

Preservation of Documented QCB Sightings in County Subarea Plan

OTAY RANCH VILLAGE 14 AND PLANNING AREAS 16/19
LAND EXCHANGE ALTERNATIVE

Attachment A
QUINO CHECKERSPOT BUTTERFLY EVALUATION OF LAND EXCHANGE EIR ALTERNATIVE

Table 1
STATE LAND EXCHANGE PORTION OF LAND EXCHANGE EIR ALTERNATIVE

	PA 16/19 Exchange to State (Give)	V 14 Exchange from State (Take)	Comments
Total Acres	278 acres	278 acres	
<u>Predominant Habitat:</u>			The parcel currently owned by the State is not identified as core Quino checkerspot butterfly (QCB) habitat. Eighty one percent of the habitat on the State's current parcel is chaparral, with over half of that chaparral (117.82 acres) being so dense as to be excluded from protocol QCB surveys in 2015. This number was reduced the 34 acres in 2016, although a majority of the previously excluded areas did not support host plants. The property being "given" to the State in the exchange, on the other hand, contains 80 percent CSS – habitat that is considered potentially suitable for QCB use and dispersal.
Chaparral	13.3acres (0.1 percent)	225.0 (80.9 percent)	
Coastal Sage Scrub (CSS) + CSS (d)	222.4 acres (80 percent)	31.4 (11.3 percent)	
<u>Acres Excluded from Quino</u>			
2014 (Dudek)	26.56 acres (9.6 percent)	51.82 acres (18.6 percent)	The Dudek 2014 survey shows slightly more habitat excluded from QCB surveys in the property being "given" to the State.
2015 (HELIX)	4.50 acres (1.6 percent)	117.82 acres (42.4 percent)	The HELIX 2015 survey found almost half (42 percent) of the entire parcel currently owned by the State to be unsuitable QCB habitat (excluded) per QCB protocol, while 2016 surveys reduced this number to 12 percent, although a majority of the previously excluded areas did not support host plants. In addition, based on 2015 surveys, the State parcel contains approximately 26 times more QCB excluded habitat than the parcel being "given" to the State. Only 2 percent of the parcel being "given" to the State was considered excluded habitat.
2016 (HELIX)	0 acres (0 percent)	34 acres (12 percent)	

Attachment A (cont.)
QUINO CHECKERSPOT BUTTERFLY EVALUATION OF LAND EXCHANGE EIR ALTERNATIVE

Table 1 (cont.)
STATE LAND EXCHANGE PORTION OF LAND EXCHANGE EIR ALTERNATIVE

	PA 16/19 Exchange to State (Give)	V 14 Exchange from State (Take)	Comments
<u>Mapped Host Plant</u> 2014 surveys (Dudek)	15.54 acres	1.76 acres	The 2014 Dudek mapping included several areas of host plants that totaled 15.54 acres in the parcel that will be exchanged to the State.
2015 surveys (HELIX)	<ul style="list-style-type: none"> • <i>Plantago</i>: 5 Low density point locations (1-100 individuals), 9 Medium density point locations (100-1,000 individuals), 3 High density point locations (1,000-10,000 individuals) • <i>Castilleja</i>: 0 points 	<ul style="list-style-type: none"> • <i>Plantago</i>: 30 Low density point locations (1-100 individuals), 7 Medium density point locations (100-1,000 individuals), 3 High density point locations (1,000-10,000 individuals), and 1 High density patch (1,000-10,000 individuals [totaling 1.54 acre]) • <i>Castilleja</i>: 28 Low density point locations (1-100 individuals) 	HELIX's 2015 protocol surveys were conducted on the parcel currently owned by the State proposed for development. Host plants were mapped during each week of survey. Due to the excessive costs associated with the new protocol, protocol surveys were limited to development area and not conducted on the property to be "given" to the State. The host plants mapped on the property that is to be "given" to the State were documented during a late-season, non-protocol site visit (April 2015) when conditions had largely deteriorated. Although the host plant data between the "give" and "take" areas is not directly comparable due to the reasons listed above, an adequate comparison can be developed when considering the potential QCB resources described below and the sheer number of CSS areas being given to the state as compared to the chaparral acreage being taken from the state.

Attachment A (cont.)
QUINO CHECKERSPOT BUTTERFLY EVALUATION OF LAND EXCHANGE EIR ALTERNATIVE

Table 1 (cont.)
STATE LAND EXCHANGE PORTION OF LAND EXCHANGE EIR ALTERNATIVE

	PA 16/19 Exchange to State (Give)	V 14 Exchange from State (Take)	Comments
<u>Mapped Host Plant</u> (cont.) 2016 surveys (HELIX)	<ul style="list-style-type: none"> • <i>Plantago</i>: 58 Low density point locations (1-100 individuals), 43 Medium density point locations (100-1,000 individuals), 4 High density point locations (1,000-10,000 individuals), 2 Medium density patches (100-1,000 individuals [totaling 0.08 acre]), and 1 High density patch (1,000-10,000 individuals [totaling 0.1 acre]) • <i>Castilleja</i>: 2 point locations 	<ul style="list-style-type: none"> • <i>Plantago</i>: 68 Low Density point locations (1-100 individuals), 14 Medium density point locations (100-1,000 individuals), 1 High density point location (1,000-10,000 individuals), 1 Low density patch (1-100 individuals [totaling 0.02 acre]), 12 Medium density patches (100-1,000 individuals [totaling 0.26 acre]), 4 High density patches (1,000-10,000 individuals [totaling 1.08 acres]) • <i>Castilleja</i>: 150 Low density point locations (1-100 individuals), 1 High density point location (1,000-10,000 individuals), and 4 Low density patches (1-100 individuals [totaling 0.02 acre]) 	HELIX's 2016 surveys included both the "give" and "take" areas. There are 108 point and patch locations in the "give" area and 100 locations in the "take" area. There were more patches within the "take" areas as compared to "give" areas, and the total area of the mapped patches within the "take" area (1.36 acres) was higher than the "give" area (0.18 acre).

Attachment A (cont.)
QUINO CHECKERSPOT BUTTERFLY EVALUATION OF LAND EXCHANGE EIR ALTERNATIVE

Table 1 (cont.)
STATE LAND EXCHANGE PORTION OF LAND EXCHANGE EIR ALTERNATIVE

	PA 16/19 Exchange to State (Give)	V 14 Exchange from State (Take)	Comments
Historical Sightings	1 location	1 location	A historic QCB location occurs in the area within the State's current ownership and was documented by Mooney Jones and Stokes as part of a USFWS-funded post-fire study associated with the 2003 Old Fire. One QCB was observed in 2005 along a ridge top west of Proctor Valley Road consisting of burned CSS/chamise chaparral; 2 QCB were observed in the same location in 2006; and 1 QCB was observed in the same location in 2007 (Andrew Borchert, personal communication, September 15, 2015). This area supported scattered host plant patches in 2015 and scattered host plant patches and one larger host plant patch in 2016. This location has always been included within the proposed development footprint – i.e., it was in the original land exchange reviewed by the Agencies. In 2017, the USFWS incidentally sighted 1 location east of Proctor Valley Road within the Land Exchange, 1 location immediately west of Proctor Valley Road in the same general location as Borchert observed in 2005-2007 (4 QCB), 1 location west of Village 14 (2 QCB), and 1 location adjacent to the northeastern portion of the Land Exchange (1 QCB).
Current Sightings	Two incidental sightings by USFWS in 2017 adjacent to Give areas: area east of Proctor Valley Road in the northern portion of the Land Exchange and area adjacent to the northeastern portion of the Land Exchange.	One incidental sighting by USFWS in 2017 adjacent to Take area west of Proctor Valley Road (same general location as the 2007 Borchert location).	

Attachment A (cont.)
QUINO CHECKERSPOT BUTTERFLY EVALUATION OF LAND EXCHANGE EIR ALTERNATIVE

Table 1 (cont.)
STATE LAND EXCHANGE PORTION OF LAND EXCHANGE EIR ALTERNATIVE

	PA 16/19 Exchange to State (Give)	V 14 Exchange from State (Take)	Comments
General habitat quality, suitability for QCB, and nectaring resources	Areas given to the State are largely CSS habitat. HELIX mapped scattered potential QCB resource areas; however, based on the general habitat quality in the areas to be given to the State, it is anticipated that are smaller QCB resource areas scattered throughout the “give” area similar to the development footprint. Three high patches of <i>Plantago</i> (1,000-10,000 individuals per patch) were observed even though surveys were conducted well past the prime detection period for <i>Plantago</i> in 2015 and 5 were observed in 2016. The areas of potential QCB habitat (i.e. sage scrub and open chaparral) are generally larger than the areas taken from the State and are connected to blocks of other open space, the majority of which are CSS. Although not mapped, nectaring resources are found throughout these areas.	Areas taken from the State are largely chaparral habitats that contain scattered areas of QCB host plants. The majority of the host plants patches are low (<1,000 individuals of <i>Plantago</i> per patch). Four high patches of <i>Plantago</i> (1,000-10,000 individuals per patch) were mapped in one of the areas taken from the preserve. Although not mapped, nectaring resources are found throughout these areas.	The habitat quality in the areas to be “given” and the areas to be “taken” is relatively similar when considering the host plants, nectaring resources, and topography. The main difference is the areas to be taken from the State are largely chaparral and the areas to be given to the State are largely sage scrub. Also the areas to be given to the State are connected to larger blocks of open space habitat that is suitable for QCB. The areas to be given to the State would provide a greater benefit to QCB because of the greater amount of open CSS and their adjacency to larger blocks of suitable QCB habitat, both of which are preferable for preserve design for this species. Therefore, the land in the “give” parcel to the State is considered biologically equal or superior to the land in the exchanged or “take” from the State.

Attachment A (cont.)
QUINO CHECKERSPOT BUTTERFLY EVALUATION OF LAND EXCHANGE EIR ALTERNATIVE

Table 1 (cont.) STATE LAND EXCHANGE PORTION OF LAND EXCHANGE EIR ALTERNATIVE			
	PA 16/19 Exchange to State (Give)	V 14 Exchange from State (Take)	Comments
Critical habitat designation			
2002 Critical Habitat	201.96 acres	277.96 acres	None
2009 Critical Habitat	30.87 acres	276.76 acres	

Attachment A
QUINO CHECKERSPOT BUTTERFLY EVALUATION OF LAND EXCHANGE EIR ALTERNATIVE

Table 2
BOUNDARY LINE ADJUSTMENT PORTION OF LAND EXCHANGE EIR ALTERNATIVE

	Given to Preserve	Taken from Preserve	Comments
<u>Total Acres</u>	311.9 acres	43.6 acres	
<u>Predominant Habitat:</u> Chaparral Coastal Sage Scrub	68.3 acres (22 percent) 228.1 acres (73 percent)	26.0 (60 percent) 10.6 (24 percent)	Over 7 times more habitat is being given to the preserve as compared to what is being taken. The majority of the habitat taken from the preserve is chaparral habitat and the majority given to the preserve is coastal sage scrub.
<u>Acres Excluded from Quino</u> 2014 (Dudek) 2015 (HELIX) 2016 (HELIX)	28.02 acres (9 percent) 37.88 acres (12 percent) 2.11 acres (0.67 percent)	1.27 acres (3 percent) 12.82 acres (29 percent) 0.12 acres (0.27 percent)	Approximately half of the chaparral both taken and given from the preserve was mapped by HELIX as excluded from surveys in 2015. As a percentage of the total acres, nearly twice as much (29 percent) was excluded from the areas taken from the preserve as compared to those given to the preserve (12 percent). The 2016 surveys reduced these numbers to less than 1 percent for both.

Attachment A (cont.)
QUINO CHECKERSPOT BUTTERFLY EVALUATION OF LAND EXCHANGE EIR ALTERNATIVE

Table 2 (cont.)
BOUNDARY LINE ADJUSTMENT PORTION OF LAND EXCHANGE EIR ALTERNATIVE

	Given to Preserve	Taken from Preserve	Comments
<u>Mapped Host Plant</u> 2014 surveys (Dudek)	1.62 acres	0.1 acres	
2015 surveys (HELIX)	<ul style="list-style-type: none"> • <i>Plantago</i>: 2 Medium density point locations (100-1,000 individuals) • <i>Castilleja</i>: 2 Low density point locations 	<ul style="list-style-type: none"> • <i>Plantago</i>: 13 Low density point locations (1-100 individuals), 4 Medium density point locations (100-1,000 individuals), and 2 Very High density patches (10,000+ individuals [totals 0.38 acre for the 2 patches]) • <i>Castilleja</i>: 11 Low density point locations 	HELIX's 2015 protocol surveys were conducted on the parcel currently owned by the State proposed for development. Host plants were mapped during each week of survey. Due to the excessive costs associated with the new protocol, protocol surveys were limited to development area and not conducted on the property to be "given" to the State. The host plants mapped on the property to be "given" to the State were, however, documented during a late-season, non-protocol site visit (April 2015) when conditions had largely deteriorated. Although the host plant data between the "give" and "take" areas is not directly comparable due to the reasons listed above, an adequate comparison can be developed when considering the potential QCB resources described below and the sheer number of coastal sage scrub acres being given to the state as compared to the chaparral acreage being taken from the state.
2016 surveys (HELIX)	<ul style="list-style-type: none"> • <i>Plantago</i>: 23 Low density point locations (1-100 individuals), 11 Medium density point locations (100-1,000 individuals), 3 High density point locations (1,000-10,000 individuals), and 8 High density patches (1,000-10,000 individuals [totals 0.73 acre]) • <i>Castilleja</i>: 80 Low density point locations (1-100 individuals) and 3 Medium density point locations (100-1,000 individuals) 	<ul style="list-style-type: none"> • <i>Plantago</i>: 18 Low density point locations (1-100 individuals), 1 Medium density point location (100-1,000 individuals), and 1 High density patch (1,000-10,000 individuals [totals 0.31 acre]) • <i>Castilleja</i>: 19 Low density point locations (1-100 individuals) 	HELIX's 2016 surveys included both the "give" and "take" areas. There are 45 <i>Plantago</i> point and patch locations in the "give" area and 20 locations in the "take" area. A total of 0.31 acre of host plants was mapped in the "take" area, and 0.73 acre in the "give" area.

Attachment A (cont.)
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Table 2 (cont.)
BOUNDARY LINE ADJUSTMENT PORTION OF LAND EXCHANGE EIR ALTERNATIVE

	Given to Preserve	Taken from Preserve	Comments
Historical Sightings	None	1 location by Borchert in 2005-2007 west of Proctor Valley Road	A historic QCB location occurs in the area within the State's current ownership and was documented by Mooney Jones and Stokes as part of a USFWS-funded post-fire study associated with the 2003 Old Fire. One QCB was observed in 2005 along a ridge top west of Proctor Valley Road consisting of burned CSS/chamise chaparral; 2 QCB were observed in the same location in 2006; and 1 QCB was observed in the same location in 2007 (Andrew Borchert, personal communication, September 15, 2015). This area supported scattered host plant patches in 2015 and scattered host plant patches and one larger host plant patch in 2016. This location has always been included within the proposed development footprint – i.e., it was in the original land exchange reviewed by the Agencies. In 2017, the USFWS incidentally sighted 1 location east of Proctor Valley Road within the Land Exchange, 1 location immediately west of Proctor Valley Road in the same general location previously observed by Borchert in 2005-2007 (4 QCB), 1 location west of Village 14 (2 QCB), and 1 location adjacent to the northeastern portion of the Land Exchange (1 QCB).
Current Sightings	Several incidental sightings by USFWS in 2017 adjacent to Give areas: area east of Proctor Valley Road in the northern portion of the Land Exchange, area adjacent to the northeastern portion of the Land Exchange, and area west of the western portion of Village 14.	One incidental sighting by USFWS in 2017 adjacent to Take area west of Proctor Valley Road (same general location as the 2005-2007 Borchert location)	
General habitat quality, suitability for QCB, and nectaring resources	Areas given to the preserve are largely coastal sage scrub habitat that contains scattered areas of potential QCB resource areas. The area of potential QCB habitat (i.e. coastal sage scrub and open chaparral) are generally larger than the areas taken from the preserve and are connected to blocks of other open space,	Scattered QCB resources have been mapped in these areas, the majority of which are low patches of Plantago (<1,000 individuals per patch). Two high patches of Plantago were mapped in one of the areas taken from the preserve based on 2015 mapping. These areas were mapped as medium patches	The habitat quality in the areas to be given and the areas to be taken is relatively similar when considering the host plants, nectaring resources, and topography. There are no dramatic differences between the areas, with the exception that 7 times more habitat is being given to the preserve, including approximately 21 times more coastal sage scrub, and the locations of the areas to be given are connected to larger blocks of open space habitat that is suitable for QCB. The areas to be given to the preserve would provide a greater benefit to QCB not only due to the greater number of acres being given as compared to those being taken, but

Attachment A (cont.)
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Table 2 (cont.)
BOUNDARY LINE ADJUSTMENT PORTION OF LAND EXCHANGE EIR ALTERNATIVE

	Given to Preserve	Taken from Preserve	Comments
	the majority of which are coastal sage scrub. Although not mapped, nectaring resources are found throughout these areas.	in 2016. Although not mapped, nectaring resources are found throughout these areas.	also as it relates to their locations and being connected to larger blocks of suitable QCB habitat. Therefore the land “given” to the preserve is considered biologically equal or superior to the land being “taken” from the preserve.
Critical habitat designation			
2002 Critical Habitat	291.67 acres	43.56 acres	
2009 Critical Habitat	145.98 acres	43.56 acres	

Otay Ranch Proctor Valley Village & Preserve

Quino Checkerspot Butterfly Survey Report


June 3, 2015

Prepared for:
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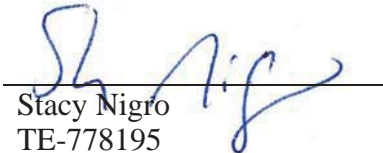
**Otay Ranch Proctor Valley Village & Preserve
Quino Checkerspot Butterfly Survey Report**


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



Jasmine Bakker
TE-778195

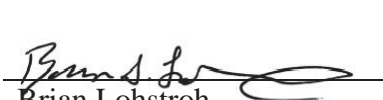

Erica Harris
TE-778195

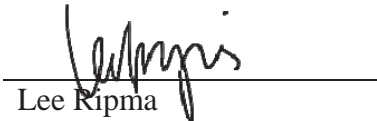

Sally Trnka
TE-778195



Stacy Nigro
TE-778195

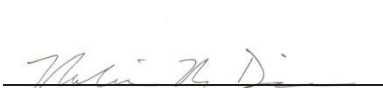

Jim Rocks
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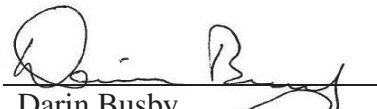

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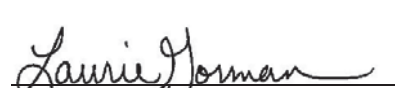

Brian Lohstroh
TE-063608-5



Lee Ripma
TE-221290-3



Garrett Huffman
TE-20186A-1


Melanie Dicus
TE-049175-3


Darin Busby
TE-115373-3


Laurie Gorman
TE-233367-2


Victor Novick
TE-069534-2


Travis Cooper
TE-170389-5


Alicia Hill
TE-06145B-0

Otay Ranch Proctor Valley Village & Preserve 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) 2015 Quino checkerspot butterfly (*Euphydryas editha quino*; QCB) survey of the Proctor Valley - Otay Ranch Village 14 Project site. HELIX biologists performed the protocol survey (comprising seven site visits) under HELIX's Threatened/Endangered Species Permit No. TE778195. Consultants (Busby Biological Services, Inc. and Rocks Biological) conducted surveys under their individual permits (please refer to the title page for a complete list of individual permit numbers).

The Project site is located predominantly within the County of San Diego and portions of the City of Chula Vista in southwestern San Diego County, California in an area commonly known as Proctor Valley. It is further located within Sections 17, 18, 19, 20, 25, and 30 of Township 17 South, Range 1 West and 1 East of the U.S. Geological Survey (USGS) 7.5-minute Jamul Mountains quadrangle map (Figure 1). The Project site and associated study area are situated along Proctor Valley Road and are southeast of San Miguel Mountain, north of Upper Otay Reservoir, and west of the Jamul Mountains. The Project site also includes portions of the California Department of Fish and Wildlife Rancho Jamul Ecological Reserve located in Otay Ranch Village 14. Elevations range from approximately 560 to 1,320 feet above mean sea level. Vegetation communities within the study area consist primarily of chamise chaparral, coastal sage scrub, non-native grassland, and southern mixed chaparral. Eucalyptus woodland and disturbed habitat comprising unpaved roads and trails are also present.

2.0 METHODS

The study area comprises the proposed development footprint, including limits of brush management and potential Proctor Valley Road realignment areas, and totals approximately 778 acres (Figure 2). A QCB habitat assessment of the study area was conducted by HELIX biologist Jasmine Bakker on February 12, 2015. Based on this habitat assessment, approximately 216 acres were excluded from the survey area, largely as dense chamise chaparral or southern mixed chaparral. The 562-acre QCB survey area was divided into smaller areas and distributed amongst the surveyors to ensure 100 percent coverage of the survey area.

Seven weekly protocol surveys were conducted in accordance with the U.S. Fish and Wildlife Service (USFWS) Survey Protocol for Quino Checkerspot Butterfly (2014) by HELIX biologists Jasmine Bakker, Erica Harris, Stacy Nigro, and Sally Trnka, and consultants Busby Biological Services, Inc. and Rocks Biological (Appendix A). HELIX biologists Tara Baxter, Laura Moreton, and Ben Rosenbaum participated as supervised individuals. Surveys began on February 17, 2015 and continued through April 2, 2015. The first QCB in Riverside County was reported at Oak Mountain by Adam Malisch on February 26, 2015 (Quino Biologists United 2015). The first QCB in San Diego County was reported at Marron Valley by Alison Anderson on March 12, 2015; however, additional sightings of QCB within San Diego County were limited. The seventh and last survey was conducted the week of March 30; however, the seventh survey was not completed for the entire survey area because surveys were discontinued due to host and nectar resources conditions and limited QCB sightings in San Diego County (see additional details in Section 3.0).

Surveys consisted of walking through appropriate habitat and identifying all butterflies observed by sight and with the aid of binoculars. Larval host plants were mapped with the aid of hand-held Global Positioning System (GPS) units (Figure 3), and potential nectar plant species were documented. Surveys covered between 5 and 10 acres per hour, with the exception of the first survey conducted on February 20 due to limited protocol weather conditions.

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

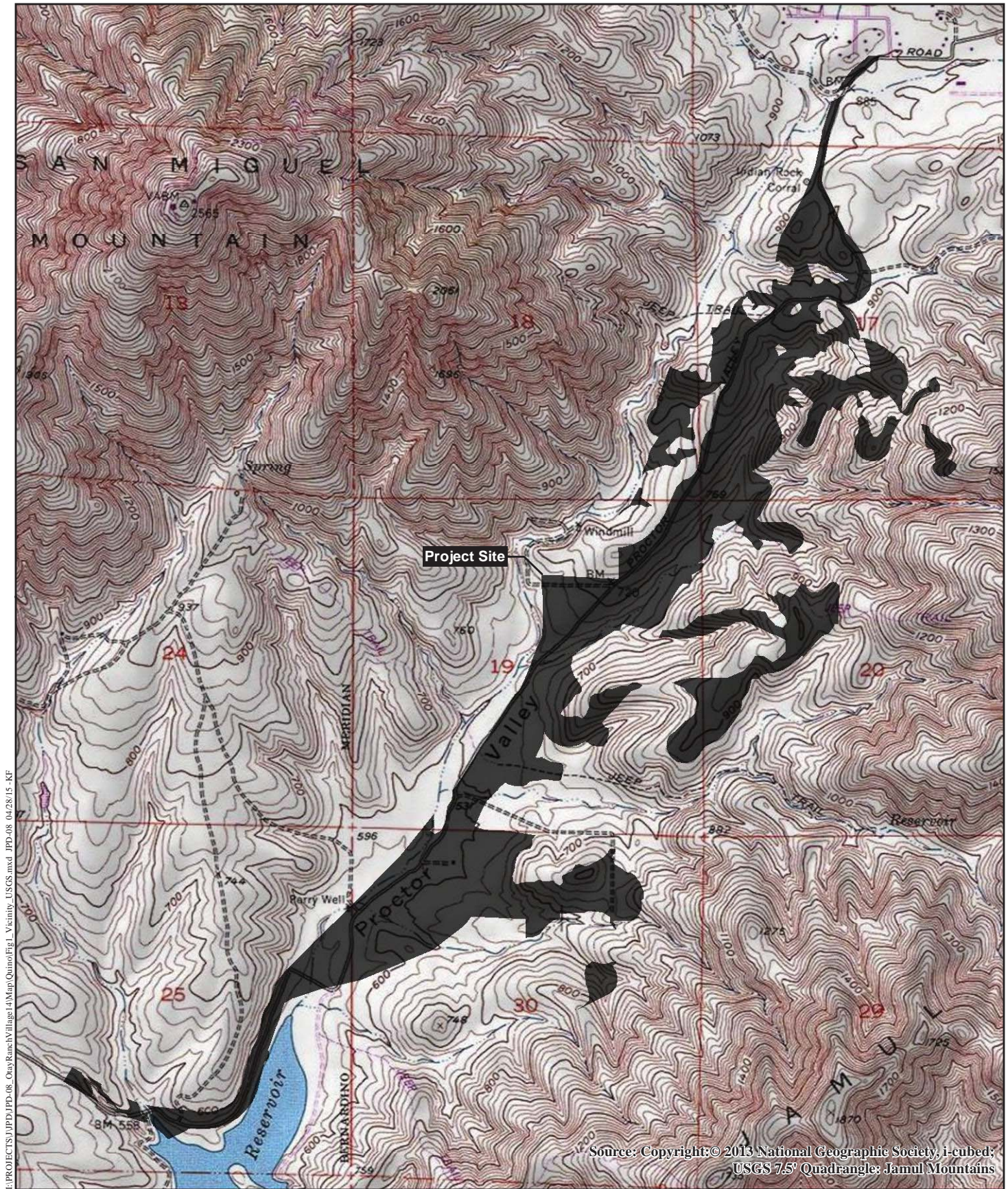
No QCB or QCB larvae were detected within the survey area during the 2015 protocol surveys.

Surveyors observed a total of 3,849 butterfly individuals representing at least 32 butterfly species during the seven surveys. The most common butterflies observed were Behr's metalmark (*Apodemia mormo virgulti*), funereal duskwing (*Erynnis funeralis*), southern blue (*Glaucopsyche lygdamus australis*), ladies (*Vanessa* spp.), and Sarah's orangetip (*Anthocharis sara sara*).

Two larval host plant species were observed within the survey area: dwarf plantain (*Plantago erecta*) and purple owl's clover (*Castilleja exserta*). Parish's owl's clover (*Castilleja densiflora*), a potential host plant species similar to purple owl's clover, was more commonly observed in small patches throughout the survey area than purple owl's clover. Dwarf plantain was mapped in patches of low density (1 - 100 plants), medium density (100 - 1,000 plants), and high density (1,000 - 10,000 plants); the owl's clover were mapped in low density patches (Figure 3). High density patches of dwarf plantain were mapped as polygons if they were in areas larger than approximately 250 square feet, and a few of those were reported to have greater than 10,000 plants. Host plants were in good condition during the first 6 weeks of surveys and representative of a typical year; however, by the seventh week dwarf plantain numbers decreased and most individuals has senesced.

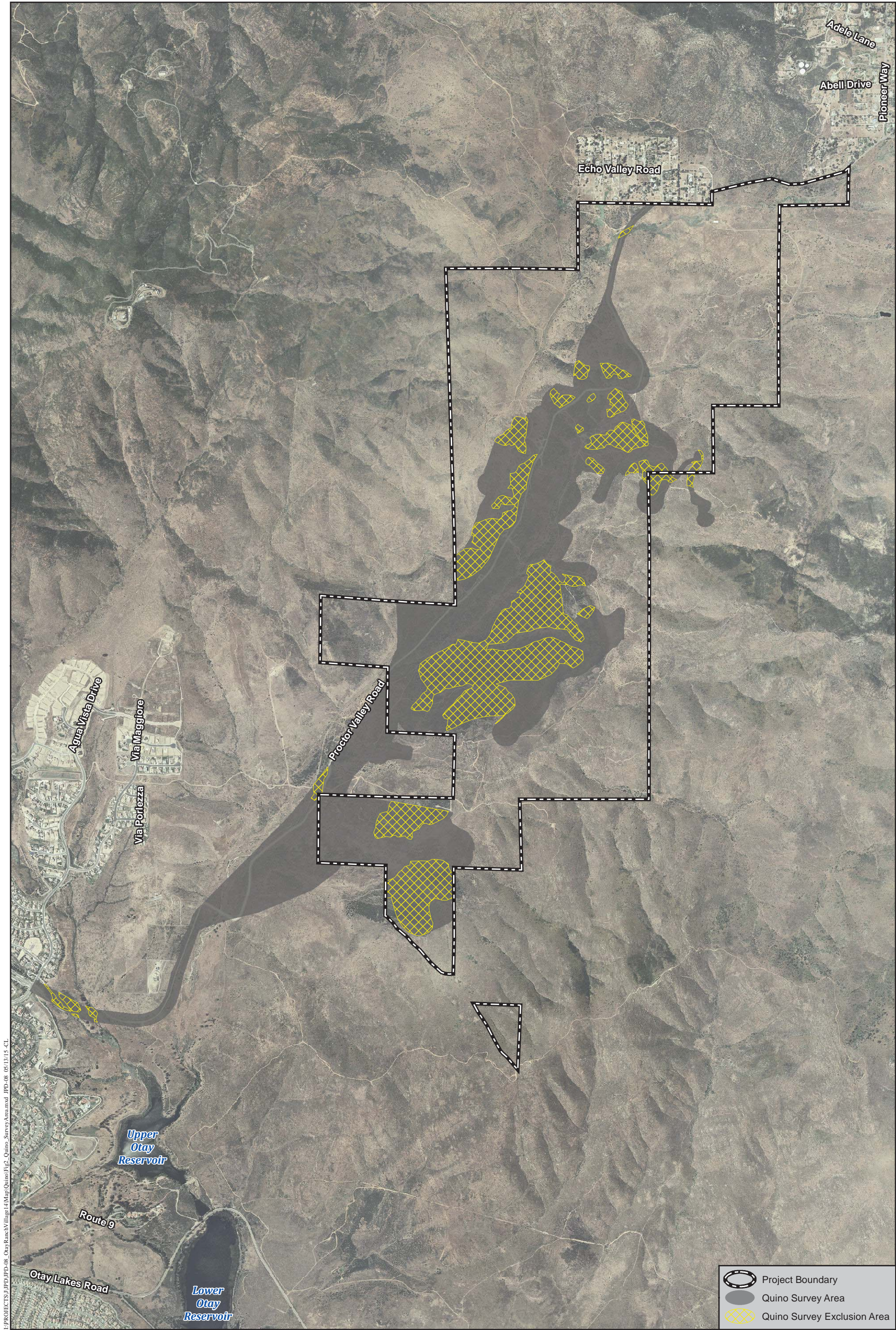
Seven potential nectar sources known to be utilized by QCB were noted within the survey area: popcorn flower (*Cryptantha* and *Plagiobothrys* spp.), California buckwheat (*Eriogonum fasciculatum*), goldfields (*Lasthenia* spp.), ground pink (*Linanthus dianthiflorus*), goldenstar (*Muilla maritima*), rancher's fiddleneck (*Amsinckia intermedia*), 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 seven surveys. Popcorn flower was present throughout the survey area and onion was common within patches of grassland intermixed with the chaparral communities on the north-facing slopes. Ground pink and goldfields occurred in smaller, isolated patches, and rancher's fiddleneck occurred occasionally along the road and trails.

Dominant plant species within the coastal sage scrub were primarily California buckwheat, California sagebrush (*Artemisia californica*), San Diego sunflower (*Bahiopsis laciniata*), laurel sumac (*Malosma laurina*), and deerweed (*Acmispon glaber*). Dominant plant species within the



Project Vicinity Map

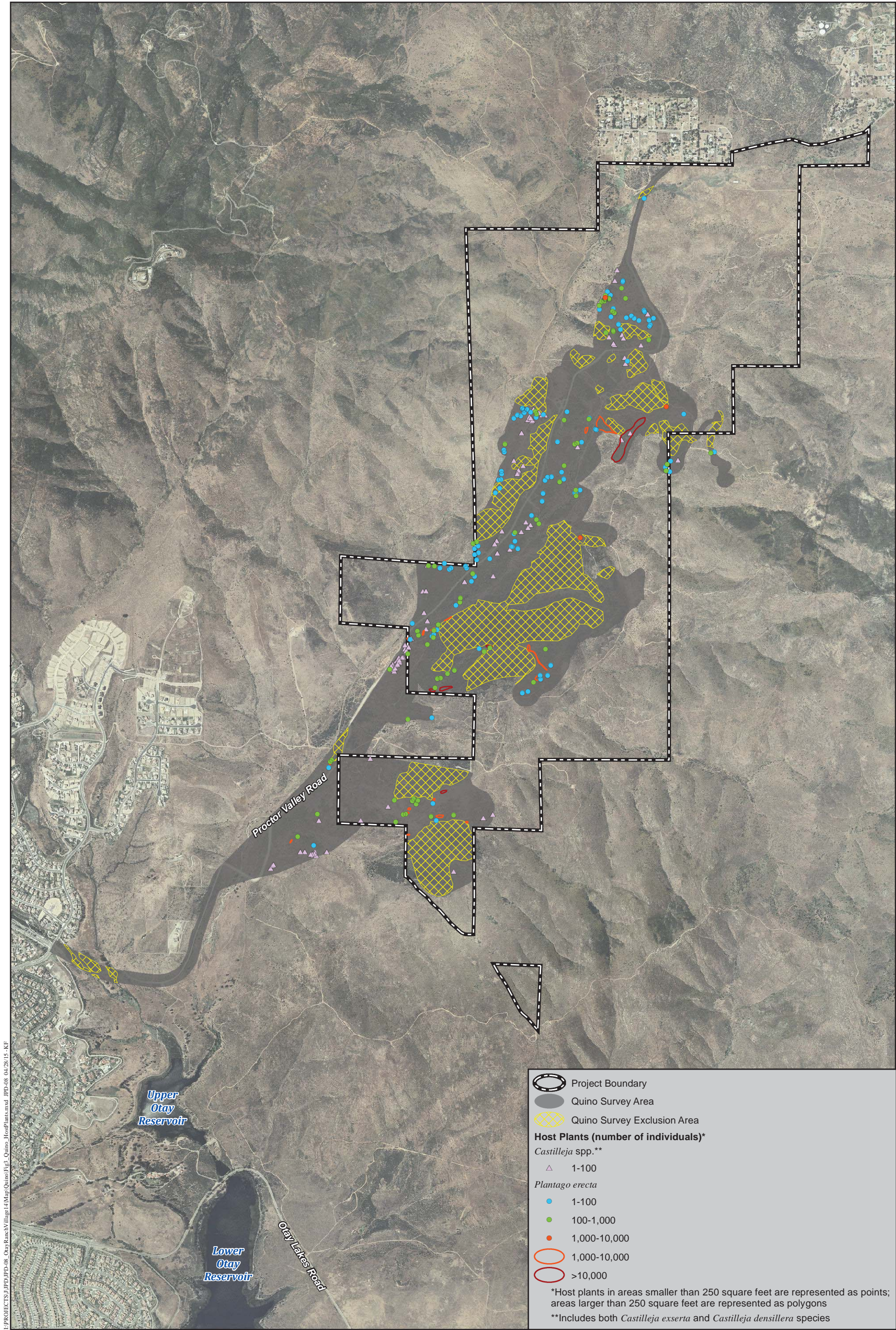
OTAY RANCH PROCTOR VALLEY VILLAGE & PRESERVE



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2015 Quino Checkerspot Butterfly Survey Area

OTAY RANCH PROCTOR VALLEY VILLAGE & PRESERVE



2015 Quino Checkerspot Butterfly Host Plant Locations

OTAY RANCH PROCTOR VALLEY VILLAGE & PRESERVE

chamise chaparral and southern mixed chaparral were primarily chamise (*Adenostoma fasciculatum*), Ramona lilac (*Ceanothus tomentosus*), and mission manzanita (*Xylococcus bicolor*). Munz's sage (*Salvia munzii*) also occurred in patches throughout the survey area.

Surveys were discontinued during the seventh week due to a combination of factors: host plant and nectar resources within the survey area had deteriorated to a condition that was determined by HELIX permitted biologists to not be suitable conditions; and an extremely limited number of QCB sightings in coastal San Diego County, including in areas known to support QCB. HELIX had several communications with USFWS staff (i.e., Susan Wynn and Alison Anderson) to confirm the extremely limited QCB sightings in San Diego County, prior to making a decision to stop the weekly surveys. The only reported sightings in coastal San Diego County were two sightings in Marron Valley (March 12 and March 20) and one sighting in east Otay Mesa on March 20 (Quino Biologists United 2015).

Despite the limited QCB sightings within San Diego County in 2015, this survey season was a good habitat year across the region and the 2015 QCB resource mapping for the Otay Ranch Village 14 survey area likely is representative of QCB resources on site.

4.0 REFERENCES

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Appendix A

SURVEY INFORMATION



Appendix A
SURVEY INFORMATION

Survey 1							
DATE	BIOLOGIST	ACRES	AC/HR	TIME* (start/ end)	WEATHER CONDITIONS		RESULTS†
					Start	End	
February 20, 2015	Jasmine Bakker [^]	45	13.5	1220/1540	Hazy, 73°F, wind 2-3 mph	Hazy, 68°F, wind 3-9 mph	No QCB Observed
	Erica Harris [^]	40	12.6	1230/1540	Hazy, 73°F, wind 0-1 mph	Overcast, 68°F, wind 3-9 mph	
February 17, 2015	J. Rocks [#]	127	6.22	1005/1530	0% clouds, 61°F, wind 1-3 mph	0% clouds, 73°F, wind 3-5 mph	No QCB Observed
	Melanie Rocks [#]						
	Brian Lohstroh [#]			1120/1530	0% clouds, 68°F, wind 0-3 mph		
February 19, 2015	J.Rocks [#]			1000/1525	50% clouds, 64°F, wind 1-2 mph	80% clouds, 74°F, wind 1-6 mph	No QCB Observed
February 18, 2015	Laurie Gorman ^β , Victor Novick ^β , Travis Cooper ^β	120	5	0820/1600	3% clouds, 61.4°F, wind 0-2 mph	100% clouds, 74.8°F, wind 0-3 mph	No QCB Observed
February 19, 2015	Darin Busby ^β	30	10	1240/1530	Light haze, 75°F, wind 1-5 mph	Light haze, 74°F, wind 1-3 mph	No QCB Observed
February 20, 2015	Laurie Gorman ^β , Travis Cooper ^β	91	7.58	0945/1545	10% clouds, 71.5°F, wind 0-2 mph	50% clouds, 70.8°F, wind 1-6 mph	No QCB Observed
February 21, 2015	Travis Cooper ^β , Victor Novick ^β , Brian Lohstroh ^β	110	7.3	1000/1500	90% clouds, 70°F, wind 3-5 mph	50% hazy, 70°F, wind 5-7 mph	No QCB Observed

[^]Signifies HELIX biologist

[#]Signifies Busby biologist

^βSignifies Rocks biologist

Appendix A (cont.)
SURVEY INFORMATION

Survey 2							
DATE	BIOLOGIST	ACRES	AC/HR	TIME* (start/ end)	WEATHER CONDITIONS		RESULTS†
					Start	End	
February 25, 2015	Jasmine Bakker [^]	40	9.4	1000/1415	0% clouds, 63°F, wind 1-3 mph	0% clouds, 76°F, wind 3-7 mph	No QCB Observed
	Stacy Nigro [^]	45	9.8	0945/1420	0% clouds, 64°F, wind 2-5 mph	5% clouds, 76°F, wind 3-7 mph	
February 26, 2015	J.Rocks [‡]	127	6.27	0915/1600	10% clouds, 60°F, wind 1-4 mph	10% clouds, 70.5°F, wind 1-5 mph	No QCB Observed
	Melanie Dicus [‡]				5% clouds, 60°F, wind 1-3 mph	10% clouds, 70.5°F, wind 1-5 mph	
	Garrett Huffman [‡]				10% clouds, 60°F, wind 1-3 mph	10% clouds, 70.5°F, wind 1-5 mph	
February 24, 2015	Alicia Hill ^β , Laurie Gorman ^β ,	93	8.45	1040/1615	2% clouds, 66.2°F, wind 5-10 mph	2% clouds, 71.6°F, wind 0.5-7 mph	No QCB Observed
February 25, 2015	Alicia Hill ^β , Laurie Gorman ^β , Travis Cooper ^β , Victor Novick ^β	137	5.37	0800/1500	3% clouds, 62.1°F, wind 0-1 mph	3% clouds, 76.0°F, wind 3-8 mph	No QCB Observed
February 26, 2015	Travis Cooper ^β , Victor Novick ^β	89	6.59	0900/1545	30% clouds, 62°F, wind 1-3 mph	5% clouds, 72°F, wind 5-8 mph	No QCB Observed
February 26, 2015	Laurie Gorman ^β	30	9.23	1245/1600	60% clouds, 78.2°F, wind 1-5 mph	10% clouds, 70.6°F, wind 1-4 mph	No QCB Observed

[^]Signifies HELIX biologist

[‡]Signifies Busby biologist

^βSignifies Rocks biologist

Appendix A (cont.)
SURVEY INFORMATION

Survey 3							
DATE	BIOLOGIST	ACRES	AC/HR	TIME* (start/ end)	WEATHER CONDITIONS		RESULTS†
					Start	End	
March 5, 2015	Jasmine Bakker [^]	40	10	0930/1330	0% clouds, 65°F, wind 1-3 mph	0% clouds, 76°F, wind 2-7 mph	No QCB Observed
	Erica Harris [^]	45	11.25	0930/1330	0% clouds, 65°F, wind 1-3 mph	0% clouds, 76°F, wind 2-7 mph	
March 5, 2015	J.Rocks [#]	127	6.43	0850/1510	0% clouds, 62°F, wind 0-2 mph	0% clouds, 79°F, wind 0-4 mph	No QCB Observed
	Melanie Dicus [#]			0850/1530	0% clouds, 62°F, wind 2-4 mph	0% clouds, 76°F, wind 0-2 mph	
	Garrett Huffman [#]			0850/1510	0% clouds, 62°F, wind 2-4 mph	0% clouds, 76°F, wind 0-2 mph	
March 5, 2015	Alicia Hill ^β , Travis Cooper ^β , Victor Novick ^β	145	6.9	0830/1530	0% clouds, 63°F, wind 0-2 mph	0% clouds, 77°F, wind 0-3 mph	No QCB Observed
March 6, 2015	Alicia Hill ^β , Travis Cooper ^β , Victor Novick ^β	111	6.2	0815/1415	0% clouds, 63°F, wind 0-3 mph	0% clouds, 82°F, wind 1-5 mph	No QCB Observed
March 7, 2015	Travis Cooper ^β , Victor Novick ^β	93	7.75	0745/1345	0% clouds, 61°F, wind 0-1 mph	0% clouds, 86°F, wind 1-5 mph	No QCB Observed

[^]Signifies HELIX biologist

[#]Signifies Busby biologist

^βSignifies Rocks biologist

Appendix A (cont.)
SURVEY INFORMATION

Survey 4							
DATE	BIOLOGIST	ACRES	AC/HR	TIME* (start/ end)	WEATHER CONDITIONS		RESULTS†
					Start	End	
March 9, 2015	Jasmine Bakker^	45	9.47	1015/1500	0% clouds, 63°F, wind 0-2 mph	10% clouds, 71°F, wind 2-6 mph	No QCB Observed
	Stacy Nigro^	40	9.8	1045/1445	5% clouds, 65°F, wind 2-5 mph	5% clouds, 71°F, wind 2-6 mph	
March 9, 2015	Melanie Rocks‡	127	6.05	0920/1615	0% clouds, 61°F, wind 1-2 mph	0% clouds, 77°F, wind 1-2 mph	No QCB Observed
	Melanie Dicus‡			0915/1615	0% clouds, 60.6°F, wind 1-2 mph	0% clouds, 78°F, wind 1-2 mph	
	Garrett Huffman‡			0920/1615	0% clouds, 61°F, wind 1-2 mph	0% clouds, 78°F, wind 1-2 mph	
March 11, 2015	Travis Cooper‡, Victor Novick‡	81	6.75	1040/1640	80% clouds, 72°F, wind 1-2 mph	80% clouds, 76°F, wind 1-3 mph	No QCB Observed
March 12, 2015	Alicia Hill‡, Travis Cooper‡, Victor Novick‡	123	6.8	0830/1430	0% clouds, 63°F, wind 0-1 mph	0% clouds, 85°F, wind 3-5 mph	No QCB Observed
March 13, 2015	Alicia Hill‡, Travis Cooper‡, Victor Novick‡, Brian Lohstroh‡	145	6.04	0800/1400	0% clouds, 62°F, wind 0-2 mph	0% clouds, 91°F, wind 4-7 mph	No QCB Observed

^Signifies HELIX biologist

‡Signifies Busby biologist

‡Signifies Rocks biologist

Appendix A (cont.)
SURVEY INFORMATION

Survey 5							
DATE	BIOLOGIST	ACRES	AC/HR	TIME* (start/ end)	WEATHER CONDITIONS		RESULTS†
					Start	End	
March 18, 2015	Jasmine Bakker^	85	10	1125/1540	20% clouds, 69°F, wind 0-4 mph	60% clouds, 70°F, wind 3-7 mph	No QCB Observed
	Sally Trnka^						
March 16, 2015	Melanie Rocks‡	127	6.86	0930/1500	55% clouds, 76°F, wind 1-3 mph	30% clouds, 88°F, wind 2-7 mph	No QCB Observed
	Melanie Dicus‡			0830/1500	30% clouds, 78°F, wind 3-8 mph	30% clouds, 88°F, wind 2-7 mph	
	Garrett Huffman‡			0830/1500	30% clouds, 78°F, wind 3-8 mph	30% clouds, 85°F, wind 2-7 mph	
March 19, 2015	Alicia Hill ^β , Travis Cooper ^β , Victor Novick ^β	133	7.4	0930/1530	10% clouds, 65°F, wind 0-2 mph	10% clouds, 82°F, wind 3-6 mph	No QCB Observed
March 20, 2015	Alicia Hill ^β , Travis Cooper ^β , Laurie Gorman ^β ,	112	6.2	0900/1500	1% clouds, 66.1°F, wind 0-1 mph	1% clouds, 85°F, wind 3-5 mph	No QCB Observed
	Victor Novick ^β	45	7.5	1030/1630	0% clouds, 73°F, wind 0-2 mph	5% clouds, 78°F, wind 0-3 mph	No QCB Observed
March 21, 2015	Travis Cooper ^β ,	74	6.2	0815/1415	45% clouds, 62°F, wind 1-3 mph	0% clouds, 79°F, wind 2-5 mph	No QCB Observed
	Victor Novick ^β ,				45% clouds, 62°F, wind 0-3 mph	0% clouds, 74°F, wind 0-5 mph	

^Signifies HELIX biologist

‡Signifies Busby biologist

^βSignifies Rocks biologist

Appendix A (cont.)
SURVEY INFORMATION

Survey 6							
DATE	BIOLOGIST	ACRES	AC/HR	TIME* (start/ end)	WEATHER CONDITIONS		RESULTS†
					Start	End	
March 23, 2015	Jasmine Bakker [^] Sally Trnka [^]	85	10	1015/1430	0% clouds, 67°F, wind 0-3 mph	20% clouds, 74°F, wind 3-8 mph	No QCB Observed
March 23, 2015	Garrett Huffman [‡]	127	8.2	0845/1530	0% clouds, 62°F, wind 1-3 mph	0% clouds, 72°F, wind 2-6 mph	No QCB Observed
	Melanie Dicus [‡]			0845/1530	1% clouds, 62°F, wind 0-3 mph	1% clouds, 72°F, wind 2-6 mph	
	Lee Ripma [‡]			0855/1345	1% clouds, 62°F, wind 1-3 mph	60% clouds, 75°F, wind 2-5 mph	
March 24, 2015	Brian Lohstroh ^β , Laurie Gorman ^β	52	7.43	1200/1500	2% clouds, 78°F, wind 4-9 mph	1% clouds, 85°F, wind 5-9 mph	No QCB Observed
	Travis Cooper ^β ,	49	7.5	0830/1500	5% clouds, 61°F, wind 1-3 mph	1% clouds, 85°F, wind 5-9 mph	No QCB Observed
March 26, 2015	Alicia Hill ^β , Travis Cooper ^β , Victor Novick ^β	139	6.6	0745/1440	0% clouds, 62°F, wind 0-1 mph	0% clouds, 93°F, wind 1-5 mph	No QCB Observed
March 27, 2015	Alicia Hill ^β , Travis Cooper ^β , Victor Novick ^β ,	119	6.6	0730/1330	0% clouds, 60°F, wind 0-1 mph	0% clouds, 93°F, wind 2-7 mph	No QCB Observed

[^]Signifies HELIX biologist

[‡]Signifies Busby biologist

^βSignifies Rocks biologist

Appendix A (cont.)
SURVEY INFORMATION

Survey 7							
DATE	BIOLOGIST	ACRES	AC/HR	TIME* (start/ end)	WEATHER CONDITIONS		RESULTS†
					Start	End	
March 30, 2015	Stacy Nigro [^]	40	10	1015/1415	0% clouds, 74°F, wind 0-8 mph	0% clouds, 79°F, wind 5-8 mph	No QCB Observed
March 30, 2015	Melanie Dicus [‡] Garrett Huffman [‡]	60	7.5	0845/1630	0% clouds, 61°F, wind 0-2 mph	0% clouds, 79°F, wind 2-6 mph	No QCB Observed
April 1, 2015	Brian Lohstroh [‡] , Travis Cooper [‡] , Victor Novick [‡]	97	5.9	0900/1430	20% clouds, 67°F, wind 1-4 mph	0% clouds, 82°F, wind 2-7 mph	No QCB Observed
April 2, 2015	Alicia Hill [‡] , Travis Cooper [‡] , Victor Novick [‡]	48	8	0830/1030	45% clouds, 62°F, wind 2-5 mph	20% clouds, 69°F, wind 2-6 mph	No QCB Observed

[^]Signifies HELIX biologist

[‡]Signifies Busby biologist

[‡]Signifies Rocks biologist

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Appendix B

SURVEY FORMS AND FIELD NOTES



2015 Quino Checkerspot Butterfly Survey Form

Surveyor: J. Rocks

Date: 2/17/15

Site Name: Proctor Valley - Village 14 of Olay Ranch

Site Visit No: 1

Acres Surveyed 127 (217+219) Survey Time: 20.4

Acres per Hour: 6.22

Other Surveyors Present: M. Rocks
B. Lohstroh

Field Conditions			
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)
Start	<u>1005</u>	<u>61</u>	<u>1-3</u>
End	<u>1530</u>	<u>73</u>	<u>3-5</u>
Start			
End			

Vegetation Communities Surveyed (inc. dominant spp.)

Chamise Chap. NNG

DCSS, Dist Hab, So Mixed Chap (Chamise, Xylococcus, Ceanothus tomentosus)

Host Plants	Obs.	Nectar Plants	Obs.
dwarf plantain (<i>Plantago erecta</i>)	<u>1</u>	popcorn flower (<i>Cryptantha/Plagiobothrys</i> spp.)	<u>11</u>
purple owl's clover (<i>Castilleja exserta</i>)	<u>1</u>	goldfields (<i>Lasthenia</i> spp.)	<u>1</u>
snapdragon (<i>Antirrhinum coulterianum</i>)		goldenstar (<i>Mulla</i> spp.)	
birds-beak (<i>Cordylanthus rigidus</i>)		fiddleneck (<i>Amsinckia menziesii</i> var. <i>intermedia</i>)	<u>1</u>
woolly plantain (<i>Plantago patagonica</i>)		onion (<i>Allium</i> spp.)	
Chinese houses (<i>Collinsia</i> spp.)		buckwheat (<i>Eriogonum fasciculatum</i>)	
		ground pink (<i>Linanthus dianthiflorus</i>)	
		Munz's Sage (<i>Salvia munzii</i>)	<u>1</u>
		Blue Dicks (<i>Dichelostemma cap</i>)	<u>1</u>

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	<u>1111</u>
chalcid checkerspot (<i>E. chalcidona chalcidona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everses amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	<u>11111</u>	painted lady (<i>V. cardui</i>)	<u>1111</u>
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue		pale swallowtail (<i>Papilio eurymedon</i>)	<u>1</u>
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	<u>1</u>	anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	<u>11</u>
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	<u>1111</u>	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
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	<u>14</u>	Column Subtotal	<u>12</u>
		Total	<u>26</u>

AcnGla Adefas All Prae Bah Lac Sol Par
Xyl Bic Mal Lav Cal Cil Vio Red 1
Cea Tom Sel Cin Esch Cal Lom Das

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Melanie Rocks Date: 2/17/2015
 Site Name: Proctor Valley - Village 14 of Otay Ranch Site Visit No: 1
 Acres Surveyed: 127 Survey Time: 20.4 Acres per Hour: 6.22
 Other Surveyors Present: J. Rocks
B. Lohstroh

Field Conditions			
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)
Start	1005	61	1-3
End	1530	73	3-5
Start			
End			

Vegetation Communities Surveyed (inc. dominant spp.)

Chamise chaparral (Ade fas), NW6, DCS
Disturbed / roadway, so mixed chaparral

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atides halesus corcoranti</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	111
chalcid checkerspot (<i>E. chalcidona chalcidona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brachydium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Evers amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	111	painted lady (<i>V. cardui</i>)	#
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	111
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue		pale swallowtail (<i>Papilio eurymedon</i>)	1
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)		anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white	1	funereal duskywing (<i>Erynnis funeralis</i>)	1
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	111	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
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	7	Column Subtotal	
		Total	10

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: B. Lohstroff Date: 2/17/15
 Site Name: Proctor Valley - Village 14 of Otay Ranch Site Visit No: 1
 Acres Surveyed: 127 Survey Time: 1120-1530 20.4 Acres per Hour: 6.22
 Other Surveyors Present: J. Rocks, M. J. Rocks

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	1120	68°F	0-3 mph	0%
End	1530	73°F	3-5 mph	0%
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

Chap. Mtn DCSS, Dist
Chamise, Yucca, Cercocarpus, Salvia leucantha, Erigeron, Achillea

Host Plants	Obs.	Nectar Plants	Obs.
dwarf plantain (<i>Plantago erecta</i>)	X	popcorn flower (<i>Cryptantha/Plagiobothrys</i> spp.)	X
purple owl's clover (<i>Castilleja exserta</i>)	X	goldfields (<i>Lasthenia</i> spp.)	X
snapdragon (<i>Antirrhinum coulterianum</i>)		goldenstar (<i>Muilla</i> spp.)	
birds-beak (<i>Cordylanthus rigidus</i>)		fiddleneck (<i>Amsinckia menziesii</i> var. <i>intermedia</i>)	
woolly plantain (<i>Plantago patagonica</i>)		onion (<i>Allium</i> spp.)	X
Chinese houses (<i>Collinsia</i> spp.)		buckwheat (<i>Eriogonum fasciculatum</i>)	
		ground pink (<i>Linanthus dianthiflorus</i>)	X
		see add'l Nectar sources opposite page	

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

2015 Quino Checkerspot Butterfly Survey Form

Surveyor

J. Rocks

Date: 2/19/15

Site Name: Proctor Valley - Village 14 of Otay Ranch

Site Visit No: 1

Acres Surveyed 127

Survey Time: 20.4

Acres per Hour: 6.22

Other Surveyors Present: —

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	1000	64	1-2	50% thin
End	1230	70	1-8	10% thin
Start	1525	74	1-6	80% thin
End				

Vegetation Communities Surveyed (inc. dominant spp.)

Cham chap, DCS, Dist habitat, NNG
Dirt Roads

Host Plants	Obs.	Nectar Plants	Obs.
dwarf plantain (<i>Plantago erecta</i>)	1	popcorn flower (<i>Cryptantha/Plagiobothrys</i> spp.)	1
purple owl's clover (<i>Castilleja exserta</i>)	1	goldfields (<i>Lasthenia</i> spp.)	1
snapdragon (<i>Antirrhinum coulterianum</i>)		goldenstar (<i>Mulla</i> spp.)	
birds-beak (<i>Cordylanthus rigidus</i>)		fiddleneck (<i>Amsinckia menziesii</i> var. <i>intermedia</i>)	
woolly plantain (<i>Plantago patagonica</i>)		onion (<i>Allium</i> spp.)	1
Chinese houses (<i>Collinsia</i> spp.)		buckwheat (<i>Eriogonum fasciculatum</i>)	1
		ground pink (<i>Linanthus dianthiflorus</i>)	
		Blue dicks, <i>Clematis pauciflora</i>	1

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

Add'l Nectar Sources - *Lathyrus vestitus*
Calystegia macro
Acmispon glaber
Bahia
Solanum parishii
Oxalis

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Laurie Gorman Date: 2-18-15
 Site Name: Proctor Valley - Village 14 of Otay Ranch Site Visit No: 1 (F.G. northern portion of K)
 Acres Surveyed: 120 Survey Time: 7.75 Acres per Hour: 5
 Other Surveyors Present: Victor Novik, Travis Cooper

Field Conditions			
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)
Start	0820	61.4	0-2
End	1600	74.8	0-3
Start			
End			

Vegetation Communities Surveyed (inc. dominant spp.)

Chamise (dom. *Ceanothus tomentosus*)
Chaparral *Adenostoma fasciculatum*

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcid checkerspot (<i>E. chalcidona chalcidona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exilis</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Evers amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	1	painted lady (<i>V. cardui</i>)	2
Edward's blue (<i>Hemiarctus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	20
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue	15	pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	10	anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	6
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgult</i>)	20+5	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)		striated queen	1
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur			
Column Subtotal	53	Column Subtotal	29

total 82

Oxalis sp.
Eschscholzia californica
Mirabilis laevis
Dodecatheon clevelandii
Salvia clevelandii
Therapsidella incana
Solanum sp.
Dichostema capitatum
Eschscholzia californica
Lomatium sp.

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: TRAVIS COOPER Date: 2/18/15
 Site Name: Proctor Valley - Village 14 of Otay Ranch F, G, K (North) Site Visit No: 1
 Acres Surveyed: 120 Survey Time: 7hr 40min Acres per Hour: 5.16
 Other Surveyors Present: Victor Munk, Laurie Gorman

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0820	61	02	5%
End	1600	75	0-3	100% haze
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

<u>Chamise Chaparral (chamise)</u>	<u>CSS (Buckwheat)</u>
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Host Plants	Obs.	Nectar Plants	Obs.
dwarf plantain (<i>Plantago erecta</i>)	X	popcorn flower (<i>Cryptantha/Plagiobothrys</i> spp.)	X
purple owl's clover (<i>Castilleja exserta</i>)		goldfields (<i>Lasthenia</i> spp.)	X
snapdragon (<i>Antirrhinum coulterianum</i>)		goldenstar (<i>Mulla</i> spp.)	X
birds-beak (<i>Cordylanthus rigidus</i>)		fiddleneck (<i>Amsinckia menziesii</i> var. <i>intermedia</i>)	X
woolly plantain (<i>Plantago patagonica</i>)		onion (<i>Allium</i> spp.)	X
Chinese houses (<i>Collinsia</i> spp.)		buckwheat (<i>Eriogonum fasciculatum</i>)	
		ground pink (<i>Linanthus dianthiflorus</i>)	X

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcedon checkerspot (<i>E. chalcedona chalcedona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	1	painted lady (<i>V. cardui</i>)	2
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	20
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue	15	pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	10	anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	6
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	27	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)		<u>Striated Queen</u>	1
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur	14		
Column Subtotal	53	Column Subtotal	28
		Total	81

Surveyor: T. Novik Date: 2-18
Site Name: Proctor Valley - Village 14 of Otay Ranch Site Visit No: 1 Areas
Acres Surveyed 120 Survey Time: 0820 775 Acres per Hour: 5+ F, G, K
Other Surveyors Present: Travis Cooper, Laurie Gormann

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0820	61.4	0-2	3%
End	1600	74.8	0-3	100% thin
Start				
End				

Chamise, *Ceanothus* tom
Chamise Chaparral

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspot		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcodon checkerspot (<i>E. chalcodona chalcodona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Myliatta crescent (<i>Phyciodes myliatta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glauropsyche lygdamus australis</i>)	1	painted lady (<i>V. cardui</i>)	11
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)	.	unidentified lady (<i>Vanessa</i> sp.)	111 11111
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue	111 111111	pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	11111	anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	1111
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	11111 111 111	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)		Striated Queen	1
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur			
Column Subtotal	53	Column Subtotal	28
		Total	81

2015 Quino Checkerspot Butterfly Survey Form

Surveyor Darin Busby Date: 2/19/15
 Site Name: Proctor Valley - Village 14 of Otay Ranch (Map M) Site Visit No: 1
 Acres Surveyed 30 acres Survey Time: ~ 3 hrs Acres per Hour: ~ 10 acres/hr.
 Other Surveyors Present: N/A

Field Conditions			
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)
Start	1240	75 F	1-5 mph
End	1530	74 F	1-3 mph
Start			
End			

Vegetation Communities Surveyed (inc. dominant spp.)
Coastal Sage Scrub, disturbed areas, bare ground, non-native grass/and.

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

~~No host plants observed.~~

other flowering plants:
Isomeris, *Eriodum*, *Agrostis*, *Baccharis*,
Dichlostenum, *Bahicopsis*, *Mirabilis*

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcedon checkerspot (<i>E. chalcedona chalcedona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)	1	west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)		painted lady (<i>V. cardui</i>)	1
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue	1	pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)		anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	1
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	11	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)		Unidentified moth	11
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur			
Column Subtotal	6	Column Subtotal	4
		Total	10

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Jasmine Bakker **Date:** 2/20/2015
Site Name: Proctor Valley – Village 14 of Otay Ranch (JPD-08); Area A **Site Visit No:** 1
Acres Surveyed 45 **Survey Time:** 3 hours 20 min **Acres per Hour:** 13.5*
Other Surveyors Present: Erica Harris ~ Area C
 *Survey completed at faster pace in order to complete survey during suitable weather conditions

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	1220	73	2-3	hazy
End	1540	68	3-9	hazy (mostly cloudy)
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)
NNG (<i>Bromus</i> , <i>Avena</i>), DCSS (<i>Artemisia californica</i> , <i>Eriogonum fasciculatum</i> , <i>Salvia apiana</i> , <i>Acmispon glaber</i>),
SMC (<i>Ceanothus tomentosus</i> , <i>Adenostoma fasciculatum</i> , <i>Xylococcus bicolor</i> , <i>Rhamnus crocea</i>)

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcedon checkerspot (<i>E. chalcedona chalcedona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	2
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	3	painted lady (<i>V. cardui</i>)	
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginiensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue	3	pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)		anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)	1	monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	5
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	3	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
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	10	Column Subtotal	7
		Total	17

Procter Valley
QCB Survey #1

20 Feb 2015

JB

ARDA A ~ 45 acres

START: 73° 2-3 mph, hazy: 1220

SOOP: 68° 3-9 mph, " 1540

NNG, SMC, CC, DSS

Flowering Sp.

Rap sat Pla. ere*
Ero. mos. Coa tom
Hir inc Sal mel
Duc cap Eri tom
Acm. gla Cryptantha*
Oxa. pes Lin. dia*
Cal mac Esc cal
Mir cal Peetocarya sp.
Mar mac Xyl bic
Cal cil Las. ves.
Eri far* Cle pan.
Camissonia sp.
Allium sp.* Dod. de
Lomatium Thalictrum
Sanicula Lepidium
Oxa. cal Stilodine
Bac sal Der far
Solanum Kee. ant

Butterflies

W. Coast lady II
Dusky wing III
Southern blue III
Behr's metalmark III
Blue III
Cal. Ringlet I

WILDLIFE

WEME COBA
Lizards LEGF
woolly bear caterpillars
moths, bees
WREN SPTO
jack rabbit
ROWR BUSH
BEWR
CATH

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Erica Harris Date: 2/20/15
 Site Name: Proctor Valley - Village 14 of Otay Ranch Site Visit No: 1
 Acres Surveyed: 40 Survey Time: 3.17 hr Acres per Hour: 12.6
 Other Surveyors Present: Jasmine Bakker (Area A)

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	<u>1230</u>	<u>73</u>	<u>0-1</u>	<u>100% hazy</u>
End	<u>1540</u>	<u>68</u>	<u>3-9</u>	<u>100% overcast</u>
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbi</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcid checkerspot (<i>E. chalcidona chalcidona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	<u>1</u>	painted lady (<i>V. cardui</i>)	<u>1</u>
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	<u>1</u>
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue		pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)		anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)	<u>2</u>	monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	<u>30</u>	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
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	<u>33</u>	Column Subtotal	<u>2</u>
		Total	<u>35</u>

JPD 08

Enca H

QCB #1; Area C

2/20/15

START: 1230; 73°F, 0-1, 100% hazy

STOP: 1540; 68°F, 3-9, 100% over

Flowering:

Dracopis oxalis rap sat

acm glia calcei vio ped

Hierac mirae solanum

Diccap cryptantha trifas

amr men ceanothus esc cal

pic mon *pl ere cal mac

Allium sis bel sanicula

cast ex *

Duskywing III So. Blue I

Berks ^{III} ^{III} ^{III} Painted I

Ridget II Lady I

WOMF BUSH OAKI LABP

AMCR NOFL WOSP SAVS

GRRO RCKI YRWA BOMR

WREN ROMR HOFI OWA

CALIN (part)

*NO QCB

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Laurie Gorman Date: 2-20-15
 Site Name: Proctor Valley - Village 14 of Otay Ranch Site Visit No: 1
 Acres Surveyed: 91 Survey Time: 6 hours Acres per Hour: 7.58 (Hard I)
 Other Surveyors Present: Travis Cooper

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0945	71.5	0-2	10
End	1545	70.8	1-6	50
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

Chamise chaparral (don. = chamise); Coastal sage scrub (*Salvia leucantha*),
 Non-native grassland (don. = *Bromus* sp., *Erodium*) *Eriogonum fasciculatum*

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbi</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcid checkerspot (<i>E. chalcid chalcid</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	1
western tailed blue (<i>Evers amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	10	painted lady (<i>V. cardui</i>)	
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue	2	pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)		anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	16
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	8	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
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	20	Column Subtotal	17

Total = 37

Calandrinia ciliata
 Dolocathus clelandii
 Solanum sp.
 Lasthenia sp.
 Viola sp.
 Icaricia canadensis
 Strymon melinus
 Linanthus dianthiflorus
 Hirschfeldia incana
 Lathyrus vestitus var. alefeldii
 Delostemma
 Capitulum
 Lepidium sp.
 Silene gallica
 Aconitum glaberrimum

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: TRAVIS COOPER Date: 2/20/15
 Site Name: Proctor Valley - Village 14 of Otay Ranch H&I Site Visit No: 1
 Acres Surveyed 91 Survey Time: 6 hrs Acres per Hour: 7.58
 Other Surveyors Present: Laurie Gorman

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0945	72	0-2	10% haze
End	1545	71	1-6	50% haze
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)
<u>Chamise Chaparral, CSS (montez sage) non-native grassland (Barnus, Erodium)</u> <u>+Buckwheat</u>

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcidon checkerspot (<i>E. chalcidona chalcidona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Myliitta crescent (<i>Phyciodes myliitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	1
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	10	painted lady (<i>V. cardui</i>)	
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue	2	pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)		anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	16
Metalmarks		mourful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	8	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
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	20	Column Subtotal	17
		Total	37

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: V. for Novik

Date: 2/21/15

Site Name: Proctor Valley - Village 14 of Otay Ranch

Site Visit No: 1

Acres Surveyed 110

Survey Time: 5 hrs

Acres per Hour: 7.3

Other Surveyors Present: Brian Lotz, Travis Cooper

Field Conditions

	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	1000	70	3-5	96%
End	1500	70	5-7	50% then
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

<u>mixed CS</u>	<u>Malasoma laury</u>	<u>Erigo Fas</u>
-----------------	-----------------------	------------------

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	1
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcid checkerspot (<i>E. chalcidona chalcidona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	1
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)		painted lady (<i>V. cardui</i>)	1
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	
marine blue (<i>Leptotes marina</i>)	1	Swallowtails	
unidentified blue		pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)		anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)		fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
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	32	Column Subtotal	14
		Total	46

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 Field mustard
 Red muds
 Shooting stars
 Vio Ped
 Vio Ped

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: B. Lokstad Date: 2/21/15
 Site Name: Proctor Valley - Village 14 of Otay Ranch K, L, J Site Visit No: 1
 Acres Surveyed 110 Survey Time: 1000-1500 Acres per Hour: 7.3
 Other Surveyors Present: Tavis Cooper
Victor Novik

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	1000	70°F	3-5	90%
End	1500	70°F	5-7	70% 50% thin clouds
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

CSS: Artcd, Mal laurina, Acropolis Superis
 Chamise Chap: Ad. Fac.

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

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

Mercurium
coddium

Baheopsis Lind.
Syl bellus

Hirschii.

~~Acnison~~ scop

Salvia Munzii

Sanicula

Mimus Ar.

Diel cap

lonicera sp

cammissana

chama syche

mirabilis

Viola ped.

Dws. integ

Escholz. ed.

Rhamnus, croc.

Ribes (chp. cruent)

Eriodictyon (m)

oxalis p-c

isomeris eds.

Sanicula

niella var.

Dodecatheon lep.

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: TRAVIS COOPER Date: 2/21/15
 Site Name: Proctor Valley - Village 14 of Otay Ranch J, L, K (South) Site Visit No: 1
 Acres Surveyed 110 Survey Time: 5 hrs Acres per Hour: 7.3
 Other Surveyors Present: Victor Navik, Brian Lestrah

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	1000	70	3-5	90%
End	1500	70	5-7	50% hazy
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

~~Buckwheat downy~~ chamise chaparral (chamise)
CSS (Buckwheat) non-native grassland (Bromus, Erodium)

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcidon checkerspot (<i>E. chalcidona chalcidona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	1
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	8	painted lady (<i>V. cardui</i>)	5
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	1
marine blue (<i>Leptotes marina</i>)	1	Swallowtails	
unidentified blue	8	pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	3	anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)	2	monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)	1	mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	6
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	29	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)		Cal Ringlet	2
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur			
Column Subtotal	52	Column Subtotal	13
		Total	65

polygons
G+H

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Laurie Gorman Date: 2-24-15
 Site Name: Proctor Valley - Village 14 of Otay Ranch Site Visit No: 2
 Acres Surveyed: 93 Survey Time: 5.5 hrs/person Acres per Hour: 8.45
 Other Surveyors Present: Alicia Hill

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	1040	66.2	5-10	2%
End	1615	71.6	0.5-7	2%
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

coastal sage scrub (Salvia chalcabada dom.); non-native grassland (Erodium + brown's sp. dom.); chamise chaparral (Adenostoma fasciculatum dom.); native grassland

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcadon checkerspot (<i>E. chalcadon chalcadon</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everses amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	13	painted lady (<i>V. cardui</i>)	26
Edward's blue (<i>Hemiargus cerasus gys</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue	4	pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	2	anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	1
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	2
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemis mormo virgulti</i>)	26	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)	2		
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur	1		
Column Subtotal	48	Column Subtotal	14

Total: 62

Other flowering plants:
 Erodium
 DICAP
 Hirschfeldia
 Solanum sp.
 Mimulus sp.
 MIRTAE
 Legidium sp.
 Camissonia sp.
 CALICIL
 HELSCO
 CLAPUR
 SALMUN
 LINCAN
 Gutierrezia sp.
 ESCAL
 OXACAL

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Alicia Hill Date: 2/24/15
 Site Name: Proctor Valley - Village 14 of Otay Ranch Site Visit No: 2
 Acres Surveyed: 93 Survey Time: 5.5 Acres per Hour: 16.9 (8.45 pp)
 Other Surveyors Present: Laurie Gorman

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	1040	66.2	5-10	2%
End	1615	71.6	0.5-7	2%
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.) Chamise chaparral, non-native grassland, coastal sage scrub (D: Salvia munzii)

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcid checkerspot (<i>E. chalcidona chalcidona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	11	painted lady (<i>V. cardui</i>)	7
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	10
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue	8	pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	3	anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	2
Metalmarks		mourning duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	19	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)	2	Gray Buckeye	1
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur	1		
Column Subtotal	44	Column Subtotal	20
		Total	64

Additional flowering plants: *Acemisson glaber*, *Dichelostemma capitatum*, *Eschscholzia californica*, *Ceanothus tomentosus*, *Mirabilis laevis*, *Mimulus aurantiacus*, *Lathyrus vestitus*, *Oxalis californica*, *Eucryphia chrysanthemifolia*, *Camissonia* spp., *Calandrinia ciliata*, *Gutierrezia* spp., *Erodium* sp., *Solanum palshi*, *Sisyrinchium bellum*, *Chamaesyce* sp., *Salvia munzii*, *Clavica* sp., *Calystegia macrostegia*

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Jasmine Bakker **Date:** 2/25/2015
Site Name: Proctor Valley – Village 14 of Otay Ranch (JPD-08); Area C **Site Visit No:** 2
Acres Surveyed 40 **Survey Time:** 4 hours 15 minutes **Acres per Hour:** 9.41
Other Surveyors Present: Stacy Nigro ~ Area A
Joined by supervised individual: Ben Rosenbaum at 1315

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	1000	63	1-3	0 %, clear & sunny
End	1415	76	3-7	0 %, clear & sunny
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)
NNG, DCSS, CC, SMC

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	1
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcedon checkerspot (<i>E. chalcedona chalcedona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)	4	west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	1
southern blue (<i>Glaucopsyche lygdamus australis</i>)	3	painted lady (<i>V. cardui</i>)	
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginiensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	8
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue	3	pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	1	anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)	8	monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	56	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
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	75	Column Subtotal	10
		Total	85

JPD-08 Procter Valley

25 Feb 2015

GB Survey #2

JB

AREA C ~ 40 acres

(joined by BR @ 1315)

START: 1000, 63°F, 1-3 mph, clear 0%cc

STOP: 1415, 76°F, 3-7 mph, clear 0%cc

mostly CC (Ale for), patches of NNG (Erodium)

Flowering Sp.

Bumpfles

Ero mosk Bah lac

Blue III

SOUTHERN BLUE: III

Acn gla Cryptantha *

Calif night III

Filago Cas exs. *

~~Behr's meadow~~ III

Hir inc Stilobolus sp.

Lady III

Oxa per Lotus sp.

Behr's III

Camissonia sp. Pectocarya sp.

Sarah's Orange I

Hed cre Emm. per

Brown elfin I

Rap sat Ant. nut

Pygmy blue III

Er. for * Sis hel

Red Admiral I

Allium sp. * Sal mun

WILDLIFE Obs.

Sanicula sp. Lomatium

WREN YRWA

Dic cap Lin dia *

CORA WEME

Solanum sp. Cal cil

ANTH BUSIT

Lepidium sp. Erodichyn

Sparrow, moths

Mim aur Placere *

CAKI WCSP

Cea tom Jas ves

bees, hovering flies

Plagiodonys * Oxa cal

CATH - lizard

Cal mac Ams. int. men. *

YRWA CALT

Esc cal Mui mar

SAPH NOMO

Interregia

SPTO in rain

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Stacy Nigro **Date:** 2/25/2015
Site Name: Proctor Valley – Village 14 of Otay Ranch (JPD-08); Area A **Site Visit No:** 2
Acres Surveyed 45 **Survey Time:** 4 hours 35 min **Acres per Hour:** 9.8
Other Surveyors Present: Jasmine Bakker ~ Area C

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0945	64	2-5	0% / clear
End	1420	76	3-7	5% / clear
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

DCSS – *Artemisia californica*, *Erigeron fasciculatus*, *Salvia apiana*, *Acmispon glaber*; SMC – *Ceanothus tomentosus*, *Adenostoma fasciculatum*, *Xylococcus bicolor*, *Rhamnus crocea*; NNG – *Avena*, bromes; NG – *Stipa pulchra*

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcedon checkerspot (<i>E. chalcedona chalcedona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	3	painted lady (<i>V. cardui</i>)	
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	3
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue	5	pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	4	anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)	3	monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	2
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	5	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
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	20	Column Subtotal	5
		Total	25

2/25/15 JPD-08 S. NIGRO
 Proctor Valley Otter Ranch
 Village 14
 QCB survey #2
 Area A 45 acres

start end
 time 9:45 14:20 = 4.58 hrs
 temp 64°F 76°F
 wind 2-5 mph 3-7 mph
 clouds 0% clear 5% clear

9.8 ac/hr

plants in bloom:
 Raph sat Sol per
 Erodium sp. Beh lac
 Cam bist Ams ment
 Viol pend Sisym sp.
 Sarch asp. Bee salic
 Dich czp Caland. cil
 Acm gla Plantere

butterflies:
 silk blue :: = 3
 helio sun :: = 5
 blue sp :: = 5
 fun dusky :: = 2
 CA ring let :: = 3
 S. erg tip :: = 4
 lady sp :: = 3
 TOTAL = 25

Mir. cal (sev) Crypt. sp. Phac cic Sisy bell
 Erio fasc Plegio sp. Gnap cal Mim ar
 Hirsc inc Carth. ens Ant nutt
 Gily mac Lath. Vest (all sp)
 Oxa pes-c Can tom Lam dary
 Allium ~~Sp~~ Esch cal Clemstris parc
~~Linanthus~~ Eriod crass Mar mac
 Lin dian Dod cle

JPD-08 2/25/15 p2/2

* = dom. sp.

Native grassland - Nass pulch* w/ annual
 grasses, Iso menz

NGS = bromes*, Avena*

DCSS = Art cal* Eriodac*, Sol 22pi, Mal 22pi
 = Acm gla

SMC: Can 22pi* ton*, Rham croc, Mal 22pi
 Xyl bic*, Ade fasc*

AMKE ANHU
 SOSP KILL

WEME utastens

SPTO coyote scat

honey bee BLPH

rabbit scat CAKI

SAPH Sporn beach

CATH Rd Di. Rth snake ←

CORA And cthrtl (going easterly)

ROWR BTJR

w. fence lg BUSH

AMCR

Rite in the Rain

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Alicia Hill Date: 2/25/15
 Site Name: Proctor Valley - Village 14 of Otay Ranch, F.I.K. Site Visit No: 2
 Acres Surveyed: 137 Survey Time: 25.5 person hours Acres per Hour: 5.37
 Other Surveyors Present: Laune Gorman, Travis Cooper, Victor Nuck

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	10:40	72.8	0.5-3.5	5%
End	13:00	76.0	3-8	2%
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)	Chamise chaparral, CSSC (Artemisia calif., Salvia munzii, Er. fascic.), non-native grassland (Bromus, erodium)
--	--

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcid checkerspot (<i>E. chalcidona chalcidona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Myliatta crescent (<i>Phyciodes myliatta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Evers amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	1	painted lady (<i>V. cardui</i>)	
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	10
marine blue (<i>Leptotes marina</i>)	3	Swallowtails	
unidentified blue	12	pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	2	anise swallowtail (<i>P. zelicaon</i>)	1
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white	2	funereal duskywing (<i>Erynnis funeralis</i>)	9/12
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	10	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	1
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)	1		
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur			
Column Subtotal	31	Column Subtotal	30
		Total	61

Lotus strigosus
 lupinus sp.
 Oxalis cal.
 CEA. TOM.
 ESC. CAL.
 Viola pedunculata
 SOL. PAR.
 erodium sp.
 Cryptantha sp.
 ACM. GUA.
 Plants in bloom:
 DIC. CAP.
 Camissonia sp.
 Calandrinia ciliata

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Laurie Gorman

Date: 2-25-15

Polygons

Site Name: Proctor Valley - Village 14 of Otay Ranch

Site Visit No: 2

F, I, K

Acres Surveyed: 137

Survey Time: 25.5

Acres per Hour: 5.37

Other Surveyors Present: Victor Novik, Travis Cooper, Alicia Hill

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0800	62.1	0-1	3%
End	1500	76.0	3-8	3%
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

Chamise chaparral (chamise dom.); no. - native grassland (Bromus, sp. Erodium)
Coastal Sage Scrub (ARTCAL, ACMGLA, ERI FAS)

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbi</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcadon checkerspot (<i>E. chalcadon chalcadon</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	1
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Myliatta crescent (<i>Phyciodes myliatta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Evers amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)		painted lady (<i>V. cardui</i>)	
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	11
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue	18	pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	3	anise swallowtail (<i>P. zelicaon</i>)	1
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)	2	Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	6
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	27	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	1
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)	1		
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur			
Column Subtotal	51	Column Subtotal	20

Total 71

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: TRAVIS COOPER Date: _____
 Site Name: Proctor Valley - Village 14 of Otay Ranch F, I, K Site Visit No: 2
 Acres Surveyed 137 Survey Time: 7 Acres per Hour: 5.37
 Other Surveyors Present: _____
25.5 total person hrs.

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0840	62°	0-1	5%
End	1540	76°	3-8	28
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)
Chamise Chaparral, CSS (Salix munzii, Eriogonum) NAG (Dromys, S. ...)

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Attides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcid checkerspot (<i>E. chalcidona chalcidona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	15	painted lady (<i>V. cardui</i>)	5
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	10
marine blue (<i>Leptotes marina</i>)	1	Swallowtails	
unidentified blue	5	pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)		anise swallowtail (<i>P. zelicaon</i>)	1
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	5
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	36	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
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	56	Column Subtotal	21
		Total	77

CAL PAC
 PHACIC
 EUCAP
 EUCHE
 ANTUT
 ERICOM
 SALMER
 ERIDUM SPP.
 VIOPED
 LATVES
 O TACAL
 CAT SPP
 ERIFAS
 SOL PAR
 NUTTEX
 MIRLAG
 ACINGLA
 SALANU

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Victor Noelle Area F, I, K Date: 2/25/15
 Site Name: Proctor Valley - Village 14 of Otay Ranch Site Visit No: 2
 Acres Surveyed 137 Survey Time: 7 Acres per Hour: 5.37
 Other Surveyors Present: Travis Cooper, Laurie Gorman, Al - Hill
25.5 total Survey Hours - 4 people

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0800	62.1	0-1	4.3%
End	1500	76	3-8	20%
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

Chemise chaparral chemise, *Eriogonum*, *Salvia* spp.,
1 = *Csi* *Eriogonum*, *Lotus*, *Mulsomia*, *Nicot* - *Bromus* sp

Host Plants	Obs.	Nectar Plants	Obs.
dwarf plantain (<i>Plantago erecta</i>)	1	popcorn flower (<i>Cryptantha/Plagiobothrys</i> spp.)	1
purple owl's clover (<i>Castilleja exserta</i>)		goldfields (<i>Lasthenia</i> spp.)	1
snapdragon (<i>Antirrhinum coulterianum</i>)		goldenstar (<i>Muilla</i> spp.)	1
birds-beak (<i>Cordylanthus rigidus</i>)		fiddleneck (<i>Amsinckia menziesii</i> var. <i>intermedia</i>)	1
woolly plantain (<i>Plantago patagonica</i>)		onion (<i>Allium</i> spp.)	1
Chinese houses (<i>Collinsia</i> spp.)		buckwheat (<i>Eriogonum fasciculatum</i>)	1
		ground pink (<i>Linanthus dianthiflorus</i>)	1

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcidon checkerspot (<i>E. chalcidona chalcidona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Myliatta crescent (<i>Phyciodes myliatta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucoopsyche lygdamus australis</i>)		painted lady (<i>V. cardui</i>)	
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue		pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)		anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)		fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
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	53	Column Subtotal	15
		Total	68

Sol num	Eroic	En con	Leaton	D
Lt sco	Oieap	Hol sco	E	s
Hem: fas	Sol pur	Via	ard	Eucon

Nigral	minor
Escal	Redmonds
Brandy	Sisbel

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Victor Naville

Date: 2-26-15

Site Name: Proctor Valley - Village 14 of Otay Ranch

Site Visit No: 2 Area J#1

Acres Surveyed 89

Survey Time: 6.75

Acres per Hour: 6.54 pp

Other Surveyors Present: Travis Cooper

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	<u>0900</u>	<u>62</u>	<u>2-5</u>	<u>30</u>
End	<u>1545</u>	<u>72</u>	<u>5-11</u>	<u>5</u>
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

Chamise Chap chamise, Erigeron, lotus
Native grass land / NNC Nesella pulchra Bromus / CSS - lotus

Host Plants	Obs.	Nectar Plants	Obs.
dwarf plantain (<i>Plantago erecta</i>)	<u>1</u>	popcorn flower (<i>Cryptantha/Plagiobothrys</i> spp.)	<u>1</u>
purple owl's clover (<i>Castilleja exserta</i>)		goldfields (<i>Lasthenia</i> spp.)	<u>1</u>
snapdragon (<i>Antirrhinum coulterianum</i>)		goldenstar (<i>Muilla</i> spp.)	<u>1</u>
birds-beak (<i>Cordylanthus rigidus</i>)		fiddleneck (<i>Amsinckia menziesii</i> var. <i>intermedia</i>)	<u>1</u>
woolly plantain (<i>Plantago patagonica</i>)		onion (<i>Allium</i> spp.)	<u>1</u>
Chinese houses (<i>Collinsia</i> spp.)		buckwheat (<i>Eriogonum fasciculatum</i>)	<u>1</u>
		ground pink (<i>Linanthus dianthiflorus</i>)	<u>1</u>

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)	<u>1111</u>	brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	<u>1</u>
chalcid checkerspot (<i>E. chalcidona chalcidona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	<u>1</u>
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	<u>1</u>
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	<u>111111</u>	painted lady (<i>V. cardui</i>)	<u>111111</u>
Edward's blue (<i>Hemiarctus ceraunus gys</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)	<u>1</u>	unidentified lady (<i>Vanessa</i> sp.)	<u>111111</u>
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue	<u>111111</u>	pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	<u>1111</u>	anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white	<u>11</u>	funereal duskywing (<i>Erynnis funeralis</i>)	<u>11111111</u>
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	<u>1111111111111111</u>	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)		<u>cal ringlet</u>	<u>1111</u>
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur	<u>1</u>		
Column Subtotal	<u>120</u>	Column Subtotal	<u>39</u>
		Total	<u>159</u>

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2015 Quino Checkerspot Butterfly Survey Form

Surveyor: TRANS COWPER Date: 2/26/15
 Site Name: Proctor Valley - Village 14 of Otay Ranch J+L Site Visit No: 2
 Acres Surveyed: 89 Survey Time: 6.75 hrs Acres per Hour: 6.59
 Other Surveyors Present: VICTOR NARIK

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0900	62°	1-3	30%
End	1545	72°	5-8	5%
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)	
<u>Chamise chaparral, CSS (Eriogonum, lotus) NMG (Bromus, Erodium) Native Grass</u> <u>(Stipa spp.)</u>	

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbi</i>)	5	brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	1
chalcid checkerspot (<i>E. chalcidona chalcidona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	1
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	2
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	20	painted lady (<i>V. cardui</i>)	5
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginiensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)	1	unidentified lady (<i>Vanessa</i> sp.)	10
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue	15	pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	4	anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)	6	monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	10
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	72	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)			
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur	1		
Column Subtotal		Column Subtotal	
		29	
		Total	
		152	

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2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Laurie Gorman Date: 2-26-15
 Site Name: Proctor Valley - Village 14 of Otay Ranch Site Visit No: 2 - Polygon M
 Acres Surveyed: 30 Survey Time: 3.25 Acres per Hour: 9.23
 Other Surveyors Present: none

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	1245	78.2°F	1-5 mph	60%
End	1600	70.6°F	1-4 mph	10% thin
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

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

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

total 10

other flowering plants - *Erodium* sp.
 NICGLA
 ACMLA
 CALMC
 DICAP
 MIRAE
 VIGSAR
 CALCU
 LINDIA
 HIRINC
 ISOARB
 Camissonia sp.

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: J. Rocks Date: 2/26/15
 Site Name: Proctor Valley - Village 14 of Otay Ranch Site Visit No: 2
 Acres Surveyed 127 Survey Time: 20.25 Acres per Hour: 510 6.27
 Other Surveyors Present: G. Huffman, M. Dicuss

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0915	60	1-4	10%
End	1600	70.5	1-5	10-70
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

Host Plants	Obs.	Nectar Plants	Obs.
dwarf plantain (<i>Plantago erecta</i>)	1	popcorn flower (<i>Cryptantha/Plagiobothrys</i> spp.)	1
purple owl's clover (<i>Castilleja exserta</i>) <i>C. densiflora</i>	1	goldfields (<i>Lasthenia</i> spp.)	1
snapdragon (<i>Antirrhinum coulterianum</i>)		goldenstar (<i>Muilla</i> spp.)	
birds-beak (<i>Cordylanthus rigidus</i>)		fiddleneck (<i>Amsinckia menziesii</i> var. <i>intermedia</i>)	1
woolly plantain (<i>Plantago patagonica</i>)		onion (<i>Allium</i> spp.)	1
Chinese houses (<i>Collinsia</i> spp.)		buckwheat (<i>Eriogonum fasciculatum</i>)	
		ground pink (<i>Linanthus dianthiflorus</i>)	1
		<i>Bahioopsis</i> lac; <i>Pentstemon</i> , <i>Die Cap</i>	

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	11
chalcid checkerspot (<i>E. chalcidona chalcidona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	1
western tailed blue (<i>Evers amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	1111	painted lady (<i>V. cardui</i>)	1111
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)	11	unidentified lady (<i>Vanessa</i> sp.)	
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue		pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	1	anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)	1	mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	1111
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	1111	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
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	2725	Column Subtotal	14
		Total	37

38286152

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: MELANIE DICUS Date: 02-26-2015
 Site Name: Proctor Valley - Village 14 of Otay Ranch Site Visit No: 2
 Acres Surveyed 127 Survey Time: 0915-1600 x 3 = 20.25 Acres per Hour: 5.10 6.27
 Other Surveyors Present: JIM ROCKS, GARRET HUFFMAN

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0915	60	1-3	5
End	1600	70.5	1-5	10
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)
CHAMISE CHAPARRAL, CSS

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	4
chalcidon checkerspot (<i>E. chalcidona chalcidona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Myliatta crescent (<i>Phycides myliatta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	1
western tailed blue (<i>Evers amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	20	painted lady (<i>V. cardui</i>)	10
Edward's blue (<i>Hemiarctus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue		pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	1	anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	5
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	30	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
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	51	Column Subtotal	20
		Total	71

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: GARRET HUFFMAN

Date: 2/26/15

Site Name: Proctor Valley - Village 14 of Otay Ranch

Site Visit No: 2

Acres Surveyed 127

Survey Time: 6:45 20.25

Acres per Hour: 5.10 6.27

Other Surveyors Present: MELANIE DICUS, TIM ROCKS

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	<u>0915</u>	<u>60</u>	<u>1-3</u>	<u>10%</u>
End	<u>1600</u>	<u>70.5</u>	<u>1-5</u>	<u>10%</u>
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

CHAMISE CHAPARRAL, CSS

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcidion checkerspot (<i>E. chalcidion chalcidion</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	<u>1</u>
western tailed blue (<i>Evers amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	<u>5</u>	painted lady (<i>V. cardui</i>)	<u>10</u>
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue		pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	<u>1</u>	anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)	<u>1</u>	mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbri</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	<u>10</u>
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	<u>25</u>	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
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	<u>32</u>	Column Subtotal	<u>11</u>
		Total	<u>53</u>

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Jasmine Bakker **Date:** 3/5/2015
Site Name: Proctor Valley – Village 14 of Otay Ranch (JPD-08); Area C **Site Visit No:** 3
Acres Surveyed 40 **Survey Time:** 4 hours **Acres per Hour:** 10
Other Surveyors Present: Erica Harris ~ Area A

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0930	65	1-3	0 %, clear & sunny
End	1330	76	2-7	0 %, clear & sunny
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)
NNG, DCSS, CC, SMC

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcedon checkerspot (<i>E. chalcedona chalcedona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	2
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	1
southern blue (<i>Glaucopsyche lygdamus australis</i>)	1	painted lady (<i>V. cardui</i>)	2
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginiensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	5
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue	1	pale swallowtail (<i>Papilio eurymedon</i>)	1
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)		anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	1
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	54	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)			
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur	1		
Column Subtotal	57	Column Subtotal	12
		Total	69

JPD-08 Procter Valley

5 March 2015

QCB Survey #3

JB (CW)

AREA C ~ 40 acres

START 0930, 65°, 1-3 mph, 0% cc sunny

STOP 1330, 76°, 2-7 mph, 0% cc

FLOWERING SPP.

Dic cap Stilbene

Ero mos Ss bel

Acro glau Lomatium sp.

Alum mac Lin dia *

Oxa pes Camissonia

Rap sat Cas exs. *

Ams mos * Mui. mar. *

Eri far * Cal cil

Pectocarya * Sanicula

Allium sp. *

Cryptantha spp *

Bah lac

Esch cal

Cal mac

Lotus sp.

Art. nat

Emm ped

Solanum

Helsco

BUTTERFLIES

Behr's metalmark IIII IIII IIII

IIII IIII IIII IIII IIII IIII IIII

W. Coast lady II / Red admiral

Painted lady II

Blue I

Southern blue I

Sulphur I

Fun dusky wing I

Lady sp. IIII

Pale swallowtail I

WILDLIFE OBS

WEME CORA

CALT BUSH

side blotched lizard

moths WREN

bees MODO

HOLA CAQU

BEWR CAGN ♂

BTJR GOEA x2

dragonfly Rite in the Rain

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Erica Harris **Date:** 3/5/2015
Site Name: Proctor Valley – Village 14 of Otay Ranch (JPD-08); Area A **Site Visit No:** 3
Acres Surveyed 45 **Survey Time:** 4 hours **Acres per Hour:** 11.25
Other Surveyors Present: Jasmine Bakker ~ Area C

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0930	65	1-3	0 %, clear & sunny
End	1330	76	2-7	0 %, clear & sunny
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)
NNG, DCSS, CC, SMC

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcedon checkerspot (<i>E. chalcedona chalcedona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)		painted lady (<i>V. cardui</i>)	
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	9
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue	3	pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	1
Sara orangetip (<i>Anthocharis sara sara</i>)		anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	6
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	9	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)			
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur	1		
Column Subtotal	13	Column Subtotal	16
		Total	29

Jasmine BCo)

JPD-08

Enca H

QCB #3, Area A 3/5/14

Start: 0930, 65°F, 1-3, 0%

Stop: 1330, 70°F, 2-7, 0%

Behr ^{III}

Blue ^{III}

Lady ^{III}

Sulphur ^I

Duskywing ^I

Tiger SW. ^I

WEME CAKI BEWE GALT

Amber YRWA ANHU HOPI

LEGO SOSO BUSH RTHA

COYE NOPL ROWR GIOBA

Flower: camissonia Ant nut

pod ole Lin dia Phacelia

Nic glia sonchus Brassica

cal cil Amn men Dic cap

acm glia tur inc oxalis

allium Bac llin mar fab

no ped mir lal en fal

cal mac sis bel mmaur

pic mon ceardhus esc cal

solanum cryptantha Paier*

cas exe? * An cras kic ant

* NO QCB

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: J. Rocks Date: 3/5/15
 Site Name: Proctor Valley - Village 14 of Otay Ranch Site Visit No: _____
 Acres Surveyed: 127 Survey Time: 19.75 (total) Acres per Hour: 6.43
 Other Surveyors Present: G. Huffman, M. Dicus

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0850	62	0-2	0
End	1510	79	0-4	0
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

Host Plants	Obs.	Nectar Plants	Obs.
dwarf plantain (<i>Plantago erecta</i>)	1	popcorn flower (<i>Cryptantha/Plagiobothrys</i> spp.)	1
purple owl's clover (<i>Castilleja exserta</i>)	1	goldfields (<i>Lasthenia</i> spp.)	1
snaptail (<i>Antirrhinum coulterianum</i>)	1	goldenstar (<i>Mulla</i> spp.)	1
birds-beak (<i>Cordylanthus rigidus</i>)	1	fiddleneck (<i>Amsinckia menziesii</i> var. <i>intermedia</i>)	1
woolly plantain (<i>Plantago patagonica</i>)	1	onion (<i>Allium</i> spp.)	1
Chinese houses (<i>Collinsia</i> spp.)	1	buckwheat (<i>Eriogonum fasciculatum</i>)	1
		ground pink (<i>Linanthus dianthiflorus</i>)	1
		<i>Dichelostemma cap.</i> , <i>Lasthenia coronaria</i>	1

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)	1	great purple hairstreak (<i>Atides halesus corcorani</i>)	1
Gabb's checkerspot (<i>C. gabbi</i>)	1	brown elfin (<i>Callophrys augustinus</i>)	1
Quino checkerspot (<i>Euphydryas editha quino</i>)	1	bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	1
chalcid checkerspot (<i>E. chalcidona chalcidona</i>)	1	gray hairstreak (<i>Strymon melinus pudica</i>)	1
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)	1	Ladies/Admirals	
Myliatta crescent (<i>Phyciodes myliatta</i>)	1	California sister (<i>Adelpha bredowii californica</i>)	1
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	1
western pygmy-blue (<i>Brephidium exila</i>)	1	west coast lady (<i>Vanessa annabella</i>)	1
western tailed blue (<i>Everes amyntula</i>)	1	red admiral (<i>V. atalanta rubria</i>)	1
southern blue (<i>Glaucopsyche lygdamus australis</i>)	1	painted lady (<i>V. cardui</i>)	1
Edward's blue (<i>Hemiargus ceraunus gyas</i>)	1	American (Virginia) lady (<i>V. virginensis</i>)	1
Acmon blue (<i>Icaricia acmon acmon</i>)	1	unidentified lady (<i>Vanessa</i> sp.)	1
marine blue (<i>Leptotes marina</i>)	1	Swallowtails	
unidentified blue	1	pale swallowtail (<i>Papilio eurymedon</i>)	1
Whites		western tiger swallowtail (<i>P. rutulus</i>)	1
Sara orangetip (<i>Anthocharis sara sara</i>)	1	anise swallowtail (<i>P. zelicaon</i>)	1
desert (Felder's) orangetip (<i>A. cethura</i>)	1	Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)	1	monarch (<i>Danaus plexippus</i>)	1
cabbage white (<i>Pieris rapae</i>)	1	common buckeye (<i>Junonia coenia grisea</i>)	1
checkered (common) white (<i>Pontia protodice</i>)	1	mourning cloak (<i>Nymphalis antiopa</i>)	1
spring white (<i>P. sisymbrii</i>)	1	Skippers	
unidentified white	1	funereal duskywing (<i>Erynnis funeralis</i>)	1
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	1
Behr's metalmark (<i>Apodemis mormo virgulti</i>)	1	fiery skipper (<i>Hylephila phyleus</i>)	1
Wright's metalmark (<i>Calephelis wrighti</i>)	1	white (common) checkered-skipper (<i>Pyrgus albescens</i>)	1
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)	1		
sleepy orange (<i>Eurema nicippe</i>)	1		
cloudless sulfur (<i>Phoebus sennae marcellina</i>)	1		
unidentified sulphur	1		
Column Subtotal	32	Column Subtotal	26
		Total	58

Striped Racer
 Horned Lizard

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: GARRET HUFFMAN Date: 03/05/15
 Site Name: Proctor Valley - Village 14 of Otay Ranch Site Visit No: 3
 Acres Surveyed: 120 Survey Time: 7 hrs Acres per Hour: 5-10
 Other Surveyors Present: JIM ROUCS, MELANIE DICUS

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0830	62	2-4	0
End	1530	76	0-2	0
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)
CHAMISE CHAPARRAL, CSS

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbi</i>)	1	brown elfin (<i>Callophrys augustinus</i>)	1
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	2
chalcid checkerspot (<i>E. chalcidona chalcidona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Myiitta crescent (<i>Phyciodes myiitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	5
southern blue (<i>Glaucopsyche lygdamus australis</i>)	30	painted lady (<i>V. cardui</i>)	25
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue		pale swallowtail (<i>Papilio eurymedon</i>)	1
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)		anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)	2	monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	25
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	2106	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
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	33	Column Subtotal	59
		Total	192

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: MELANIE DICUS Date: 03-05-2015
 Site Name: Proctor Valley - Village 14 of Otay Ranch Site Visit No: 3
 Acres Surveyed: 120 Survey Time: _____ Acres per Hour: 5-10
 Other Surveyors Present: GARET HUFFMAN
JIM ROCKS

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0850	62	2-4	0
End	1530	76	0-2	0
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

CHAMISE CHAPARRAL, GRASSLAND, CSS

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)	1	brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	4
chalcid checkerspot (<i>E. chalcidona chalcidona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Evers amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	1
southern blue (<i>Glaucopsyche lygdamus australis</i>)	10	painted lady (<i>V. cardui</i>)	8
Edward's blue (<i>Hemiarctus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue		pale swallowtail (<i>Papilio eurymedon</i>)	A
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)		anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)	2	monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	10
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	105	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
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	118	Column Subtotal	24
		Total	142

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Alicia Hill Date: 3/5/15
 Site Name: Proctor Valley - Village 14 of Otay Ranch (F, G, H) Site Visit No: 3
 Acres Surveyed: 15 Survey Time: 1:00 to 2:00 Acres per Hour: 0.9
 Other Surveyors Present: Travis Cooper, Victor Novak

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	8:30	63	0-2	0%
End	15:30	77	0-3	0%
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.) Chamise chaparral, non-native grassland (Acm. gla.)

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbi</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcid checkerspot (<i>E. chalcidona chalcidona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	5	painted lady (<i>V. cardui</i>)	4
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	16
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue	6	pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)		anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	16
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	44	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)	2		
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)	1		
unidentified sulphur			
Column Subtotal	58	Column Subtotal	36
		Total	94

POR, GRA
 OXALIS spp.
 SIL GAC
 CAL, CIL
 EGG, CAL
 ANT, NUT
 VIO PED
 SIS BEL
 Camissonia sp.
 Cryptantha
 DIC, CAP
 ERI, FAS
 SAL MUN
 ERO, spp
 SOL PAR
 ACM GUA
 MAL, FAS

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Travis Cooper Date: 3/5/15
 Site Name: Proctor Valley - Village 14 of Otay Ranch F, G, H Site Visit No: 3
 Acres Surveyed: 145 Survey Time: 7hrs Acres per Hour: 6.9
 Other Surveyors Present: Victor Novik, Alicia Hill

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0830	63°	0-2	0%
End	1530	77°	0-3	0%
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

Chamise chap, NVG (Bons, Amerson)

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcidon checkerspot (<i>E. chalcidona chalcidona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Myllitta crescent (<i>Phyciodes myllitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everses amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	6	painted lady (<i>V. cardui</i>)	8
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	10
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue	4	pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	1	anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)	1	monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	10
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	44	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)	1		
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)	1		
unidentified sulphur			
Column Subtotal	58	Column Subtotal	28
		Total	86

CRY SPR. SOL PAR MRLAE ACAGLA LWA DAS
 SAL MUN ERO SPR. OXAPES CALCIL PORGRA
 CHAIR EUG CHR ANT NUT SIS BEL ERICON
 CALMAC CUTCAL PERARIS SILGAL DICCAP

AREA F, H, G

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Victor Noyak Date: 3/5/15
 Site Name: Proctor Valley - Village 14 of Otay Ranch Site Visit No: 3
 Acres Surveyed: 145 Survey Time: 7 Acres per Hour: 6.4
 Other Surveyors Present: Alicia Hill, Travis Cooper

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0830	63	0-2	0
End	1530	77	0-3	0
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

F- Chamise Chaparral → Chamise Chap
 H- NNY, Lot 502

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

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

Behr's ||||

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Alicia Hill Date: 3/10/15
 Site Name: Proctor Valley - Village 14 of Otay Ranch J.K.M Site Visit No: 3
 Acres Surveyed 111 Survey Time: 40 Acres per Hour: 0.2
 Other Surveyors Present: Travis Cooper Victor Novick

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	8:15	63	0-3	0%
End	14:15	82	1-5	0%
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.) chaparral, disturbed
CSS (ART CAL, ERI SAS, ACM - GLA), non-native grassland

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)	10	brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	2
chalcedon checkerspot (<i>E. chalcedona chalcedona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)		painted lady (<i>V. cardui</i>)	4
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	11
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue	12	pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	2	anise swallowtail (<i>P. zelicaon</i>)	1
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)	7	monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white	1	funereal duskywing (<i>Erynnis funeralis</i>)	13
Metalmarks		mourful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	48	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)		<u>Striated Queen</u>	2
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur			
Column Subtotal	76	Column Subtotal	33
		Total	109

CAL. CAL.
 Phacelia cicutaria
 Camissonia
 Lathyrus vestitus
 Mimulus
 Lophanthus
 Erigeron
 Mirabilis cal.
 Lupinus spp.
 DIC. CAP.
 IAS. CAL.
 ER. SAS.
 Erodium spp.
 Cryptantha
 ACM. GLA.

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: TRAVIS COOPER Date: 3/6/15
 Site Name: Proctor Valley - Village 14 of Otay Ranch K, J, M Site Visit No: 3
 Acres Surveyed 111 Survey Time: 6hrs Acres per Hour: 6.
 Other Surveyors Present: ALICIA HILL, VICTOR MUIK

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0815	63°	0-3	0%
End	1415	82°	1-5	0%
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

Chamise Chap. CSS-disturbed (*Eriogonum*, *Amorpha*)
 NNG (Foothill, *Brugmansia*)

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)	6	brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	1
chalcid checkerspot (<i>E. chalcidona chalcidona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Myliatta crescent (<i>Phyciodes myliatta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	7	painted lady (<i>V. cardui</i>)	6
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	14
marine blue (<i>Leptotes marina</i>)	10	Swallowtails	
unidentified blue		pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)		anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)	11	monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)	1	common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	9
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	62	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)		Queen	1
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur	1		
Column Subtotal	98	Column Subtotal	32
		Total	130

CANSIP.
 DICCIP.
 HERM.
 RABAT
 SYSTIV
 PER-ROB
 CANSIP.
 CROSR.
 LUNSUB
 OXKAR
 SILCAL
 SOLPEL
 NUTTEX
 MIFLNE
 ANGLA
 SANDW

AREAL, J. M.

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Victor Nov. 16 Date: 3/6/15
 Site Name: Proctor Valley - Village 14 of Otay Ranch Site Visit No: 3
 Acres Surveyed: 111 Survey Time: 6 Acres per Hour: 6.2
 Other Surveyors Present: Alissa Hill, Travis Cooper

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0815	63	0-3	0
End	1415	82	1-5	0
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

K - Chamise char, DCS, NBY J - chamise chap
 M - NBY, DCS DCS Artemisia, ER, K

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)	1111	brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcid checkerspot (<i>E. chalcidona chalcidona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	111
southern blue (<i>Glaucopsyche lygdamus australis</i>)	111	painted lady (<i>V. cardui</i>)	
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	11111111
marine blue (<i>Leptotes marina</i>)	111111	Swallowtails	
unidentified blue		pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	11	anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)	1	mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbria</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	11111
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	111111111111	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescentis</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)		LA Rymet	11111111
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur	1		
Column Subtotal	87	Column Subtotal	41
		Total	138

Behr's 111111111111

Surveyor: Travis Cooper Date: 3/7/15
 Site Name: Proctor Valley – Village 14 of Otay Ranch I, L Site Visit No: 3
 Acres Surveyed 93 Survey Time: 6hrs Acres per Hour: _____
 Other Surveyors Present: Chamie Chap.
NAG, Adrian Gonzalez

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0745	61°	0-1	0%
End	1345	86°	1-5 mph	0%
Start				
End				

Change Chap. NUG, NG, DCS

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	1
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	1
chalcodon checkerspot (<i>E. chalcodona chalcodona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Myliatta crescent (<i>Phyciodes myliatta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>) ♀	4	painted lady (<i>V. cardui</i>)	2
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.) ♂	10
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue	10	pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)		anise swallowtail (<i>P. zelicaon</i>)	1
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)	5	monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>) ♂	6
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>) ♂	67	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescent</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)	1		
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur	1		
Column Subtotal	88	Column Subtotal	21
		Total	109

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Victor Novik

Date: 3/7/15

Site Name: Proctor Valley - Village 14 of Otay Ranch

Site Visit No: 3

Acres Surveyed: 93

Survey Time: 6

Acres per Hour: 7.75

Other Surveyors Present: Travis Cooper

Field Conditions

	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0745	62-61	0-1	0
End	1345	86	1-5	0
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

L/I	NGY, NCI, DCS, Chamise Chap
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Host Plants	Obs.	Nectar Plants	Obs.
dwarf plantain (<i>Plantago erecta</i>)	X	popcorn flower (<i>Cryptantha/Plagiobothrys</i> spp.)	X
purple owl's clover (<i>Castilleja exserta</i>)		goldfields (<i>Lasthenia</i> spp.)	X
snapdragon (<i>Antirrhinum coulterianum</i>)		goldenstar (<i>Muilla</i> spp.)	X
birds-beak (<i>Cordylanthus rigidus</i>)		fiddleneck (<i>Amsinckia menziesii</i> var. <i>intermedia</i>)	X
woolly plantain (<i>Plantago patagonica</i>)		onion (<i>Allium</i> spp.)	X
Chinese houses (<i>Collinsia</i> spp.)		buckwheat (<i>Eriogonum fasciculatum</i>)	X
		ground pink (<i>Linanthus dianthiflorus</i>)	X

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	1
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	1
chalcodon checkerspot (<i>E. chalcodona chalcodona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Evers amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	1	painted lady (<i>V. cardui</i>)	1
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	1
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue	1	pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)		anise swallowtail (<i>P. zelicaon</i>)	1
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)	1	monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	1
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	1	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)			
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur	1		
Column Subtotal	96	Column Subtotal	21
Behr's 16 + 20		Total	117

Chaparral Red Vine - Lothmans
isolec

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Jasmine Bakker **Date:** 3/9/2015
Site Name: Proctor Valley – Village 14 of Otay Ranch (JPD-08); Area A **Site Visit No:** 4
Acres Surveyed 45 **Survey Time:** 4 hours 45 min **Acres per Hour:** 9.47
Other Surveyors Present: Stacy Nigro (with supervised individual Ben Rosenbaum) ~ Area C

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	1015	63	0-2	0 %, clear & sunny
End	1500	71	2-6	10 %, sunny with haze
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

NNG (*Bromus*, *Avena*), DCSS (*Artemisia californica*, *Eriogonum fasciculatum*, *Salvia apiana*, *Acmispon glaber*),

SMC (*Ceanothus tomentosus*, *Adenostoma fasciculatum*, *Xylococcus bicolor*, *Rhamnus crocea*)

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcedon checkerspot (<i>E. chalcedona chalcedona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	1
southern blue (<i>Glaucopsyche lygdamus australis</i>)	13	painted lady (<i>V. cardui</i>)	
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	4
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue		pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	1	anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	16
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	7	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
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	21	Column Subtotal	21
		Total	42

JPD 08 Procter Valley
QCB Survey #4

9 March 2015

JB (SN, BR)

START 1015, 63°, 0-2 mph, 0% cc, sunny
STOP 1500, 71°, 2-6 mph, 10% cc, hazy

FLOWERING

Erodium Phacel
Cal mac. Cea tom
Eri for * Eriodictyon
Acn gla Placere*
Pap cat Las ves
Mir cal Hyp gla
Oxa per Stilactine
Allium * Cas. densiflora
Decap Pho mem
Sis hel Mimang
Sanicula spp. Dod cle
Camissoria Solanum
Hir inc Oxal
Sisymbrium Mui mar*
Kec ant Cal cil
Son asp Sis hel
Beh lac Ant nut
Cryptantha*
Esc cul

BUTTERFLIES

LADY IIII
Fun Daskyring ~~IIIIIIII~~
Behr's metalmark ~~IIII~~
Blue ~~IIII~~
Southern blue ~~IIIIIIII~~
Red admiral I
Sarah's orange tip I

WILDLIFE OBS

CORA - NOMO woodchuck
RTHA CARI caterpillars
WEME MOOD Engret
YRNA CALT BTJR
COYE cortontail BEWR
AMKE dragonfly ANHU
SPTO moths WESP
BCSP ~~the rain~~

western diamond

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Stacy Nigro **Date:** 3/9/2015
Site Name: Proctor Valley – Village 14 of Otay Ranch (JPD-08); Area C **Site Visit No:** 4
Acres Surveyed: 40 **Survey Time:** 4 hours 5 min **Acres per Hour:** 9.8
Other Surveyors Present: Ben Rosenbaum – Supervised Individual
 Jasmine Bakker ~ Area A

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	1045	65	2-5	< 5% / clear
End	1445	71	2-6	< 5% / clear
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

CC/SMC – *Adenostoma fasciculatum*, *Xylococcus bicolor*, *Erigeron fasciculatus*, *Acmispon glaber*
 NNG – *Avena*, bromes, *Erodium*

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcedon checkerspot (<i>E. chalcedona chalcedona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	2	painted lady (<i>V. cardui</i>)	1
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	1
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue	2	pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	1	anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white	1	funereal duskywing (<i>Erynnis funeralis</i>)	4
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	73	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)			
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur	1		
Column Subtotal	80	Column Subtotal	6
		Total	86

3/9/15 JPD-08

S. NIGRO
w/R. Rosabam

Area C QCB Survey #4

40ac

40 acres

Start

end

p1/2

65°

71°

10:40

14:45

2-5 mph

2-6

< 5% / clear

< 5% / clear

4.08 hrs

9.8 ac/hr

butterflies

NO QCB

Behrs mm ~~1~~ ~~1~~ ~~1~~ ~~1~~ ~~1~~ = 73

" " ~~1~~ ~~1~~ ~~1~~ ~~1~~ ~~1~~

South. blue ♀ = 2 blue sp. = 2

lady sp. = 1

fin dashy ♂ = 4

Sulphur ♂ = 1

Savannah ♂ = 1

ptd lady = 1

white sp = 1

Total butterflies =

86

Veg comm. Surveyed

NGG - bromes, Area, Eradum = 10m

~~NGG~~ SMC - Ab. fas, Xyl. blc, Erio-fus

S. NIGRO

3/9/15

QCB #4, Area C

p2/2

plants in bloom:

Allium sp. Sisym. sp. Pseu cal

Erodium sp. Camm. sp. Sal ^{munz}

Cryptantha sp. Hirs. inc. Gls cor

Sil. gal Bah. lac Osteo. frut.

Acm gla Esch. cal Loma das.

Erio fas Plag. sp. Lin dian.

Dick czp Plant ere Cala. cil

Lup bic Eriod. crass Pent. am

Sol par Sisy bell

~~Hel sea~~ Guit sar

Cast. ~~erod. dens.~~

Hed croc Ziga ♂ → Tox fr (Zig-fre)

Sav ^{bip} Acm mic?

Med poly Lasth cal

Ams mof Ade fasc

Meli off Ant nut

Oxa pos. c. Emm pend

Calys. mac Uro lind

CAKI, NORD, MODO, WENE, CALT, CATH

WESP, CORA, gol sgl, AMCR, BUSH

WREN, BEWB, CAGN, CAQU, SDHL

Uta st.

Return in the Rain.

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Melanie Rocks Date: 3/9/2015
 Site Name: Proctor Valley - Village 14 of Otay Ranch - Parcels B,D,E Site Visit No: 4
 Acres Surveyed 127 Survey Time: 2 Hr Acres per Hour: 6.05
 Other Surveyors Present: M. Dicus, G. Hyffman

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0920	61	1-2	0%
End				
Start	1245	77	2-9	0%
End	1615	78	1-2	0%

Vegetation Communities Surveyed (inc. dominant spp.)

DCSS, Chamise Chaparral, Disturbed, NWG

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcid checkerspot (<i>E. chalcidona chalcidona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Evers amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)		painted lady (<i>V. cardui</i>)	
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue		pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)		anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)		fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
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	33	Column Subtotal	7
		Total	40

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: MELANIE DICUS Date: 03-09-2015
 Site Name: Proctor Valley - Village 14 of Otay Ranch Site Visit No: 4
 Acres Surveyed: 120 Survey Time: 0915-1615 Acres per Hour: 6.05
 Other Surveyors Present: GARRETT HUFFMAN, MELANIE ROCKS

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	<u>0915</u>	<u>60.6</u>	<u>1-2</u>	<u>0</u>
End	<u>1615</u>	<u>78</u>	<u>1-2</u>	<u>0</u>
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)
<u>CHAMISE CHAPARRAL</u>

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcedon checkerspot (<i>E. chalcedona chalcedona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Myliatta crescent (<i>Phyciodes myliatta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	<u>8</u>	painted lady (<i>V. cardui</i>)	<u>5</u>
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue		pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)		anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)	<u>1</u>	monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	<u>7</u>
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	<u>71</u>	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)		<u>COLIAS HARFORDII</u>	<u>1</u>
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur			
Column Subtotal	<u>80</u>	Column Subtotal	<u>13</u>
		Total	<u>93</u>

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: GARRET HUFFMAN Date: 3/9/15
 Site Name: Proctor Valley - Village 14 of Otay Ranch - Parcels B, D, E Site Visit No: 4
 Acres Surveyed: 120 Survey Time: _____ Acres per Hour: 6.05
 Other Surveyors Present: MELANIE ROCKS, MELANIE DICUS

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0920	68°	1-2	0
End	1615	70°	1-2	10
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbi</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcid checkerspot (<i>E. chalcidona chalcidona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	10	painted lady (<i>V. cardui</i>)	5
Edward's blue (<i>Hemiarctus ceraunus gys</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue		pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)		anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)	1	monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	15
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	65	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
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	76	Column Subtotal	20
		Total	96

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: TRAVIS COOPER Date: 3/11/15
 Site Name: Proctor Valley - Village 14 of Otay Ranch F, K (29ac.) Site Visit No: 4
 Acres Surveyed: 81 Survey Time: 6 Acres per Hour: 6.75
 Other Surveyors Present: Victor Moya K

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	1040	72°	1-2	80%
End	1640	76°	1-3	80%
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

Chamise chap. DCSS (S. monzii, E. fasciculatum)

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbi</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcedon checkerspot (<i>E. chalcedona chalcedona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Myliitta crescent (<i>Phyciodes myliitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)		painted lady (<i>V. cardui</i>)	2
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	1
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue	2	pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	1	anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white	2	funereal duskywing (<i>Erynnis funeralis</i>)	6
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	28	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
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	33	Column Subtotal	9
		Total	42

SULPAR DANCA PERARIS
 WILSO DCLEAS
 ACNOLA PHALIC
 SALMUN
 SISBEL
 RAP-SAT
 GUTCAL

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Vicor Nodji Date: 3/11/15

Project Name: PV QCB

Section F, K ~~Heifers~~ Survey Time (hrs): 6 Site Visit No: 4 of

Other Surveyors Present: Travis Cooper Stacy 0.6 ~~other~~ visit Make-up survey? Yes ☐ No ☒

Vegetation communities surveyed: *list dominant species*

Quino Host Plants (2014 USFWS Protocol)	Present?/Flowering?	Quino Nectar Plants	Present?/Flowering?
birds-beak (<i>Cordylanthus rigidus</i>)	/	<i>Lupinus sp</i>	X / X
Chinese houses (<i>Collinsia heterophylla</i>)	/	<i>Plago sp</i>	X / X
dot-seed plantain (<i>Plantago erecta</i>)	/	<i>Buck wheel</i>	X / X
purple owl's clover (<i>Castilleja exserta</i>)	/	<i>gimen</i>	X / X
snapdragon (<i>Antirrhinum coulterianum</i>)	/		/
woolly plantain (<i>Plantago patagonica</i>)	X / X		/

Total	41
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2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Alkia Hill Date: 3/12/15
 Site Name: Proctor Valley - Village 14 of Otay Ranch CHM Site Visit No: 4
 Acres Surveyed: 123 Survey Time: 6:00 Acres per Hour: 6.8
 Other Surveyors Present: Travis Cooper, Victor Novick

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	830	68°F	0-1	0%
End	1430	85°F	3-5	0%
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)	<u>Chamise chaparral, non-native grassland, CSS (ARTCAL, ERIFAS, ACM GLA)</u>
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Host Plants	Obs.	Nectar Plants	Obs.
dwarf plantain (<i>Plantago erecta</i>)	X	popcorn flower (<i>Cryptantha/Plagiobothrys</i> spp.)	X
purple owl's clover (<i>Castilleja exserta</i>) <u>densiflora</u>	X	goldfields (<i>Lasthenia</i> spp.)	X
snapdragon (<i>Antirrhinum coulterianum</i>)		goldenstar (<i>Mulla</i> spp.)	X
birds-beak (<i>Cordylanthus rigidus</i>)		fiddleneck (<i>Amsinckia menziesii</i> var. <i>intermedia</i>)	X
woolly plantain (<i>Plantago patagonica</i>)		onion (<i>Allium</i> spp.)	X
Chinese houses (<i>Collinsia</i> spp.)		buckwheat (<i>Eriogonum fasciculatum</i>)	X
		ground pink (<i>Linanthus dianthiflorus</i>)	X

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbi</i>)	1	brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcid checkerspot (<i>E. chalcidona chalcidona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	1
southern blue (<i>Glaucopsyche lygdamus australis</i>)	2	painted lady (<i>V. cardui</i>)	4
Edward's blue (<i>Hemargus ceraunus gys</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	4
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue	3	pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	5	anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)	2	monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white	5	funereal duskywing (<i>Erynnis funeralis</i>)	8
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	82	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)		<u>Stratified Queen</u>	1
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur	1		
Column Subtotal	101	Column Subtotal	18
		Total	119

SIL CAL
 ECH. CAL
 MIR CAL
 Mimulus spp.

MALFAS
 SAL MUN
 ANT NUT
 OXA spp.

Cryptantha sp.
 Camissonia sp.
 Gradiun sp.
 SOL PAR.

CALCIL
 DIC CAP
 SIS BEL








2015 Quino Checkerspot Butterfly Survey Form

Surveyor: TRANS CUMPER Date: 3/12/15
 Site Name: Proctor Valley - Village 14 of Otay Ranch G, H, M Site Visit No: 4
 Acres Surveyed: 123 Survey Time: 6 hrs Acres per Hour: 6.8
 Other Surveyors Present: Alicia Hill, Victor Novik

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0830	63°	1-2	0
End	1430	85°	3-5	0
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)	
<u>Chamise Chaparral, NNG, CSS,</u>	

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbi</i>)	1	brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	1
chalcid checkerspot (<i>E. chalcidona chalcidona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Myliatta crescent (<i>Phyciodes myliatta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	3	painted lady (<i>V. cardui</i>)	2
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	3
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue	1	pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	4	anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)	1	monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)	1	common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white	2	funereal duskywing (<i>Erynnis funeralis</i>)	1
Metalmarks      	66	mournful duskywing (<i>Erynnis tristis</i>)	6
Behr's metalmark (<i>Apodemia mormo virgulti</i>) 		fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)	1	<u>Queen</u>	1
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur	1		
Column Subtotal	81	Column Subtotal	13
		Total	94

SALMON
 BAHILAC
 ISOMEN
 NELSON
 PICCAP
 MUPED
 SALMON
 BAHILAC
 ISOMEN
 NELSON
 PICCAP
 MUPED
 SOLPAR
 MIRLAG
 ACINGLA
 CAMSPR
 ELOSPR

Other Surveyors Present: Alicia Hill, Travis Cooper

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0830	63	0 1-2	1-2 0
End	1430	85	0 3-5	6
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

Mixed Chap - Alefas,

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)	1	brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcodon checkerspot (<i>E. chalcodona chalcodona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)		painted lady (<i>V. cardui</i>)	11
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa sp.</i>)	1
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue	1	pale swallowtail (<i>Papilio eurymedon</i>)	1
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	1	anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)	1	monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white	1	funereal duskywing (<i>Erynnis funeralis</i>)	111111
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)		fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)			
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur	1		
Column Subtotal	60	Column Subtotal	13
Behr 145		Total	93

Ducap	Herring	Esical	Sil Silgal
Cracil	Vigke	Solpar	Okapen
Hemlebs	miral	Sidalcia	
Iatso	Calbuc	matmuan	