',  Floreing pluts animals  Via lac lady IIII  Carly nac Pha lady IIII I  Carl spl cottonbail  Eni fes wordship  Lot Sco raven  Cry sp- (few) roadminur  Pla ere (dry) what and some  Sere's off II  Ch towhere  Behr's II  end' clear/sunny', 15:35 pm', w of lady II   |  | Survey 3 Sally T                       |
| Flowering pluts animals  Vig lac lady MI  Carly mac Phil lady MI  Carl spl cortonal  Eni fes windship  Lot Sco raven  Cry sp (few) roadminum  Pla ene (dry) what and spru  Series offp II  Ch towhere  Behis II  end: clear/surmy; 15:35 pm; w 6t lady II   |  | Start: Av; SN; BP                      |
| Flowering pluts animals  Vig lac lady MI  Carly mac Phil lady MI  Carl spl cortonal  Eni fes windship  Lot Sco raven  Cry sp (few) roadminum  Pla ene (dry) what and spru  Series offp II  Ch towhere  Behis II  end: clear/surmy; 15:35 pm; w 6t lady II   |  | clear/suny, 0% , 2:20pm,               |
| flowering shuts animals  Via lac lady IVII  Carly mac Pharlady IMI I  Carl spl cottonbail  Eni fas windwhile  Lot Sco raven  Cry sp- (few) roadminum  Pla ene (dry) what and spine  Serais off II  CA towhere  Bohris II  end' clear/sinny, 15:35 pm; w st lady II  |  | 71°F; 5-7 mph                          |
| Vig lac  Caty nec  Cat spl  Cottontail  Eni feo  Lot Sco  Cry sp- (few)  Pla ere (dry)  Sereis ottp 11  CA towhere  Behris 11  End' clear (surmy', 15:35 pm')  West lady 11   | 1  |  |
| Vig lac  Caty nec  Cat spl  Cat spl  Cottontail  Eni feo  Lot Sco  Cry sp- (few)  Pla ere (dry)  Sere's 0+1p 11  CA towhere  Behr's 11  End' clear (surmy', 15:35 pm')  west lady 11  |  | Howeving pluts animals                 |
| Cal spl  Eri fao  Lot Sco  Cry sp- (faw)  Fla are (dry)  Serais 0:419 II  CA towhere  Behris II  endi clear/surmy, 15:35 pm; w St lady II   |  | Via lac                                |
| Eri fas  Lot Sco  Cry sp- (few)  Pla ere (dry)  Seras 0-419 11  CA towhere  Behris 11  Ext bockeye 1  erd: clear/surmy; 15:35 pm; w st lady 11  | · · · · · · · · · · · · · · · · · · ·  | Cary nec Phol lady III 1               |
| Eri fes wonderlik  Lot Sco raven  Cry sp- (few) roadminum  Pla ere (dry) what and spru  Sara's 0419 11  CA towhere  Behr's 11  Ext bockeye!  erd' clear/sumy, 15:35 pm; w st laty 11  | · · · · · · · · · · · · · · · · · · ·  | Cel spl cottontail                     |
| Lot Sco  Cry sp- (few)  Pla ere (dry)  Series 04p 11  CA towhere  Behris 11  End' clear/surmy', 15:35 pm', w 6t lady 11   |  |  |
| Cry sp (few)  Pla ere (dry)  Sanàs 0 Hp II  CA towhere  Behris II  End': clear/sumy', 15:35 pm', wast lady II   |  |  |
| Ha ere (dry)  Serais 0-419 11  CA towhere  Boh-is 11  End: clear/sumy; 15:35 pm; w of larly 11  |  | Cry sp- (few) roadrunner               |
| Serais 0-419 11  CA towhere  Behris 11  Ext bockers 1  end: clear/sunny; 15:35 pm; w st lay 11  |  | Pla eve (dry) what and some            |
| CA towhere  Boh-is 11  Boh-is 11  end: clear/sunny; 15:35 pm; w st lay 11   |  | Saras 0.40 11                          |
| end: clear/sunny; 15:35 pm; w st lary 1)  |  | CA towher                              |
| end: clear/sunny; 15:35 pm; w st lary 1)  |  | Bah-s 11                               |
| end: clear/sunny; 15:35 pm; w st lasy 1   |  | · · · · · · · · · · · · · · · · · · ·  |
|   |  | end: clear/sumy; 15:35 pm; wast late 1 |
|   |  |  |
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|   |  |  |
|   | Alexander (B.) Alexander (B.)  |  |
|   |  |  |
|   | - Destruction of the second of |  |
|   | Control  |  |
|   | Total Control of the  |  |
|   |  |  |

| Surveyor: Alison Varner              |                             | Date: April 4, 2008 |
|--------------------------------------|-----------------------------|---------------------|
| Site Name: SRM-01 Otay Hills         |                             | Site Visit No:      |
| Acres Surveyed                       | Survey Time: 1.08 hrs       | Acres per Hour:     |
| Other Surveyors Present: Sally Trnka | , Brian Parker, Stacy Nigro |                     |

| Field Conditions |              |                  |                  |             |  |  |
|------------------|--------------|------------------|------------------|-------------|--|--|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |  |  |
| Start            | 1420         | 71               | 5-7              | Clear       |  |  |
| End              | 1535         | 67               | 3-5              | Clear       |  |  |
| Start            |              |                  |                  |             |  |  |
| End              |              |                  |                  |             |  |  |

### Vegetation Communities Surveyed (inc. dominant spp.)

NNG and CSS, dominated by Artemisia californica, Eriogonum fasciculatum, Viguiera laciniata, and Malosma laurina

| Host Plants                               |  | Nectar Plants                                    | Obs.         |
|---|--|--|--------------|
| dwarf plantain ( <i>Plantago erecta</i> ) |  | popcorn flower (Cryptantha / Plagiobothrys spp.) | X            |
| purple owl's clover (Castilleja exserta)  |  | goldfields (Lasthenia spp.)                      |              |
| snapdragon (Antirrhinum coulterianum)     |  | chia (Salvia columbariae)                        |              |
| birds-beak (Cordylanthus rigidus)         |  | goldenstar (Muilla spp.)                         | <del></del>  |
| woolly plantain (Plantago patagonica)     |  | fiddleneck (Amsinckia intermedia)                | <del>-</del> |
|   |  | onion (Allium spp.)                              |              |
|   |  | buckwheat (Eriogonum fasciculatum)               | Х            |
|   |  |  |              |

| Butterfly Species                                   | No. | Butterfly Species                                      | No.         |
|---|-----|--|-------------|
| Checkerspots  |     | Hairstreaks  |             |
| California patch (Chlosyne californica)             |     | great purple hairstreak (Atlides halesus corcorani)    |             |
| Gabb's checkerspot (C. gabbii)                      |     | brown elfin (Callophrys augustinus)                    |             |
| Quino checkerspot (Euphydryas editha quino)         |     | bramble (perplexing) hairstreak (C. dumetorum affinis) | <del></del> |
| chalcedon checkerspot (E. chalcedona chalcedona)    |     | gray hairstreak (Strymon melinus pudica)               |             |
| Leanira checkerspot (Thessalia leanira wrighti)     |     | Ladies/Admirals  |             |
| Mylitta crescent (Phyciodes mylitta)                |     | California sister (Adelpha bredowii californica)       |             |
| Blues   |     | Lorquin's admiral ( <i>Limenitis lorquini</i> )        |             |
| western pygmy-blue (Brephidium exila)               |     | west coast lady (Vanessa annabella)                    |             |
| western tailed blue (Everes amyntula)               |     | red admiral (V. atalanta rubria)                       |             |
| southern blue (Glaucopsyche lygdamus australis)     |     | painted lady (V. cardui)                               | 9           |
| Edward's blue (Hemiargus ceraunus gyas)             |     | American (Virginia) lady (V. virginiensis)             |             |
| Acmon blue (Icaricia acmon acmon)                   | 1   | unidentified lady (Vanessa sp.)                        |             |
| marine blue (Leptotes marina)                       |     | Swallowtails   |             |
| unidentified blue                                   |     | pale swallowtail (Papilio eurymedon)                   |             |
| Whites  |     | western tiger swallowtail (P. rutulus)                 |             |
| Sara orangetip (Anthocharis sara sara)              |     | anise swallowtail (P. zelicaon)                        |             |
| desert (Felder's) orangetip (A. cethura)            |     | Miscellaneous  |             |
| common California ringlet (Coenonympha californica) |     | monarch (Danaus plexippus)                             |             |
| cabbage white (Pieris rapae)                        |     | common buckeye (Junonia coenia grisea)                 |             |
| checkered (common) white (Pontia protodice)         |     | mourning cloak (Nymphalis antiopa)                     |             |
| spring white (P. sisymbrii)                         |     | Skippers   |             |
| unidentified white                                  |     | funereal duskywing (Erynnis funeralis)                 | 1           |
| Metalmarks  |     | mournful duskywing (Erynnis tristis)                   |             |
| Behr's metalmark (Apodemia mormo virgulti)          | 1   | fiery skipper (Hylephila phyleus)                      |             |
| Wright's metalmark (Calephelis wrighti)             |     | white (common) checkered-skipper (Pyrgus albescens)    |             |
| Sulphurs  |     | Other  |             |
| orange sulphur ( <i>Colias eurytheme</i> )          |     |  |             |
| sleepy orange (Eurema nicippe)                      |     |  |             |
| cloudless sulfur (Phoebus sennae marcellina)        |     |  |             |
| unidentified sulphur                                |     |  | <del></del> |
| Column Subtotal                                     | 2   | Column Subtotal  | 10          |
|   |     | Total  | 12          |

| 0000 | 15:30 7-11mph 20<br>16:35 16-8 65   | Del as Er as Anola in the North Colon of Will have been bus the Colon of the Colon  |  | CASA)-Offers |           |                                |  |
|------|---|--|--|--------------|-----------|--------------------------------|--|
|      | 4,7.08 SPM 11 Frea 3 AM OR<br>SPACE 12130 230 Glomph Spaces 2000 210C 2-60mph Spaces 250C 210C 2-60mph Spaces 250C 410C | Diversity of the city of backlury less than the control of the city of the cit | A Existence of the state of the |              | Todavage. | Fileso Si. (Text-con Annimary) | Service of the servic |

| Surveyor: Site Name: Acres Surveyed |  | Brian Pa                              | arker  |  |                   | Date:  |                                       |          |
|-------------------------------------|--|---------------------------------------|--|--|-------------------|--|---------------------------------------|----------|
|                                     |  | Otay Hi                               | lls Quarry                                       |  | Site Visit No: 3  |  |                                       |          |
|                                     |  | Survey Time: 4.17 Acres per Hour: 0.0 |  |  |                   | ır: 0.00   |                                       |          |
| Survey                              | ors Present:   | Amy Ma                                | —<br>attson Dale                                 | Ritenou  | Sally Trnka       |  |                                       |          |
| •                                   |  |                                       |  |  |                   |  |                                       |          |
|                                     |  |                                       |  |  |                   |  |                                       | ·        |
|                                     | ·  |                                       |  |  | onditions         |  |                                       |          |
| <u> </u>                            | Time (24   | hr)                                   | <del>                                     </del> | ature (°F)                                       |                   | Speed (mph)                                      | Cloud Cove                            | er       |
| Start                               | 1235   |                                       | 65   |  | 7-10              |  | 30%                                   |          |
| End                                 | 1645   |                                       | 65   |  | 6-8               |  | 30%                                   | ÷        |
| Start                               |  |                                       |  |  |                   |  | %                                     |          |
| End                                 |  |                                       |  |  |                   |  | %                                     |          |
|                                     |  |                                       |  |  |                   |  |                                       |          |
| Vegetat                             | ion Communities  | Surveyed (i                           | nc. dominant                                     | spp.)  |                   |  |                                       |          |
| Diegan o                            | coastal sage scrub                                       | (Eri fas, Vig                         | lac, Mal lau, a                                  | nd numer   | ous annual flower | s)   |                                       |          |
|                                     |  |                                       |  |  |                   |  |                                       |          |
|                                     | * .  |                                       |  |  |                   |  |                                       | ·        |
|                                     | Host F   |                                       |  | Obs.   |                   | Nectar Plants                                    |                                       | Obs.     |
|                                     | antain ( <i>Plantago ei</i>                              |                                       |  |  |                   | (Cryptantha / Plagi                              | iobothrys spp.)                       |          |
|                                     | wl's clover (Castille                                    |                                       |  |  | goldfields (Las   |  |                                       |          |
|                                     | gon ( <i>Antirrhinum c</i><br>ak ( <i>Cordylanthus r</i> |                                       | <del></del>                                      |  | goldenstar (Mu    |  |                                       |          |
|                                     | lantain ( <i>Plantago p</i>                              | <del></del>                           | ····-  |  | onion (Allium s   | nsinckia intermedia)                             |                                       |          |
| woony p                             | iamam (r iamago p  | alagoriica)                           | <del></del>                                      | <del>                                     </del> |                   | iogonum fasciculatu                              | <i>(m</i> )                           |          |
|                                     |  |                                       |  |  |                   | inanthus dianthiflor                             | ····                                  |          |
|                                     | •  |                                       |  |  | 3                 |  |                                       |          |
|                                     | 5.44.  |                                       |  | 1  |                   |  |                                       |          |
| Checker                             | Butterfly  | Species                               | <u> </u>   | No.  | Hairstreaks       | Butterfly Specie                                 | 98                                    | No.      |
|                                     | a patch (Chlosyne  | californica)                          |  |  |                   | rstreak ( <i>Atlides hale</i>                    | neue coroorani                        |          |
|                                     | heckerspot (C. gal                                       |                                       |  | 5  |                   | llophrys augustinus)                             |                                       | -        |
|                                     | eckerspot ( <i>Euphyd</i>                                |                                       | quino)   | 1  |                   | xing) hairstreak (C.                             |                                       |          |
|                                     | n checkerspot (É.  |                                       |  |  |                   | (Strymon melinus p                               |                                       |          |
|                                     | checkerspot ( <i>Thess</i>                               |                                       |  |  | Ladies/Admira     |  |                                       |          |
| Mylitta cr                          | escent (Phyciodes  | mylitta)                              |  |  |                   | (Adelpha bredowii                                |                                       |          |
| Blues                               |  |                                       |  | <u> </u>   |                   | al ( <i>Limenitis lorquin</i>                    |                                       |          |
|                                     | pygmy-blue ( <i>Breph</i>                                |                                       |  |  |                   | (Vanessa annabel                                 | la)                                   | 4        |
|                                     | tailed blue ( <i>Everes</i><br>blue ( <i>Glaucopsycl</i> |                                       | auatralia\                                       | ļ  | red admiral (V.   |  |                                       |          |
|                                     | blue ( <i>Hemiargus</i>                                  |                                       |  |  | painted lady (V.  | <i>cardui)</i><br>nia) lady ( <i>V. virginie</i> | nneie\                                | 26       |
|                                     | lue (Icaricia acmor                                      |                                       | 45)  |  | unidentified lady |  | 11313)                                |          |
|                                     | lue ( <i>Leptotes marii</i>                              |                                       |  | <del> </del>                                     | Swallowtails      | , (va.15554 op.)                                 | · · · · · · · · · · · · · · · · · · · |          |
| unidentifi                          |  |                                       | -  |  | pale swallowtail  | (Papilio eurymedor                               | 7)                                    |          |
| Whites                              |  |                                       |  |  | western tiger sw  | vallowtail ( <i>P. rutulus</i>                   | )                                     |          |
|                                     | ngetip ( <i>Anthochari</i> :                             |                                       |  | 9  | anise swallowta   | <del></del>                                      |                                       |          |
|                                     | elder's) orangetip                                       | `                                     |  |  | Miscellaneous     |  | <u></u>                               |          |
|                                     | California ringlet (                                     |                                       | na californica)                                  | 16   | monarch (Dana     |  |                                       |          |
|                                     | white ( <i>Pieris rapae</i> d (common) white             |                                       | adiaa)   | 3  |                   | ye (Junonia coenia :                             |                                       |          |
|                                     | nite ( <i>P. sisymbrii</i> )                             | (Forma pron                           | ouice)   | 3  | Skippers          | (Nymphalis antiopa                               | <u>//</u>                             |          |
| unidentifi                          |  | ··                                    |  | <del> </del>                                     | +                 | ving ( <i>Erynnis funera</i>                     | die)                                  | 1        |
| Metalma                             |  |                                       |  | <u> </u>   |                   | wing ( <i>Erynnis tristis</i> )                  |                                       | <u> </u> |
| Behr's m                            | etalmark ( <i>Apodem</i>                                 | ia mormo vir                          | gulti)   | 7  |                   | ylephila phyleus)                                |                                       |          |
|                                     | metalmark ( <i>Calept</i>                                |                                       |  |  |                   |  | (Pyrgus albescens)                    |          |
| Sulphurs                            |  |                                       |  |  | Other             |  |                                       |          |
|                                     | ulphur ( <i>Colias eury</i>                              |                                       |  |  | Comstock's fritil | lary   |                                       |          |
|                                     | ange ( <i>Eurema nici</i>                                | <del></del>                           |  | <u>                                     </u>     |                   |  |                                       |          |
|                                     | sulfur (Phoebus s  | ennae marce                           | ellina)  |  |                   |  |                                       |          |
| unidentifi                          | ed sulphur   | Cal                                   | umn Subtotal                                     | 40   |                   | · · · · · · · · · · · · · · · · · · ·            | Column Cubtotal                       | 24       |
|                                     |  | ÇOI                                   | unin aublotai                                    | 40   | 1                 |  | Column Subtotal<br>Total              | 31<br>71 |
|                                     |  |                                       |  |  |                   |  | iviai                                 | , ,      |

Oray Hay QCB Crassula Mal las Avera Bro hor 7-10 Lot seo Brodia 30% NC Lady B. mad rob Chlorogaler Act cal . Cal spl Sara GT X PLADY XX Ero cic Der fas Er, for olalandrina Ca Ringlet & Behr MM L · Pha cic GADIS CKK 1: ·Sil gol Nosella Melanur Ray obthory 1 Cal mac Chambesyle Mir call-lessive a moved spatial to En Est Brassica Rumex Gaill 865P Normo Vigue = Sisymboum @Pla Aum CORA WEME er OTHA Cen mel Seel. excidentalis

| Surveyor: Dale Ritenour  | Date: 04/07/2008 |  |
|--|------------------|--|
| Site Name: Otay Hills (SRM-01)                                   | Site Visit No: 3 |  |
| Acres Surveyed Survey Time: _4.00                                | Acres per Hour:  |  |
| Other Surveyors Present: Amy Mattson, Brian Parker, Sally Trnka, |                  |  |

|       |              | Field Cond       | litions          | ······································ |
|-------|--------------|------------------|------------------|--|
|       | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover                            |
| Start | 12:30        | 70               | 6-10             | 15%                                    |
| End   | 1515         | 68               | 2-4, G8          | 0%                                     |
| Start | 1530         | 68               | 7-11             | 0%                                     |
| End   | 1645         | 68               | 6-8              | 0%                                     |

| Vegetation Communities Surveyed (inc. dominant spp.) |  |
|--|--|
| DCSS - Viguiera laciniata, Eriogonum fasciculatum    |  |
|  |  |

| Host Plants                              | Obs. | Nectar Plants                                  | Obs.             |
|--|------|--|------------------|
| dwarf plantain (Plantago erecta)         | x    | popcorn flower (Cryptantha/Plagiobothrys spp.) | ×                |
| purple owl's clover (Castilleja exserta) |      | goldfields (Lasthenia spp.)                    |                  |
| snapdragon (Antirrhinum coulterianum)    |      | goldenstar (Muilla spp.)                       | X                |
| birds-beak (Cordylanthus rigidus)        |      | fiddleneck (Amsinckia intermedia)              |                  |
| woolly plantain (Plantago patagonica)    |      | onion (Allium spp.)                            |                  |
|  |      | buckwheat (Eriogonum fasciculatum)             | X                |
|  |      | ground pink (Linanthus dianthiflorus)          | х                |
|  |      | ground pink (Emantrus dianumiorus)             | <del>- -</del> * |

| Butterfly Species                                   | No. | Butterfly Species                                      | No.           |
|---|-----|--|---------------|
| Checkerspots  |     | Hairstreaks  |               |
| California patch (Chlosyne californica)             |     | great purple hairstreak (Atlides halesus corcorani)    |               |
| Gabb's checkerspot (C. gabbii)                      | 1   | brown elfin (Callophrys augustinus)                    |               |
| Quino checkerspot (Euphydryas editha quino)         |     | bramble (perplexing) hairstreak (C. dumetorum affinis) |               |
| chalcedon checkerspot (E. chalcedona chalcedona)    |     | gray hairstreak (Strymon melinus pudica)               |               |
| Leanira checkerspot (Thessalia leanira wrighti)     |     | Ladies/Admirals  |               |
| Mylitta crescent (Phyciodes mylitta)                |     | California sister (Adelpha bredowii californica)       |               |
| Blues   |     | Lorquin's admiral (Limenitis lorquini)                 |               |
| western pygmy-blue (Brephidium exila)               |     | west coast lady (Vanessa annabella)                    | 5             |
| western tailed blue (Everes amyntula)               |     | red admiral (V. atalanta rubria)                       | 1             |
| southern blue (Glaucopsyche lygdamus australis)     |     | painted lady (V. cardui)                               | 37            |
| Edward's blue (Hemiargus ceraunus gyas)             |     | American (Virginia) lady (V. virginiensis)             |               |
| Acmon blue (Icaricia acmon acmon)                   |     | unidentified lady (Vanessa sp.)                        |               |
| marine blue (Leptotes marina)                       |     | Swallowtails   |               |
| unidentified blue                                   |     | pale swallowtail (Papilio eurymedon)                   |               |
| Whites  |     | western tiger swallowtail (P. rutulus)                 |               |
| Sara orangetip (Anthocharis sara sara)              | 7 . | anise swallowtail (P. zelicaon)                        |               |
| desert (Felder's) orangetip (A. cethura)            |     | Miscellaneous  |               |
| common California ringlet (Coenonympha californica) |     | monarch (Danaus plexippus)                             |               |
| cabbage white (Pieris rapae)                        |     | common buckeye (Junonia coenia grisea)                 |               |
| checkered (common) white (Pontia protodice)         | 7   | mourning cloak (Nymphalis antiopa)                     |               |
| spring white (P. sisymbrii)                         |     | Skippers   |               |
| unidentified white                                  |     | funereal duskywing (Erynnis funeralis)                 |               |
| Metalmarks  |     | mournful duskywing (Erynnis tristis)                   |               |
| Behr's metalmark (Apodemia mormo virgulti)          | 6   | fiery skipper (Hylephila phyleus)                      |               |
| Wright's metalmark (Calephelis wrighti)             |     | white (common) checkered-skipper (Pyrgus albescens)    |               |
| Sulphurs  |     | Other  |               |
| orange sulphur (Colias eurytheme)                   |     | Fritillary   | 1             |
| sleepy orange ( <i>Eurema nicippe</i> )             |     |  |               |
| cloudless sulfur (Phoebus sennae marcellina)        |     |  |               |
| unidentified sulphur                                |     |  | <del>-i</del> |
| Column Subtotal                                     | 21  | Column Subtotal  | 44            |
|   |     | Total  | 65            |

SRMOI OXYH Dalek w AMBERS Start 1830 Soc Partel lade II

and 1645 20°C 6.8 mgh 0% c.

In Bloom Viglas Esta Calp) Dices, Plan Branga Sigal Estan Cryptanths

JUNY Spein, been HOET

CORA BOSP CATO ANHY BUSH WEN and 1515 20°C to July 2-465

Dess Adel es Vigla Erites Erock Lepul
Elmec Leman Mine Phacelia Hypole Calsy Silver
Salcin Cyntachte 7. Osmter Un Escer
Eran Solvan Lolm Euryn Salapi Heliny
Eran Solvan Lolm Euryn Salapi Heliny SRN-01 GCB 4/708

OT=4 Hills Deleky BP-ANST
Banted Lack KN Sumy 159cc, 6 and
Robert What Littley

Robert MAN 10 Red Holling Pant frag Check White Sava of W.C. Lady Gabbs C.S.

| Surveyor: Sally TRNKA                 | Date: 04/07/08  |
|---------------------------------------|-----------------|
| Site Name: Otay Hills Quarry (SRM-01) | Site Visit No:  |
| Acres Surveyed Survey Time: 4.17 hrs  | Acres per Hour: |
| Other Surveyors Present: Brian Parker |                 |

|       |              | Field Condit     | ions             |                   |
|-------|--------------|------------------|------------------|-------------------|
|       | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover       |
| Start | 12:35        | 65               | 7-10             | Sunny; 30% clouds |
| End   | 16:45        | 65               | 6-8              | Sunny; 30% clouds |
| Start |              |                  |                  |                   |
| End   |              |                  |                  | <u> </u>          |

#### Vegetation Communities Surveyed (inc. dominant spp.)

Diegan coastal sage scrub; Plantago had dried up; very few nectaring resources; most abundant flowering plant was San Diego sunflower (*Viguiera laciniata*).

| Host Plants                              | Obs. | Nectar Plants                                  | Obs. |  |
|--|------|--|------|--|
| dwarf plantain (Plantago erecta)         |      | popcorn flower (Cryptantha/Plagiobothrys spp.) | X    |  |
| purple owl's clover (Castilleja exserta) |      | goldfields (Lasthenia spp.)                    |      |  |
| snapdragon (Antirrhinum coulterianum)    |      | goldenstar (Muilla spp.)                       |      |  |
| birds-beak (Cordylanthus rigidus)        |      | fiddleneck (Amsinckia intermedia)              | -    |  |
| woolly plantain (Plantago patagonica)    |      | onion (Allium spp.)                            | ·    |  |
|  |      | buckwheat (Eriogonum fasciculatum)             | X    |  |
|  |      | ground pink (Linanthus dianthiflorus)          |      |  |
|  |      |  |      |  |

| Butterfly Species                                   | No.           | Butterfly Species  | No. |
|---|---------------|--|-----|
| Checkerspots  |               | Hairstreaks  |     |
| California patch (Chlosyne californica)             |               | great purple hairstreak (Atlides halesus corcorani)          |     |
| Gabb's checkerspot (C. gabbii)                      | 12            | brown elfin (Callophrys augustinus)                          |     |
| Quino checkerspot (Euphydryas editha quino)         |               | bramble (perplexing) hairstreak (C. dumetorum affinis)       |     |
| chalcedon checkerspot (E. chalcedona chalcedona)    |               | gray hairstreak (Strymon melinus pudica)                     |     |
| Leanira checkerspot (Thessalia leanira wrighti)     |               | Ladies/Admirals  |     |
| Mylitta crescent (Phyciodes mylitta)                |               | California sister (Adelpha bredowii californica)             |     |
| Blues   |               | Lorquin's admiral (Limenitis lorquini)                       |     |
| western pygmy-blue (Brephidium exila)               |               | west coast lady (Vanessa annabella)                          | 17  |
| western tailed blue (Everes amyntula)               |               | red admiral (V. atalanta rubria)                             |     |
| southern blue (Glaucopsyche lygdamus australis)     |               | painted lady (V. cardui)                                     | 22  |
| Edward's blue (Hemiargus ceraunus gyas)             |               | American (Virginia) lady (V. virginiensis)                   |     |
| Acmon blue (Icaricia acmon acmon)                   |               | unidentified lady (Vanessa sp.)                              | 11  |
| marine blue ( <i>Leptotes marina</i> )              |               | Swallowtails   |     |
| unidentified blue                                   |               | pale swallowtail (Papilio eurymedon)                         |     |
| Whites  |               | western tiger swallowtail (P. rutulus)                       |     |
| Sara orangetip (Anthocharis sara sara)              | 1             | anise swallowtail (P. zelicaon)                              |     |
| desert (Felder's) orangetip (A. cethura)            |               | Miscellaneous  |     |
| common California ringlet (Coenonympha californica) | 22            | monarch (Danaus plexippus)                                   |     |
| cabbage white ( <i>Pieris rapae</i> )               |               | common buckeye (Junonia coenia grisea)                       | 1   |
| checkered (common) white (Pontia protodice)         |               | mourning cloak (Nymphalis antiopa)                           |     |
| spring white ( <i>P. sisymbrii</i> )                |               | Skippers   |     |
| unidentified white                                  | 2             | funereal duskywing (Erynnis funeralis)                       | 1   |
| Metalmarks  |               | mournful duskywing ( <i>Erynnis tristis</i> )                |     |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> ) | 8             | fiery skipper (Hylephila phyleus)                            |     |
| Wright's metalmark (Calephelis wrighti)             |               | white (common) checkered-skipper ( <i>Pyrgus albescens</i> ) |     |
| Sulphurs  | -             | Other  |     |
| orange sulphur (Colias eurytheme)                   |               | Comstock's fritillary (Speyeria callippe comstocki)          | 5   |
| sleepy orange ( <i>Eurema nicippe</i> )             |               |  |     |
| cloudless sulfur (Phoebus sennae marcellina)        | <del></del> - |  |     |
| unidentified sulphur                                |               |  |     |
| Column Subtotal                                     | 45            | Column Subtotal  | 57  |
|   |               | Total  | 102 |

|  | Otay Hills (SRM                   |                          |
|--|-----------------------------------|--------------------------|
|  | OTAY 17000 (SRM                   |                          |
|  | ala di mas                        | SallyT                   |
|  | start: 12:35pm; 65°F; suny 13     | 06; 7-10mph w/ BParker   |
|  | 0,                                | ^                        |
|  | flowering pluts                   | animals                  |
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|  | Caly mae                          | what 11                  |
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|  | Calindr. sp (few)                 | A ringlet III III III II |
|  | Mir cal (few)                     | Behr's HHT III           |
|  | Eri Cas (Caw)                     | Gabb's LHY 14 11         |
|  | Erloph con                        | And lady Ult LUT ATT MIN |
|  | Cry 3p (Cew)                      | w cet body IM MY MY II   |
|  | Pla eve (present, but very day    | ) buckeye 1              |
|  | ) 50, 000                         | Side-bleh liz            |
|  |                                   |                          |
| end: 16  | 145 ' SIGNAL 307' LEPE            | boby bonny contonlails   |
|  | 45; sonny, 30%; 65°F              | oriole 11                |
|  | 0 3, 43                           | unenlit                  |
|  |                                   | mack bird                |
|  |                                   | CD homed bz!             |
|  |                                   | tonoreal dusky           |
|  | coastal CA gnot.<br>CA quail      | Or towhere               |
| 4  | CA quail                          | vd Hd hawk               |
|  |                                   |                          |

| Surveyor: Stacy Nigro    |                     | Date: 4/10/08       |   |
|--------------------------|---------------------|---------------------|---|
| Site Name: Otay Hills    |                     | Site Visit No: 3    |   |
| Acres Surveyed 103.9     | Survey Time: 4 hrs  | Acres per Hour: 8.7 | _ |
| Other Surveyors Present: | S. Trnka, B. Parker |                     |   |

| ·     | Field Conditions |                  |                  |             |  |  |
|-------|------------------|------------------|------------------|-------------|--|--|
|       | Time (24 hr)     | Temperature (°F) | Wind Speed (mph) | Cloud Cover |  |  |
| Start | 10:45            | 67               | 1-4              | 0/clear     |  |  |
| End   | 14:45            | 77               | 3-4              | 0/clear     |  |  |
| Start |                  |                  |                  |             |  |  |
| End   |                  |                  |                  |             |  |  |

|   | Vegetation Communities Surveyed (inc. dominant spp.)DCSS -Vig lac,; SMC - Ade fasc |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|
| 1 |  |  |  |  |  |  |  |
|   |  |  |  |  |  |  |  |

| Host Plants                                    | Obs. | Nectar Plants                                    | Obs. |
|--|------|--|------|
| dwarf plantain (Plantago erecta)               | X    | popcorn flower (Cryptantha / Plagiobothrys spp.) | X    |
| purple owl's clover (Castilleja exserta)       | X    | goldfields (Lasthenia spp.)                      |      |
| snapdragon (Antirrhinum coulterianum)          |      | chia (Salvia columbariae)                        |      |
| birds-beak (Cordylanthus rigidus)              |      | goldenstar (Muilla spp.)                         |      |
| woolly plantain ( <i>Plantago patagonica</i> ) |      | fiddleneck (Amsinckia intermedia)                |      |
|  |      | onion (Allium spp.)                              | Х    |
|  |      | buckwheat (Eriogonum fasciculatum)               | Х    |

| Butterfly Species                                   | No. | Butterfly Species  | No.      |
|---|-----|--|----------|
| Checkerspots  | •   | Hairstreaks  |          |
| California patch (Chlosyne californica)             |     | great purple hairstreak (Atlides halesus corcorani)          |          |
| Gabb's checkerspot (C. gabbii)                      | 1   | brown elfin (Callophrys augustinus)                          |          |
| Quino checkerspot (Euphydryas editha quino)         |     | bramble (perplexing) hairstreak (C. dumetorum affinis)       |          |
| chalcedon checkerspot (E. chalcedona chalcedona)    |     | gray hairstreak (Strymon melinus pudica)                     |          |
| Leanira checkerspot (Thessalia leanira wrighti)     |     | Ladies/Admirals  |          |
| Mylitta crescent (Phyciodes mylitta)                |     | California sister (Adelpha bredowii californica)             |          |
| Blues   |     | Lorquin's admiral (Limenitis lorquini)                       |          |
| western pygmy-blue (Brephidium exila)               |     | west coast lady (Vanessa annabella)                          |          |
| western tailed blue (Everes amyntula)               |     | red admiral (V. atalanta rubria)                             | 1        |
| southern blue (Glaucopsyche lygdamus australis)     |     | painted lady (V. cardui)                                     | 15       |
| Edward's blue (Hemiargus ceraunus gyas)             |     | American (Virginia) lady (V. virginiensis)                   |          |
| Acmon blue (Icaricia acmon acmon)                   |     | unidentified lady (Vanessa sp.)                              | 51       |
| marine blue (Leptotes marina)                       |     | Swallowtails   |          |
| unidentified blue                                   | 1.  | pale swallowtail (Papilio eurymedon)                         |          |
| Whites  |     | western tiger swallowtail (P. rutulus)                       | _        |
| Sara orangetip (Anthocharis sara sara)              | 19  | anise swallowtail (P. zelicaon)                              | 1        |
| desert (Felder's) orangetip (A. cethura)            |     | Miscellaneous  | <u>.</u> |
| common California ringlet (Coenonympha californica) | 1   | monarch (Danaus plexippus)                                   |          |
| cabbage white (Pieris rapae)                        |     | common buckeye (Junonia coenia grisea)                       | 1        |
| checkered (common) white (Pontia protodice)         | -   | mourning cloak (Nymphalis antiopa)                           |          |
| spring white (P. sisymbrii)                         |     | Skippers   |          |
| unidentified white                                  | 7   | funereal duskywing (Erynnis funeralis)                       | 1        |
| Metalmarks  |     | mournful duskywing ( <i>Erynnis tristis</i> )                |          |
| Behr's metalmark (Apodemia mormo virgulti)          | 8   | fiery skipper (Hylephila phyleus)                            |          |
| Wright's metalmark (Calephelis wrighti)             |     | white (common) checkered-skipper ( <i>Pyrgus albescens</i> ) |          |
| Sulphurs  |     | Other  |          |
| orange sulphur (Colias eurytheme)                   |     |  |          |
| sleepy orange (Eurema nicippe)                      | -   |  |          |
| cloudless sulfur (Phoebus sennae marcellina)        |     |  | ·        |
| unidentified sulphur                                |     |  |          |
| Column Subtotal                                     | 37  | Column Subtotal  | 70       |
|   |     | Total  | 107      |

14/10/08 SBN-01 Other Hills

Start QCB # 4 Start Distor + 5 To the fall by 10

Open 2-4 Start Start Distor + 5 To the fall by 10

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4/4/08 SEM-DI DIZ, the Color of the Shift of A. Warrer of A. L. Sand of A. Salvari to A. Sa

| Site Name:                  |  | Brian Par       | ker             |           | <b>Date:</b> 4/10/200 |  |   |           |
|-----------------------------|--|-----------------|-----------------|-----------|-----------------------|--|---|-----------|
|                             |  | Otay Hills      | Quarry          |           | Site Visit No:        |  | 3   |           |
|                             |  |                 | ime: 4.00       |           | Acres per Ho          |  |   |           |
|                             |  | Sally Trnl      | -<br>ka Stacy I | _         |                       |  |   |           |
|                             |  | - Carry Tith    | ia Oldoy i      | iigio     |                       |  |   |           |
|                             |  |                 |                 |           |                       |  |   |           |
|                             |  |                 |                 | Field C   |                       | ons  |   |           |
|                             | Time (24 I   | hr)             | Temper          | ature (°F | )                     | Wind Speed (mph)   | Cloud Cov   | er        |
| Start                       | 1045   |                 | 67              |           | _                     | 1-4  | 0%  |           |
| End                         | 1445   |                 | 77              |           |                       | 2-4  | 0%  |           |
| Start                       |  |                 |                 |           |                       |  | %   |           |
| End                         |  |                 |                 |           |                       |  | %   |           |
|                             |  |                 |                 |           |                       |  | 76  |           |
| Vegetati                    | ion Communities S  | Surveyed (in    | c. dominant     | spp.)     |                       |  |   |           |
| Diegan o                    | coastal sage scrub (                                       | Eri fas. Vig la | c. Mal lau. ar  | nd numer  | ous an                | nual flowers)  |   |           |
|                             |  | ,               |                 |           | -                     | Tidar nowers/  |   |           |
|                             |  | <del></del>     |                 |           |                       |  |   |           |
|                             | Host Pla   | ants            |                 | Obs.      | 1                     | Nectar Plants  | s   | Obs.      |
|                             | antain ( <i>Plantago ere</i>                               |                 |                 | Ø         | pop                   | corn flower (Cryptantha / Plag   | ver ( <i>Cryptantha / Plagiobothrys</i> spp.)<br><i>asthenia</i> spp.)<br><i>Muilla</i> spp.) |           |
|                             | wl's clover ( <i>Castillej</i> a                           |                 |                 | Ø         |                       | fields ( <i>Lasthenia</i> spp.)  |   |           |
|                             | gon ( <i>Antirrhinum co</i> i                              |                 |                 |           |                       | denstar ( <i>Muilla</i> spp.)  |   |           |
|                             | ak ( <i>Cordylanthus rig</i>                               |                 |                 |           |                       | leneck ( <i>Amsinckia intermedia</i>   | )   |           |
| woolly pl                   | antain ( <i>Plantago pa</i>                                | tagonica)       | · .             |           |                       | on ( <i>Allium</i> spp.)   |   |           |
| <del></del>                 |  |                 |                 |           |                       | kwheat (Eriogonum fasciculat   |   |           |
|                             |  |                 |                 |           | gro                   | und pink ( <i>Linanthus dianthifloi</i>  | rus)  | <u> </u>  |
|                             |  |                 |                 |           |                       |  |   |           |
|                             | Butterfly S  | pecies          |                 | No.       |                       | Butterfly Speci  | es  | No.       |
| Checkers                    | <del></del>  |                 |                 |           | Hair                  | streaks  |   |           |
|                             | patch (Chlosyne ca   |                 |                 |           | grea                  | t purple hairstreak ( <i>Atlides hai</i>   | lesus corcorani)  |           |
|                             | neckerspot (C. gabb  |                 |                 | 2         |                       | n elfin ( <i>Callophrys augustinu</i> s  |   |           |
|                             | eckerspot ( <i>Euphydr</i> )                               |                 |                 |           |                       | ble (perplexing) hairstreak (C   |   |           |
|                             | n checkërspot ( <i>E. ch</i><br>heckerspot ( <i>Thessa</i> |                 |                 |           |                       | hairstreak (Strymon melinus į  | oudica)   |           |
|                             | escent (Phyciodes n  |                 | ignu)           |           |                       | es/Admirals  |   |           |
| Blues                       | escent (1 hydrodes h                                       | пунцај          |                 | _         |                       | ornia sister ( <i>Adelpha bredowii</i><br>uin's admiral ( <i>Limenitis lorquir</i> |   | <u> </u>  |
|                             | ygmy-blue ( <i>Brephia</i>                                 | lium exila)     |                 |           |                       | coast lady (Vanessa annabe   |   | 2         |
|                             | ailed blue (Everes a                                       |                 |                 |           |                       | dmiral (V. atalanta rubria)  | na)   |           |
| southern                    | blue ( <i>Glaucopsyche</i>                                 | lygdamus at     | ustralis)       |           |                       | ed lady (V. cardul)  |   | 68        |
|                             | blue (Hemiargus ce   |                 |                 |           |                       | rican (Virginia) lady (V. virginia   | ensis)  |           |
|                             | ue ( <i>Icaricia acmon a</i>                               |                 |                 |           | unide                 | entified lady (Vanessa sp.)  |   |           |
|                             | ue ( <i>Leptotes marina</i>                                | 1)              |                 |           |                       | lowtails   |   |           |
| unidentifie                 | ed blue  |                 |                 |           |                       | swallowtail ( <i>Papilio eurymedo</i>  |   |           |
| Whites                      | ngetip (Anthocharis s                                      |                 |                 |           |                       | ern tiger swallowtail (P. rutulus  | s)  |           |
|                             | elder's) orangetip (A                                      |                 | ·····           | 6         |                       | swallowtail (P. zelicaon)  |   | 1.        |
|                             | California ringlet (Co                                     |                 | californica\    | 10        | +                     | ellaneous  |   |           |
|                             | white ( <i>Pieris rapae</i> )                              | ononympha       | oumonnoa)       | 10        |                       | arch ( <i>Danaus plexippus</i> )<br>non buckeye ( <i>Junonia coenia</i>            | aricas)   |           |
|                             | d (common) white (F  | Pontia protod   | ice)            | 8         |                       | ning cloak ( <i>Nymphalis antiopa</i>  |   |           |
| spring white (P. sisymbrii) |  | <del></del>     | Skip            |           | ·                     |  |   |           |
| unidentifie                 | ed white   |                 |                 |           |                       | eal duskywing ( <i>Erynnis funera</i>  | alis)   |           |
| Metalmar                    | <u> </u>   |                 |                 |           |                       | nful duskywing ( <i>Erynnis tristis</i>  |   |           |
|                             | etalmark ( <i>Apodemia</i>                                 |                 | lti)            | 3         |                       | skipper ( <i>Hylephila phyleus</i> )   |   |           |
|                             | netalmark ( <i>Calephel</i>                                | lis wrighti)    |                 |           | white                 | (common) checkered-skipper   | (Pyrgus albescens)  | 1         |
| Sulphurs                    |  |                 |                 | <u>_</u>  | Othe                  | <u> </u>   |   |           |
|                             | lphur (Colias euryth                                       |                 |                 |           | Coms                  | stock's fritillary   |   | 4         |
|                             | inge ( <i>Eurema nicipp</i><br>sulfur ( <i>Phoebus ser</i> |                 |                 |           | <del> </del>          |  |   |           |
| unidentifie                 |  | ıı ıae marcelli | id)             |           | -                     |  |   |           |
| - naoritine                 | - Juipirui   | Colum           | nn Subtotal     | 29        | <del> </del>          |  | Column Culatata   | 70        |
|                             |  | Coluit          | oubtotal        |           | <u>L</u>              |  | Column Subtotal   | 76<br>105 |
| ·                           |  |                 |                 |           |                       |  | Total   | 105       |

| = 11,10 any 1/1/13                   | 4-10-07   |
|--------------------------------------|---|
| I so Orany Hills                     | sn 1005 1445  |
| #3 \\ BU,57,                         | 670 77  |
| The Sy Mel law                       | 67° 77<br>1-4 2-4<br>1-6 870  |
| - Lake Solde                         | of Sto  |
| - Vocal Sobel                        |   |
| - Plagio "En con                     | CAT BESP  |
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| P Man Ferrir                         | Sto Ecsf  |
| A Em cic Back                        | COON WENT   |
| L Year who Still be                  |   |
| 105 (12)                             |   |
| - Colondonia Orccap                  |   |
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| Common Oderen Ord                    |   |
| = Cyptaste Cophimen                  | P. Loat M. G. M. D. M. D.   |
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|                                      | a samuel transcription of the contract of the |

| Surveyor: Sally TRNKA                              | Date: _04/10/08  |
|--|------------------|
| Site Name: Otay Hills Quarry (SRM-01)              | Site Visit No: 3 |
| Acres Surveyed Survey Time:4 hours                 | Acres per Hour:  |
| Other Surveyors Present: Brian Parker; Stacy Nigro |                  |

| Field Conditions |              |                  |                  |                  |  |
|------------------|--------------|------------------|------------------|------------------|--|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover      |  |
| Start            | 10:45        | 67               | 1-4              | Sunny; 0% clouds |  |
| End              | 14:45        | 77               | 2-4              | Sunny; 0% clouds |  |
| Start            |              |                  |                  |                  |  |
| End              |              |                  |                  |                  |  |

| Vegetation Communities Surveyed (inc. dominant spp.)  |  |
|---|--|
| Diegan coastal sage scrub; Plantago very dry; some nectaring resources still present, especially Cryptantha sp. |  |
|   |  |

| Obs. | Nectar Plants                                  | Obs.   |
|------|--|--|
| Х    | popcorn flower (Cryptantha/Plagiobothrys spp.) | X  |
| X    |  | X  |
|      | goldenstar (Muilla spp.)                       | <del>-  </del> -   |
|      | fiddleneck (Amsinckia intermedia)              |  |
|      | onion (Allium spp.)                            |  |
|      | buckwheat (Eriogonum fasciculatum)             | X  |
|      | ground pink (Linanthus dianthiflorus)          |  |
|      | Х  | X popcorn flower (Cryptantha/Plagiobothrys spp.) X goldfields (Lasthenia spp.) goldenstar (Muilla spp.) fiddleneck (Amsinckia intermedia) onion (Allium spp.) buckwheat (Eriogonum fasciculatum) |

| Butterfly Species                                   | No. | Butterfly Species  | No.         |
|---|-----|--|-------------|
| Checkerspots  |     | Hairstreaks  |             |
| California patch (Chlosyne californica)             |     | great purple hairstreak (Atlides halesus corcorani)          |             |
| Gabb's checkerspot (C. gabbii)                      | 2   | brown elfin (Callophrys augustinus)                          |             |
| Quino checkerspot (Euphydryas editha quino)         |     | bramble (perplexing) hairstreak (C. dumetorum affinis)       |             |
| chalcedon checkerspot (E. chalcedona chalcedona)    |     | gray hairstreak (Strymon melinus pudica)                     |             |
| Leanira checkerspot (Thessalia leanira wrighti)     |     | Ladies/Admirals  |             |
| Mylitta crescent (Phyciodes mylitta)                |     | California sister (Adelpha bredowii californica)             |             |
| Blues   |     | Lorquin's admiral (Limenitis lorquini)                       |             |
| western pygmy-blue (Brephidium exila)               |     | west coast lady (Vanessa annabella)                          | 4           |
| western tailed blue (Everes amyntula)               |     | red admiral (V. atalanta rubria)                             |             |
| southern blue (Glaucopsyche lygdamus australis)     |     | painted lady (V. cardui)                                     | 21          |
| Edward's blue (Hemiargus ceraunus gyas)             |     | American (Virginia) lady (V. virginiensis)                   |             |
| Acmon blue (Icaricia acmon acmon)                   | ··· | unidentified lady (Vanessa sp.)                              | - 68        |
| marine blue ( <i>Leptotes marina</i> )              |     | Swallowtails   |             |
| unidentified blue                                   |     | pale swallowtail (Papilio eurymedon)                         |             |
| Whites  |     | western tiger swallowtail (P. rutulus)                       |             |
| Sara orangetip (Anthocharis sara sara)              | 19  | anise swallowtail (P. zelicaon)                              |             |
| desert (Felder's) orangetip (A. cethura)            |     | Miscellaneous  |             |
| common California ringlet (Coenonympha californica) | 20  | monarch (Danaus plexippus)                                   |             |
| cabbage white (Pieris rapae)                        |     | common buckeye (Junonia coenia grisea)                       | 1           |
| checkered (common) white (Pontia protodice)         |     | mourning cloak (Nymphalis antiopa)                           |             |
| spring white ( <i>P. sisymbrii</i> )                |     | Skippers   |             |
| unidentified white                                  | 10  | funereal duskywing (Erynnis funeralis)                       | 1           |
| Metalmarks  |     | mournful duskywing (Erynnis tristis)                         |             |
| Behr's metalmark (Apodemia mormo virgulti)          | 4   | fiery skipper (Hylephila phyleus)                            |             |
| Wright's metalmark (Calephelis wrighti)             |     | white (common) checkered-skipper ( <i>Pyrgus albescens</i> ) |             |
| Sulphurs  |     | Other  | <del></del> |
| orange sulphur (Colias eurytheme)                   |     | Comstock's fritillary (Speyeria callippe comstocki)          | 2           |
| sleepy orange (Eurema nicippe)                      |     |  | <del></del> |
| cloudless sulfur (Phoebus sennae marcellina)        |     |  |             |
| unidentified sulphur                                | 1   |  |             |
| Column Subtotal                                     | 56  | Column Subtotal  | 97          |
|   |     | Total  | 153         |

|  | \(\sigma\) \(\sigma\) \(\sigma\) |  |
|--|----------------------------------|--|
|  | Otay Hills Qua<br>(SRM-01)       | 30/01/08   |
| 7  | (SKM-01)                         | Sally T.   |
|  |                                  | BP; SN   |
|  | start: clear/sonny; 0% clouds;   | 1-4 mph  |
|  | 10:45 am. 167°F                  | Area 11,13   |
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|  | Viola ped 2-4mph; 77°F           | buckeye 1  |
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| Quino Checkerspot General Form - Adult Sur  | rvey   |
|---|--|
| Surveyor: Roblt w/ Dale R   | Date: 4/11/08  |
| HELIX permit number: TE778195   | Site Visit No: 1 2/3/4 5 6 7 8 9 10  |
| Sub-consultant permit number:   |  |
| Site Name: OT AY 12.11's  | Total site acres:  |
| Total acres surveyed:   |  |
| Site Location:  | (I ¬ ¬   |
| Time (24 hour) SKY  | Wind (mph) Temperature   |
| Start: Clear Patchy Overcast/Cloudy Drizzle Showers   | rs <1 1-3 4-7 8-12 12-15 >15 78 F  |
| End: Clear Patchy Overcast/Cloudy Drizzle Showers   | rs <1 1-3 4-7 8-12 (12-15) >15   |
| Start: Clear Patchy Overcast/Cloudy Drizzle Showers   | rs $\begin{array}{ c c c c c c c c c c c c c c c c c c c$  |
| End: Patchy Overcast/Cloudy Drizzle Showers   | rs $\begin{pmatrix} <1 & 1-3 & 4-7 \end{pmatrix}$ 8-12 12-15 >15 $\begin{pmatrix} 6 & 6 & 6 \\ 6 & 6 & 6 \end{pmatrix}$                                      |
| Start: Clear Patchy Overcast/Cloudy Drizzle Showers   | rs <1 1-3 4-7 8-12 12-15 >15   |
| End: Clear Patchy Overcast/Cloudy Drizzle Showers   | rs <1 1-3 4-7 8-12 12-15 >15   |
| □ Owl's Clover (Castilleja exserta) □ Chinese Houses (Collinsia concolor) □ Snapdragon (Antirrhinum coulterianum) □ Thread-leaved Bird's Beak (Cordylanthus | Fiddleneck (Amsinckia intermedia) Chia (Salvia columbariae) Popcorn Flower (Cryptantha sp.) Goldfields (Lasthenia sp.) Ground Pink (Linanthus dianthiflorus) |
| rigidus)  | (Lotus sp.)  CA Buckwheat (Eriogonum fasciculatum)  D Photographs  |
| Copy of Field Notes Other   | ☐ Field Maps   |

|   | +8          |               |
|---|-------------|---------------|
| Name: Rus A (Da)  | e)          | Date: 4/11/08 |
| Butterflies   | Number      | Comments      |
| Checkerspots  |             |               |
| Quino checkerspot (Euphydryas editha quino)                     |             |               |
| chalcedon checkerspot (E. chalcedona                            | 2           |               |
| Leanira checkerspot (Thessalia leanira wrighti)                 |             |               |
| Mylitta cresent (Phyciodes mylitta)                             |             |               |
| Gabb's checkerspot (Chlosyne gabbii)                            | 4           |               |
| California patch (C. californica)                               |             |               |
| Blues   |             |               |
| western tailed blue (Everes amyntula)                           |             |               |
| southern blue (Glaucopsyche lygdamus australis)                 |             |               |
| echo blue (Celastrina ladon echo)                               |             |               |
| Edward's blue (Hemiargus ceraunus gyas)                         |             |               |
| Sonoran blue (Philotes sonorensis)                              |             |               |
| marine blue (Leptotes marina)                                   |             |               |
| Acmon blue (Icaricia acmon acmon)                               |             |               |
| pygmy blue (Brephidium exilis)                                  |             |               |
| unidentified blue   |             |               |
| Whites  |             |               |
| Sara orangetip (Anthocharis sara sara)                          | 45          |               |
| desert (Felder's) orangetip (A. cethura)                        |             |               |
| cabbage white (Artogeia rapae)                                  |             |               |
| common white (Pontia protodice)                                 | 52          |               |
| spring white (P. sisymbrii)                                     |             |               |
| California ringlet (Coenonympha californica) unidentified white | 5           |               |
| Metalmarks  |             |               |
| Behr's metalmark (Apodemia mormo virgulti)                      | 7           |               |
| Wright's metalmark (Calephelis wrightii)                        | 13          |               |
| Swallowtails  |             |               |
| pale swallowtail (Papilio eurymedon)                            |             |               |
| anise swallowtail ( <i>P. zelicaon</i> )                        | <del></del> |               |
| western tiger swallowtail (P. rutulus)                          |             |               |
| Sulphurs  |             |               |
| sleepy orange (Eurema nicippe)                                  |             |               |
| California dogface (Zerene eurydice)                            |             |               |
| orange sulphur (Colias eurytheme)                               |             |               |
| cloudless sulfur (Phoebus sennae marcellina)                    |             |               |
| Hairstreaks   |             |               |
| gray hairstreak (Strymon melinus pudica)                        |             |               |
| brown elfin (Callophrys augustinus)                             |             |               |
| bramble (perplexing) hairstreak (C. dumetorum)                  |             |               |
| great purple hairstreak (Atlides halesus corcorani)             |             |               |
| Ladies/Admirals   |             |               |
| painted lady (Vanessa cardui)                                   | 360 t       |               |
| west coast lady (V. annabella)                                  | 160+        |               |
| Virginia lady (V. virginiensis)                                 |             |               |
| red admiral (V. atalanta rubria)                                |             |               |
| unidentified lady (Vanessa sp.)                                 |             |               |
| California sister (Adelpha bredowii californica)                |             |               |
| Lorquin's admiral ( <i>Limenitis Iorquini</i> )                 |             |               |
| Miscellaneous   |             |               |
| monarch (Danaus plexippus)                                      |             |               |
| queen (D. gilippus) satyr anglewing (Polygonia satyrus)         |             |               |
| buckeye (Junonia coenia)  |             |               |
| mourning cloak (Nymphalis antiopa)                              | 5           |               |
| Skippers  |             |               |
| common checkered-skipper ( <i>Pyrgus communia</i> )             |             |               |
| funereal duskywing (Erynnis funeralis)                          | <u></u>     |               |
| mournful duskywing ( <i>Erynnis tuneralis</i> )                 |             |               |
| Fr. + Mary  |             |               |
| 1 L) -IIMA  | 5           |               |
|   |             |               |

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| Cri Euc                | allium         |         |
| gemeilal.              | planlego       |         |
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| <u>Bassira</u>         | Januar ex      |         |
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| - Phoen m 5 ps.        |                |         |
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#### 2008 Quino Checkerspot Butterfly Survey Form

| Surveyor:          | Brian Parker                | Date:           | 4/11/2008 |
|--------------------|-----------------------------|-----------------|-----------|
| Site Name:         | Otay Hills Quarry           | Site Visit No:  | 3         |
| Acres Surveyed     | Survey Time: 4.50           | Acres per Hour: | 0.00      |
| Surveyors Present: | Jasmine Watts Dale Ritenour |                 |           |
|                    | •                           |                 |           |

|       | Field Conditions |                  |                  |             |  |
|-------|------------------|------------------|------------------|-------------|--|
|       | Time (24 hr)     | Temperature (°F) | Wind Speed (mph) | Cloud Cover |  |
| Start | 1030             | 78               | 6-8              | 0%          |  |
| End   | 1500             | 88               | 3-5              | 0%          |  |
| Start |                  |                  |                  | %           |  |
| End   |                  |                  |                  | %           |  |

| Vegetation Communities Surveyed (inc. dominant spp.)                               |  |  |
|--|--|--|
| Diegan coastal sage scrub (Eri fas, Vig lac, Mal lau, and numerous annual flowers) |  |  |
|  |  |  |

| Host Plants                              | Obs. | Nectar Plants                                    | Obs. |
|--|------|--|------|
| dwarf plantain (Plantago erecta)         | ⊠    | popcorn flower (Cryptantha / Plagiobothrys spp.) |      |
| purple owl's clover (Castilleja exserta) |      | goldfields (Lasthenia spp.)                      |      |
| snapdragon (Antirrhinum coulterianum)    |      | goldenstar (Muilla spp.)                         |      |
| birds-beak (Cordylanthus rigidus)        |      | fiddleneck (Amsinckia intermedia)                | 一    |
| woolly plantain (Plantago patagonica)    |      | onion (Allium spp.)                              |      |
|  |      | buckwheat (Eriogonum fasciculatum)               |      |
|  |      | ground pink (Linanthus dianthiflorus)            |      |
|  |      |  |      |

| Butterfly Species                                   | No. | Butterfly Species                                      | No.         |
|---|-----|--|-------------|
| Checkerspots  |     | Hairstreaks  |             |
| California patch (Chlosyne californica)             |     | great purple hairstreak (Atlides halesus corcorani)    |             |
| Gabb's checkerspot (C. gabbii)                      |     | brown elfin (Callophrys augustinus)                    |             |
| Quino checkerspot (Euphydryas editha quino)         |     | bramble (perplexing) hairstreak (C. dumetorum affinis) |             |
| chalcedon checkerspot (E. chalcedona chalcedona)    |     | gray hairstreak (Strymon melinus pudica)               |             |
| Leanira checkerspot (Thessalia leanira wrighti)     |     | Ladies/Admirals  |             |
| Mylitta crescent (Phyciodes mylitta)                |     | California sister (Adelpha bredowii californica)       |             |
| Blues   |     | Lorquin's admiral ( <i>Limenitis lorquini</i> )        |             |
| western pygmy-blue (Brephidium exila)               |     | west coast lady (Vanessa annabella)                    |             |
| western tailed blue (Everes amyntula)               |     | red admiral (V. atalanta rubria)                       |             |
| southern blue (Glaucopsyche lygdamus australis)     |     | painted lady (V. cardui)                               | 129         |
| Edward's blue (Hemiargus ceraunus gyas)             |     | American (Virginia) lady (V. virginiensis)             | · ·         |
| Acmon blue (Icaricia acmon acmon)                   | -   | unidentified lady (Vanessa sp.)                        |             |
| marine blue ( <i>Leptotes marina</i> )              |     | Swallowtails   |             |
| unidentified blue                                   |     | pale swallowtail (Papilio eurymedon)                   |             |
| Whites  |     | western tiger swallowtail (P. rutulus)                 |             |
| Sara orangetip (Anthocharis sara sara)              | 20  | anise swallowtail (P. zelicaon)                        | -           |
| desert (Felder's) orangetip (A. cethura)            |     | Miscellaneous  |             |
| common California ringlet (Coenonympha californica) | 1   | monarch (Danaus plexippus)                             |             |
| cabbage white (Pieris rapae)                        | 3   | common buckeye (Junonia coenia grisea)                 | 3           |
| checkered (common) white (Pontia protodice)         | 1   | mourning cloak (Nymphalis antiopa)                     |             |
| spring white (P. sisymbrii)                         |     | Skippers   |             |
| unidentified white                                  |     | funereal duskywing (Erynnis funeralis)                 | 1           |
| Metalmarks  |     | mournful duskywing (Erynnis tristis)                   |             |
| Behr's metalmark (Apodemia mormo virgulti)          | 1   | fiery skipper (Hylephila phyleus)                      |             |
| Wright's metalmark (Calephelis wrighti)             |     | white (common) checkered-skipper (Pyrgus albescens)    | 2           |
| Sulphurs  |     | Other  |             |
| orange sulphur (Colias eurytheme)                   |     | Comstock's fritillary                                  | · · · · · · |
| sleepy orange ( <i>Eurema nicippe</i> )             |     |  | <del></del> |
| cloudless sulfur (Phoebus sennae marcellina)        |     |  |             |
| unidentified sulphur                                |     |  |             |
| Column Subtotal                                     | 26  | Column Subtotal  | 135         |
|   |     | Total  | 161         |

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# 2008 Quino Checkerspot Butterfly Survey Form

| Surveyor: Dale Ritenour  |                                 | Date: April 11, 2008 |
|--------------------------|---------------------------------|----------------------|
| Site Name: Otay Hills    |                                 | Site Visit No: 3?    |
| Acres Surveyed           | Survey Time: 4:50               | Acres per Hour:      |
| Other Surveyors Present: | Robert Hogenauer, Alison Varner |                      |

| Field Conditions |              |                  |                  |             |
|------------------|--------------|------------------|------------------|-------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
| Start            | 1000         | 78               | 1-5              | none        |
| End              | 1145         | 85               | 12-15 Gusts 28   | none        |
| Start            | 1220         | 86               | 7-13             | none        |
| End              | 1525         | 86               | 4-7              | none        |

# Vegetation Communities Surveyed (inc. dominant spp.) DCSS- Vigueria lacinata, Eriogonum fasciculatum

| Host Plants                              | Obs. | Nectar Plants                                    | Obs.           |
|--|------|--|----------------|
| dwarf plantain (Plantago erecta)         | х    | popcorn flower (Cryptantha / Plagiobothrys spp.) | X              |
| purple owl's clover (Castilleja exserta) | x    | goldfields (Lasthenia spp.)                      | ×              |
| snapdragon (Antirrhinum coulterianum)    |      | chia (Salvia columbariae)                        |                |
| birds-beak (Cordylanthus rigidus)        |      | goldenstar (Muilla spp.)                         | <del>-  </del> |
| woolly plantain (Plantago patagonica)    |      | fiddleneck (Amsinckia intermedia)                |                |
|  |      | onion (Allium spp.)                              | х              |
|  |      | buckwheat (Eriogonum fasciculatum)               |                |
|  |      |  | <del>-  </del> |

| Butterfly Species                                   | No. | Butterfly Species                                      | No.         |
|---|-----|--|-------------|
| Checkerspots  |     | Hairstreaks  |             |
| California patch (Chlosyne californica)             |     | great purple hairstreak (Atlides halesus corcorani)    |             |
| Gabb's checkerspot (C. gabbii)                      | 3   | brown elfin (Callophrys augustinus)                    |             |
| Quino checkerspot (Euphydryas editha quino)         |     | bramble (perplexing) hairstreak (C. dumetorum affinis) |             |
| chalcedon checkerspot (E. chalcedona chalcedona)    |     | gray hairstreak (Strymon melinus pudica)               |             |
| Leanira checkerspot (Thessalia leanira wrighti)     |     | Ladies/Admirals  |             |
| Mylitta crescent (Phyciodes mylitta)                |     | California sister (Adelpha bredowii californica)       |             |
| Blues   |     | Lorquin's admiral (Limenitis lorquini)                 | <del></del> |
| western pygmy-blue (Brephidium exila)               |     | west coast lady (Vanessa annabella)                    |             |
| western tailed blue (Everes amyntula)               |     | red admiral (V. atalanta rubria)                       |             |
| southern blue (Glaucopsyche lygdamus australis)     |     | painted lady (V. cardui)                               | 150+        |
| Edward's blue (Hemiargus ceraunus gyas)             |     | American (Virginia) lady (V. virginiensis)             |             |
| Acmon blue (Icaricia acmon acmon)                   |     | unidentified lady (Vanessa sp.)                        |             |
| marine blue (Leptotes marina)                       |     | Swallowtails   |             |
| unidentified blue                                   |     | pale swallowtail (Papilio eurymedon)                   | 1           |
| Whites  |     | western tiger swallowtail (P. rutulus)                 |             |
| Sara orangetip (Anthocharis sara sara)              | 14  | anise swallowtail (P. zelicaon)                        |             |
| desert (Felder's) orangetip (A. cethura)            |     | Miscellaneous  |             |
| common California ringlet (Coenonympha californica) |     | monarch (Danaus plexippus)                             |             |
| cabbage white (Pieris rapae)                        | 1   | common buckeye (Junonia coenia grisea)                 | 5           |
| checkered (common) white (Pontia protodice)         | 16  | mourning cloak (Nymphalis antiopa)                     |             |
| spring white (P. sisymbrii)                         |     | Skippers   |             |
| unidentified white                                  |     | funereal duskywing (Erynnis funeralis)                 |             |
| Metalmarks  |     | mournful duskywing (Erynnis tristis)                   |             |
| Behr's metalmark (Apodemia mormo virgulti)          | 5   | fiery skipper (Hylephila phyleus)                      |             |
| Wright's metalmark (Calephelis wrighti)             |     | white (common) checkered-skipper (Pyrgus albescens)    |             |
| Sulphurs  |     | Other  |             |
| orange sulphur (Colias eurytheme)                   |     | callippe fritillary                                    | 15          |
| sleepy orange (Eurema nicippe)                      |     |  |             |
| cloudless sulfur (Phoebus sennae marcellina)        |     |  |             |
| unidentified sulphur                                |     |  |             |
| Column Subtotal                                     | 39  | Column Subtotal  | 167+        |
|   |     | Total  | 206+        |

SRM-01 Otry Hills Dahl -/ RH(AN) OCB start 1000 78°F 1-5 0%
pause 1145 85°F 12-15 525.28
painted Lacky & DIXIND Fritillary Sara OT Di Galdes Behrsmyn 1.5 PaleST CA Ringlet 1220 86°F 7-13 6 070 end 1523 30°C \$-7mph 0% cc DOSS x - Salari Valla Alleta Mallon Eritas
In Bloom Osmlen Stygna Sidnel Lotsco Silgel Exobit Brania Lather Erican Danguir
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# 2008 Quino Checkerspot Butterfly Survey Form

| Surveyor: _Saily TRNKA    |                        | Date: 04/11/08   |  |
|---------------------------|------------------------|------------------|--|
| Site Name: Otay Hills Qua | rry (SRM-01)           | Site Visit No: 3 |  |
| Acres Surveyed            | Survey Time: 4.5 hours | Acres per Hour:  |  |
| Other Surveyors Present:  | Brian Parker           |                  |  |

|       | Field Conditions |                  |                  |                  |  |
|-------|------------------|------------------|------------------|------------------|--|
|       | Time (24 hr)     | Temperature (°F) | Wind Speed (mph) | Cloud Cover      |  |
| Start | 10:30            | 78               | 6-8              | Sunny; 0% clouds |  |
| End   | 15:00            | 88               | 3-5              | Sunny; 0% clouds |  |
| Start |                  |                  |                  |                  |  |
| End   |                  |                  |                  |                  |  |

| Vegetation Communities Surveyed (inc. dominant spp.) |  |  |  |  |                                       |  |  |  |
|--|--|--|--|--|---------------------------------------|--|--|--|
| Diegan coastal sage scrub.                           |  |  |  |  | · · · · · · · · · · · · · · · · · · · |  |  |  |
|  |  |  |  |  |                                       |  |  |  |

| Host Plants C                            |  | Nectar Plants                                  | Obs.            |
|--|--|--|-----------------|
| dwarf plantain (Plantago erecta)         |  | popcorn flower (Cryptantha/Plagiobothrys spp.) | X               |
| purple owl's clover (Castilleja exserta) |  | goldfields (Lasthenia spp.)                    | <del>  ``</del> |
| snapdragon (Antirrhinum coulterianum)    |  | goldenstar (Muilla spp.)                       |                 |
| birds-beak (Cordylanthus rigidus)        |  | fiddleneck (Amsinckia intermedia)              |                 |
| woolly plantain (Plantago patagonica)    |  | onion (Allium spp.)                            |                 |
|  |  | buckwheat (Eriogonum fasciculatum)             | - X             |
|  |  | ground pink (Linanthus dianthiflorus)          |                 |
|  |  |  |                 |

| Butterfly Species                                     | No. | Butterfly Species                                      | No. |
|---|-----|--|-----|
| Checkerspots  |     | Hairstreaks  |     |
| California patch (Chlosyne californica)               |     | great purple hairstreak (Atlides halesus corcorani)    |     |
| Gabb's checkerspot (C. gabbii)                        |     | brown elfin (Callophrys augustinus)                    |     |
| Quino checkerspot (Euphydryas editha quino)           |     | bramble (perplexing) hairstreak (C. dumetorum affinis) |     |
| chalcedon checkerspot (E. chalcedona chalcedona)      |     | gray hairstreak (Strymon melinus pudica)               |     |
| Leanira checkerspot (Thessalia leanira wrighti)       |     | Ladies/Admirals  |     |
| Mylitta crescent (Phyciodes mylitta)                  |     | California sister (Adelpha bredowii californica)       |     |
| Blues   |     | Lorquin's admiral (Limenitis lorquini)                 |     |
| western pygmy-blue (Brephidium exila)                 |     | west coast lady (Vanessa annabella)                    |     |
| western tailed blue (Everes amyntula)                 |     | red admiral (V. atalanta rubria)                       |     |
| southern blue (Glaucopsyche lygdamus australis)       |     | painted lady (V. cardui)                               |     |
| Edward's blue (Hemiargus ceraunus gyas)               |     | American (Virginia) lady (V. virginiensis)             | -   |
| Acmon blue (Icaricia acmon acmon)                     |     | unidentified lady (Vanessa sp.)                        | 137 |
| marine blue (Leptotes marina)                         |     | Swallowtails   |     |
| unidentified blue                                     |     | pale swallowtail (Papilio eurymedon)                   | •   |
| Whites  |     | western tiger swallowtail (P. rutulus)                 |     |
| Sara orangetip (Anthocharis sara sara)                | 11  | anise swallowtail (P. zelicaon)                        |     |
| desert (Felder's) orangetip (A. cethura)              |     | Miscellaneous  |     |
| common California ringlet (Coenonympha californica)   |     | monarch (Danaus plexippus)                             |     |
| cabbage white (Pieris rapae)                          |     | common buckeye (Junonia coenia grisea)                 | 2   |
| checkered (common) white (Pontia protodice)           |     | mourning cloak (Nymphalis antiopa)                     |     |
| spring white ( <i>P. sisymbrii</i> )                  |     | Skippers   |     |
| unidentified white                                    | 12  | funereal duskywing (Erynnis funeralis)                 | 2   |
| Metalmarks  |     | mournful duskywing (Erynnis tristis)                   |     |
| Behr's metalmark (Apodemia mormo virgulti)            | 4   | fiery skipper (Hylephila phyleus)                      |     |
| Wright's metalmark (Calephelis wrighti)               |     | white (common) checkered-skipper (Pyrgus albescens)    |     |
| Sulphurs  |     | Other  |     |
| orange sulphur ( <i>Colias eurytheme</i> )            |     | Comstock's fritillary (Speyeria callippe comstocki)    | 8   |
| sleepy orange ( <i>Eurema nicippe</i> )               |     | , (-p-y  |     |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> ) |     |  |     |
| unidentified sulphur                                  |     |  |     |
| Column Subtotal                                       | 27  | Column Subtotal  | 149 |
|   |     | Total  | 176 |

|  | Ctay Hello Quarry                                 | 04111108  |
|--|---|---|
|  | (SRM-01)  | Sally T.  |
|  |   | ***   |
|  | Start! 10:30 am., 6-8 mph; ele<br>0% clouds; 78°F | arl Sonny                                       |
|  | Who clouds 1 78 T                                 |   |
|  |   |   |
|  | 4 busing July                                     | animals   |
|  | Lot 20  | lady HY +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 |
| *  | Via lac   | S. 6-412 14 141                                 |
|  | Caly nac  | whit and spanner                                |
|  | Graph SP  | sido-bleh liz.                                  |
|  | Esch cal  | who the the 11                                  |
|  | Erioph con  | Duckeye 11                                      |
|  | Cry g.  | Kelu's MI                                       |
|  | Die cap (drying up)                               | W fence lizard                                  |
|  | Silere gal  | Couch fist MM 111                               |
|  | Lath best (few)<br>Dain fas                       | tran duskey !                                   |
|  |   | coastal western                                 |
|  | tring les   | Whipfall  |
|  | Pha ac  | CA towler                                       |
|  | 11  |   |
| The state of the s | Helia sco   |   |
|  |   |   |
|  | a 1'15:00 '-C /-                                  |   |
|  | end:15:00; clear/svnny; 0% cl<br>3-5 mph ] 880 F  | ands  |
|  | 2 2 mby 1 880 b                                   |   |
|  |   |   |
| \  | 11/15 a.m. 2-10 gusts to 15                       |   |
| <u>\</u>   |   |   |

#### 2008 Quino Checkerspot Butterfly Survey Form

| Surveyor: Alison Varner  |                                 | Date:                        | April 11, 2008 |
|--------------------------|---------------------------------|------------------------------|----------------|
| Site Name: SRM-01 Otay   | Hills                           |                              | Site Visit No: |
| Acres Surveyed           | Survey Time: 2.58               | 3 hrs Acres                  | s per Hour:    |
| Other Surveyors Present: | Jasmine Watts, Dale Ritenour, R | obert Hogenauer, Brian Parke | r, Sally Trnka |

| Field Conditions |              |                  |                  |             |  |  |
|------------------|--------------|------------------|------------------|-------------|--|--|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |  |  |
| Start            | 1250         | 86               | 3-12             | Clear       |  |  |
| End              | 1525         | 86               | 4-7              | Clear       |  |  |
| Start            |              |                  |                  |             |  |  |
| End              |              |                  |                  |             |  |  |

#### Vegetation Communities Surveyed (inc. dominant spp.)

NNG and CSS, dominated by Artemisia californica, Eriogonum fasciculatum, Viguiera laciniata, and Malosma laurina

| Host Plants                              | Obs. | Nectar Plants                                    | Obs.   |  |
|--|------|--|--|--|
| warf plantain ( <i>Plantago erecta</i> ) |      | popcorn flower (Cryptantha / Plagiobothrys spp.) | X  |  |
| purple owl's clover (Castilleja exserta) |      | goldfields (Lasthenia spp.)                      | <del>  ``</del>                                  |  |
| snapdragon (Antirrhinum coulterianum)    |      | chia (Salvia columbariae)                        | <del>                                     </del> |  |
| birds-beak (Cordylanthus rigidus)        |      | goldenstar (Muilla spp.)                         |  |  |
| woolly plantain (Plantago patagonica)    |      | fiddleneck (Amsinckia intermedia)                |  |  |
|  |      | onion (Allium spp.)                              |  |  |
|  |      | buckwheat (Eriogonum fasciculatum)               | T <sub>X</sub>                                   |  |
|  |      |  | <del>-   ^ -</del>                               |  |

| Butterfly Species                                     | No.      | Butterfly Species                                      | No.  |
|---|----------|--|--|
| Checkerspots  |          | Hairstreaks  |  |
| California patch (Chlosyne californica)               |          | great purple hairstreak (Atlides halesus corcorani)    | <del> </del>                                     |
| Gabb's checkerspot (C. gabbii)                        |          | brown elfin (Callophrys augustinus)                    |  |
| Quino checkerspot (Euphydryas editha quino)           |          | bramble (perplexing) hairstreak (C. dumetorum affinis) |  |
| chalcedon checkerspot (E. chalcedona chalcedona)      |          | gray hairstreak (Strymon melinus pudica)               |  |
| Leanira checkerspot (Thessalia leanira wrighti)       |          | Ladies/Admirals  |  |
| Mylitta crescent (Phyciodes mylitta)                  |          | California sister (Adelpha bredowii californica)       |  |
| Blues   |          | Lorquin's admiral (Limenitis lorquini)                 | <del>                                     </del> |
| western pygmy-blue (Brephidium exila)                 |          | west coast lady (Vanessa annabella)                    |  |
| western tailed blue (Everes amyntula)                 |          | red admiral (V. atalanta rubria)                       | -  |
| southern blue (Glaucopsyche lygdamus australis)       |          | painted lady (V. cardul)                               | 13   |
| Edward's blue (Hemiargus ceraunus gyas)               | 1        | American (Virginia) lady (V. virginiensis)             | <del></del>                                      |
| Acmon blue (Icaricia acmon acmon)                     |          | unidentified lady (Vanessa sp.)                        | <u> </u>   |
| marine blue (Leptotes marina)                         |          | Swallowtails   |  |
| unidentified blue                                     |          | pale swallowtail (Papilio eurymedon)                   |  |
| Whites  |          | western tiger swallowtail (P. rutulus)                 |  |
| Sara orangetip (Anthocharis sara sara)                | 7        | anise swallowtail (P. zelicaon)                        | l  |
| desert (Felder's) orangetip (A. cethura)              |          | Miscellaneous  |  |
| common California ringlet (Coenonympha californica)   | <u> </u> | monarch (Danaus plexippus)                             |  |
| cabbage white (Pieris rapae)                          |          | common buckeye (Junonia coenia grisea)                 |  |
| checkered (common) white (Pontia protodice)           |          | mourning cloak (Nymphalis antiopa)                     | <u> </u>   |
| spring white (P. sisymbrii)                           |          | Skippers   |  |
| unidentified white                                    | 6        | funereal duskywing (Erynnis funeralis)                 |  |
| Metalmarks  |          | mournful duskywing (Erynnis tristis)                   |  |
| Behr's metalmark (Apodemia mormo virgulti)            | 6        | fiery skipper (Hylephila phyleus)                      |  |
| Wright's metalmark (Calephelis wrighti)               |          | white (common) checkered-skipper (Pyrgus albescens)    |  |
| Sulphurs  |          | Other  |  |
| orange sulphur ( <i>Colias eurytheme</i> )            | 7        | Fritillary   | 16   |
| sleepy orange ( <i>Eurema nicippe</i> )               |          |  |  |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> ) |          |  |  |
| unidentified sulphur                                  |          |  |  |
| Column Subtotal                                       | 19       | Column Subtotal  | 29   |
|   | L        | Total  | 48   |

|                | \$ \$ J  | 0                        |                   | 7-6       |  |
|----------------|--|--------------------------|-------------------|-----------|--|
| 10-            | 3-12 mp  |                          | Thrai             | 2000      |  |
| SRM-01         | Paints   | '1 1 1                   | Sam Orig          | Fry Helen | <b>s</b>   |
| 14115<br>000#3 | of cle   | 3                        | 8                 |           | \$ 35 E  |
| UND HILLS      | 20 30.0<br>Plant   | 3.0                      | V (               | 2 TH 4    | No. of the last of |
| MO             | NYTHING INTERPRETATION   | Sussica of<br>Lot sco as | Sponena<br>Silaal | 1         | PLASO DE LA CARO LA CA |
| <b>F</b>       |  |                          |                   | AN PICA   |  |
|                | To the state of th |                          | H H H             | AAA       |  |

# 2008 Quino Checkerspot Butterfly Survey Form

| Surveyor: _ | Jasmine Watts   |                                   | Date:      | April 11, 2008 |  |
|-------------|-----------------|-----------------------------------|------------|----------------|--|
| Site Name:  | SRM-01 OTAY     | HILLS                             |            | Site Visit No: |  |
| Acres Surve | yed             | Survey Time:                      | 4.4Z Acres | s per Hour:    |  |
| Other Surve | yors Present: _ | (joined by Alison Varner at 1250) | )          |                |  |

| Field Conditions |              |                  |                  |             |  |  |
|------------------|--------------|------------------|------------------|-------------|--|--|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |  |  |
| Start            | 0950         | 26c 79 P         | 0-2              | clear       |  |  |
| End              | 1210         | 30c 86 F         | 10-15 (gusts 20) | clear       |  |  |
| Start            | 1215         | 30 86 F          | 3-12             | clear       |  |  |
| End              | 1420         | 31.5 Z9F         | 4-9              | clear       |  |  |

| Vegetation Communities Surveyed (inc. dominant spp.) |  |  |  |  |  |  |
|--|--|--|--|--|--|--|
| DCSS dominated by Viguiera laciniata                 |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

| Host Plants                              | Obs. | Nectar Plants                                    | Obs. |
|--|------|--|------|
| dwarf plantain (Plantago erecta)         | X    | popcorn flower (Cryptantha / Plagiobothrys spp.) | X    |
| purple owl's clover (Castilleja exserta) |      | goldfields (Lasthenia spp.)                      |      |
| snapdragon (Antirrhinum coulterianum)    |      | chia (Salvia columbariae)                        |      |
| birds-beak (Cordylanthus rigidus)        |      | goldenstar (Muilla spp.)                         | X    |
| woolly plantain (Plantago patagonica)    | ,    | fiddleneck (Amsinckia intermedia)                |      |
|  |      | onion (Allium spp.)                              |      |
|  |      | buckwheat (Eriogonum fasciculatum)               | X    |
|  |      |  |      |

| Butterfly Species                                   | No. | Butterfly Species                                      | No.      |
|---|-----|--|----------|
| Checkerspots  |     | Hairstreaks  |          |
| California patch (Chlosyne californica)             |     | great purple hairstreak (Atlides halesus corcorani)    |          |
| Gabb's checkerspot (C. gabbii)                      | 16  | brown elfin (Callophrys augustinus)                    | <u> </u> |
| Quino checkerspot (Euphydryas editha quino)         |     | bramble (perplexing) hairstreak (C. dumetorum affinis) |          |
| chalcedon checkerspot (E. chalcedona chalcedona)    |     | gray hairstreak (Strymon melinus pudica)               |          |
| Leanira checkerspot (Thessalia leanira wrighti)     |     | Ladies/Admirals  |          |
| Mylitta crescent (Phyciodes mylitta)                | 1   | California sister (Adelpha bredowii californica)       |          |
| Blues   |     | Lorquin's admiral (Limenitis lorquini)                 |          |
| western pygmy-blue (Brephidium exila)               |     | west coast lady (Vanessa annabella)                    | 9        |
| western tailed blue (Everes amyntula)               |     | red admiral (V. atalanta rubria)                       |          |
| southern blue (Glaucopsyche lygdamus australis)     |     | painted lady (V. cardui)                               | 71       |
| Edward's blue (Hemiargus ceraunus gyas)             |     | American (Virginia) lady (V. virginiensis)             |          |
| Acmon blue (Icaricia acmon acmon)                   | 1   | unidentified lady (Vanessa sp.)                        | 56       |
| marine blue (Leptotes marina)                       |     | Swallowtails   |          |
| unidentified blue                                   |     | pale swallowtail (Papilio eurymedon)                   |          |
| Whites  |     | western tiger swallowtail (P. rutulus)                 |          |
| Sara orangetip (Anthocharis sara sara)              | 3   | anise swallowtail (P. zelicaon)                        |          |
| desert (Felder's) orangetip (A. cethura)            |     | Miscellaneous  | _        |
| common California ringlet (Coenonympha californica) | 14  | monarch (Danaus plexippus)                             |          |
| cabbage white ( <i>Pieris rapae</i> )               |     | common buckeye (Junonia coenia grisea)                 | 1        |
| checkered (common) white (Pontia protodice)         | 9   | mourning cloak (Nymphalis antiopa)                     |          |
| spring white (P. sisymbrii)                         |     | Skippers   |          |
| unidentified white                                  | 8   | funereal duskywing (Erynnis funeralis)                 | 2        |
| Metalmarks  |     | mournful duskywing (Erynnis tristis)                   |          |
| Behr's metalmark (Apodemia mormo virgulti)          | 32  | fiery skipper (Hylephila phyleus)                      |          |
| Wright's metalmark (Calephelis wrighti)             |     | white (common) checkered-skipper (Pyrgus albescens)    |          |
| Sulphurs  |     | Other  |          |
| orange sulphur (Colias eurytheme)                   |     | Fritillary (Speyeria sp.)                              | 10       |
| sleepy orange ( <i>Eurema nicippe</i> )             |     |  |          |
| cloudless sulfur (Phoebus sennae marcellina)        |     |  |          |
| unidentified sulphur                                |     |  |          |
| Column Subtotal                                     | 84  | Column Subtotal  | 149      |
|   |     | Total  | 233      |

11 April 2008: (@ 120\_(AV) STFICE 950 AM, 26°C, 0-2 Mph, Chart.
END: 1210 AM, 30°C, 10-15 mph Guess 2), don LADIES: WINDWINE Prince Lawy: 沒在沒在沒有 MANUED LADY: MI IN IN INCINIA BENE'S METAMORE HINKILL ANHU, CORA, S' son GABB'S CHECEOSPOT: M. Mass Cass Lawy IM III CHACERIO WHITE WILL would have cutingles CARDES: MK MK HT IN CARBS: WATH | CARBS: WATH | Fun, dusty want | Bucceye: 1 MHILLS: 医I BUNDAPUES SARA ORMETTE: []] MARK SRN-OI OTAY HILLS Area 5. - 59,600005 Pha. Carn. Dar Gas. Fervill Silgal Direct E. Jahum Pla. ore. 104.5co, Flowering Plant Spp Fritillary WILHT Fundustrums 11 Mylitha Crescont 1 Acmon 1810C BUTTERFLIES Eci, wn. Cal. spl. Cell met. Vis be. SPASSICA SO E. Br. Clarpen.

SPM-01 OTAY MILLS 11 April 2008, CONDINUAL ...

Flowering PI SAL

Costales Sp.

hidleya vanigatin - buds, ~100 indiv.

Jawed by AV @ 1250pm

WWINTIFE WILE

STREET 1215 30°C, 3-12 men , clear END: 420, 315, 4-9 mph, clear

# Appendix C U.S. FISH AND WILDLIFE SERVICE SURVEY PLOT DATA SHEETS

| Date 3/19/08 Plot number 32 Time start 1207 end 1202              |
|---|
| Plot location Dtay Hills Avea 3 1786529.74 N 6360556.22 E         |
| Surveyor Align Vamer  |
| Temp (°C) 27.2 Wind (km/hr) 3-10 Sky clear) partly cloudy, cloudy |

| Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
|------------------|---|------------------|---|
|                  | SW  |                  |   |
| 2                | NE  |                  |   |
|                  |   |                  |   |
|                  |   |                  |   |
|                  |   |                  |   |
|                  |   |                  |   |
|                  |   |                  |   |
|                  |   |                  | (   |
|                  |   |                  |   |
|                  |   |                  |   |

| Hostplant species        | Density per plot (estimate)        |
|--------------------------|------------------------------------|
| Plantago erecta          | 0, 1-20, 20-100, \$100-1000 > 1000 |
| Plantago patagonica      | (0, 1-20, 20-100, >100             |
| Antirrhinum coulterianum | 0, 1-20, 20-100, >100              |
| Corylanthis rigidus      | ② 1-20, 20-100, >100               |
| Castilleja exserta       | (0,) 1-20, 20-100, >100            |
|                          |                                    |
| % Bare ground estimate   | 0-25%, 26-50%, 51-75%, >75%        |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75%        |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75%        |
|                          |                                    |

| Notes. Include dominant shrub species, GPS coo      | rdinates for other life stages observed,   |
|---|--|
| and other relevant information (e.g. butterfly beha | avior, nectar sources, other butterfly   |
| species, other life stages observed).               | Nectar: Cryptantha, Lindia,<br>Diccap, Lotsco, Las (al,  |
| Som shrub Erifus, Artcol                            | The old of the state of the sta |
| 1.760   | UCCOPILOTS CO., LAS (al)   |
| ib mon white  | Escal, Brassica  |
| iommon white<br>Funerial Duskywing                  |  |

Common white Funkvial Duskywing Behrs metalmank

| Date 3/19/08               | Plot nun | nber 34          | Time start 1415        | end_1430_    |
|----------------------------|----------|------------------|------------------------|--------------|
| Plot location Otay         | Hills    | Avea 3           | 1786787,51 N           | 6361427.16 E |
| Surveyor Mison             | Varner   |                  |                        |              |
| Temp (°C) <u>∂∂. </u> 2_ V | Vind (km | /hr) <u>5-10</u> | Sky: clear, partly clo | udy, cloudy  |

| Number of adults                | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
|---------------------------------|---|------------------|---|
| NO QU                           | ino observed  |                  |   |
|                                 |   |                  |   |
|                                 |   |                  |   |
|                                 |   |                  |   |
| What was your grown as a second |   |                  |   |
|                                 |   |                  |   |
|                                 |   |                  |   |
|                                 |   |                  |   |
|                                 |   |                  |   |
|                                 |   |                  |   |

| Hostplant species        | Density per plot (estimate)         |
|--------------------------|-------------------------------------|
| Plantago erecta          | 0, 1-20, 20-100, \$100-1000 (71000) |
| Plantago patagonica      | 0,71-20, 20-100, >100               |
| Antirrhinum coulterianum | Ø21-20, 20-100, >100                |
| Corylanthis rigidus      | <u>0</u> 21-20, 20-100, >100        |
| Castilleja exserta       | 0.1-20, 20-100, >100                |
| % Bare ground estimate   | (0-25%) 26-50%, 51-75%, >75%        |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75%         |
| % Shrub cover estimate   | (0-25%), 26-50%, 51-75%, >75%       |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed)

species, other life stages observed).

Dom Shrub: Erifas, Mallau

White Behrs metalmak Nectar: Dic cap, Brassico, Lindia, Silgel, Lot sio, With, Hed ove, Phacic, Evifas, Lasco Esc cal, solpar, Lat ves

| Date 3/19/08           | Plot number 38           | Time start 1250       | end 1305                              |         |                         |
|------------------------|--------------------------|-----------------------|---------------------------------------|---------|-------------------------|
| Plot location DIN      | Hills Wea 3              | 1787047.74            | N 63605                               | 25.55 E | مستند<br>مستند<br>مستند |
| Surveyor Mison         | Varner                   |                       | · · · · · · · · · · · · · · · · · · · | •       |                         |
| Temp (°C) <u>} } V</u> | Wind (km/hr) <u>5-10</u> | _Sky; clear, partly o | cloudy, cloudy                        |         |                         |

| Number of adults                       | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
|--|---|------------------|---|
| <u> </u>                               | NE  |                  |   |
| <u> </u>                               | NE  |                  |   |
|  | SE  |                  |   |
|  |   |                  |   |
| ************************************** |   |                  |   |
|  |   |                  |   |
|  |   |                  |   |
|  |   |                  |   |
| ·                                      |   |                  |   |
|  |   |                  |   |

| Hostplant species        | Density per plot (estimate)                        |  |  |
|--------------------------|--|--|--|
| Plantago erecta          | 0, 1-20, 20-100, \$100-1000 €1000                  |  |  |
| Plantago patagonica      | (0) 1-20, 20-100, >100                             |  |  |
| Antirrhinum coulterianum | 0 1-20, 20-100, >100                               |  |  |
| Corylanthis rigidus      | <b>1-20</b> , 20-100, >100                         |  |  |
| Castilleja exserta       | (0), 1-20, 20-100, >100                            |  |  |
| % Bare ground estimate   | (0-25%) 26-50%, 51-75%, >75%                       |  |  |
| % Burned area estimate   | ( <del>0-25%</del> ) 26- <u>50</u> %, 51-75%, >75% |  |  |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75%                        |  |  |
|                          |  |  |  |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly Nedar: Lin dialas cal Congransha, Lot Sio, Diccayo Phacelia cic, Sil gal, Diccayo species, other life stages observed).

Don Shrub: Erifas, Artcal, Ade fas

Behrs metalmant Unise swallowfail

| Date 3/19/08 Plot number   | er_41 | Time start 1327 en | d 1342       |
|----------------------------|-------|--------------------|--------------|
| Plot location Dtay Hills A | rea 6 | 1787603.02 N       | 6360535.57 E |
| Surveyor Mism VAMEN        |       |                    | · ·          |

Temp (°C) 33.3 Wind (km/hr) 6-11 Sky: clear, partly cloudy, cloudy

Observations (use additional sheets if needed)

| Number of adults                        | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
|---|---|------------------|---|
| NO Qui                                  | no observed   |                  |   |
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| Hostplant species        | Density per plot (estimate)   |
|--------------------------|-------------------------------|
| Plantago erecta          | 0,71-20, 20-100, >100         |
| Plantago patagonica      | 70, 1-20, 20-100, >100        |
| Antirrhinum coulterianum | 0 1-20, 20-100, >100          |
| Corylanthis rigidus      | 0, 1-20, 20-100, >100         |
| Castilleja exserta       | 0, 1-20, 20-100, >100         |
| % Bare ground estimate   | 0-25%, 26-50%, 51-75%, >75%   |
| % Burned area estimate   | (0-25%), 26-50%, 51-75%, >75% |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75%   |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

Dum Shrub: Mill My IMI IMI Pha Cic, Michael Rocic, Milinm, Sol par Viola, Plagio, Las Cali Brocic Mill Swallardi Mill

Mile swallantail Behrs wetalwark

| Date 21 March 2005 Plot number 25 Time start 12:10 end 2725     |
|---|
| Plot location 1785775.32 N 6359319,66E                          |
| Surveyor JASMUE WATTS Easterpanied by J. Kurnen)                |
| Temp (°C) 24 Wind (kan/hr) 03 Sky: clear, partly cloudy, cloudy |
|   |

| Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
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| Hostplant species        | Density per plot (estimate)             |
|--------------------------|---|
| Plantago erecta          | 0, 1-20, 20-100, \$100, 101-1000 61000  |
| Plantago patagonica      | (0,)1-20, 20-100, >100, 101-1000, >1000 |
| Antirrhinum coulterianum | 0.1-20, 20-100, >100                    |
| Corylanthis rigidus      | (0, 1-20, 20-100, >100                  |
| Castilleja exserta       | (0,)1-20, 20-100, >100                  |
|                          |   |
| % Bare ground estimate   | 0-25%, 26-50% 51-75%, >75%              |
| % Burned area estimate   | 0-25% 26-50%, 51-75%, >75%              |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75%             |
|                          |   |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

Dom. Shrubs Eri. flas. Vig Inc

Magazitations
Lenomithus
Dic cap
Mustard Sp.
Enoclina

Common White II
West Coast Lady II
Behr's medalmark III
Painted Lady II
Fundasky wing I

|                  | <i>R</i>   |                                       |             |                |  |
|------------------|--|---------------------------------------|-------------|----------------|--|
| Date <u>2\ /</u> | WWW 1008 Plot number                             | er <u>7</u> 5                         | Ti          | ime sta        | ort 1230 end 1245  |
| Plot location    | n 1786447.60                                     | 10                                    | 63          | 592            | 80,79E   |
| and the second   |  |                                       |             |                |  |
| Surveyor _s      | Jasmire Wa                                       | ths_                                  | (4          | Jasa           | n Kurnau)  |
| Temp (°C)        | 25 Wind (km/h                                    | e) <u>2</u> -                         | <u>4</u> s  | kÿ:(cle        | ear, partly cloudy, cloudy   |
| Observation      | s (use additional sheets                         | s if ne                               | eded)       |                |  |
| Number           | Quadrant   |                                       | Num         | ber            | Quadrant   |
| of adults        | (or GPS coordinat                                | es                                    | of ad       | ults           | (or GPS coordinates  |
| `                | NAD 83 outside pl                                |                                       |             |                | NAD 83 outside plot)   |
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|                  |  |                                       |             |                |  |
| Hostplant        |  |                                       |             |                | ot (estimate)  |
| Plantago er      |  |                                       |             |                | 0,>100   |
| Plantago pe      |  |                                       | <del></del> |                | 0, >100  |
|                  | n coulterianum                                   |                                       |             |                | 0, >100  |
| Corylanthis      |  | 0,                                    |             |                | 0, >100  |
| Castilleja e     | xserta   | <u></u> ₹0,                           | 1-20,       | 20-10          | 0, >100  |
|                  |  | $\searrow$                            |             |                |  |
|                  | ound estimate                                    |                                       |             |                | %, 51-75%, >75%  |
|                  | area estimate                                    | (0-2                                  | 25%,>       | 26-509         | %, 51-75%, >75%  |
| % Shrub c        | over estimate                                    | 0-2                                   | 25%,(?      | 26-509         | 6, 5,1-75%, >75%   |
| and other rele   | vant information (e.g. billife stages observed). | utterfl                               | y behav     | vior, nec      | for other life stages observed, star sources, other butterfly  Ranted Lady 5 |
| Enifa            | A. Plasti  | o Dea M                               | 73          | •              | Nest Coastlady 2<br>Behr's metalnank 3                                       |
| V15.0            | s. Plasi.<br>Lat. Cryp                           | ImM                                   | ~~          | <b>*</b>       | Benr's mediumik 3  |

| Date 21 March 2008 Plot number 31 Time start 12150 end 1:08     |
|---|
| Plot location 1786619.50 N 6358581.10 E                         |
| Surveyor Jasmine Watts (+ Jasm Furnow)                          |
| Temp (°C) 25 Wind (km/hr) 2-4 Sky: Clear, partly cloudy, cloudy |

| Observations ( | use additional | sheets if | needed) |
|----------------|----------------|-----------|---------|
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| Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
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| Density per plot (estimate)  |  |  |
|------------------------------|--|--|
| (0, 1-20, 20-100, >100       |  |  |
| 7, 1-20, 20-100, >100        |  |  |
| 0, 1-20, 20-100, >100        |  |  |
| 0, 1-20, 20-100, >100        |  |  |
| 0,/1-20, 20-100, >100        |  |  |
|                              |  |  |
| Q-25%, 26-50%, 51-75%, >75%  |  |  |
| (0-25%) 26-50%, 51-75%, >75% |  |  |
| 0-25%, 26-50%) 51-75%, >75%  |  |  |
|                              |  |  |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

Lasical. Dom. shrubs
Plagiobathers Eric fais.
Cryptonthesp
Dicicap.

Fun. dusty wing |
Armse swallenter |
Painted Lady 3
West Gast lady |
Behi's metalmark 4

| Date 03/21/08 Plot number 56 Time start 2:15pm end 2:3 | <u> </u>                               |
|--|--|
| Plot location 1789356, 51 N 6363403,95 E               | ······································ |
| Surveyor Sally T.; Brian P.                            |  |

Temp (°C) 73°F Wind (km/hr) 2-5 Sky: clear, partly cloudy, cloudy

Observations (use additional sheets if needed)

| Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
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| Hostplant species        | Density per plot (estimate)        | ]             |
|--------------------------|------------------------------------|---------------|
| Plantago erecta          | 0, 1-20, 20-100, (5100) (61-1,000) |               |
| Plantago patagonica      | 0, 1-20, 20-100, >100              |               |
| Antirrhinum coulterianum | 0, 1-20, 20-100, >100              |               |
| Corylanthis rigidus      | 0, 1-20, 20-100, >100              |               |
| Castilleja exserta       | 0, 1-20, 20-100, >100              |               |
|                          |                                    |               |
| % Bare ground estimate   | 0-25%, 26-50%, 51-75%, >75%        |               |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, (\$75%) (c. | - 1 CARDING T |
| % Shrub cover estimate   | 0-25%, 26-50% 51-75% >75%          | (080)         |
|                          |                                    | I             |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

other botterflies: Painted lady 4
lady 8
for doskywing
white 1
Aruse scottl 1

| Date 3/21/08 Plot number 71 Time start 1420 end          | 1435   |
|--|--------|
| Plot location 1791156.37 N / 6366366.11 E                | Sovery |
| Surveyor B. Panlin D. Allen                              |        |
| Temp (°C) 27 Wind (km/hr) 3-4 Sky: clear, partly cloudy. | cloudy |

Observations (was additional about if --- I. IV

| Number of adults                      | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |  |
|---------------------------------------|---|---------------------|---|--|
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| Hostplant species        | Density per plot (estimate)       |  |  |
|--------------------------|-----------------------------------|--|--|
| Plantago erecta          | 0, 1-20, 20-100, 101-1000, \$1000 |  |  |
| Plantago patagonica      | 0, 1-20, 20-100, 101-1000, >1000  |  |  |
| Antirrhinum coulterianum | 0, 1-20, 20-100, >100             |  |  |
| Corylanthis rigidus      | 0, 1-20, 20-100, >100             |  |  |
| Castilleja exserta       | 0, (1-20, 20-100, >100            |  |  |
| % Bare ground estimate   | 0-25%, 26-50%, 51-75%, >75%       |  |  |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75%       |  |  |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75%       |  |  |
|                          |                                   |  |  |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

Adeno StemA fasciculation

Leathania sp popocou floren Painted Leady west cost leady AMISE Sevallowted Behr Metal mank

| Date 3/21/08 Plot number 77 Time start 1350         | end 1405     |
|---|--------------|
| Plot location 1791561.36 N / 6360 703.67            | Surce        |
| Surveyor B PARLER D Allen                           |              |
| Temp (°C) 27 Wind (km/hr) 0-3 Sky: clear, partly cl | oudy, cloudy |

| Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
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| Hostplant species        | Density per plot (estimate)      |  |  |
|--------------------------|----------------------------------|--|--|
| Plantago erecta          | 0, 1-20, 20-100, 101-1000, >1000 |  |  |
| Plantago patagonica      | 0, 1-20, 20-100, 101-1000, >1000 |  |  |
| Antirrhinum coulterianum | 0, 1-20, 20-100, >100            |  |  |
| Corylanthis rigidus      | 0, 1-20, 20-100, >100            |  |  |
| Castilleja exserta       | 0, 1-20, 20-100, >100            |  |  |
| % Bare ground estimate   | 0-25%, 26-50%, 51-75%, >75%      |  |  |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75%      |  |  |
| % Shrub cover estimate   | 0-25%, 26-50%, (51-75%) > 75%    |  |  |
|                          |                                  |  |  |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

Adenostema farcia betun Ce andhes otavensis Salvee Clevelindur

Popcovan Flores SAM Consequence
LASThermed Least Coogst Lacty
Lin parties Perplexing Horn-Streck
Eroclim acidanias Beher Metalmank

| Date 3/21/08 Plot number 78 Time start 1330 end 1345           |
|--|
| Plot location otay Hills 1791619,73N/6360235,76E Sorrey        |
| Surveyor B. Parlin D. Allen                                    |
| Temp (°C) 22 Wind (km/hr) 2-3 Sky: clear) partly cloudy cloudy |

| Number of adults                       | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
|--|---|---------------------|---|
| 2                                      | SW  |                     |   |
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| Hostplant species        | Density per plot (estimate)      |
|--------------------------|----------------------------------|
| Plantago erecta          | 0, 1-20, 20-100, 101-1000(>1000) |
| Plantago patagonica      | 0, 1-20, 20-100, 101-1000, >1000 |
| Antirrhinum coulterianum | 0, 1-20, 20-100, >100            |
| Corylanthis rigidus      | 0, 1-20, 20-100, >100            |
| Castilleja exserta       | 0,(1-20), 20-100, >100           |
|                          |                                  |
| % Bare ground estimate   | (0-25%), 26-50%, 51-75%, >75%    |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75%      |
| % Shrub cover estimate   | 0-25%, 26-50% (51-75%, >75%      |
|                          |                                  |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

Adenostema fasciculatum Ce anothos tometerses

C otayens

Archtospaphylos sp.

FORCOUN Flower
LASTING MER
Lincultus
Evodiem Cicutarium

Saux orange tip Paiviled Lacly Livest coast Loedy Beden Metel Match

| Date 3/21/08 Plot number 82 Time start 1310 end | 1325   |
|---|--------|
| Plot location 1791899, 22 N / 6359787, 90 E     | Survey |
| Surveyor B. PARLER / D. Allen                   |        |

Temp (°C) 21.5 Wind (km/hr) 2-3 Sky: clear partly cloudy, cloudy

Observations (use additional sheets if needed)

| Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
|------------------|---|------------------|---|
| 2                | SW  |                  |   |
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| Hostplant species        | Density per plot (estimate)       |
|--------------------------|-----------------------------------|
| Plantago erecta          | 0, 1-20, 20-100, 101-1000, >1000) |
| Plantago patagonica      | 0, 1-20, 20-100, 101-1000, >1000  |
| Antirrhinum coulterianum | 0, 1-20, 20-100, >100             |
| Corylanthis rigidus      | 0, 1-20, 20-100, >100             |
| Castilleja exserta       | 0, 4-20, 20-100, >100             |
| % Bare ground estimate   | 0-25%, 26-50%, 51-75%, >75%       |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75%       |
| % Shrub cover estimate   | 0-25%, 26-50%, (51-75%), >75%     |
|                          |                                   |

**Notes.** Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

Adenostoma fasciculatura Ceanothis tomentosos popular Flavor Lasthenia Erodium cicularin Linanthus sp. Common white SALA orange till CAL. Ringlet Per plevy HABSTREK PAINTED COCKY West Cocky (Ady

| Date 3/24/08 Plot number 25       | Time start 1120 end 1135          |
|-----------------------------------|-----------------------------------|
| Plot location Otay Hills Avea 4   | 1785775.32 N 6359319.06 E         |
| Surveyor D Allen                  |                                   |
| Temp (°C) $20$ Wind (km/hr) $2-9$ | Sky: elear, partly cloudy, cloudy |

| Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
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| Density per plot (estimate)           |
|---------------------------------------|
| 0, 1-20, 20-100, \$100-1000 (\$1000)  |
| 0, 1-20, 20-100, \$100 - 1000 , 71000 |
| 0, 1-20, 20-100, >100                 |
| 0, 1-20, 20-100, >100                 |
| 0, 1-20, 20-100, >100                 |
| 0-25%) 26-50%, 51-75%, >75%           |
| 0-25%, 26-50%, 51-75%, >75%           |
| 0-25%, (26-50%), 51-75%, >75%         |
|                                       |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

HWOS

V. Lanun

Popacon GoldSield

ben m

E. Sayan

| Date 3/26/08 Plot number 28                   | _ Time start 1655 end 1110         |
|---|------------------------------------|
| Plot location Otay Hills Avea 4               | 1786447,66N 6359280,79 E           |
| Surveyor D Allen                              |                                    |
| Temp (°C) <u>26.6</u> Wind (km/hr) <u>6-3</u> | _Sky: clear, partly cloudy, cloudy |

| Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number<br>of adults                   | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
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| Hostplant species        | Density per plot (estimate) |  |  |
|--------------------------|-----------------------------|--|--|
| Plantago erecta          | 0, 1-20, 20-100, (>100)     |  |  |
| Plantago patagonica      | 0, 1-20, 20-100, >100       |  |  |
| Antirrhinum coulterianum | 0, 1-20, 20-100, >100       |  |  |
| Corylanthis rigidus      | 0, 1-20, 20-100, >100       |  |  |
| Castilleja exserta       | 0, 1-20, 20-100, >100       |  |  |
| % Bare ground estimate   | 0-25%, 26-50%, 51-75%, >75% |  |  |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75% |  |  |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75% |  |  |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

BEMM

E fascic

V. laramada

FUDW

PALA

Date 3/26/08 Plot number 31 Time start 1210 end 1228

Plot location Otry Hills Avea 4 1786619.50 N 6358581.10 E

Surveyor D Allen

Temp (°C) 21 Wind (km/hr) 7-9 Sky: clear partly cloudy, cloudy

Observations (use additional sheets if needed)

| Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
|---------------------|---|------------------|---|
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| Hostplant species        | Density per plot (estimate)  |  |  |
|--------------------------|------------------------------|--|--|
| Plantago erecta          | 0, 1-20,(20-100) >100        |  |  |
| Plantago patagonica      | 0, 1-20, 20-100, >100        |  |  |
| Antirrhinum coulterianum | 0, 1-20, 20-100, >100        |  |  |
| Corylanthis rigidus      | 0, 1-20, 20-100, >100        |  |  |
| Castilleja exserta       | 0, 1-20, 20-100, >100        |  |  |
| % Bare ground estimate   | Q-25% 26-50%, 51-75%, >75%   |  |  |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75%  |  |  |
| % Shrub cover estimate   | 0-25%, 26-50%, (51-75%) >75% |  |  |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

BEWW

E. fasar

PACA

U. lacin.

Cowh

| Date <u>3/21</u>  | Plot number 5       | Time st   | art 410 end 1425    |
|---|---------------------|-----------|---------------------|
| Plot location   | n 1789158,30        | ON 63     | 60296.39E           |
|   | Brian Park          | -         |                     |
| Temp (°C) Wind (km/hr) 45 Sky: clear, partly cloudy, cloudy |                     |           |                     |
| Observations (use additional sheets if needed)              |                     |           |                     |
| Number  | Quadrant            | Number    | Quadrant            |
| of adults   | (or GPS coordinates | of adults | (or GPS coordinates |

| Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
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| Hostplant species        | Density per plot (estimate)  |
|--------------------------|------------------------------|
| Plantago erecta          | 0, 1-20, 20-100, >100        |
| Plantago patagonica      | 0, 1-20, 20-100, >100        |
| Antirrhinum coulterianum | 0, 1-20, 20-100, >100        |
| Corylanthis rigidus      | 0, 1-20, 20-100, >100        |
| Castilleja exserta       | 0, 1-20, 20-100, >100        |
|                          |                              |
| % Bare ground estimate   | 0-25%, 26-50%, 51-75%, >75%  |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75%  |
| % Shrub cover estimate   | (0-25%) 26-50%, 51-75%, >75% |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

species, other life stages observed).

Showb - Malaston Broke harf, Dearnest Vigorian

Nector Dicholostern Silva Majorathy Chamery a

Butterflow P.C. \*

Ringlet Ringlet Stages of the Ringlet Stages

- Evelence of Tour St. son acces + Mann class Placen

| Date 3/2  | 6/08 Plot number 5             | O Time sta | art 1234 end 1249   |
|---|--------------------------------|------------|---------------------|
| Plot location   | on 1789731.34 N                | 6359100    | 0.29E               |
| Surveyor  | BRIAN PA                       | PKOR       |                     |
| Γemp (°C) 23 Wind (km/hr)3-5 Sky: clear partly cloudy, cloudy |                                |            |                     |
|   | s (use additional sheets if ne | •          |                     |
|   | Quadrant                       | Number     | Quadrant            |
| of adults   | (or GPS coordinates            | of adults  | (or GPS coordinates |
|   | NATO 02 overside wind)         |            | NIATA OO41111       |

| Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
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| Hostplant species        | Density per plot (estimate)                              |  |  |
|--------------------------|--|--|--|
| Plantago erecta          | 0, 1-20, 20-100, >100 /100 /100 /100 /100 /100 /100 /100 |  |  |
| Plantago patagonica      | 0, 1-20, 20-100, >100                                    |  |  |
| Antirrhinum coulterianum | 0, 1-20, 20-100, >100                                    |  |  |
| Corylanthis rigidus      | 0, 1-20, 20-100, >100                                    |  |  |
| Castilleja exserta       | 0, 1-20, 20-100, >100                                    |  |  |
| % Bare ground estimate   | 0-25%, 26-50%, 51-75%, >75%                              |  |  |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75%                              |  |  |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75%                              |  |  |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

other relevant informations sies, other life stages observed).

Viguiera laciniata don-shabs

Enogenera fasciculation

Lots & grass cover-Browns madritensis rebens/Browns diander

Some compressible, Dichelosteman

(over)

| •            |   |          |               |   |
|--------------|---|----------|---------------|---|
| Date 3/2     | 6/08 Plot number                        | 7        | Time sta      | art 1415 end 1430                           |
| Plot locatio | n 1791154.37                            | N        | 63603         | 66.16E                                      |
|              | DATE RIB                                |          | ,             |   |
| Temp (°C)    | Wind (km/hr)                            | <u> </u> | Sky: cle      | ar, partly cloudy, cloudy                   |
| Observation  | s (use additional sheets if             | f ne     | eded)         |   |
|              | Quadrant                                | 110      | Number        | Quadrant                                    |
|              | (or GPS coordinates NAD 83 outside plot |          | of adults     | (or GPS coordinates<br>NAD 83 outside plot) |
|              |   |          |               |   |
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| Hostplant    | enaciae                                 | D        | maiter non nl | at (actimate)                               |
| Plantago er  |   |          | 1-20, 20-10   | ot (estimate) 0, >100 (100 - 1000)          |
| Plantago pe  |   |          | 1-20, 20-10   |   |
|              | n coulterianum                          |          | 1-20, 20-10   |   |
| Corylanthis  |   |          | 1-20, 20-10   |   |
| Castilleja e |   |          | 1-20, 20-10   |   |
|              |   |          |               | , - 100                                     |
| % Bare gr    | ound estimate                           | Q-,      | 25%, 26-509   | %, 51-75%, > <del>7</del> 5%                |
|              | area estimate                           |          |               | %, 51-75%, <i>⊳</i> 75,%√                   |
| % Shrub c    | over estimate                           |          |               | %, 51-75%, >75%                             |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

X

species, other life stages observed).

Adonostoma, Salvia Clevelandii, Ceanothus

Nector - Plagiobothy (abundant

Butterflies - P. Lady 21: 15

We Lady 1: -5

| Date <u>031</u>     | 27/08 Plot number_          | 3Z_Time st                            | art 12:55 end 1:10 pm      |  |
|---------------------|-----------------------------|---------------------------------------|----------------------------|--|
| Plot location       | on 1786529.74 N             | 6360550                               | 1,22E                      |  |
| Surveyor _          | Sally Traka                 | · · · · · · · · · · · · · · · · · · · |                            |  |
| L8° (€<br>Temp (°C) | Wind (km/hr)                | 2-8~ph Sky:(clo                       | ear, partly cloudy, cloudy |  |
| Observation         | s (use additional sheets if | needed)                               |                            |  |
| Number              | Quadrant                    | Number                                | Quadrant                   |  |
| of adults           | (or GPS coordinates         | . •                                   | (or GPS coordinates        |  |
|                     | NAD 83 outside plot         | )                                     | NAD 83 outside plot)       |  |
| none                |                             |                                       |                            |  |
|                     |                             |                                       |                            |  |
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|                     |                             |                                       |                            |  |
| Hostplant           | species                     | Density per p                         | lot (estimate)             |  |
| Plantago e          |                             | 0, 1-20, 20-10                        | 00, >100-1,000, (1,000+)   |  |
| Dlantagon           | ataanniaa                   | 0 1 20 20 100 > 100                   |                            |  |

| Hostplant species        | Density per plot (estimate)  |         |
|--------------------------|--|---------|
| Plantago erecta          | 0, 1-20, 20-100, >100-1,000, (1,000+)                              |         |
| Plantago patagonica      | 0, 1-20, 20-100, >100  |         |
| Antirrhinum coulterianum | 0, 1-20, 20-100, >100  |         |
| Corylanthis rigidus      | 0, 1-20, 20-100, >100  | •       |
| Castilleja exserta       | 0, 1-20, 20-100, >100  |         |
| % Bare ground estimate   | 0-25%, 26-50%, 51-75%, >75%  |         |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, (75%) Sevena                                | 0 روميع |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, \$75% sever a 0-25%, (26-50%), 51-75%, >75% | gà V    |
|                          |  |         |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

| Date 03/27/08 Plot number 34 Time start 10:22 amend 10:37 am                       |
|--|
| Plot location 34 1786787.51 N 6361427.16=  |
| Surveyor Sally Traka   |
| Temp (°C) <u>\&amp;F</u> Wind (km/hr) <u>O-4</u> Sky: clear) partly cloudy, cloudy |
| Ob   |

| Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
|------------------|---|---------------------|---|
| none             |   |                     |   |
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| Hostplant species        | Density per plot (estimate)          |
|--------------------------|--------------------------------------|
| Plantago erecta          | 0, 1-20, 20=100, 2100 - 1,000 1,000+ |
| Plantago patagonica      | 0, 1-20, 20-100, >100                |
| Antirrhinum coulterianum | 0, 1-20, 20-100, >100                |
| Corylanthis rigidus      | 0, 1-20, 20-100, >100                |
| Castilleja exserta       | 0, 1-20, 20-100, >100                |
| 1                        | includes dist road                   |
| % Bare ground estimate   | 0-25%, 26-50%, 51-75%, >75%          |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, (575%)        |
| % Shrub cover estimate   | (0-25%), 26-50%, 51-75%, >75%        |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

| Date 3 27 87 Plot number 58 Time start 1242 end 1257            |
|---|
| Plot location 1787047.74 N 6360525.25 E                         |
| Surveyor Brian Parket   |
| Temp (°C) 70 Wind (km/hr) 4 6 Sky: clear, partly cloudy, cloudy |

| Number<br>of adults                   | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
|---------------------------------------|---|------------------|---|
|                                       | SW 32°34,037'N  |                  |   |
| · · · · · · · · · · · · · · · · · · · | No Photo  |                  |   |
|                                       |   |                  |   |
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|                                       |   |                  |   |

| Hostplant species        | Density per plot (estimate) |
|--------------------------|-----------------------------|
| Plantago erecta          | 0, 1-20, 20-100, >100       |
| Plantago patagonica      | 0, 1-20,(20-100, >100       |
| Antirrhinum coulterianum | 0, 1-20, 20-100, >100       |
| Corylanthis rigidus      | 0, 1-20, 20-100, >100       |
| Castilleja exserta       | 0, 1-20, 20-100, >100       |
| % Bare ground estimate   | 0-25%(26-50)%, 51-75%, >75% |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75% |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75% |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

Shrubs-Er. fas, Adu fas, Mal (a)

Nectar - Las cal, Errogonum

Some Cast. ess., Some Cryptanthe

From Coordinates for other life stages observed, and other butterfly species, other

|               | * •                            |            |  |   |
|---------------|--------------------------------|------------|--|---|
| Date 3/27     | Plot number 3                  | 9 Time st  | art 1130 end 1135                        |   |
| Plot location | on Otay Hills Aveo             | 12 17      | 57683.64N 636                            | e2405.22                                |
| Surveyor _    | Alison Vamer                   |            |  |   |
| Temp (°C)     | 21.6 Wind (km/hr) 0            | -3_Sky: et | ear, partly cloudy, cloudy               |   |
| Observation   | s (use additional sheets if ne | eeded)     |  | •                                       |
| Number        | Quadrant                       | Number     | Quadrant                                 |   |
| of adults     |                                | of adults  | (or GPS coordinates NAD 83 outside plot) | *************************************** |
|               | NAD 83 outside plot)           |            | NAD 83 outside plot)                     |   |

| Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
|---------------------|---|------------------|---|
| NOQ                 | nno Observed  |                  |   |
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| Hostplant species        | Density per plot (estimate)      |
|--------------------------|----------------------------------|
| Plantago erecta          | 0, 1-20, 20-100, 101-1000, >1000 |
| Plantago patagonica      | 8, 1-20, 20-100, 101-1000, >1000 |
| Antirrhinum coulterianum | 0, 1-20, 20-100, >100            |
| Corylanthis rigidus      | ① 1-20, 20-100, >100             |
| Castilleja exserta       | 0, 1-20, 20-100, \$100           |
|                          |                                  |
| % Bare ground estimate   | (10-25%), 26-50%, 51-75%, >75%   |
| % Burned area estimate   | (0-25%) 26-50%, 51-75%, >75%     |
| % Shrub cover estimate   | (0-25%) 26-50%, 51-75%, >75%     |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

NCAV: (MyANA), LATIO, MS LYS, DOWN Shrub: EVIFAS

VIJUC, (MYANA)

Painted Lady 14+111

| Date $\frac{3/27/08}{}$ Plot number $\frac{42}{}$ Time start $\frac{13:02}{}$ end $\frac{13:17}{}$ |
|--|
| Plot location Otay HILLS 1788015.47 N 6363690.87 E   |
| Surveyor Stacy Nigro - Helix Envir. Planing  |
| Temp (°C) 21 Wind (km/hr) 5-/3 Sky clear partly cloudy, cloudy                                     |

| Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
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| Hostplant species        | Density per plot (estimate)   |
|--------------------------|-------------------------------|
| Plantago erecta √        | 0, 1-20, 20-100, (>100)       |
| Plantago patagonica      | (0) 1-20, 20-100, >100        |
| Antirrhinum coulterianum | 0, 1-20, 20-100, >100         |
| Corylanthis rigidus      | 0, 1-20, 20-100, >100         |
| Castilleja exserta 🗸     | 0, 1-20, 20-100 >100          |
|                          |                               |
| % Bare ground estimate   | 0-25%, 26-50%, 51-75%, >75%   |
| % Burned area estimate   | (0-25%,) 26-50%, 51-75%, >75% |
| % Shrub cover estimate   | 0-25%,)26-50%, 51-75%, >75%   |

**Notes.** Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

Nector sources: Crypto/Plagio spr. Erio. Fasc.; Linanthus

Dom. shrubs: Art. cat, Vig. lac, Erio. fase

|                  |                            | r_48Time start_                | 1333 end_      | 14:05  |
|------------------|----------------------------|--------------------------------|----------------|--------|
| Plot location _  | 04ay 14i15<br>1788593,154N | ,6301189.13HE                  |                |        |
| Surveyor         | Any Mattson                | A 21:03 H                      |                |        |
| Temp (°C)        | Wind (km/hr                | 0-48 km/hr<br>) 0-3 Sky clear, | partly cloudy, | cloudy |
| Observations (us | se additional sheets       | if needed)                     |                |        |

| Number Quadrant Number Quadrant |  |           |  |  |  |
|---------------------------------|--|-----------|--|--|--|
| of adults                       | (or GPS coordinates<br>NAD 83 outside plot)  | of adults | (or GPS coordinates<br>NAD 83 outside plot)  |  |  |
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| Hostplant species        | Density per plot (estimate)          |
|--------------------------|--------------------------------------|
| Plantago erecta          | (0, 1-20, 20-100, \$100 -1000 ,>1000 |
| Plantago patagonica      | 0, 1-20, 20-100, \$100 - 1000 > 1000 |
| Antirrhinum coulterianum | 0, 1-20, 20-100, >100                |
| Corylanthis rigidus      | 0, 1-20, 20-100, >100                |
| Castilleja exserta       | (0), 1-20, 20-100, >100              |
|                          |                                      |
| % Bare ground estimate   | (0-25%, 26-50%, 51-75%, >75%         |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75%          |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75%          |
|                          |                                      |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

bull-office i white, Galdes, ringlet
Nector i malacothomnus, roll scop, Congolombia, orth cap Brassilage, vight
Ghoubs - vight, Maltan Z Calcol, Johanny Jumpup!, schemer, Siey bel: Allnump
mossily work

| Date _  | 3.27.08     | Plot-number_        | <u> 5</u> 2_ '                         | Time start            | 11:35 end     | 11/50    |
|---------|-------------|---------------------|--|-----------------------|---------------|----------|
| Plot lo | ocation Ohy | 15115 1788126       | 1.05 Ft N                              | , 636213              | 6.07.4 E      |          |
| Surve   | yor Am      | 1 Mattern           | disdadició selegyes <sub>kara</sub> na |                       |               | · .      |
| Temp    | (°C) 65°F   | Markon Wind (km/hr) | 1.8-9.<br>3-60<br>man                  | 6 km/hr<br>Sky: clear | partly cloudy | , cloudy |
| ~ -     |             |                     | _ / #                                  | 5.                    |               |          |

| Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot)  | Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
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| Hostplant species        | Density per plot (estimate)         |
|--------------------------|-------------------------------------|
| Plantago erecta          | 0, 1-20, 20-100, >100 -1000, 71000) |
| Plantago patagonica      | 0,1-20, 20-100, \$100-1000 71000    |
| Antirrhinum coulterianum | 0) 1-20, 20-100, >100               |
| Corylanthis rigidus      | 0, 1-20, 20-100, >100               |
| Castilleja exserta       | 0, 1-20, 20-100, >100               |
| % Bare ground estimate   | 0-25%) 26-50%, 51-75%, >75%         |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75% NK      |
| % Shrub cover estimate   | 0-25%) 26-50%, 51-75%, >75%         |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

bullethies - Gabbs, ladies, painted lady, white shribs - AA Cal, Lessinsia, Sal api, Lot seo, Vis lae, Erichs rector Linda, the cap, Cappanta, Lot sea, Miris cal, Oak all Milliams, Lotying, Lascal, Phac cie, Hyp Sta, Ege cal Johnson, Jumps, Erodian spp Solmung, Stiene Tunpologo, Brasicase, Vig las,

| Date     | 3-27-0K          | _Plot number_ | <u>54</u> Time | e start <u>/0.434</u> e | nd <u>10:55</u> |
|----------|------------------|---------------|----------------|-------------------------|-----------------|
| Plot loc | ation <u>Hae</u> | 1616 178915   | 841AN 16       | 361302.09.ftE           | •               |
| Surveyo  | or <u>Am</u>     | y Mattson     | N - 8 L        | 1/2 · ·                 |                 |
| Temp (°  |                  |               | ()-5 Sky:      | clear, partly clou      | dy, cloudy      |

| Observations | (use | additional | sheets | if | needed) |
|--------------|------|------------|--------|----|---------|
|--------------|------|------------|--------|----|---------|

| Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number<br>of adults  | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
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| Hostplant species        | Density per plot (estimate)           |
|--------------------------|---------------------------------------|
| Plantago erecta          | / 0, 1-20, 20-100, ≥100 -1000 (>1000) |
| Plantago patagonica      | (0), 1-20, 20-100, \$100-1000 >1000   |
| Antirrhinum coulterianum | (0,) 1-20, 20-100, >100               |
| Corylanthis rigidus      | (0), 1-20, 20-100, >100               |
| Castilleja exserta       | 0, 1-20, 20-100, >100                 |
|                          |                                       |
| % Bare ground estimate   | (0-25%, 26-50%, 51-75%, >75%          |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75%           |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75%           |

other bullothy: lady rubult, rinslet, Galobs strubs- Mallan, visks, Erifus, Blefas. rector- Gyptanthe, Lix dan, Alliumsp, Holsen, etc.

| Date 3/27/08        | _ Plot number   | 56_ Time start  | //:45 end       | 1/2:00    |
|---------------------|-----------------|-----------------|-----------------|-----------|
| Plot location Otan  | Hills 1789      | 396.91 N 63     | 63403.95        | E         |
| Surveyor Stacy      |                 |                 |                 |           |
| Temp (°C) <u>2∂</u> | Wind (km/hr) _3 | 3-11 Sky: clear | ) partly cloudy | y, cloudy |

| Number<br>of adults                   | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
|---------------------------------------|---|---------------------|---|
|                                       |   |                     |   |
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| Hostplant species        | Density per plot (estimate) |
|--------------------------|-----------------------------|
| Plantago erecta          | (0,71-20, 20-100, >100      |
| Plantago patagonica      | 0, 1-20, 20-100, >100       |
| Antirrhinum coulterianum | 02 1-20, 20-100, >100       |
| Corylanthis rigidus      | 0/1-20, 20-100, >100        |
| Castilleja exserta       | (0) 1-20, 20-100, >100      |
| % Bare ground estimate   | 0-25%, 26-50%, 51-75%, >75% |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75% |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75% |

| Date 3/22/08 Plot number 77 Time start 1015 end 1030                |
|---|
| Plot location 1791561.86 N /6360703.67E                             |
| Surveyor DOUG ALLEN   |
| Temp (°C) 18.8 C Wind (km/hr) 3-5 Sky: Clear, partly cloudy, cloudy |

| Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
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| Hostplant species        | Density per plot (estimate)         |
|--------------------------|-------------------------------------|
| Plantago erecta          | 0, 1-20, 20-100, >100               |
| Plantago patagonica      | 0, 1-20, 20-100, >100               |
| Antirrhinum coulterianum | 0, 1-20, 20-100, >100               |
| Corylanthis rigidus      | 0, 1-20, 20-100, >100               |
| Castilleja exserta       | 0, (1-20, 20-100, >100              |
| % Bare ground estimate   | <b>Q</b> -25%, 26-50%, 51-75%, >75% |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75%         |
| % Shrub cover estimate   | 0-25%, 26-50%, \$1-75%, >75%        |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

Chamise C. Lamen PALA WCLA Gold Richels popcoun

C. othy

Yylo, coc.

| Date 3/27/08      | _ Plot number 78        | Time start_ | 1035      | end_/_   | 150  |
|-------------------|-------------------------|-------------|-----------|----------|------|
| Plot location 179 | 1619.73N/63             | 60235,76    | E         |          |      |
| Surveyor D. A     | Illen                   |             |           |          |      |
| Temp (°C) 18.8    | Wind (km/hr) <u>6-3</u> | Sky: elear  | partly cl | oudy, cl | oudy |

| Number of adults                        | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
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| Hostplant species        | Density per plot (estimate)   |
|--------------------------|-------------------------------|
| Plantago erecta          | 0, 1-20, 20-100, >100 (7100)  |
| Plantago patagonica      | 0, 1-20, 20-100, >100         |
| Antirrhinum coulterianum | 0, 1-20, 20-100, >100         |
| Corylanthis rigidus      | 0, 1-20, 20-100, >100         |
| Castilleja exserta       | 0, 1-20, 20-100, >100         |
|                          |                               |
| % Bare ground estimate   | (0-25%), 26-50%, 51-75%, >75% |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75%   |
| % Shrub cover estimate   | 0-25%, 26-50%, (51-75%), >75% |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

Chamise

TZAS

Gold field Popcoin Flower Evaclim (1)

C. Homan

WHA PALA

T. CYPYER

BEMM

| Date 3/2 1/08 Plot number 82 Time    | ne start 10 25 end 10 55        |
|--------------------------------------|---------------------------------|
| Plot location 1791899.82w /6350      | 9787.9€                         |
| Surveyor RobA                        |                                 |
| Temp (°C) 67 Wind (km/hr) 2-4mph Sky | /: clear, partly cloudy, cloudy |

| Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
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| 11 (2)              | SW  |                  | ,   |
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| Hostplant species        | Density per plot (estimate)   |
|--------------------------|-------------------------------|
| Plantago erecta          | 0,(1-20) 20-100, >100         |
| Plantago patagonica      | 0) 1-20, 20-100, >100         |
| Antirrhinum coulterianum | (0) 1-20, 20-100, >100        |
| Corylanthis rigidus      | (O) 1-20, 20-100, >100        |
| Castilleja exserta       | 0, 1-20, 20-100, >100         |
| % Bare ground estimate   | 0-25%, 26-50%, 51-75%, >75%   |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75%   |
| % Shrub cover estimate   | 0-25%, (26-50%), 51-75%, >75% |
| % Shrub cover estimate   | 0-25%,(26-50%), 51-75%, >75%  |

| Date 3/27/08 Plot number 85 Time start 1/55 end 1215          |
|---|
| Plot location 1792631.38 N 6357559.51 E                       |
| Surveyor Cob H  |
| Temp (°C) 69 Wind (km/hr) 3 Sky: clear, partly cloudy, cloudy |
| 30.5°C  |

| Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
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| Hostplant species        | Density per plot (estimate)       |
|--------------------------|-----------------------------------|
| Plantago erecta          | 0, (1-20) 20-100, 101-1000, >1000 |
| Plantago patagonica      | (6, 1-20, 20-100, 101-1000, >1000 |
| Antirrhinum coulterianum | ②, 1-20, 20-100, >100             |
| Corylanthis rigidus      | (0), 1-20, 20-100, >100           |
| Castilleja exserta       | ①, 1-20, 20-100, >100             |
|                          |                                   |
| % Bare ground estimate   | 0-25%, 26-50%, 51-75%, >75%       |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75%       |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75%       |

| Number   | Quadrant                                 | I            | lumber   | Quadrant |           |
|--|--|--------------|----------|----------|-----------|
| Observations (use additional sheets if needed)                     |  |              |          |          |           |
| Temp (°C) 65 F Wind (km/hr) 4-10 Sky: clear, partly cloudy, cloudy |  |              |          |          |           |
| Surveyor_  | Surveyor Sally Troke                     |              |          |          |           |
| Plot location  | Plot location 1786378.06 N (036623), 56E |              |          |          |           |
| Date <u>O3/</u>  | 28/08 PI                                 | ot number 26 | Time sta | art 1:15 | end_\'30_ |

| Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
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| Hostplant species        | Density per plot (estimate)  |
|--------------------------|------------------------------|
| Plantago erecta          | 0, 1-20, 20-100, >100        |
| Plantago patagonica      | 0, 1-20, 20-100, >100        |
| Antirrhinum coulterianum | 0, 1-20, 20-100, >100        |
| Corylanthis rigidus      | 0, 1-20, 20-100, >100        |
| Castilleja exserta       | 0, 1-20, 20-100, >100        |
|                          |                              |
| % Bare ground estimate   | (0-25%,)26-50%, 51-75%, >75% |
| % Burned area estimate   | 0-25%, 26-50%, 51-75% >75%   |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75%  |

| Date $\frac{4/7/08}{1325}$ Plot number $\frac{26}{1325}$ Time start $\frac{1310}{1325}$ end $\frac{1325}{1325}$ |
|---|
| Plot location 26 - Otay Hills 1786328.06 N 6360231.56E  |
| Surveyor Dale Ritenour  |
| Temp (°C) 20 Wind (km/hr) Sky: elear, partly cloudy, cloudy   |

| Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant (or GPS coordinates NAD 83 outside plot) |
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| Hostplant species        | Density per plot (estimate)      |
|--------------------------|----------------------------------|
| Plantago erecta          | 0, 1-20, 20-100, 101-1000, >1000 |
| Plantago patagonica      | ① 1-20, 20-100, 101-1000, >1000  |
| Antirrhinum coulterianum | (0, 1-20, 20-100, >100           |
| Corylanthis rigidus      | ① 1-20, 20-100, >100             |
| Castilleja exserta       | ①> 1-20, 20-100, >100            |
| % Bare ground estimate   | 0-25%, 26-50% 51-75%, >75%       |
| % Burned area estimate   | (0-25%) 26-50%, 51-75%, >75%     |
| % Shrub cover estimate   | Ø-25%; 26-50%, 51-75%, >75%      |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

Painted Ladies, Check. White

| Date 4/7/    | 08  | Plot num | ber <u>32</u> | Time start_ | 12143 end_     | 12158  |
|--------------|-----|----------|---------------|-------------|----------------|--------|
|              |     |          | - 10 p        |             | 6360556        |        |
| Surveyor     | Amy | Mattson  |               |             |                | .·     |
|              |     |          |               |             | partly cloudy, | cloudy |
| Observations |     |          |               |             |                |        |

| Number of adults                      | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot)   | Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
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| Hostplant species        | Density per plot (estimate)       |
|--------------------------|-----------------------------------|
| Plantago erecta          | 0, 1-20, 20-100, 101-1000, \$1000 |
| Plantago patagonica      | (0.)1-20, 20-100, 101-1000, >1000 |
| Antirrhinum coulterianum | (0√1-20, 20-100, >100             |
| Corylanthis rigidus      | (0,)1-20, 20-100, >100            |
| Castilleja exserta       | 0, 1-20, 20-100,>100              |
| % Bare ground estimate   | (0-25%), 26-50%, 51-75%, >75%     |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75% NIA   |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75%       |

bullerlies ; lads, white Shouls : Exi Pas, VIS he,

Fures: Vistac Califol En las laccal (almac osm for Louis 4., Linda Exodisión sp., Corporanhase. + Este cal, Solanume.

| Date $\frac{4/7/08}{1}$ Plot number $\frac{34}{3}$ Time start $\frac{1355}{1}$ end $\frac{1410}{1}$ |
|---|
| Plot location Otay Hills 1786787,51 N 6361427.16 E  |
| Surveyor Dale Ritanew   |
| Temp (°C) 20 Wind (km/hr) 4-10 Sky clear, partly cloudy, cloudy                                     |
| Ob  |

| Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
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| Hostplant species        | Density per plot (estimate)      |
|--------------------------|----------------------------------|
| Plantago erecta          | 0, 1-20, 20-100, 101-1000, >1000 |
| Plantago patagonica      | ①51-20, 20-100, 101-1000, >1000  |
| Antirrhinum coulterianum | <b>6</b> 1-20, 20-100, >100      |
| Corylanthis rigidus      | Ø? 1-20, 20-100, >100            |
| Castilleja exserta       | ① 1-20, 20-100, >100             |
| % Bare ground estimate   | 0-25%, 26-50% 51-75%, >75%       |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75%      |
| % Shrub cover estimate   | 0-25%) 26-50%, 51-75%, >75%      |

| Date 4/8/08 Plot number 38 Time start 1240 end 1255                            |
|--|
| Plot location 38-Otay Hills 1797047.74 N 6360525.25E<br>Surveyor Dale Riteneur |
| Surveyor Dale Ritenour   |
| Temp (°C) 23 Wind (km/hr) 6-10 mph Sky clear) partly cloudy, cloudy            |
| Observations (use additional sheets if needed)                                 |

| Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
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| Hostplant species        | Density per plot (estimate)      |
|--------------------------|----------------------------------|
| Plantago erecta          | 0, 1-20, 20-100, 101-1000, >1000 |
| Plantago patagonica      | © 1-20, 20-100, 101-1000, >1000  |
| Antirrhinum coulterianum | ① 1-20, 20-100, >100             |
| Corylanthis rigidus      | © 1-20, 20-100, >100             |
| Castilleja exserta       | <u>(a)</u> , 1-20, 20-100, >100  |
|                          |                                  |
| % Bare ground estimate   | 0-25%, 26-50%, 51-75%, >75%      |
| % Burned area estimate   | 0-25% 26-50%, 51-75%, >75%       |
| % Shrub cover estimate   | (0-25%; 26-50%, 51-75%, >75%     |

Few annuals still in flower-some cryptanthe.

Painted Lady, Behrs Metalmark & Checkered White also observed.

| Date <u>Out</u> | <u>○寻/®</u> Plot number <u>□</u>  | Time st          | art 12:57 end 13:12                               | •   |
|-----------------|---|------------------|---|-----|
| Plot location   | on Oday Hills   | 178760           | 3.02 N 6360535                                    | .57 |
|                 | Sally TRUKA   |                  |   |     |
| Temp (°C)       | <b>歩</b> で<br>Wind (km/hr)  | Sky:Cl           | ear) partly cloudy, cloudy                        |     |
|                 | • '   |                  |   |     |
| Observation     | s (use additional sheets if n   | eeded)           |   |     |
| Number          | s (use additional sheets if no<br>Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant (or GPS coordinates NAD 83 outside plot) |     |
| Number          | Quadrant<br>(or GPS coordinates   | Number           | 1 -   |     |

| Hostplant species        | Density per plot (estimate)      |
|--------------------------|----------------------------------|
| Plantago erecta          | 0, 1-20, 20-100, 101-1000, >1000 |
| Plantago patagonica      | 0, 1-20, 20-100, 101-1000, >1000 |
| Antirrhinum coulterianum | 0, 1-20, 20-100, >100            |
| Corylanthis rigidus      | 0, 1-20, 20-100, >100            |
| Castilleja exserta       | 0, 1-20, 20-100, >100            |
|                          |                                  |
| % Bare ground estimate   | (0-25%, 26-50%, 51-75%, >75%     |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%,(>75%)     |
| % Shrub cover estimate   | 0-25%, (26-50%, 51-75%, >75%     |

| Date <u>4-7-</u> | Plot number 53 Time start 14/0 end 1425             | _ |
|------------------|---|---|
| Plot location _  | 1789518,30 N/ 6360296,398                           |   |
| Surveyor         |   |   |
| Temp (°C)        | Wind (km/hr) 6-12 Sky: clear) partly cloudy, cloudy |   |

| Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |  |
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| Hostplant species        | Density per plot (estimate)     |  |  |
|--------------------------|---------------------------------|--|--|
| Plantago erecta          | <b>(0/1-20, 20-100, &gt;100</b> |  |  |
| Plantago patagonica      | (0, 1-20, 20-100, >100          |  |  |
| Antirrhinum coulterianum | (0/1-20, 20-100, >100           |  |  |
| Corylanthis rigidus      | (10) 1-20, 20-100, >100         |  |  |
| Castilleja exserta       | (0, 1-20, 20-100, >100          |  |  |
| % Bare ground estimate   | 0-25%, 26-50%, 51-75%, >75%     |  |  |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75%     |  |  |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75%     |  |  |

| Date 4-10-08 Plot number 7/ Time start 1230 end 1245                |
|---|
| Plot location 1791156.37 N 6360366.16 E                             |
| Surveyor Brian Parle  |
| Temp (°C) 74 Wind (km/hr) 4-6 m/4 Sky: elear, partly cloudy, cloudy |

| Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
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Sara 1. P. Ludy:

| Hostplant species        | Density per plot (estimate)          |  |  |
|--------------------------|--------------------------------------|--|--|
| Plantago erecta          | (O; 1-20, 20-100, >100               |  |  |
| Plantago patagonica      | (0), 1-20, 20-100, >100              |  |  |
| Antirrhinum coulterianum | -0 <sub>3</sub> , 1-20, 20-100, >100 |  |  |
| Corylanthis rigidus      | 1-20, 20-100, >100                   |  |  |
| Castilleja exserta       | ( <del>0,</del> 1-20, 20-100, >100   |  |  |
|                          |                                      |  |  |
| % Bare ground estimate   | 0-25%, 26-50%, 51-75%, >75%          |  |  |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75%          |  |  |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75%          |  |  |

**Notes.** Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

Nector Cryptantle, Erogonin

shows - Chamice, Sil cle, Eri. fas,

Butterflue - Son Orange trp-3 Painted Cod - Z

| Date 4/10/08 Plot number 77 Time start 11:11 end 11:26      |
|---|
| Plot location of 416 179 1561.86N 6360703.67E               |
| Surveyor Stacy Nigno  |
| Temp (°C) 21 Wind (km/hr) Sky: clear, partly cloudy, cloudy |

| Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |                                       | Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |  |
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| Hostplant species        | Density per plot (estimate)    |  |  |
|--------------------------|--------------------------------|--|--|
| Plantago erecta          | 0, 1-20, 20-100, >100, (21000) |  |  |
| Plantago patagonica      | ① 1-20, 20-100, >100           |  |  |
| Antirrhinum coulterianum | ① 1-20, 20-100, >100           |  |  |
| Corylanthis rigidus      | ① 1-20, 20-100, >100           |  |  |
| Castilleja exserta       | ① 1-20, 20-100, >100           |  |  |
| % Bare ground estimate   | 0-25%, 26-50%, 51-75%, >75%    |  |  |
| % Burned area estimate   | (0-25%) 26-50%, 51-75%, >75%   |  |  |
| % Shrub cover estimate   | 0-25%, 26-50%,(51-75%) >75%    |  |  |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

species, other life stages observed).

Nectoring resources: Lasth cel, Crypt. sp, Eno fast

Dom. Strubs: Aden. fasc, Cranothus sp.

butterfires: 1 blue, 1'swellowfail = 2

| Date 041            | 10 108 Plot number 3                                    | ቼ Time st             | art 11:21 end 11:360                                    | i.w.      |
|---------------------|---|-----------------------|---|-----------|
| Plot location       | on Otay Hills C   | luary 1               | 791619,73N/63   | 60235,76E |
|                     | Sally TRNKA   |                       |   |           |
| Temp (°C)           | Wind (km/hr) <u>3</u> -                                 | <u>पंत्र्क</u> Sky:टी | ear) partly cloudy, cloudy                              |           |
| Observation         | is (use additional sheets if ne                         | eded)                 |   |           |
| Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults      | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |           |
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|                     |   |                       |   | <b>]</b>  |
|                     |   |                       |   |           |

| Hostplant species          | Density per plot (estimate)            | din      |
|----------------------------|--|----------|
| Plantago erecta            | 0, 1-20, 20-100, \$100 has (or > ) per |          |
| Plantago patagonica        | 0, 1-20, 20-100, \$100                 |          |
| Antirrhinum coulterianum   | 0, 1-20, 20-100, >100                  | 1        |
| Corylanthis rigidus        | 0, 1-20, 20-100, >100                  |          |
| Castilleja exserta         | 0, (1-20), 20-100, >100                |          |
| % Bare ground estimate     | 0-25%, 26-50%, 51-75%, >75%            |          |
| % Burned area estimate     | 0-25%, 26-50%, 51-75%, (>75%) seve     | Q 4, V S |
| % Shrub cover estimate     | 0-25%, 26-50%, \$1-75%, >75%           | 1.       |
| 70 Dail dio Cover Cstimate | 0 23 70, 20-30 70, D1-13 70; >1370     | ļ ·      |

chamise is downant (Adenostena fescicolade)

flowering plants
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| Date <u>4</u> - | 10-08 Plot number 8   | 2_Time st | art 1130 end 1145          |
|-----------------|---|-----------|----------------------------|
| Plot location   | on 1791899,8  | 2N 63     | 59787,90E                  |
|                 | Brian Parker  |           |                            |
| Temp (°C)       | Wind (km/hr)  7/ ° P  2- v  1s (use additional sheets if ne | Sky: éle  | ear, partly cloudy, cloudy |
|                 | Quadrant  | Number    | Quadrant                   |
|                 | (or GPS coordinates<br>NAD 83 outside plot)                 | of adults | (or GPS coordinates        |

| Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
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| Density per plot (estimate)         |  |  |  |
|-------------------------------------|--|--|--|
| (0) 1-20, 20-100, >100 None Visible |  |  |  |
| (Q)1-20, 20-100, >100               |  |  |  |
| (0),1-20, 20-100, >100              |  |  |  |
| <u>Ø</u> ;-1-20, 20-100, >100       |  |  |  |
| 0, (1-20, 20-100, >100 5 W          |  |  |  |
| 0-25%, 26-50%, 51-75%, >75%         |  |  |  |
| 0-25%, 26-50%, 51-75%, >75%         |  |  |  |
| 0-25%, 26-50%, 51-75%, >75%         |  |  |  |
|                                     |  |  |  |

Shows - Alenostone, Country, Lotes Scop, Erro. foss. Con Fort:

Nector - Cryptantha Sal cleve., Malsones GASB.

We Lady.

| Date $\frac{4/10/08}{100}$ Plot number $85$ Time start $13:22$ end $13:37$ |
|--|
| Plot location Otay Hills 1792631,38 N 6357559.51 E                         |
| Surveyor Stacy Nigro   |
| Temp (°C) 22 Wind (km/hr) Sky: clear, partly cloudy, cloudy                |

| Number<br>of adults                   |  |  | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |  |
|---------------------------------------|--|--|---|--|
| · · · · · · · · · · · · · · · · · · · |  |  |   |  |
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| Hostplant species        | Density per plot (estimate)     |  |  |  |
|--------------------------|---------------------------------|--|--|--|
| Plantago erecta          | 0, 1-20, 20-100, >100           |  |  |  |
| Plantago patagonica      | (0), 1-20, 20-100, >100         |  |  |  |
| Antirrhinum coulterianum | ( <u>0</u> ) 1-20, 20-100, >100 |  |  |  |
| Corylanthis rigidus      | (0) 1-20, 20-100, >100          |  |  |  |
| Castilleja exserta       | (0,) 1-20, 20-100, >100         |  |  |  |
|                          |                                 |  |  |  |
| % Bare ground estimate   | (0-25%, 26-50%, 51-75%, >75%    |  |  |  |
| % Burned area estimate   | (0-25%), 26-50%, 51-75%, >75%   |  |  |  |
| % Shrub cover estimate   | 0-25%,(26-50%, 51-75%, >75%     |  |  |  |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly

| Date Oil   | 10/08 Plot number                                       | 37 Time st                            | art 13:00 end 13:15                                     |  |
|--|---|---------------------------------------|---|--|
| Plot location 1793176,39N 6358207,94E                                    |   |                                       |   |  |
| Surveyor _   | Sally TRNKA   |                                       |   |  |
| Surveyor Selly TRNKA  70% Wind (km/hr) Sky: Clear, partly cloudy, cloudy |   |                                       |   |  |
| Observation  | s (use additional sheets if r                           | needed)                               |   |  |
| Number   | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults                      | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |  |
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| Hostplant  |   |                                       | lot (estimate)  |  |
| Plantago erecta 0 1-20 20-100 >100                                       |   |                                       |   |  |

| Hostplant species        | Density per plot (estimate)           |  |  |  |
|--------------------------|---------------------------------------|--|--|--|
| Plantago erecta          | 0, 1-20, 20-100, >100                 |  |  |  |
| Plantago patagonica      | 0, 1-20, 20-100, (100)                |  |  |  |
| Antirrhinum coulterianum | 0, 1-20, 20-100, >100                 |  |  |  |
| Corylanthis rigidus      | 0, 1-20, 20-100, >100                 |  |  |  |
| Castilleja exserta       | 0, 1-20, 20-100, >100                 |  |  |  |
| % Bare ground estimate   | (0-25%) 26-50%, 51-75%, >7 <u>5</u> % |  |  |  |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, \$\(\bigsim\)  |  |  |  |
| % Shrub cover estimate   | 0-25%, 26-50%, (51-75%), >75%         |  |  |  |

| Date 4-1                               | I-08 Plot number_                                      | 39 Time st   | art 110 end 1125  |  |
|--|--|--|---|--|
| Plot locatio                           | n 1787483.64   | N 636 240  |   |  |
| Surveyor _                             | Brian Park   | 20   | A typical and the same and the |  |
|  | •  |  | ear, partly cloudy, cloudy  |  |
| Observation                            | s (use additional sheets if                            | needed)  |   |  |
| Number                                 | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot | Number of adults   | Quadrant (or GPS coordinates NAD 83 outside plot)   |  |
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| Licetalant                             | gnatica  | D  | 1-4 (-4142)   |  |
| Hostplant species                      |  | Density per plot (estimate)  |   |  |
| Plantago erecta Plantago patagonica    |  | 0, 1-20, 20-100, 101-1000, >1000<br>0, 1-20, 20-100, 101-1000, >1000 |   |  |
|  | m coulterianum   | 0, 1-20, 20-1  |   |  |
|  | <del></del>  |  |   |  |
| Corylanthis rigidus Castilleja exserta |  | 0, 1-20, 20-100, >100<br>0, 1-20, 20-100, >100                       |   |  |
| Casimeja                               |  | 0, 1-20, 20-1  | .00, /100   |  |
| % Bare gi                              | round estimate   | 0-25%, (26-50  | %, 51-75%, >75%   |  |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed,

% Burned area estimate

% Shrub cover estimate

and other relevant information (e.g. ouncil), species, other life stages observed).

SHEUBS- Malosma, Artemisia

I- Lady:

Loungetif

Flowering- Vigurera, Delelostemma Zasam Grangetif

Cryptantha, Denandra Ritard to ID Plantago ble
all died:

(0-25%, 26-50%, 51-75%, >75%

26-50%, 51-75%, >75%

| Date 4/11/08 Plot number 42 Time start 1230 end 1245              |
|---|
| Plot location Otzy Hills 1788015,47 N 6362490,82E                 |
| Surveyor Dale Riterour  |
| Temp (°C) 29 Wind (km/hr) 11-19 Sky: clear) partly cloudy, cloudy |

| Number of adults                      | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
|---------------------------------------|---|---------------------|---|
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| Hostplant species        | Density per plot (estimate)  |  |  |  |
|--------------------------|------------------------------|--|--|--|
| Plantago erecta          | (C) 1-20, 20-100, >100       |  |  |  |
| Plantago patagonica      | 07, 1-20, 20-100, >100       |  |  |  |
| Antirrhinum coulterianum | -0; 1-20, 20-100, >100       |  |  |  |
| Corylanthis rigidus      | -0-> 1-20, 20-100, >100      |  |  |  |
| Castilleja exserta       | ② 1-20, 20-100, >100         |  |  |  |
| % Bare ground estimate   | 0-25% 26-50%, 51-75%, >75%   |  |  |  |
| % Burned area estimate   | (0-25%) 26-50%, 51-75%, >75% |  |  |  |
| % Shrub cover estimate   | (0-25%, 26-50%, 51-75%, >75% |  |  |  |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

species, other life stages observed).

Dominat Shrubs Viglau, Erifes

Butlerflies Painted Lady

Nectari Viglau, Eritas, Lin. diz.

| Date 4/11/08 Plot number 48 Time start 1/15 end 1/30            |
|---|
| Plot location Otay Hills 1788593.15 N 6361189.13E               |
| Surveyor Dale Ritenous  |
| Temp (°C) 26 Wind (km/hr) 0-6 Sky: clear, partly cloudy, cloudy |

| Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
|---------------------|---|------------------|---|
| None                |   |                  |   |
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| Hostplant species        | Density per plot (estimate) |
|--------------------------|-----------------------------|
| Plantago erecta          | (0) 1-20, 20-100, >100      |
| Plantago patagonica      | ©? 1-20, 20-100, >100       |
| Antirrhinum coulterianum | ©, 1-20, 20-100, >100       |
| Corylanthis rigidus      | (6), 1-20, 20-100, >100     |
| Castilleja exserta       | <b>4</b> 1-20, 20-100, >100 |
| % Bare ground estimate   | 0-25%, 26-50%, 51-75%, >75% |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75% |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75% |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

species, other life stages observed).

Dominant Shrubs: Viy /2c, Art cz/, Mz/lan

Nestari Vig/2c, Fen popcorn Honors

Bafforflies i Painted Lodies, Fritilling

| Date <u>4/11/08</u> Plot number <u>52</u> Time start <u>1415</u> end <u>1430</u> |
|--|
| Plot location Otay Hills 1789126.65 N 6362136.07 E                               |
| Surveyor Date Riterour   |
| Temp (°C) 24 Wind (km/hr) 220 Sky: clear, partly cloudy, cloudy                  |

| Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
|---------------------|---|------------------|---|
| None                |   |                  | ·   |
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| Hostplant species        | Density per plot (estimate)   |
|--------------------------|-------------------------------|
| Plantago erecta          | 0, 1-20, 20-100, >100 (>/000) |
| Plantago patagonica      | Ø 1-20, 20-100, >100          |
| Antirrhinum coulterianum | 0, 1-20, 20-100, >100         |
| Corylanthis rigidus      | (a) 1-20, 20-100, >100        |
| Castilleja exserta       | 07, 1-20, 20-100, >100        |
| % Bare ground estimate   | 0-25%, 26-50%, 51-75%, >75%   |
| % Burned area estimate   | Q-25%, 26-50%, 51-75%, >75%   |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75%   |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

species, other life stages observed).

Dominant Shrubs & Salapi, Mallau, Adefas, Africal

Nector; Pla ere, Lindia, Silgal. Ericon Butterflies: West Coast Lady, Painted Lady, Common White, Frit; Ilary

|   | ,                                     |          |             |   |
|---|---------------------------------------|----------|-------------|---|
| Date <u>4/1/</u>                              | 108 Plot numbe                        | <u>s</u> | Time sta    | art 1045 end 1100                           |
| Plot location                                 | on Otzy Hil                           | 15       | 178915      | 58,41N 6361302,0                            |
| Surveyor _                                    | Dale Ritenou                          | er-      |             |   |
| Temp (°C)                                     | 26 Wind (km/hr                        | )5<br>)  | Sky: cfe    | ear, partly cloudy, cloudy                  |
| Observation                                   | s (use additional sheets              | if ne    | eded)       |   |
| Number  | Quadrant                              | 11 110   | Number      | Quadrant                                    |
| of adults                                     | (or GPS coordinate NAD 83 outside plo |          | of adults   | (or GPS coordinates<br>NAD 83 outside plot) |
| None  |                                       |          |             | was de daside plot)                         |
|   |                                       |          |             |   |
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| Wootnlant                                     |                                       | T-D      | •           |   |
| Hostplant : Plantago es                       |                                       |          |             | ot (estimate)                               |
| Plantago el                                   |                                       |          |             | 00, >100 (>/600)                            |
|   |                                       |          | 1-20, 20-10 | <del></del>                                 |
| Antirrhinum coulterianum  Corylanthis rigidus |                                       | _        | 1-20, 20-10 |   |
| Castilleja e                                  |                                       | 117      | 1-20, 20-10 | 0, >100                                     |
| Casimeja e                                    | AGC/1U                                | 10%      | 1-20, 20-10 | 0, >100                                     |
| % Bare or                                     | ound estimate                         | m.       | 25%) 26 500 | %, 51-75%, >75%                             |
| % Burned                                      | area estimate                         | 6        | 25% 26-500  | 6, 51-75%, >75%                             |
|   |                                       | 14.      | 20-30 /     | v, J1-1370, 21370                           |

Dominant Shrubs - Adetas, Salapi, Arteal

% Shrub cover estimate

Other butler / is; Painted Lady, Callippe Fr. Hilley, Seva Oranget is, CA Ring let

| Date <u>1/11/08</u> Plot numbe | er 56 Time start 1335 end 1350 |
|--------------------------------|--------------------------------|
| Plot location Otay Hills       | 1789356,51 N 6363403.95E       |
| Surveyor Dz/r/itenour          |                                |
| $\sim$ 4                       |                                |

Temp (°C)  $\frac{28}{28}$  Wind (km/hr)  $\frac{2-10}{2}$  Sky: clear) partly cloudy, cloudy

Observations (use additional sheets if needed)

| Number<br>of adults                   | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
|---------------------------------------|---|------------------|---|
| None                                  |   |                  |   |
|                                       |   |                  |   |
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| Hostplant species        | Density per plot (estimate)              |
|--------------------------|--|
| Plantago erecta          | <b>%</b> ; 1-20, 20-100, >100            |
| Plantago patagonica      | 0, 1-20, 20-100, >100                    |
| Antirrhinum coulterianum | 0, 1-20, 20-100, >100                    |
| Corylanthis rigidus      | Ø; 1-20, 20-100, >100                    |
| Castilleja exserta       | Ø; 1-20, 20-100, >100                    |
| % Bare ground estimate   | 0-25%, 26-50%? 51-75%, >75%              |
| % Burned area estimate   | Ø <del>-25%</del> , 26-50%, 51-75%, >75% |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75%              |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

Dominant shrubs & Ade Fas, Salvia chev.,

Butterflies: Painted Lady Nectar: Papeorn flowers, Ant. nut., Eri.con.

| Number        | Quadrant                       | Number      | Quadrant                              |
|---------------|--------------------------------|-------------|---------------------------------------|
| Observation   | s (use additional sheets if ne | eded)       |                                       |
| Temp (°C)     | Wind (km/hr)                   | Sky: cle    | ear partly cloudy, cloudy             |
| -             | Alison Varner                  |             | · · · · · · · · · · · · · · · · · · · |
| Plot location | 1785775.32                     | N 635       | 59319.66 E                            |
| Date 444      | Plot number 25                 | ∑_ Time sta | art_1038_end_1053                     |

| Number<br>of adults                   | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
|---------------------------------------|---|------------------|---|
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|                                       |   |                  |   |

| Hostplant species        | Density per plot (estimate)         |
|--------------------------|-------------------------------------|
| Plantago erecta          | 0, 1-20, 20-100, 101-1000, \$1000 d |
| Plantago patagonica      | (0,)1-20, 20-100, 101-1000, >1000   |
| Antirrhinum coulterianum | 0, 1-20, 20-100, >100               |
| Corylanthis rigidus      | (0-1-20, 20-100, >100               |
| Castilleja exserta       | Q/1-20, 20-100, >100                |
| % Bare ground estimate   | (0-25%) 26-50%, 51-75%, >75%        |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75%         |
| % Shrub cover estimate   | 0-25%,(26-50%), 51-75%, >75%        |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed). Flunts metal mac, Evifas, Vigha Behrs metal make III white I white I white I white I white I white I

| Date 4/14/08 Plot number 26 Time start 11:34 end 11:49          |
|---|
| Plot location Objuffills 1786328.06N 6360231,56E                |
| Surveyor Stacy Nigro  |
| Temp (°C) 28 Wind (km/hr) 3-8 Sky: clear, partly cloudy, cloudy |

| Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
|---------------------|---|---------------------|---|
|                     |   |                     |   |
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orispy

| Hostplant species        | Density per plot (estimate)       |
|--------------------------|-----------------------------------|
| Plantago erecta          | 0, 1-20, 20-100, (01-1000)>1000   |
| Plantago patagonica      | (0) 1-20, 20-100, 101-1000, >1000 |
| Antirrhinum coulterianum | 0,71-20, 20-100, >100             |
| Corylanthis rigidus      | (0) 1-20, 20-100, >100            |
| Castilleja exserta       | ( <b>9</b> ) 1-20, 20-100, >100   |
| % Bare ground estimate   | Ø-25% 26-50%, 51-75%, >75%        |
| % Burned area estimate   | Q-25%, 26-50%, 51-75%, >75%       |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75%       |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

Dom. Shrubs: Erio Fue, At Cil, Vig. (ac

Behrs-1 = 1

Q

| Plot location 1786447.46 N 63 59380.79 E  Surveyor Misen Variation (CC) 268 Wind (km/hr) 6-3 Sky: clear partly cloudy, cloudy 34° F  Observations (use additional sheets if needed)  Number of adults (or GPS coordinates NAD 83 outside plot)  Hostplant species Density per plot (estimate)  Plantago erecta 9, 1-20, 20-100, 101-1000, >1000  Plantago patagonica (0, 1-20, 20-100, 101-1000, >1000  Antirrhinum coulterianum (0, 1-20, 20-100, >100   | Date 414  | Plot number   | <u>29</u>      | Time sta                              | art 1080 end 1015  |     |
|---|---|---|----------------|---------------------------------------|--|-----|
| Temp (°C) % 8 Wind (km/hr) 6-3 Sky: clear, partly cloudy, cloudy  Observations (use additional sheets if needed)  Number of adults (or GPS coordinates NAD 83 outside plot)  Hostplant species Density per plot (estimate)  Plantago erecta 0; 1-20, 20-100, 101-1000, >1000  Plantago patagonica (0) 1-20, 20-100, 101-1000, >1000  Antirrhinum coulterianum (2, 1-20, 20-100, >100)   | Plot location   | on 1786447.66   | N              | 63592                                 | 80.79€   |     |
| Observations (use additional sheets if needed)  Number Quadrant (or GPS coordinates NAD 83 outside plot)  Nad 83 outside plot)  Hostplant species Density per plot (estimate)  Plantago erecta 0; 1-20, 20-100, 101-1000, >1000  Plantago patagonica (0, 1-20, 20-100, 101-1000, >1000  Antirrhinum coulterianum (0, 1-20, 20-100, >100   | Surveyor_   | Alison Varner   |                |                                       |  |     |
| Number of adults (or GPS coordinates NAD 83 outside plot)  Hostplant species Plantago erecta Plantago patagonica Antirrhinum coulterianum  Number of adults (or GPS coordinates NAD 83 outside plot)  NAD 83 outside plot)  Or GPS coordinates (or GPS coordinates NAD 83 outside plot)  Nad 83 outside plot) |   |   |                |                                       | ear, partly cloudy, cloudy                                       |     |
| Of adults   (or GPS coordinates   NAD 83 outside plot)   (or GPS coordinates   NAD 83 outside plot)   | Observation Number                                      | s (use additional sheets ) Ouadrant                                       | if nee         |                                       | Quadrant   |     |
| Plantago erecta       0; 1-20, 20-100, 101-1000, >1000         Plantago patagonica       0, 1-20, 20-100, 101-1000, >1000         Antirrhinum coulterianum       0, 1-20, 20-100, >100  |   | (or GPS coordinate  |                |                                       | (or GPS coordinates  |     |
| Plantago erecta       0; 1-20, 20-100, 101-1000, >1000         Plantago patagonica       0, 1-20, 20-100, 101-1000, >1000         Antirrhinum coulterianum       0, 1-20, 20-100, >100  |   |   |                | · · · · · · · · · · · · · · · · · · · |  |     |
| Plantago erecta       0; 1-20, 20-100, 101-1000, >1000         Plantago patagonica       0, 1-20, 20-100, 101-1000, >1000         Antirrhinum coulterianum       0, 1-20, 20-100, >100  |   |   |                |                                       |  |     |
| Plantago erecta       0; 1-20, 20-100, 101-1000, >1000         Plantago patagonica       0, 1-20, 20-100, 101-1000, >1000         Antirrhinum coulterianum       0, 1-20, 20-100, >100  |   |   |                |                                       |  |     |
| Plantago erecta       0; 1-20, 20-100, 101-1000, >1000         Plantago patagonica       0, 1-20, 20-100, 101-1000, >1000         Antirrhinum coulterianum       0, 1-20, 20-100, >100  | :   |   |                | ·                                     |  |     |
| Plantago erecta       0; 1-20, 20-100, 101-1000, >1000         Plantago patagonica       0, 1-20, 20-100, 101-1000, >1000         Antirrhinum coulterianum       0, 1-20, 20-100, >100  |   |   |                |                                       |  |     |
| Plantago erecta       0; 1-20, 20-100, 101-1000, >1000         Plantago patagonica       0, 1-20, 20-100, 101-1000, >1000         Antirrhinum coulterianum       0, 1-20, 20-100, >100  |   |   |                |                                       |  |     |
| Plantago erecta       0; 1-20, 20-100, 101-1000, >1000         Plantago patagonica       0, 1-20, 20-100, 101-1000, >1000         Antirrhinum coulterianum       0, 1-20, 20-100, >100  |   |   |                |                                       |  |     |
| Plantago erecta       0; 1-20, 20-100, 101-1000, >1000         Plantago patagonica       0, 1-20, 20-100, 101-1000, >1000         Antirrhinum coulterianum       0, 1-20, 20-100, >100  |   |   |                |                                       |  |     |
| Plantago patagonica       0, 1-20, 20-100, 101-1000, >1000         Antirrhinum coulterianum       0, 1-20, 20-100, >100   | Hostplant   | species   | De             | nsity per pl                          | ot (estimate)  |     |
| Antirrhinum coulterianum D, 1-20, 20-100, >100  |   | ***************************************                                   |                |                                       |  |     |
|   |   |   |                |                                       |  |     |
| (1/4/)  |   |   |                |                                       |  |     |
|   |   |   | 1/2/           |                                       |  |     |
| Castilleja exserta (0), 1-20, 20-100, >100  | Castilleja e  | exserta   | (0),           | 1-20, 20-10                           | 0, >100  |     |
| % Bara ground estimate 0 25% 2050 51 75% 75%  | % Para an   | ound actimate   | 60             | 500 2000                              | 7 51 750 mm  | -   |
| % Bare ground estimate 0-25% 26-50% 51-75%, >75%  |   |   | 1              | _ <                                   |  |     |
| % Burned area estimate       0-25%) 26-50%, 51-75%, >75%         % Shrub cover estimate       0-25%, 26-50%, 51-75%, >75%   | ~~~~  | · · · · · · · · · · · · · · · · · · ·                                     |                |                                       |  |     |
| % Shrub cover estimate 0-25%, 26-50%, 51-75%, >75%  | 70 SHI UD C   | over estimate   | 0-2            | 3% 20-309                             | 9, 31-73%, >73%  |     |
| Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed). Flowering: Deifor, Evifor, Vig Iac, (Painted Lady III)  Behrs wetalmant 11  Gabbs 1  Dom Shrubs: Evifor, Viglac   | and other rele<br>species, other<br>Pairtcal<br>Behrs w | r life stages observed). Find the stages observed of the stages observed. | tterfly<br>ION | y behavior, nec<br>Nyg De<br>Pla      | etar sources, other butterfly if c, Evifas, Vig 10c, i eve (dvy) | Cul |

| Date 4/14                             | Plot number 3   | Time sta | art 1000 end 1035                                 |
|---------------------------------------|---|----------|---|
| Plot location                         | on 1786619,50 N   | 63585    | 81.10E  |
| Surveyor_                             | Alison Varner   |          |   |
|                                       | Wind (km/hr) D  | PVI      | ear) partly cloudy, cloudy                        |
| Observation                           | s (use additional sheets if ne                          | eded)    |   |
| Number                                | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number   | Quadrant (or GPS coordinates NAD 83 outside plot) |
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| Hostplant species        | Density per plot (estimate)      |        |
|--------------------------|----------------------------------|--------|
| Plantago erecta          | 0, 1-20, 20-100, 101-1000, >1000 | Hu     |
| Plantago patagonica      | 0, 1-20, 20-100, 101-1000, >1000 |        |
| Antirrhinum coulterianum | 0, 1-20, 20-100, >100            |        |
| Corylanthis rigidus      | 0, 1-20, 20-100, >100            |        |
| Castilleja exserta       | (0) 1-20, 20-100, >100           |        |
|                          |                                  |        |
| % Bare ground estimate   | (0-25%, 26-50%, 51-75%, >75%     |        |
| % Burned area estimate   | D-25%, 26-50%, 51-75%, >75%      | $\neg$ |
| % Shrub cover estimate   | 0-25%, 26-50% 51-75%, >75%       |        |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed). Flowering Plants: Viglac, Cal mac, PDN/HXNING! En fas, Berfas, Cal spl, Brassica methylandk IIII Brodinmitted are

Finerice DINKYLING 1 Behrs metalmark 1111 Common white 11

Dom shrub Frifas

| Date 4/14/08       | Plot number 32     | Time start 11:  | 08 end 11:23       |
|--------------------|--------------------|-----------------|--------------------|
| Plot location Olay | Hills 1786529,     | 74 N 63         | 60556,02E          |
| Surveyor Stac      |                    |                 |                    |
| •                  | Wind (km/hr) 3-6.4 | Sky: clear, par | tly cloudy, cloudy |

| Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
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crispy

| Hostplant species        | Density per plot (estimate)       |
|--------------------------|-----------------------------------|
| Plantago erecta          | 0, 1-20, 20-100, 101-1000 > 1000  |
| Plantago patagonica      | (0) 1-20, 20-100, 101-1000, >1000 |
| Antirrhinum coulterianum | (0, 1-20, 20-100, >100)           |
| Corylanthis rigidus      | (0) 1-20, 20-100, >100            |
| Castilleja exserta       | (0) 1-20, 20-100, >100            |
| % Bare ground estimate   | 0-25%, 26-50%, 51-75%, >75%       |
| % Burned area estimate   | (0-25%, 26-50%, 51-75%, >75%      |
| % Shrub cover estimate   | 0-25% (26-50%, 51-75%, >75%       |
|                          |                                   |

| Date $\frac{4/14/08}{12:35}$ Plot number $\frac{34}{3}$ Time start $\frac{12:30}{12:35}$ end $\frac{12:35}{3}$ |
|--|
| Plot location Otay Hills 1786787.51 N 6361427.110E   |
| Surveyor Stare Nigro   |
| Temp (°C) 30 Wind (km/hr) 3-8 Sky: clear) partly cloudy, cloudy  |

| Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
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Crispy

| Hostplant species        | Density per plot (estimate)       |
|--------------------------|-----------------------------------|
| Plantago erecta          | 0, 1-20, 20-100, 101-1000, >1000  |
| Plantago patagonica      | (0) 1-20, 20-100, 101-1000, >1000 |
| Antirrhinum coulterianum | (0) 1-20, 20-100, >100            |
| Corylanthis rigidus      | (0) 1-20, 20-100, >100            |
| Castilleja exserta       | (0) 1-20, 20-100, >100            |
| % Bare ground estimate   | Q-25%, 26-50%, 51-75%, >75%       |
| % Burned area estimate   | Q-25% 26-50%, 51-75%, >75%        |
| % Shrub cover estimate   | (0-25%) 26-50%, 51-75%, >75%      |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

Dom. Shrubs: Ero. Fasc, Mal. lauri, Callipe frit. -1

Wig. 12c

Behr's mal. -1

3

| Date 4/4/08 Plot number 38 Time start 10:48 end 11:03 |
|---|
| Plot location Stay Hills 1787047,74 N 103106525,75 E  |
| Surveyor Stray Nign                                   |
|   |

Temp (°C) Wind (km/hr) 0-6.4 Sky clear, partly cloudy, cloudy

Observations (use additional sheets if needed)

| Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
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Cri26A

| Hostplant species        | Density per plot (estimate)       |
|--------------------------|-----------------------------------|
| Plantago erecta          | 0, 1-20, 20-100, 101-1000, >1000  |
| Plantago patagonica      | (0) 1-20, 20-100, 101-1000, >1000 |
| Antirrhinum coulterianum | (b) 1-20, 20-100, >100            |
| Corylanthis rigidus      | ① 1-20, 20-100, >100              |
| Castilleja exserta       | <b>1</b> -20, 20-100, >100        |
|                          | ·                                 |
| % Bare ground estimate   | 0-25%, 26-50%) 51-75%, >75%       |
| % Burned area estimate   | (0-25%, 26-50%, 51-75%, >75%      |
| % Shrub cover estimate   | 0-25%, (26-50%), 51-75%, >75%     |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

behr's metabook 
$$-11 = 2$$

white  $-1111 = 4$ 

ledy  $-1 = 1$ 

OA ringlet  $-1 = \frac{1}{8}$ 

Nector sources . Erio fasc.

| Date 41408 Plot number 39 Time start 107 end 1122            |
|--|
| Plot location 1787683.64 N 6362455.725                       |
| Surveyor MISON VINEN   |
| Temp (°C) Mind (km/hr) J-4 Sky: clear, partly cloudy, cloudy |
| Observations (use additional sheets if needed)               |

| Number<br>of adults                   | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
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| Density per plot (estimate)       |
|-----------------------------------|
| 0, 1-20, 20-100, 101-1000, (1000) |
| 0,1-20, 20-100, 101-1000, >1000   |
| 0, 1-20, 20-100, >100             |
| 0,/1-20, 20-100, >100             |
| 0, 1-20, 20-100, >100             |
| 0-25%, 26-50%, 51-75%, >75%       |
| 0-25%, 26-50%, 51-75%, >75%       |
| 0-25%, 26-50%, 51-75%, >75%       |
|                                   |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed). FINAME FLONTS, ENFOS, VIGIAC, CAL SPI, DEFEND, CAL MAC, LOTS CO

Common species, o White II Galdos I Phinted Leady I

| Date 4/14/08 Plot number 41 Time start 10:25 end 10:40           |
|--|
| Plot location Otan Hills 1707603, 02 N 636053557 E               |
| Surveyor Stay Nigro  |
| Temp (°C) 26 Wind (km/hr) 0-1.6 Sky clear, partly cloudy, cloudy |

| Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
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| Hostplant species        | Density per plot (estimate)        |
|--------------------------|------------------------------------|
| Plantago erecta          | (0, )1-20, 20-100, 101-1000, >1000 |
| Plantago patagonica      | (0,) 1-20, 20-100, 101-1000, >1000 |
| Antirrhinum coulterianum | (0, 1-20, 20-100, >100)            |
| Corylanthis rigidus      | (0,) 1-20, 20-100, >100            |
| Castilleja exserta       | (0,) 1-20, 20-100, >100            |
| % Bare ground estimate   | 0-25%, 26-50%, 51-75%, >75%        |
| % Burned area estimate   | Q-25%, 26-50%, 51-75%, >75%        |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75%        |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

Dom shrubs - Malosna laur, Erio, faç

Nectar Sources- Erio, fairc.

| Plot location         | on 178      | 8015.4-                                    | N 636   | 2690.        | 87E           |
|-----------------------|-------------|--|---------|--------------|---------------|
| _                     |             | Varner                                     |         |              |               |
| Temp (°C)             | 29.4 v      | Vind (km/hr) $\frac{\partial}{\partial w}$ | Sky;cte | ar) partly c | loudy, cloudy |
| Observation<br>Number | s (use addi | tional sheets if n                         | eeded)  |              |               |

| Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |  |
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| Density per plot (estimate)      |
|----------------------------------|
| 0, 1-20, 20-100, 101-1000, >1000 |
| 0, 1-20, 20-100, 101-1000, >1000 |
| 0, 1-20, 20-100, >100            |
| (0) 1-20, 20-100, >100           |
| (0,) 1-20, 20-100, >100          |
|                                  |
| 0-25%, 26-50%, 51-75%, >75%      |
| (0-25%) 26-50%, 51-75%, >75%     |
| (0-25%), 26-50%, 51-75%, >75%    |
|                                  |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed). Flowling Plants: VIGIAC, EVIFAS

Brassion Sp., Cal Spt, Lots co. Excal

Der Far

Dom shows. Viglac, Evitas, 2000

Politifed Lady 1. Common white 1

|                       |                                 |           | art 11:15 end /1:30<br>593.15N 6361189.13 E |
|-----------------------|---------------------------------|-----------|---|
|                       |                                 | Caro 1100 |   |
| Surveyor_             | Any Mattern 0.                  |           |   |
| T (9 <b>C</b> )       | 29:49C)<br>85% Wind (km/hr) ()  | 3,26m/h/  |   |
| Temp (°C)             | Wind (Kiiviir) ()               | Sky Cle   | ear, partily cloudy, cloudy                 |
|                       | s (use additional sheets if n   | eeded)    | · · · · · · · · · · · · · · · · · · ·       |
| Observation           | is tust additional succes if it |           |   |
| Observation<br>Number | Quadrant                        | Number    | Quadrant                                    |
| Number                | T                               |           | Quadrant<br>(or GPS coordinates             |

| tage of the second state o | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot)  |
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| Hostplant species        | Density per plot (estimate)        |
|--------------------------|------------------------------------|
| Plantago erecta          | (0, 1-20, 20-100, 101-1000, >1000) |
| Plantago patagonica      | (0) 1-20, 20-100, 101-1000, >1000  |
| Antirrhinum coulterianum | (Q) 1-20, 20-100, >100             |
| Corylanthis rigidus      | (10°, 1-20°, 20-100°, >100°)       |
| Castilleja exserta       | (0, 1-20, 20-100, >100             |
| % Bare ground estimate   | 0-25%, 26-50%, 51-75%, >75%        |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75%        |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75%        |

vector: Malac fors, Us he Cham poly, Minnellus sv. Derfas schene, Hedore butherfres whole Erithborg. Bloom cro, 516 bd, Lot soo drubs: Malac fors (form).

| Date 4/14/10  | Plot number 52 Time start 1030 end 1046                    |
|---------------|--|
| Plot location | Dtun Hills Areas 1789126.05N 6362136.07E                   |
| Surveyor      | Any Mattson  |
| 28            | Wind (km/hr) 0-3,2 km/hr. Sky: clear partly cloudy, cloudy |

| Number<br>of adults                            | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
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| Hostplant species        | Density per plot (estimate)        |
|--------------------------|------------------------------------|
| Plantago erecta          | 0, 1-20, 20-100, 101-1000, >1000 ) |
| Plantago patagonica      | 0, 1-20, 20-100, 101-1000, >1000   |
| Antirrhinum coulterianum | 0, 1-20, 20-100, >100              |
| Corylanthis rigidus      | (0, 1-20, 20-100, >100             |
| Castilleja exserta       | 0,)1-20, 20-100, >100              |
|                          |                                    |
| % Bare ground estimate   | (0-25%), 26-50%, 51-75%, >75%      |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75% NA     |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75%        |

**Notes.** Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

ine objet: Scheme, Froton sp. Silon, Lat-scop, Lin Washingt all) Olympis Api ons, Cyphanten butterfloor; white I fatillan other, callbage who have they glab, musker) they glab, musker)

| Number        | Quadrant                       |              | Number     | Onadra      | mŧ      |         |
|---------------|--------------------------------|--------------|------------|-------------|---------|---------|
| Observation   | s (use additional s            | heets if nee | ded)       |             |         |         |
|               |                                | <u> </u>     | April (    |             |         | Oleday  |
| Temp (°C)     | 85° Wind (k                    | m/hr) 0 -    | 2 Sky: cl  | ear, partly | cloudy. | cloudy  |
|               | 29,496                         | 0-5          | , Zlearlle |             |         |         |
| Surveyor      | Any Matko<br>27:496<br>Wind (k | ^            |            |             | *       |         |
| rioi locatio  |                                | 1// 5        |            | ·           | ·       |         |
| Dist location | n Ohy Hlla                     | Ana lo       | 1789       | 158-30N     | 63606   | 29637 E |
|               |                                |              |            |             |         |         |
| Date 414      | Plot nu                        | mber 5       | 3 Time st  | tart 11/4   | 3 end   | 11:38   |
|               |                                |              |            | /           |         |         |

| Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
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| Hostplant species         | Density per plot (estimate)        |
|---------------------------|------------------------------------|
| Plantago erecta           | (0) 1-20, 20-100, 101-1000, >1000  |
| Plantago patagonica       | (0,) 1-20, 20-100, 101-1000, >1000 |
| Antirrhinum coulterianum  | (a), 1-20, 20-100, >100            |
| Corylanthis rigidus       | (0), 1-20, 20-100, >100            |
| Castilleja exserta        | (0), 1-20, 20-100, >100            |
|                           |                                    |
| % Bare ground estimate    | 0-25%, 26-50%, 51-75%, >75%        |
| % Burned area estimate    | 0-25%, 26-50%, 51-75%, >75% NA     |
| % Shrub cover estimate    | 0-25%, 26-50%, 51-75%, >75%        |
| 70 Sili do Cover estimate | (0-2576, 20-5076, 51-7576, >7576   |

hicker Dicaplay) mustard, Erifas, Lot seo, Deifas, Mir eal (dry)
butterties: Laly, fritillary, roylet
should in hal law, Erifas, Lot seo

| Date 414     | Ple                | ot number 54                    | Time sta           | nt 0:57    | end_    | 17712   |
|--------------|--------------------|---------------------------------|--------------------|------------|---------|---------|
| Plot locatio | n Steen            | tills Area8                     | 1789158            | 5.41 N     | 636130  | 209 E   |
| Surveyor     | Any Ma             | Heron                           |                    |            |         |         |
| Temp (°C)    | 28.830<br>84°F Win | Hsor<br>()-3,<br>(d (km/hr) 0-2 | Chulha<br>Sky: cle | ar, partly | cloudy. | cloudy  |
|              |                    | nal sheets if need              |                    |            | ,       | <u></u> |
| TAT. N       | 0                  | **                              | т в                | A 1        |         |         |

| Number of adults | Quadrant<br>(or GPS coord<br>NAD 83 outsid | Number<br>of adults | Quadrant<br>(or GPS coor<br>NAD 83 outsi |  |
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| Hostplant species        | Density per plot (estimate)         |
|--------------------------|-------------------------------------|
| Plantago erecta          | 0, 1-20, 20-100, 101-1000, \$1000   |
| Plantago patagonica      | © 1-20, 20-100, 101-1000, >1000     |
| Antirrhinum coulterianum | Ø <sub>5</sub> , 1-20, 20-100, >100 |
| Corylanthis rigidus      | 0, 1-20, 20-100, >100               |
| Castilleja exserta       | 0,)1-20, 20-100, >100               |
| % Bare ground estimate   | 0-25%, 26-50%, 51-75%, >75%         |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75% NA      |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75%         |

vector-Us be mostered, Ade for Exitas Lindia (almost all) Cryptanthe Daupus Somber- peal lay Ade for Uslac Clark purp, soleme sp., Lot soo butterflier-fritillay, paint lady, white.

| Observations (use additional she<br>Number   Quadrant<br>of adults   (or GPS coordin | cus ii iic | Number                       |  |
|--|------------|------------------------------|--|
| NAD 83 outside   |            | of adults                    | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot)  |
|  |            |                              |  |
|  |            |                              |  |
|  |            |                              |  |
|  |            |                              |  |
|  |            |                              |  |
| Hostplant species  |            |                              | lot (estimate)   |
| Plantago erecta<br>Plantago patagonica   |            | \$\frac{1-20}{20-10}\$       | TANKS TO THE PARTY OF THE PARTY |
| Antirrhinum coulterianum   |            | >1-20, 20-10<br>>1-20, 20-10 |  |
| Corylanthis rigidus  |            | 3 1-20, 20-10                | · · · · · · · · · · · · · · · · · · ·  |
| Castilleja exserta   |            | 1-20, 20-1                   |  |
| % Bare ground estimate   | <u></u>    | 25% 26 <u>-</u> 50           | 1%, 51-75%, >75%   |
| % Burned area estimate   |            |                              | %, 51 <u>-75</u> %, >75%   |
| % Shrub cover estimate   | 0-         | 25%, 26-50                   | %,/51-75%, >75%  |

| Number        | Ouadrant                 | Number             | Quadrant                     |
|---------------|--------------------------|--------------------|------------------------------|
|               | s (use additional sheets | if needed)         |                              |
| Temp (°C)     | 27 Wind (km/h            | ) <u>2-6</u> Sky.( | clear, partly cloudy, cloudy |
| Surveyor _    | Bran Pa                  | rke                |                              |
| Plot location | n 179 1156               | -37N/6360          | 0366:11 15                   |
| Date 4-14     | 1-08 Plot number         | r_7) Time          | start 1122 end 1137          |

| Number<br>of adults                   | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
|---------------------------------------|---|---------------------|---|
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| Hostplant species        | Density per plot (estimate)        |
|--------------------------|------------------------------------|
| Plantago erecta          | 0, (1-20), 20-100, 101-1000, >1000 |
| Plantago patagonica      | 0, 1-20, 20-100, 101-1000, >1000   |
| Antirrhinum coulterianum | 0, 1-20, 20-100, >100              |
| Corylanthis rigidus      | 0, 1-20, 20-100, >100              |
| Castilleja exserta       | 0, 1-20, 20-100, >100              |
| % Bare ground estimate   | 0-25%, 26-50%, 51-75%, >75%        |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, \$75%       |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75%        |
|                          |                                    |

Flowers · Cryptantha, Enophy//um

| Date          | Plot numb  | er <u>7 7</u> | Time sta                              | art_/142end//57                                   |
|---------------|--|---------------|---------------------------------------|---|
| Plot location | n 19756  | .86           | <u>N / 63</u>                         | 60703.67 8  |
| Surveyor _    | Brian  | Par           | ku                                    |   |
| Temp (°C)     | 29 Wind (km/h                                    | r) <u>3</u> - | <u> </u>                              | ear, partly cloudy, cloudy                        |
|               | s (use additional sheet                          | s if ne       |                                       |   |
|               | Quadrant<br>(or GPS coordina<br>NAD 83 outside p |               | Number<br>of adults                   | Quadrant (or GPS coordinates NAD 83 outside plot) |
|               |  |               |                                       |   |
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|               |  |               |                                       |   |
|               |  |               |                                       |   |
|               |  |               |                                       |   |
| Hostplant     | species  | П             | encity ner n                          | lot (estimate)                                    |
| Plantago e    |  |               |                                       | 00, 101-1000, >1000                               |
| Plantago p    |  |               |                                       | 00, 101-1000, >1000                               |
|               | m coulterianum                                   |               | 1-20, 20-1                            |   |
| Corylanthi    | s rigidus  |               | 1-20, 20-1                            |   |
| Castilleja (  | exserta  | 0,            | 1-20, 20-1                            | 00, >100  |
|               |  |               |                                       |   |
|               | round estimate                                   |               |                                       | )%, 51-75%, >75%                                  |
|               | l area estimate                                  | - Colonia     | · · · · · · · · · · · · · · · · · · · | )%, 51-75%, >75%                                  |
| ## 6 1 h h    | cover estimate                                   | I A.          | 250 26 50                             | )%, (51-75%, >75%                                 |

and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

Shrub; - Chamise, Ceanothus, Kylococcus, Salvia clovelandii

Flowers Lasthenia, Chamise, Mimulus, Brassica, Enophyllum

Butterflies - Checkered White - 1

Sara Orangetip - 1

| Date 4-14-08  | Plot number 78  | Time start_ | 1100 ei     | nd(    | 115. |
|---------------|-----------------|-------------|-------------|--------|------|
| Plot location | 1791619.73N/    | 6360235     | : 765       |        |      |
| Surveyor      | BRIAN PARK      | 572         |             |        |      |
|               | 7 Wind (km/hr)( | •           | partly clou | dy, cl | oudy |
|               |                 | •           |             |        |      |

| Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
|---------------------|---|---------------------|---|
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| Density per plot (estimate)     | Constock  |
|---------------------------------|---|
| 0, 1-20(20-100, 101-1000, >1000 |   |
| 1-20, 20-100, 101-1000, >1000   | - ch W:.  |
| ② 1-20, 20-100, >100            | 0 lit .   |
| <b>Q</b> , 1-20, 20-100, >100   | - Ringlet   |
| Ø⊋ 1-20, 20-100, >100           | Cabbage   |
| (0-25%, 26-50%, 51-75%, >75%    |   |
|                                 |   |
|                                 |   |
|                                 | ① 1-20, 20-100, 101-1000, >1000<br>② 1-20, 20-100, >100<br>② 1-20, 20-100, >100 |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

species, other life stages observed).

Showby Chanise, Ceanothus, Xylococcus, Cypress (10), Salvin Nigurera

Flowers, Chanise, Cryptanthu, Damandra, Errophyllom, Vigurera

Butterfles Constack Fritillan - 3 CA Ringled - 2

CHOCKEROD WHITE 3 Cabbage White Z

| Plot location                   | on <u>191899.82</u>                     | N/6359                     | art 1040 end 1053  |  |
|---------------------------------|---|----------------------------|--|--|
| Surveyor_                       | Brian Pa                                | rker                       |  | _  |
| Temp (°C)                       | 27 Wind (km/hr)                         | Sky: cd                    | ear, partly cloudy, cloudy   |  |
| Observation                     | ns (use additional sheets i             | f needed)                  |  |  |
|                                 | Quadrant                                | Number                     | Quadrant   |  |
| of adults                       | (or GPS coordinates                     | i                          | (or GPS coordinates  | Constock                                       |
|                                 | NAD 83 outside plot                     | t)                         | NAD 83 outside plot)   |  |
|                                 |   |                            | •  |  |
|                                 |   |                            |  | Sara .'  |
|                                 |   |                            |  | 0 11   |
|                                 |   |                            |  | - K. M. C. |
|                                 |   |                            |  | Finglett<br>Anise<br>Ch W                      |
|                                 |   |                            |  | Ch W!  |
|                                 |   |                            |  |  |
|                                 |   |                            |  |  |
|                                 |   | ·                          |  |  |
| Hostplant                       | species                                 | Doneity non n              | lat (astimata)   |  |
| Plantago e                      |   | 0-1-20 20-1                | lot (estimate)   | - L 207  |
| Plantago p                      | ····                                    | (Q.)1-20, 20-1             | 00, >100 - Totale do   | VISID  |
|                                 | m coulterianum                          | (0, )1-20, 20-1            |  |  |
| Corylanthi                      | s rigidus                               | 0, 1-20, 20-1              |  |  |
| Castilleja                      | exserta (                               | - <del>0, 1-20, 20-1</del> | 00, >100   |  |
|                                 |   |                            |  |  |
|                                 | round estimate                          |                            | %, 51-75%, >75%  |  |
|                                 | l area estimate                         |                            | %, 51-75%, >75%  |  |
| % Shrub                         | cover estimate                          | 0-25%, 26-50               | <b>%</b> , 51-75%, >75%  |  |
| and other rel<br>species, other |   | terfly behavior, ne        | for other life stages observed, ectar sources, other butterfly     |  |
| fil courses                     | Sis bel, Der Fes, (                     | ryptantha, En              | rophyllum, Mimules,  | Muskini  |
| Rter (1:                        | - Comstock Fritillar<br>Sara Orangotip- | Jzy Ansa                   | cophyllum, Mimulus,<br>Linglet 8<br>Swallowten 1-1<br>ERED WHITE-1 |  |

| Date 4408 Plot number 55 Time start 1218 end 1233   |
|---|
| Plot location 1792431.38 N 6357559.51E  |
| Surveyor HISON Vanor  |
| Temp (°C) 30 Wind (km/hr) 0-2 Sky: clear, partly cloudy, cloudy  Observations (use additional sheets if readed) |
| Observations (use additional sheets if needed)  |

| Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
|---------------------|---|------------------|---|
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| Density per plot (estimate)      |
|----------------------------------|
| 0, 1-20, 20-100) 101-1000, >1000 |
| 0, 1-20, 20-100, 101-1000, >1000 |
| 0, 1-20, 20-100, >100            |
| 0, 1-20, 20-100, >100            |
| 70, 1-20, 20-100, >100           |
|                                  |
| 0-25%, 26-50%, 51-75%, >75%      |
| Ø-25%, 26-50%, 51-75%, >75%      |
| 0-25%, 26-50%, 51-75%, >75%      |
|                                  |

Sava Ovanisetip!
Painted Lady!
Common white!!
Behrs metalmark!

Dom Shrub Viglac

| Date 4-14-08 Plot number 17 Time start 1234 end 1249           |
|--|
| Plot location 1793   26,39 N   635820794 F                     |
| Surveyor_Bran Parker   |
| Temp (°C) 29 Wind (km/hr) 3-5 Sky clear, partly cloudy, cloudy |

| Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number<br>of adults               | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot)  |
|------------------|---|-----------------------------------|--|
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| Density per plot (estimate)       |                                   |
|-----------------------------------|-----------------------------------|
|                                   | <del></del>                       |
| (0) 1-20, 20-100, 101-1000, >1000 |                                   |
| (0) 1-20, 20-100, >100            |                                   |
|                                   |                                   |
|                                   |                                   |
|                                   |                                   |
| 0-25%, 26-50%, 51-75%, >75%       |                                   |
|                                   |                                   |
|                                   |                                   |
|                                   | 0, (1-20, 20-100, 101-1000, >1000 |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

species, other life stages observed).
Should - Ceanathus, Chamise, Malosma, Xylococcus, Vigraere

Flowers . Echschillia, Dichelistemina, Brassica, Eriophyllun Cryptantha, Vigurera, Caterpillar phacelia Bitterflias Checkered While -3 Sava Grangetip-2 Ringlet-1 (abbage White-1 Galba Chebrsiel)

| Number        | Ouadrant                    | Number       | Quadrant                              |               |   |
|---------------|-----------------------------|--------------|---------------------------------------|---------------|---|
| Observation   | s (use additional sheets if | needed)      |                                       |               |   |
| Temp (°C)     | 25 Wind (km/hr)/2           | )-/3_Sky: cl | ear, partly c                         | loudy, cloudy |   |
| Surveyor_     | Bran Porker                 |              | · · · · · · · · · · · · · · · · · · · |               |   |
| Plot location | on 1,785,779                | T.32 N       | 16359                                 | 319,66        | B |
| Date 4/17     | Plot number_                | Time s       | art <u>095</u> C                      | _end          |   |
|               |                             |              |                                       |               |   |

| Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot)  | Number<br>of adults                | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
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| Hostplant species        | Density per plot (estimate)          |
|--------------------------|--------------------------------------|
| Plantago erecta          | 0, 1-20, 20-100, 101-1000, >1000 Ven |
| Plantago patagonica      | 0, 1-20, 20-100, 101-1000, >1000     |
| Antirrhinum coulterianum | 0, 1-20, 20-100, >100                |
| Corylanthis rigidus      | 0, 1-20, 20-100, >100                |
| Castilleja exserta       | 0, 1-20, 20-100, >100                |
| % Bare ground estimate   | 0-25%, 26-50%, 51-75%, >75%          |
| % Burned area estimate   | <b>Q-25%</b> , 26-50%, 51-75%, >75%  |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75%          |

Note- Rever & South end about to start -> No Engover container (domine in adjacent habitat) but many Solvia (not present in adjacent habitat).

## Survey #5

| Date $\frac{4/17/08}{100}$ Plot number $\frac{26}{26}$ Time start $\frac{9:55}{100}$ end $\frac{10:100}{100}$ |
|---|
| Plot location Otay Hills  |
| Surveyor Stacy Nigro  |
| Temp (°C) 26 Wind (km/hr) 4.8-96Sky: clear) partly cloudy, cloudy   |

Observations (use additional sheets if needed)

| Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
|------------------|---|------------------|---|
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| ,   | Hostplant species        | Density per plot (estimate)       |
|-----|--------------------------|-----------------------------------|
| dry | Plantago erecta          | 0, 1-20, 20-100, 101-1000, >1000  |
| 0   | Plantago patagonica      | (0,)1-20, 20-100, 101-1000, >1000 |
|     | Antirrhinum coulterianum | (O) 1-20, 20-100, >100            |
|     | Corylanthis rigidus      | (0), 1-20, 20-100, >100           |
|     | Castilleja exserta       | 0, 1-20, 20-100, >100             |
|     | % Bare ground estimate   | (0-25%) 26-50%, 51-75%, >75%      |
|     | % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75%       |
|     | % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75%       |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

Dom stands = Erio, fasc, Vig. lac, Art cal

Nectar - Erio, fasc.

| Date 4-17-08 Plot number 28 Time start 1042 end 1057  |
|---|
| Plot location 1786447.66 / 6359280.79   |
| Surveyor Bran Parker  |
| Temp (°C) 26 Wind (km/hr) 6-10 Sky: clear, partly cloudy, cloudy  |
| Observations (respectively) to the state of |

| Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot)  | Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
|---------------------|--|---------------------|---|
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|                     | A STATE OF THE STA | 4                   | Marin Herrina   |
|                     |  |                     |   |

| Hostplant species        | Density per plot (estimate)     |
|--------------------------|---------------------------------|
| Plantago erecta          | 0, 100, 20-100, 101-1000, >1000 |
| Plantago patagonica      | © 1-20, 20-100, 101-1000, >1000 |
| Antirrhinum coulterianum | (0) 1-20, 20-100, >100          |
| Corylanthis rigidus      | (0, 1-20, 20-100, >100          |
| Castilleja exserta       | (0, 1-20, 20-100, >100          |
| % Bare ground estimate   | 0-25%, 26-50%, 51-75%, >75%     |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75%     |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75%     |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly

species, other life stages observed).
Shrubs- Eri Fao, Vyvian, Art cal, Malesma

Flowers - Demandra, Eri Fao, Vig lac, Calachombis Bitterflies Painted Lasty 7

PLLI

| Date4                                   | 17-08 Plot number                                | 3   | Time sta             | rt 102-4 end 1039  | -        |
|---|--|-----|----------------------|--|----------|
|   |  |     |                      | 353581.10 8  | <u> </u> |
| Surveyor _                              | Bran   | 2   | ter                  |  |          |
|   | Wind (km/hr) s (use additional sheets i          |     | ~~~                  | ar, partly cloudy, cloudy  |          |
| Number                                  | Quadrant (or GPS coordinates NAD 83 outside plot | 3   | Number<br>of adults  | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot)  |          |
| • |  |     |                      |  |          |
|   |  |     |                      |  |          |
|   |  | •   |                      | and the second of the second o |          |
|   |  |     |                      |  | Constack |
| Hostplant                               | species  |     |                      | ot (estimate)  | Jak.     |
| Plantago e                              | recta  |     |                      | 0, 101-1000, >1000   | - war    |
| Plantago p                              |  |     |                      | 0, 101-1000, >1000   |          |
|   | m coulterianum                                   |     | 1-20, 20-10          |  | Belon "  |
| Corylanthi                              |  |     | 21-20, 20-10         | · · · · · · · · · · · · · · · · · · ·  |          |
| Castilleja                              | exserta  | (U, | <i>2</i> 1-20, 20-10 | 00, >100   |          |
| % Bare gr                               | cound estimate                                   | 0-  | 25%, 26-50           | %, 51-75%, <i>&gt;</i> 75%   |          |
|   | l area estimate                                  | Ø-  | 25%, 26-50°          | %, 51-75%, >75%  |          |
| % Shrub                                 | cover estimate                                   | 0-  | 25%, 26-509          | %, 51-75%, >75%  |          |

Shrubs - Vigurea, Errogenum, Artemisia cal.
Flowers-Vigureia, Demancher fors, Colochortus, Errogenum
Bothersther - Constact Fortillam - Z Behr's Metalmork 1
Rainted lady-6
West Coast lady-

| Date 4/17/08 Plot number 32 Time s                  | tart 10:12 end 10:27        |
|---|-----------------------------|
| Plot location Ohy, Hills                            |                             |
| Surveyor Stay Nigro                                 |                             |
| Temp (°C) <u>26</u> Wind (km/hr) <u>8-11</u> Sky(c) | lear, partly cloudy, cloudy |

| Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
|---------------------|---|------------------|---|
|                     |   |                  |   |
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|                     |   |                  |   |

| Hostplant species        | Density per plot (estimate)      |
|--------------------------|----------------------------------|
| Plantago erecta          | 0, 1-20, 20-100 101-1000,>1000   |
| Plantago patagonica      | 0, 1-20, 20-100, 101-1000, >1000 |
| Antirrhinum coulterianum | (0) 1-20, 20-100, >100           |
| Corylanthis rigidus      | (0, 1-20, 20-100, >100           |
| Castilleja exserta       | (0) 1-20, 20-100, >100           |
| % Bare ground estimate   | 0-25%, 26-50%, 51-75%, >75%      |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75%      |
| % Shrub cover estimate   | (-25%), 26-50%, 51-75%, >75%     |

Dom. Strubs = Esia, Fear, Vig Lac

Nectal Source

| Survey | 5 |
|--------|---|
| Survey |   |

| Date 4/17/08 Plot number 34 Time start 11: 20 end 11:35         |
|---|
| Plot location otal Hills  |
| Surveyor Stacy Nigro  |
| Temp (°C) 26 Wind (km/hr) 8-16 Sky clear) partly cloudy, cloudy |

% Bare ground estimate

| Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
|---------------------|---|------------------|---|
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 % Burned area estimate
 Q-25%
 26-50%
 51-75%
 >75%

 % Shrub cover estimate
 0-25%
 26-50%
 51-75%
 >75%

| Notes. Include dominant shrub species and other relevant information (e.g. butt | erfly behavior, necta | ar sources, oth | er butterfly | _        |
|---|-----------------------|-----------------|--------------|----------|
| species, other life stages observed).   | Dom. Shrubs=          | 8io. fasc,      | Lot. Scop    | Vig. lac |
| Behrs met 11  |                       | 7               | . ,          | 0        |
|   | Nectan sur            | urc p           |              |          |

0-25%, 26-50%, 51-75%, >75%

Survey 5

| Date $\frac{4/17}{08}$ | Plot number 38 | Time start 10:32      | end 10 47     |
|------------------------|----------------|-----------------------|---------------|
| Plot location of       | Hills          |                       |               |
| Surveyor Stary         | •              |                       |               |
| Temp (°C) <u>26</u> \  |                | Sky: clear, partly cl | loudy, cloudy |

Observations (use additional sheets if needed)

| Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
|---------------------|---|---------------------|---|
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Hostplant species **Density per plot (estimate)** Plantago erecta 0, 1-20, 20-100, 101-1000, >1000 Plantago patagonica 0.1-20, 20-100, 101-1000, >1000Antirrhinum coulterianum © 1-20, 20-100, >100 Corylanthis rigidus Ø 1-20, 20-100, >100 Castilleja exserta 20-100, >100 % Bare ground estimate 26-50%, 51-75%, >75% % Burned area estimate 26-50%, 51-75%, >75% % Shrub cover estimate 26-50%, 51-75%, >75%

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed). Dom Slove S = Sio.

· Behrs notalmark-1

Lady-1 while-1 Comst frit.-1 Necton source

| Date 4-17-6   | Plot number 39 Time start 1/40 end 1155              |
|---------------|--|
|               | 1787683.64 N/ 6362405-225                            |
| Surveyor      | Bran Parker  |
| Temp (°C) _2_ | Wind (km/hr) 10-13 Sky: clear, partly cloudy, cloudy |

| Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot)  | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
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| Hostplant species        | Density per plot (estimate)       |  |  |
|--------------------------|-----------------------------------|--|--|
| Plantago erecta          | 0, 1-20, 20-100, 101-1000, >1000  |  |  |
| Plantago patagonica      | (0, 1-20, 20-100, 101-1000, >1000 |  |  |
| Antirrhinum coulterianum | (0, 1-20, 20-100, >100            |  |  |
| Corylanthis rigidus      | ① 1-20, 20-100, >100              |  |  |
| Castilleja exserta       | (0), 1-20, 20-100, >100           |  |  |
| % Bare ground estimate   | 0-25%, 26-50%, \$1-75%) >75%      |  |  |
| % Burned area estimate   | (0-25%, 26-50%, 51-75%, >75%      |  |  |
| % Shrub cover estimate   | (9-25%, 26-50%, 51-75%, >75%      |  |  |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species other life stages observed)

ann ' Empli

| og Plot number   | 4  | Time sta  | nt 10:52 end 11:07   |  |  |
|--|--|---|--|--|--|
| n Otan Hills   |  | ·   |  |  |  |
| Stacy Nigro  |  |   |  |  |  |
| Temp (°C) 26 Wind (km/hr) 8-16 Sky: clear, partly cloudy, cloudy   |  |   |  |  |  |
| s (use additional sheets i   | f ne   | eded)   | •  |  |  |
| Quadrant<br>(or GPS coordinates  |  | Number<br>of adults   | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot)  |  |  |
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|  |  |   |  |  |  |
| species  | De   | ensity per pl   | ot (estimate)  |  |  |
| recta  |  |   | 0, 101-1000, >1000   |  |  |
|  |  |   | 0, 101-1000, >1000   |  |  |
| · · · · · · · · · · · · · · · · · · ·  | 0,   | 1-20, 20-10   | 0, >100  |  |  |
| s rigidus  | (0,)1-20, 20-100, >100   |   |  |  |  |
| exserta  | (a) 1-20, 20-100, >100   |   |  |  |  |
|  | -  |   |  |  |  |
| The state of the s | 0-25%, 26-50%, 51-75%, >75%  |   |  |  |  |
|  |  | (0=25%), 26-50%, 51-75%, >75%   |  |  |  |
| % Shrub cover estimate (0-25%), 26-50%, 51-75%, >75%   |  |   |  |  |  |
| de dominant shrub species evant information (e.g. but life stages observed).  -  \ \rho -  | terfl  | y behavior, nec   | for other life stages observed, ctar sources, other butterfly s = Mal law, Six fac   |  |  |
|  | Stacy Ngro  Stacy Ngro  Wind (km/hr)  s (use additional sheets if  Quadrant (or GPS coordinates  NAD 83 outside plot  srigidus exserta  ound estimate area estimate cover estimate de dominant shrub species evant information (e.g. but fife stages observed).  - | Stacy Nigro  Stacy Nigro  Wind (km/hr) 8  s (use additional sheets if ne  Quadrant (or GPS coordinates NAD 83 outside plot)  species recta atagonica n coulterianum s rigidus exserta  ound estimate area estimate over estimate cover estimate de dominant shrub species, GR evant information (e.g. butterfire life stages observed).  -  \ | Stacy Nigro  Wind (km/hr) 8-16 Sky: cle s (use additional sheets if needed)  Quadrant (or GPS coordinates NAD 83 outside plot)  species recta atagonica n coulterianum srigidus system area estimate area estimate over estimate outside plot  Density per pl 0, 1-20, 20-10 0, 1-20 |  |  |

| Date <u>4-1</u> | <u> 1-তরি</u> Plot number_  | 12 Time st                 | art 1120 end 1135  |
|-----------------|-----------------------------|----------------------------|--|
| Plot locatio    | n 1733015.4                 | 7 N/ B6                    | 2690.828   |
| Surveyor _      |                             | nan Parkac                 |  |
| Temp (°C)       | 27 Wind (km/hr)/            | <u>0-13</u> Sky: <u>el</u> | ear, partly cloudy, cloudy   |
|                 | s (use additional sheets if |                            | •  |
| Number          |                             |                            |  |
|                 |                             |                            |  |
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| ware to         |                             |                            | a company of the property of the company of the com |
|                 |                             |                            |  |
| Hostplant       | species                     | Density per pl             | lot (estimate)   |
| Plantago e      |                             |                            | 20, 101-1000, >1000  |
| Plantagon       |                             |                            | 00 101-1000 > 1000   |

| Hostplant species        | Density per plot (estimate)        | 0/  |
|--------------------------|------------------------------------|-----|
| Plantago erecta          | 0, 1-20, 20-100, 101-1000, >1000   | PU: |
| Plantago patagonica      | (0), 1-20, 20-100, 101-1000, >1000 | aw  |
| Antirrhinum coulterianum | ①> 1-20, 20-100, >100              |     |
| Corylanthis rigidus      | (b) 1-20, 20-100, >100             |     |
| Castilleja exserta       | (0)>1-20, 20-100, >100             |     |
|                          |                                    |     |
| % Bare ground estimate   | (0-25%, 26-50%, 51-75%, >75%       |     |
| % Burned area estimate   | 0-25%, (26-50%, 51-75%, >75%       |     |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75%        |     |

species, other life stages observed).

Shrubs- Artcal, Vig lac, Mal lan, Lot see, Eri Gen,
Plowers. Vig lac, Dei Ses, Eri Gas, Escal, Calochertus
Butterflies

| Date 4/17/08 Plot number 58 Time start 1010 end 1025            |
|---|
| Plot location 1789731,34 /6359106,29                            |
| Surveyor D Allen  |
| Temp (°C) 27.1 Wind (km/hr) 3-5 Sky clear, partly cloudy cloudy |

| Number of adults                      | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
|---------------------------------------|---|------------------|---|
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| Hostplant species        | Density per plot (estimate)         |  |  |  |
|--------------------------|-------------------------------------|--|--|--|
| Plantago erecta          | 0, 1-20, 20-100, 101-1000, >1000    |  |  |  |
| Plantago patagonica      | (i) 1-20, 20-100, 101-1000, >1000   |  |  |  |
| Antirrhinum coulterianum | (Q) 1-20, 20-100, >100              |  |  |  |
| Corylanthis rigidus      | 0, 1-20, 20-100, >100               |  |  |  |
| Castilleja exserta       | (0) 1-20, 20-100, >100              |  |  |  |
| % Bare ground estimate   | <u>9-25%</u> , 26-50%, 51-75%, >75% |  |  |  |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75%         |  |  |  |
| % Shrub cover estimate   | 0-25%, 26-50%, \$1-75%, >75%        |  |  |  |

Callippe fritillary PALA

E. fascici lectur

V. laciniate

BEMM

| Date 4/18/08 Plot number 48 Time start 1055 end 1110             |
|--|
| Plot location 1788593, 15 / 6361189, 13                          |
| Surveyor D Allen   |
| Temp (°C) 27.4 Wind (km/hr) 5-8 Sky clear, partly cloudy, cloudy |

| Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
|------------------|---|------------------|---|
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| Hostplant species        | Density per plot (estimate)      |  |  |
|--------------------------|----------------------------------|--|--|
| Plantago erecta          | 0, 1-20, 20-100, 101-1000, >1000 |  |  |
| Plantago patagonica      | 0, 1-20, 20-100, 101-1000, >1000 |  |  |
| Antirrhinum coulterianum | 0, 1-20, 20-100, >100            |  |  |
| Corylanthis rigidus      | 0, 1-20, 20-100, >100            |  |  |
| Castilleja exserta       | 0, 1-20, 20-100, >100            |  |  |
| % Bare ground estimate   | 0-25%, 26-50%, 51-75%, >75%      |  |  |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75%      |  |  |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75%      |  |  |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

MAlosma laurina Callippe Soutillery
V. laciniater BEMM
E. Sasciculation COWH
A. Calibranca DALA

| Date 4/18/08 Plot number 52 Time start 1/20 end 1/35              |
|---|
| Plot location 1789126.65/6362136.07                               |
| Surveyor D Allen  |
| Temp (°C) 27.9 Wind (km/hr) 4-7 Sky: clear, partly cloudy, cloudy |

tions (use additional sheets if readed)

|   | NAD 83 outside plot) | of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |  |  |
|---|----------------------|-----------|---|--|--|
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| Hostplant species        | Density per plot (estimate)           |
|--------------------------|---------------------------------------|
| Plantago erecta          | 0, 1-20, 20-100, 101-1000, \$1000 Dry |
| Plantago patagonica      | 0 (4-20, 20-100, 101-1000, >1000 Oc   |
| Antirrhinum coulterianum | 0 1-20, 20-100, >100                  |
| Corylanthis rigidus      | Ø 1-20, 20-100, >100                  |
| Castilleja exserta       | 2. (1-20, 20-100, >100 DAY            |
| % Bare ground estimate   | 0-25%, 26-50%, 51-75%, >75%           |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75%           |
| % Shrub cover estimate   | 0-25%, 26-50%, (51-75%) >75%          |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

Comstock Sritikary

E fasciculation A calibarita S. apinaca apiana

A fascicilation

| Date 4/18/08 Plot number 53 Time start 1030 end 1045             |
|--|
| Plot location 1729158, 20 / 6360296.39                           |
| Surveyor D Allen   |
| Temp (°C) 27.4 Wind (km/hr) 3-5 Sky, clear partly cloudy, cloudy |
|  |

| Observations | (use | additional | sheets | if | needed) |
|--------------|------|------------|--------|----|---------|
|              |      |            |        |    |         |

| Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
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| Hostplant species        | Density per plot (estimate)          |  |  |  |
|--------------------------|--------------------------------------|--|--|--|
| Plantago erecta          | 0, 1-20, 20-100, 101-1000, >1000 pry |  |  |  |
| Plantago patagonica      | 0, 1-20, 20-100, 101-1000, >1000     |  |  |  |
| Antirrhinum coulterianum | ② 1-20, 20-100, >100                 |  |  |  |
| Corylanthis rigidus      | 0, 1-20, 20-100, >100                |  |  |  |
| Castilleja exserta       | (d), 1-20, 20-100, >100              |  |  |  |
| % Bare ground estimate   | Ø-25%, 26-50%, 51-75%, >75%          |  |  |  |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75%          |  |  |  |
| % Shrub cover estimate   | 0-25% 26-50%, 51-75%, >75%           |  |  |  |

E fascie determina

Callippefulllary. PALA BEMM

L. Scapeniss

| Date 4/10/00 Plot number 54 Time start 1200         | end_(215      |
|---|---------------|
| Plot location 1789158,41 / 6361302.09               |               |
| Surveyor D Allen                                    |               |
| Temp (°C) 28. Wind (km/hr) 5-8 Sky: etear, partly c | loudy, cloudy |

.

| Number<br>of adults | Quadrant (or GPS coordinates NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
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| Hostplant species        | Density per plot (estimate)              |  |  |  |
|--------------------------|--|--|--|--|
| Plantago erecta          | 0, 1-20, 20-100, 101-1000, 51000 DAY     |  |  |  |
| Plantago patagonica      | 9 + 20 20-100, 101-1000, >1000           |  |  |  |
| Antirrhinum coulterianum | 02 1-20, 20-100, >100                    |  |  |  |
| Corylanthis rigidus      | 0, 1-20, 20-100, >100                    |  |  |  |
| Castilleja exserta       | 0, 1-20) 20-100, >100 Dry                |  |  |  |
| % Bare ground estimate   | <del>10-25%</del> , 26-50%, 51-75%, >75% |  |  |  |
| % Burned area estimate   | 0-25%; 26-50%, 51-75%, >75%              |  |  |  |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75%              |  |  |  |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

A. Sasciculation

Exemples Fritellary

Yylococcus bi

PALA

BEMM

E. fasciculation

Coult

| Date 4/18/08 Plot number 56 Time start 1000 end 1015            |
|---|
| Plot location 1789356.51/6363403.95                             |
| Surveyor D Allen  |
| Temp (°C) 25 Wind (km/hr) 0-2 Sky: Clear, partly cloudy, cloudy |

| Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
|------------------|---|---------------------|---|
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| Hostplant species        | Density per plot (estimate)        |  |  |
|--------------------------|------------------------------------|--|--|
| Plantago erecta          | (0), 1-20, 20-100, 101-1000, >1000 |  |  |
| Plantago patagonica      | Q. 1-20, 20-100, 101-1000, >1000   |  |  |
| Antirrhinum coulterianum | ©, 1-20, 20-100, >100              |  |  |
| Corylanthis rigidus      | (i) 1-20, 20-100, >100             |  |  |
| Castilleja exserta       | 0, 1-20, 20-100, >100              |  |  |
| % Bare ground estimate   | 0-25%, (26-50%), 51-75%, >75%      |  |  |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75%        |  |  |
| % Shrub cover estimate   | 0-25%,(26-50%) 51-75%, >75%        |  |  |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

· A. Sasciculation PALA COWH SAOT

| Date $\frac{4/18/08}{108}$ Plot number $\frac{71}{100}$ Time start $\frac{958}{100}$ end $\frac{1015}{100}$ |
|---|
| Plot location Otay Hills  |
| Surveyor Dale Ritenour  |
| Temp (°C) 2 / Wind (km/hr) 0-3 Sky: clear, partly cloudy, cloudy  |

| Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
|------------------|---|------------------|---|
| 4)               |   |                  |   |
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| Hostplant species        | Density per plot (estimate)  07 1-20, 20-100, 101-1000, >1000 |  |  |
|--------------------------|---|--|--|
| Plantago erecta          |   |  |  |
| Plantago patagonica      | Q <sup>2</sup> 1-20, 20-100, 101-1000, >1000                  |  |  |
| Antirrhinum coulterianum | ② 1-20, 20-100, >100  |  |  |
| Corylanthis rigidus      | (0) 1-20, 20-100, >100  |  |  |
| Castilleja exserta       | ①; 1-20, 20-100, >100   |  |  |
| % Bare ground estimate   | 0-25%, 26-50%, 51-75%, >75%                                   |  |  |
| % Burned area estimate   | Q=25%, 26-50%, 51-75%, >75%                                   |  |  |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75%                                   |  |  |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

Nectar - Deinandra fasciculata, Eriuphy/lum confertiflorum, Anth. nutt., Ade. fas.,
Butterflies-Fritillary
Painted Ledy

| Date 4/18/08 Plot number 77 Time start 1030 end 1045                |
|---|
| Plot location Otay Hills  |
| Surveyor Dale Ritenour  |
| Temp (°C) $24$ Wind (km/hr) $0-3$ Sky: clear, partly cloudy, cloudy |

| Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
|------------------|---|------------------|---|
| None             |   |                  |   |
| ·                |   |                  |   |
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|                  | <u>.</u>  |                  |   |

| Hostplant species        | Density per plot (estimate)      |
|--------------------------|----------------------------------|
| Plantago erecta          | 0, 1-20, 20-100, 101-1000, >1000 |
| Plantago patagonica      | £21-20, 20-100, 101-1000, >1000  |
| Antirrhinum coulterianum | Ø; 1-20, 20-100, >100            |
| Corylanthis rigidus      | Ø; 1-20, 20-100, >100            |
| Castilleja exserta       | Ø; 1-20, 20-100, >100            |
| % Bare ground estimate   | 0=25%, 26-50%, 51-75%, >75%      |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75%      |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75%      |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

Buttertly species: Sava Orangetys, Fritillary, Painted Cudy Nectari Cryptanthe sp.

| Date & A  | Plot number_                           | 78 Time sta                   | art 10 20 end 1035  |     |
|---|--|-------------------------------|---|-----|
| Plot locatio  | n OTAY H                               | LLS                           |   |     |
| Surveyor JASMWE WATTS   |  |                               |   |     |
| Temp (°C) 24 Wind (km/hr) 0-3 Sky: clear) partly cloudy, cloudy |  |                               |   |     |
| F   | s (use additional sheets if            |                               |   | ı   |
| Number  | Quadrant                               | Number                        | Quadrant  |     |
| of adults   | (or GPS coordinates                    | of adults                     | (or GPS coordinates   |     |
| 1   | NAD 83 outside plot)                   | <u>'</u>                      | NAD 83 outside plot)  | 1   |
| 4   |  |                               |   |     |
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|   |  |                               |   | ]   |
| Wastnlant   | species                                | Dencity per p                 | lat (actimata)  | 7   |
| Hostplant Plantago  |  |                               | lot (estimate)<br>00, 101-1000, >1000                               | 1   |
|   | patagonica                             |                               | 00, 101-1000, >1000   | 1   |
|   | m coulterianum                         | 0, 1-20, 20-1                 |   | 1   |
| Corylanth   | ······································ | 0, 1-20, 20-1                 |   | 1   |
| Castilleja  |  | 0,/1-20, 20-1                 |   | 1   |
|   |  |                               |   | ]   |
| % Bare g  | round estimate                         | <b>/</b> 0-25% <u>)</u> 26-50 | )%, 51-75%, >75%  | ]   |
| % Burnec  | il area estimate                       |                               | )%, 51 <u>-75</u> %, >75%   |     |
| % Shrub   | cover estimate                         | 0-25%, 26-50                  | )%, \$1 <i>-75</i> %, >75%  | _   |
| and other re  |  |                               | s for other life stages observed,<br>ectar sources, other butterfly |     |
|   | -checkers pot                          | Dom. SHE                      |   |     |
|   | ed White                               | Ade fas.                      | Cryptantha sp<br>Bri. con.  | •   |
| Friti   | Mary.                                  | Cauton.                       | Antirhinum  | 150 |
| Pannte  | llary<br>d Lady                        | Eri, faz                      | Dei for   | 74  |
|   | . <b>V</b>                             |                               |   |     |

| Date <u>18</u> /                        | pel   WK Plot number                             | 2        | $\frac{2}{2}$ Time sta | nt 0955 end 1010  |
|---|--|----------|------------------------|---|
| Plot locatio                            | n OTAY Hus                                       | <u> </u> | ·····                  |   |
| Surveyor _                              | JASMUE WA  | W        | 5                      |   |
| Temp (°C)                               | 24 Wind (km/hr)                                  | 0        | Sky: cle               | ar, partly cloudy, cloudy                                     |
| Observation                             | s (use additional sheets if                      | ne       | eded)                  |   |
| Number of adults                        | Quadrant (or GPS coordinates NAD 83 outside plot |          | Number<br>of adults    | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot)       |
|   |  |          |                        |   |
| <u> </u>                                |  |          |                        |   |
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|   |  |          |                        |   |
|   |  |          |                        |   |
| Hostplant species                       |  | D        |                        | ot (estimate)   |
| Plantago erecta<br>Plantago patagonica  |  | 1        |                        | 00, 101-1000, >1000   |
|   | m coulterianum                                   |          | 1-20, 20-10            | 00, 101-1000, >1000   |
| Corylanthi                              |  |          | 1-20, 20-10            |   |
| Castilleja e                            | ······································           | _        | $\sqrt{1-20, 20-10}$   |   |
| 4                                       |  |          | / <u> </u>             | 70, 7100  |
| % Bare gr                               | ound estimate                                    | 0        | <del>25%</del> , 26-50 | %, 51-75%, >75%   |
| % Burned                                | area estimate                                    |          |                        | %, 51-7 <u>5%</u> , >75%                                      |
| % Shrub                                 | cover estimate                                   | 0-       | 25%, 26-50             | %, <i>5</i> 1-75%,)>75%                                       |
| Notes. Incluand other rel               | de dominant shrub species                        | , G      | PS coordinates         | for other life stages observed, ctar sources, other butterfly |
|   | r life stages observed).                         |          |                        | S Maris S   |
| Gabbisc                                 | heckersiot                                       |          |                        |   |
|   |  |          | Ade- G                 | m blocke.   |
| Fritille<br>Brown                       | eltin  |          |                        |   |
|   | metalmark  |          | Eri fo                 | Ericon.<br>Sishel.  |
|   | swa Nowfail                                      |          |                        | 215. 2000.  |
| Califo                                  | Rugled, cleak                                    | gva      | of white               |   |

| Date 18 /    | Lpnil 2008 Plot number 8       | Time sta     | urt <u>//20</u> end <u>//35</u> |
|--------------|--------------------------------|--------------|---------------------------------|
| Plot locatio | n OTAY HILLS                   |              |                                 |
| Surveyor <   | JASMINE WI                     | EMS.         |                                 |
| Temp (°C)    | 25 Wind (km/hr) 3              | - L Sky: cle | ear, partly cloudy, cloudy      |
| Observation  | s (use additional sheets if ne | eded)        |                                 |
| Number       | Quadrant                       | Number       | Quadrant                        |
| of adults    | (or GPS coordinates            | of adults    | (or GPS coordinates             |
| $ \delta$    | NAD 83 outside plot)           |              | NAD 83 outside plot)            |
|              |                                |              |                                 |
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|              |                                |              |                                 |
| Hostplant    | species 🔎                      | ensity per p | lot (estimate)                  |
| Plantago e   | recta $/0$ ,                   | ¥-20, 20-10  | 00, 101-1000, >1000             |

| Hostplant species        | Density per plot (estimate)        |
|--------------------------|------------------------------------|
| Plantago erecta          | 0, 1-20, 20-100, 101-1000, >1000   |
| Plantago patagonica      | / 0, 1-20, 20-100, 101-1000, >1000 |
| Antirrhinum coulterianum | / 0, 1-20, 20-100, >100            |
| Corylanthis rigidus      | / 0, 1/-20, 20-100, >100           |
| Castilleja exserta       | 0, 1-20, 20-100, >100              |
|                          |                                    |
| % Bare ground estimate   | 0-25%, (26-50%) 51-75%, >75%       |
| % Burned area estimate   | (0-25%), 26-50%, 51-75%, >75%      |
| % Shrub cover estimate   | (0-25%), 26-50%, 51-75%, >75%      |

Fritillity
PainAed Lady
Gabb's Checkerspot
Creckered Unite

HETAR Eri. far. Vig. lac. Eri. con.

| Number           | Quadrant<br>(or GPS coordinates | Number of adults | Quadran      | t<br>coordinates |
|------------------|---------------------------------|------------------|--------------|------------------|
|                  | s (use additional sheets if ne  | T                |              |                  |
| Temp (°C)        | 25 Wind (km/hr) 5-              | 15 Sky (cf       | ear partly c | loudy, cloudy    |
| Surveyor _       | Dale Ritenour                   |                  |              | ·                |
|                  | on Otay Hills                   | <del></del>      |              |                  |
|                  |                                 |                  |              |                  |
| Date <u>4/18</u> | 7/08 Plot number 8              | Z Time st        | art 1130     | end //5 C        |

| of adults | (or GPS coordinates<br>NAD 83 outside plot) | of adults | (or GPS coordinates<br>NAD 83 outside plot) |
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| Hostplant species        | Density per plot (estimate)      |
|--------------------------|----------------------------------|
| Plantago erecta          | Ø; 1-20, 20-100, 101-1000, >1000 |
| Plantago patagonica      | Ø; 1-20, 20-100, 101-1000, >1000 |
| Antirrhinum coulterianum | <i>⊗</i> ; 1-20, 20-100, >100    |
| Corylanthis rigidus      | 0, 1-20, 20-100, >100            |
| Castilleja exserta       | Ø7 1-20, 20-100, >100            |
| % Bare ground estimate   | (0-25%) 26-50%, 51-75%, >75%     |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75%      |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75%      |

Buttertly: Funerial Dusking, Checkened White Nectar: Erro. conf.

| Date 4/21/08  | Plot number 05 Time start 1120 end 1135 |  |  |  |
|---|---|--|--|--|
| Plot location   | 55 1785775.32 N 6359319.60E             |  |  |  |
| Surveyor Alison James   |   |  |  |  |
| Temp (°C) 22.2 Wind (km/hr) 2.6 Sky: elear) partly cloudy, cloudy |   |  |  |  |
| Observations (use additional sheets if needed)                    |   |  |  |  |

| Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
|---------------------|---|---------------------|---|
| ND QN               | ind observed  |                     |   |
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| Density per plot (estimate)          |
|--------------------------------------|
| 0, 1-20, 20-100, 101-1000, ×1000 c/v |
| 0, 1-20, 20-100, 101-1000, >1000     |
| 0, 1-20, 20-100, >100                |
| 0, 1-20, 20-100, >100                |
| 0,71-20, 20-100, >100                |
|                                      |
| 0-25%, (26-50%,) 51-75%, >75%        |
| (0-25%), 26-50%, 51-75%, >75%        |
| 0-25%, 26-50%, 51-75%, >75%          |
|                                      |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed). Towering Plants: Che WOCIEVI Fais, VIDIAC, Dei Aus Osmodenia

Painted Lady II) Behvis mm II

| Date 4/21/08 Plot number 3 | Time start = 1138 end 1153 |
|----------------------------|----------------------------|
| Plot location 1786619.50 N | 6358581.10E                |
| Surveyor Alisan Varner     |                            |

Temp (°C) 33.8 Wind (km/hr) 4-8 Sky: clear, partly cloudy, cloudy

| <b>Observations</b> |   |            |             | 1             |
|---------------------|---|------------|-------------|---------------|
| / lincourage and    | / |            |             | _ 3 _ 3 _ 3 \ |
| I HIKKEVALIMIE      |   | winningi   | Chagte it i | 3002021       |
|                     |   | auuiuviiai | SHEELS II I |               |
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| Number<br>of adults                   | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) |
|---------------------------------------|---|------------------|---|
| No Q                                  | nino observed   |                  |   |
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| Hostplant species        | Density per plot (estimate)      |
|--------------------------|----------------------------------|
| Plantago erecta          | 0, 1-20, 20-100, 101-1000, >1000 |
| Plantago patagonica      | 0, 1-20, 20-100, 101-1000, >1000 |
| Antirrhinum coulterianum | 0, 1-20, 20-100, >100            |
| Corylanthis rigidus      | 0, 1-20, 20-100, >100            |
| Castilleja exserta       | 0, 1-20, 20-100, >100            |
| % Bare ground estimate   | 0-25%, 26-50%, 51-75%, >75%      |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75%      |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75%      |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed). Flowering Plants: Colmac Evitas, Deifas Viglac Del Spl

White II Printed Lady !! Gabbs 1

| Date 42109 Plot number 4 Time start 1014 end 1029                 |
|---|
| Plot location 1787603.02 N 6360535.57E                            |
| Surveyor Alison Varner  |
| Temp (°C) 18.8 Wind (km/hr) 2-4 Sky: elear, partly cloudy, cloudy |
| 66 F Myh  |

| Observations (use additional sheets if needed) |   |                     |   |  |
|--|---|---------------------|---|--|
| Number<br>of adults                            | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number<br>of adults | Quadrant (or GPS coordinates NAD 83 outside plot) |  |
| No Qui   | no doserved   |                     |   |  |
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|  |   |                     |   |  |

| Hostplant species        | Density per plot (estimate)                 |
|--------------------------|---|
| Plantago erecta          | $(0, \sqrt{1-20}, 20-100, 101-1000, >1000)$ |
| Plantago patagonica      | Ø, 1-20, 20-100, 101-1000, >1000            |
| Antirrhinum coulterianum | Ø, 1-20, 20-100, >100                       |
| Corylanthis rigidus      | Ø, 1-20, 20-100, >100                       |
| Castilleja exserta       | Ø, 1-20, 20-100, >100                       |
| % Bare ground estimate   | 0-25%, 26-50%, 51-75%, >75%                 |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, >75%                 |
| % Shrub cover estimate   | (0-25%) 26-50%, 51-75%, >75%                |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed). Flower Plants: Deifas, Viglac Enforcement of the particle of th

Fritillary HH HH 1

| Date 4/21/18 Plot number 58 Time start 0945 end 1000 |  |  |                     |   |
|--|--|--|---------------------|---|
| Plot location 1789731.34 N 6359   06.29 E            |  |  |                     |   |
| Surveyor MISON VAVNEV                                |  |  |                     |   |
| Temp (°C).  Observation                              | 17.7 Wind (km/hr) (<br>64 F<br>s (use additional sheets if | 2-3<br>my  | Sky cle             | ar, partly cloudy, cloudy                         |
| Number   |  |  | Number<br>of adults | Quadrant (or GPS coordinates NAD 83 outside plot) |
| No Q   | vino observed  |  |                     |   |
| <u> </u>   |  |  |                     |   |
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| Hostplant  | species  | n  | ensity per nl       | ot (estimate)                                     |
|  |  | Density per plot (estimate) 0, 1-20, 20-100, 101-1000, >1000 |                     |   |
|  |  | (1-20, 20-100, 101-1000, >1000)                              |                     |   |
|  |  | 0,/1-20, 20-100, >100  |                     |   |
| Corylanthis rigidus Q                                |  | ,  |                     |   |
|  |  | 0, 1-20, 20-100, >100  |                     |   |
|  |  |  |                     |   |
| % Bare ground estimate 0-2                           |  | 0-25%, 26% 51-75%, >75%                                      |                     |   |
| % Burned area estimate                               |  | 0-25%, 26-50%, 51-75%, >75%                                  |                     |   |
| % Shrub o  | cover estimate   | 0-   | 25%( <u>26-50</u> 9 | ½≥51-75%, >75%                                    |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed). Flowly of Plants: Evitas, Viglac Evitas, Viglac

Dom Shorb: Evifas Painted Lady 1

| Date 4-7        | 니. 저 Plot number           | <u> </u>            | tart_1135 end125           | <u> </u>             |
|-----------------|----------------------------|---------------------|----------------------------|----------------------|
| Plot location   | on                         | 6.39 N              | 6358207.94 5               | -                    |
| Surveyor_       | Brian Park                 | re C                |                            |                      |
| Temp (°C)       | 21 Wind (km/hr)            | <u>6-11</u> Sky: cl | ear, partly cloudy, cloudy |                      |
|                 | s (use additional sheets i | `_                  |                            |                      |
| Number          | Quadrant                   | Number              | Quadrant                   | ¬                    |
| of adults       | (or GPS coordinates        | of adults           | (or GPS coordinates        |                      |
|                 | NAD 83 outside plot        | )                   | NAD 83 outside plot)       |                      |
|                 | /                          |                     | ·                          | Constort             |
|                 |                            |                     |                            | Comstaction Complete |
|                 |                            |                     |                            | To laha              |
|                 |                            |                     |                            | - KTINGON "          |
|                 |                            |                     |                            | <b>(20)</b>          |
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|                 |                            |                     | <u> </u>                   |                      |
|                 |                            |                     |                            | <u></u> ].           |
| Hostplant       | species                    | Density per p       | lot (estimate)             | 7                    |
| Plantago erecta |                            | 0, (-20) 20-10      | -                          |                      |

| Hostplant species        | Density per plot (estimate)        |  |  |
|--------------------------|------------------------------------|--|--|
| Plantago erecta          | 0, (-20, 20-100, >100              |  |  |
| Plantago patagonica      | 9 <sup>2</sup> -1-20, 20-100, >100 |  |  |
| Antirrhinum coulterianum | <b>Q</b> . 1-20, 20-100, >100      |  |  |
| Corylanthis rigidus      | €, 1-20, 20-100, >100              |  |  |
| Castilleja exserta       | 0.1-20, 20-100, >100               |  |  |
|                          |                                    |  |  |
| % Bare ground estimate   | (0-28%, 26-50%, 51-75%, >75%       |  |  |
| % Burned area estimate   | 0-25%, 26-50%, 51-75%, \$75%       |  |  |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75%        |  |  |
|                          |                                    |  |  |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

Shrubs- Chamise, Canothus, Vigurera, Xylococcos Neckar, Vigurera, Dichelostemma, Errophyllom

| Date 4/2                 | $1 \log 2$ Plot numbe                                       | r <u>28</u>         | Time st                         | art 102 end 1117                         |  |  |
|--------------------------|---|---------------------|---------------------------------|--|--|--|
|                          | n 1786447.66N   |                     |                                 |  |  |  |
| Surveyor _               | Alison Varner   | -                   |                                 |  |  |  |
| Temp (°C)                | <u> み. み</u> Wind (km/hr<br>ファー<br>s (use additional sheets | ) <u>2</u><br>/// / | Sky: etc                        | partly cloudy, cloudy                    |  |  |
| Number Quadrant          |   | H III               | Number Quadrant                 |  |  |  |
| of adults                | (or GPS coordinates NAD 83 outside plot)                    |                     | of adults                       | (or GPS coordinates NAD 83 outside plot) |  |  |
| No a                     | ino observed  | ,                   |                                 |  |  |  |
|                          |   |                     |                                 |  |  |  |
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|                          |   |                     |                                 |  |  |  |
| L                        | <u> </u>  | ·····               | L                               |  |  |  |
| Hostplant                | species   | D                   | ensity per p                    | lot (estimate)                           |  |  |
| Plantago erecta          |   |                     | 0,1-20, 20-100, 101-1000, >1000 |  |  |  |
| Plantago patagonica      |   | 0,                  | 1-20, 20-100, 101-1000, >1000   |  |  |  |
| Antirrhinum coulterianum |   |                     | /0,/1-20, 20-100, >100          |  |  |  |
| Corylanthis rigidus      |   |                     | (0,)1-20, 20-100, >100          |  |  |  |
| Castilleja e             | exserta   | <b>(0,</b>          | 1-20, 20-1                      | 00, >100                                 |  |  |
|                          |   | 7                   |                                 |  |  |  |
|                          | ound estimate   | 0                   | 25% 26-50                       | %, 51-75%, <i>&gt;</i> 75%               |  |  |
| <del></del>              | area estimate   | <u> </u>            | 25%, 26-50                      | %, 51-75%, >75%                          |  |  |

Notes. Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed). Flowering Plants: Dei fas vig lac, ody IIII

Painted LodyIIII Behrs mm 1

| Numb   | er Quadr  | ant           | Number | Ouadran | <b>t</b> |  |
|--|-----------|---------------|--------|---------|----------|--|
| Observations (use additional sheets if needed)                   |           |               |        |         |          |  |
| 4-6  |           |               |        |         |          |  |
| Temp (°C) 18 Wind (km/hr) 6-10 Sky: clear, partly cloudy, cloudy |           |               |        |         |          |  |
|  |           |               |        |         |          |  |
| Survev   | or Bna    | n Parker      |        |         |          |  |
| 10010  |           |               | 11111  |         |          |  |
| Plot lo  | cation    | 1789731.7     | 101    | 6359106 | 129 5    |  |
| Dale   | 1 2 0 - 0 | _ Flot number | 11me s | tan 120 | ena loca |  |
| Dota   | 4-77-08   | Plot number 5 | ? T:   | 12.05   | 1 1270   |  |

| Number<br>of adults | Quadrant<br>(or GPS coordinates<br>NAD 83 outside plot) | Number<br>of adults | Quadrant (or GPS coordinates NAD 83 outside plot) |
|---------------------|---|---------------------|---|
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| Hostplant species        | Density per plot (estimate)       |
|--------------------------|-----------------------------------|
| Plantago erecta          | 0, (-20, 20-100, 101-1000, >1000  |
| Plantago patagonica      | (0) 1-20, 20-100, 101-1000, >1000 |
| Antirrhinum coulterianum | 0 <sub>3</sub> 1-20, 20-100, >100 |
| Corylanthis rigidus      | ⊕> 1-20, 20-100, >100             |
| Castilleja exserta       | ① 1-20, 20-100, >100              |
| % Bare ground estimate   | 0-25%, 26-50%, 51-75%, >75%       |
| % Burned area estimate   | 0.25%, 26-50%, 51-75%, >75%       |
| % Shrub cover estimate   | 0-25%, 26-50%, 51-75%, >75%       |

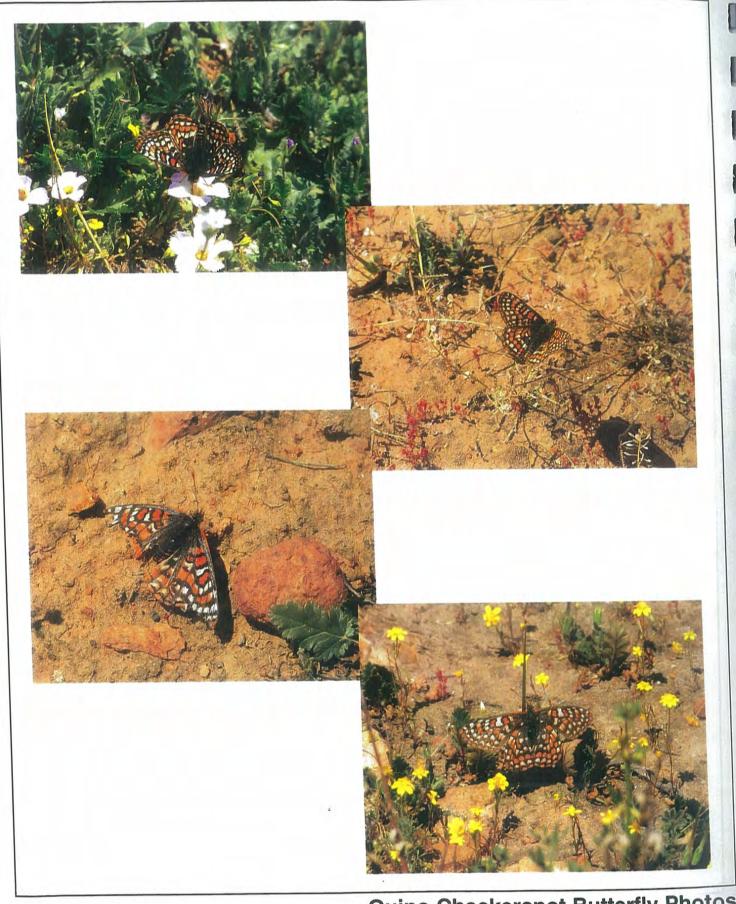
**Notes.** Include dominant shrub species, GPS coordinates for other life stages observed, and other relevant information (e.g. butterfly behavior, nectar sources, other butterfly species, other life stages observed).

Shoubs .. Br fas, Vig lac, Howers - Br fas, Vig lac, Dei Cas Butterflies Painted Locky - 34 We Lady - 6 Bohr's Metalmark - 4

# Appendix D QUINO CHECKERSPOT BUTTERFLY PHOTOS



OTAY HILLS QUARRY Appendix D



Quino Checkerspot Butterfly Photos OTAY HILLS QUARRY Appendix D

## Appendix B-7

## 2016 QUINO CHECKERSPOT BUTTERFLY SURVEY REPORT (304.6-ACRE PROPOSED OPEN SPACE)



## **Otay Hills Project**

Quino Checkerspot Butterfly Survey Report

May 6, 2016

Prepared for:

**Superior Ready Mix** 

1508 West Mission Road Escondido, CA 92029 Prepared by:

**HELIX Environmental Planning, Inc.** 

7578 El Cajon Boulevard La Mesa, CA 91942

I certify that the information in this survey report and attached exhibits fully and accurately represent our work:

Sally Trnka

Jasmine Bakker

1.

Rob Hogenauer

Amy Mattsor

rica Harris

### **Otay Hills Project**

### **Quino Checkerspot Butterfly Survey Report**

Prepared for:
Superior Ready Mix
1508 West Mission Road
Escondido, CA 92029

**Prepared by: HELIX Environmental Planning, Inc.** 

7578 El Cajon Boulevard La Mesa, CA 91942

May 6, 2016

### Otay Hills Project 2016 Quino Checkerspot Butterfly Survey Report

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#### 1.0 INTRODUCTION

This report documents the results of HELIX Environmental Planning, Inc.'s (HELIX's) 2016 Quino checkerspot butterfly (*Euphydryas editha quino*; QCB) survey of the Otay Hills Project (project). The QCB host plant mapping was conducted across the entire site, while QCB surveys were limited to proposed open space within the property boundaries. The project is located within the South County Segment of the County of San Diego (County) Multiple Species Conservation Program Subarea Plan. HELIX biologists performed the non-protocol QCB survey (which comprises four site visits) under HELIX's active 10(a)(1)(A) recovery permit (TE 778195-12).

The approximately 438.4-acre project site is located in southwestern San Diego County at the edge of Otay Mesa, in Township 18 South, Range 1 East, Sections 29, 30, 31, and 32 on the San Bernardino Base and Meridian U.S. Geological Survey (USGS) 7.5-minute Otay Mesa quadrangle map. In addition to developed land, 11 vegetation communities/habitats occur on the Project site: mule fat scrub, cismontane alkali marsh, southern interior cypress forest, tamarisk scrub, native grassland, Diegan coastal sage scrub (including disturbed), coastal sage-chaparral scrub, chamise chaparral, southern mixed chaparral, non-native grassland, and disturbed habitat.

#### 2.0 METHODS

HELIX biologists mapped host plants on the proposed development portion and proposed open space portion of the site between February 21 and 29, 2016 prior to the initiation of protocol surveys (Figures 3a – 3e). Biologists conducted pedestrian surveys within the host plant mapping area recording the location, size, and conditions of host plants. Host plants were mapped with the aid of global positioning system (GPS) units. Patches of host plants larger than approximately 250 square feet were mapped as polygons. Patches of host plants were categorized as low density (1 to 100 plants), medium density (100 to 1,000 plants), high density (1,000 to 10,000 plants), and very high density (over 10,000 plants). Host plants were also mapped incidentally when encountered during protocol surveys.

HELIX conducted four non-protocol QCB surveys within the proposed open space portion of the Otay Hills Project to determine presence/absence of QCB within the proposed open space portion of the Otay Hills Project. Surveys focused on areas of highest potential within the open Diegan coastal sage scrub, southern mixed chaparral, and chamise chaparral areas. Potentially suitable habitat areas within the Otay Hills Project included areas supporting QCB host plants, nectar sources, hilltops, ridgelines, and areas of bare ground.

The surveys were conducted when site conditions were most appropriate (based on presence of host plants and availability of nectar resources) and covered the peak of the butterfly flight season. Surveys began following the first observation of adult QCB in San Diego County (reported by Korey Klutz on February 22 at east Otay Mesa). Four focused surveys were conducted by HELIX biologists Robert Hogenauer, Erica Harris, Jasmine Bakker, and Amy Mattson on March 1, 2016 and continued through March 23, 2016.



Surveys consisted of walking through appropriate habitat and identifying all butterflies observed by sight and with the aid of binoculars. Larval host plants not previously documented were mapped with the aid of GPS units when encountered during surveys, and potential nectar plant species also were documented. Surveys covered between 5 and 10 acres per hour.

Identification of butterflies was based on personal knowledge, museum specimens, the San Diego Natural History Museum website, and field guides by Shiraiwa (2009) and Glassberg (2001). Other nomenclature for this report is taken from Holland (1986) and Oberbauer (2008) for vegetation communities and Baldwin et al. (2012) for plants.

#### 3.0 RESULTS

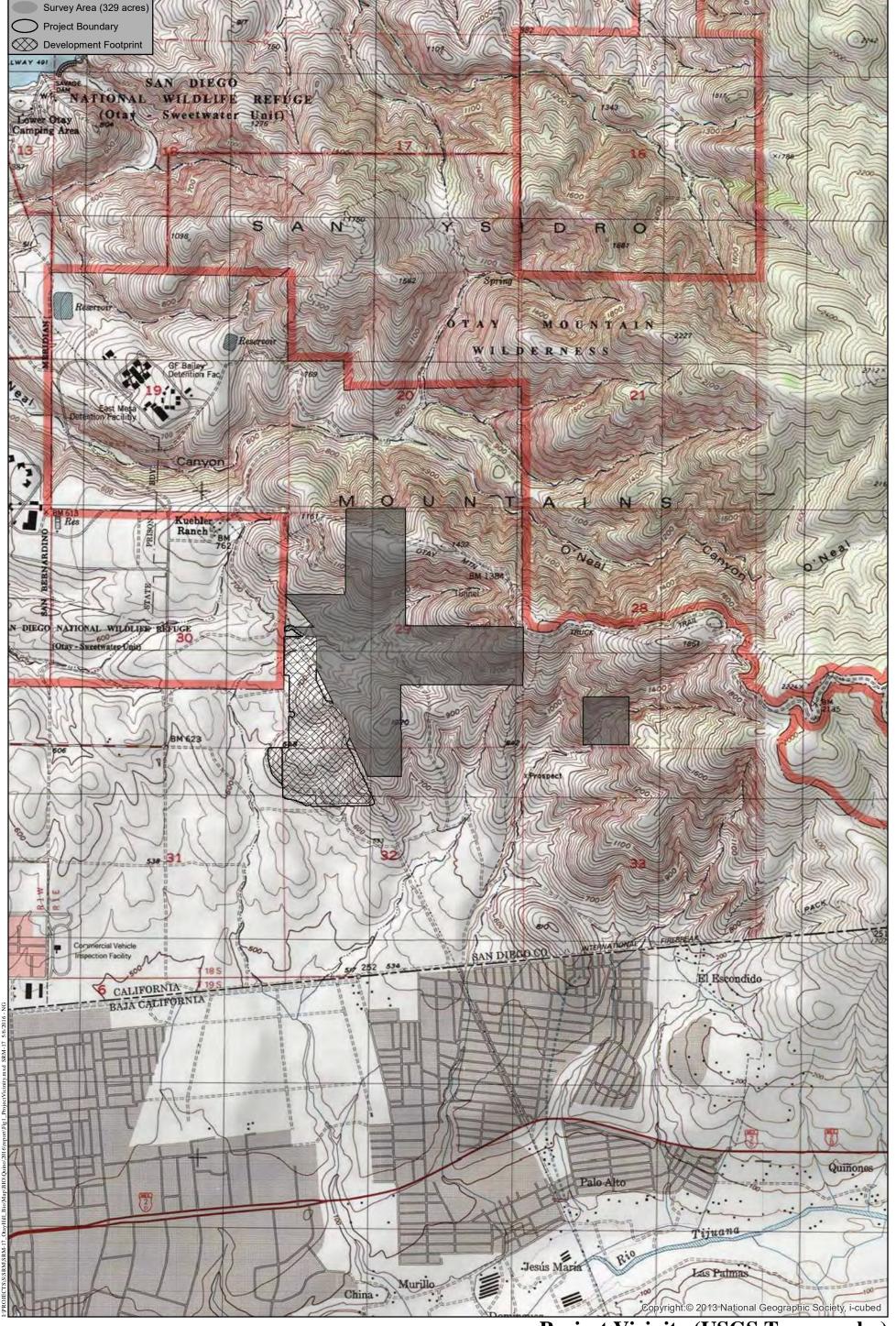
Dates, times, and weather conditions at the beginning and ending of each of the four surveys are presented in Appendix A. Copies of field notes taken are provided as Appendix B. A list of total butterflies observed during the 2016 QCB surveys is included as Appendix C.

No QCB or QCB larvae were detected within the survey area during the 2016 protocol surveys. Surveyors observed a total of 1,500 butterfly individuals representing at least 23 butterfly species during the four surveys. The most common butterflies observed were Sara's orangetip (Anthocharis sara sara), Behr's metalmark (Apodemia mormo virgulti), and anise swallowtail (Papilio zelicaon).

Two larval host plant species were observed during each of the surveys: dwarf plantain (*Plantago erecta*) and purple owl's clover (*Castilleja exserta*). Dwarf plantain was the most abundant larval host plant observed and recorded within the survey area. Dwarf plantain was mapped in patches of low density (1 to 100 plants), medium density (100 to 1,000 plants), high density (1,000 to 10,000 plants), and very high density (10,000 to over 100,000) (Figures 3a-e). High and very high density patches were further mapped by estimating ranges within these categories. For example, each high density polygon (1,000 to 10,000) was further refined by estimating a range (i.e., 4,000 to 6,000) to more narrowly define these larger patches. High and very high density patches of dwarf plantain were mapped as polygons if they were in areas larger than approximately 250 square feet. Host plants were in good condition during the four weeks of surveys, though dwarf plantain on south facing slopes began drying up sooner than less exposed areas of the survey area. However, by the fourth week of surveys dwarf plantain numbers were beginning to decrease and most individuals were beginning to senesce. Purple owl's clover was observed in low and medium densities.

Five potential nectar resources were noted within the QCB survey area: popcorn flower (*Cryptantha* and *Plagiobothrys* spp.), California buckwheat, goldfields (*Lasthenia californica*), ground pink (*Linanthus dianthiflorus*), and onion (*Allium* sp.). Other potential nectar sources were documented on survey forms and field notes. California buckwheat was a dominant within coastal sage scrub and was observed flowering throughout the four surveys. Popcorn flower was present throughout the survey area. Ground pink, onion, and goldfields occurred in smaller, isolated patches.





**Project Vicinity (USGS Topography)** 

OTAY HILLS



2016 Quino Checkerspot Butterfly Survey Area

OTAY HILLS