2015 Quino Checkerspot Butterfly Survey Form Date: 2-20-15 aurie Gorman Site Name: Proctor Valley - Village 14 of Otay Ranch Site Visit No: hours Acres per Hour: _ 7. 58 Survey Time: **Acres Surveyed** Other Surveyors Present: Travis Cooper **Field Conditions** Cloud Cover Time (24 hr) Temperature (°F) Wind Speed (mph) Start 0945 10 End 1545 50 Start End Vegetation Communities Surveyed (inc. dominant spp.) (don = chamise); Coastal sage Scrub (Salvia develordi grassland (don. = Bromus sp. Erodium Obs. **Host Plants** Obs. **Nectar Plants** dwarf plantain (Plantago erecta) popcorn flower (Cryptantha/Plagiobothrys spp.) purple owl's clover (Castilleja exserta) goldfields (Lasthenia spp.) snapdragon (Antirrhinum coulterianum) goldenstar (Muilla spp.) recession developedin fiddleneck (Amsinckia menziesii var. intermedia) birds-beak (Cordylanthus rigidus) woolly plantain (Plantago patagonica) onion (Allium spp.) Chinese houses (Collinsia spp.) buckwheat (Eriogonum fasciculatum) ground pink (Linanthus dianthiflorus) **Butterfly Species** No. **Butterfly Species** No. Checkerspots California patch (Chlosyne californica) great purple hairstreak (Atlides halesus corcorani) Gabb's checkerspot (C. gabbii) brown elfin (Callophrys augustinus) Quino checkerspot (Euphydryas editha quino) bramble (perplexing) hairstreak (C. dumetorum affinis) chalcedon checkerspot (E. chalcedona chalcedona) gray hairstreak (Strymon melinus pudica) Leanira checkerspot (Thessalia leanira wrighti) Ladies/Admirals California sister (Adelpha bredowii californica) Mylitta crescent (Phyciodes mylitta) Blues Lorquin's admiral (Limenitis lorquini) athyrus western pygmy-blue (Brephidium exila) west coast lady (Vanessa annabella) western tailed blue (Everes amyntula) red admiral (V. atalanta rubria) southern blue (Glaucopsyche lygdamus australis) painted lady (V. cardui) Edward's blue (Hemiargus ceraunus gyas) American (Virginia) lady (V. virginiensis) dianthitherus Acmon blue (Icaricia acmon acmon) unidentified lady (Vanessa sp.) marine blue (Leptotes marina) **Swallowtails** かれた unidentified blue pale swallowtail (Papilio eurymedon) Whites western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Sara orangetip (Anthocharis sara sara) Miscellaneous desert (Felder's) orangetip (A. cethura) common California ringlet (Coenonympha californica) monarch (Danaus plexippus) var.alefeldii cabbage white (Pieris rapae) common buckeye (Junonia coenia grisea) checkered (common) white (Pontia protodice) mourning cloak (Nymphalis antiopa) spring white (P. sisymbrii) Skippers unidentified white funereal duskywing (Erynnis funeralis) mournful duskywing (Erynnis tristis) Metalmarks Behr's metalmark (Apodemia mormo virgulti) fiery skipper (Hylephila phyleus) Wright's metalmark (Calephelis wrighti) white (common) checkered-skipper (Pyrgus albescens) Sulphurs orange sulphur (Colias eurytheme) Dickelosten sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina) unidentified sulphur

Column Subtotal

20

Total = 37

Column Subtotal

			ot Butterfly Survey Form		
Surveyo	me: Proctor Valley – Village 14 of C	(C.	Date: 2	1/20/15	
Site Nan	ne: Proctor Valley – Village 14 of C	tay Ranch	Site V	/isit No:	
Acres S	urveyed 91 Si	ırvey Time:	Chrs Acres per H	lour: 7.58	
	urveyors Present: Lauric				
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
	Time (24 hr)	Temperature (°F)	onditions Wind Speed (mph)	Cloud Cov	or
Start					
	0945	72	0-2	10% h	
End	1545	71	1-6	50% h	520
Start					
End					
1/					
vegetati	ion Communities Surveyed (inc. do				
	Chamise Chaparal, C	SS (muntis	sage ren-hattle grass	land (Bromus,	Eroolum
		70	UKNENT		
	Host Plants	Obs.	Nectar Plants		Obs.
dwarf pla	antain (<i>Plantago erecta</i>)	X	popcorn flower (Cryptantha/Plagio		V
	wl's clover (Castilleja exserta)	X	goldfields (Lasthenia spp.)	7-17	×
	gon (Antirrhinum coulterianum)		goldenstar (Muilla spp.)		X
birds-bea	ak (Cordylanthus rigidus)		fiddleneck (Amsinckia menziesii va	ar. intermedia)	X
woolly pla	antain (Plantago patagonica)		onion (Allium spp.)		X
Chinese	houses (Collinsia spp.)		buckwheat (Eriogonum fasciculatu	ım)	X
			ground pink (Linanthus dianthifloru	is)	×
			1		
	Butterfly Species	No.	Butterfly Specie	s	No.
Checkers			Hairstreaks		
California	patch (Chlosyne californica)		great purple hairstreak (Atlides hale	sus corcorani)	
	heckerspot (C. gabbii)		brown elfin (Callophrys augustinus)		
	eckerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C.		
	n checkerspot (E. chalcedona chalced		gray hairstreak (Strymon melinus p	udica)	
	heckerspot (Thessalia leanira wrighti)		Ladies/Admirals	('f ' \	
Blues	escent (Phyciodes mylitta)		California sister (Adelpha bredowii o Lorquin's admiral (Limenitis lorquini		-
	ygmy-blue (<i>Brephidium exila</i>)		west coast lady (Vanessa annabeli		1
	ailed blue (Everes amyntula)		red admiral (V. atalanta rubria)	4)	
	blue (Glaucopsyche lygdamus austra	lis) 16	painted lady (V. cardui)		
	blue (Hemiargus ceraunus gyas)	10	American (Virginia) lady (V. virginie	nsis)	
	ue (Icaricia acmon acmon)	F 17. 75.	unidentified lady (Vanessa sp.)		
marine blu	ue (Leptotes marina)		Swallowtails		
unidentifie	ed blue		pale swallowtail (Papilio eurymedor	7)	
Whites			western tiger swallowtail (P. rutulus)	
	ngetip (Anthocharis sara sara)		anise swallowtail (P. zelicaon)		
	elder's) orangetip (A. cethura)		Miscellaneous	## **··	
	California ringlet (Coenonympha califo	ornica)	monarch (Danaus plexippus)	ariana)	
	white (Pieris rapae) d (common) white (Pontia protodice)		mourning cloak (Nymphalis antiopa		-
	ite (P. sisymbrii)	7	Skippers	/	
unidentifie			funereal duskywing (Erynnis funeral	lis)	16
Metalmar	- 10 Parket (incl		mournful duskywing (Erynnis tristis)		160
	etalmark (Apodemia mormo virgulti)	4	fiery skipper (Hylephila phyleus)		
	metalmark (Calephelis wrighti)		white (common) checkered-skipper	(Pyrgus albescens)	
Sulphurs			Other		
	lphur (Colias eurytheme)				
	ange (Eurema nicippe)				
	sulfur (Phoebus sennae marcellina)			/2 22-2-11	
unidentifie	a sulphur	and the same of th			

Column Subtotal

20

Column Subtotal

Total

Column Subtotal

Total

2015 Quino Checkerspot Butterfly Survey Form Surveyor: Site Name: Proctor Valley - Village 14 of Otay Ranch Acres Surveyed 110 Survey Time: 5 hrs Acres per Hour: Other Surveyors Present: **Field Conditions** Time (24 hr) Temperature (°F) Wind Speed (mph) Cloud Cover Start 1000 76% End this Start End Vegetation Communities Surveyed (inc. dominant spp.) Laur Erigo Fas **Host Plants** Obs. **Nectar Plants** Obs. dwarf plantain (Plantago erecta) popcorn flower (Cryptantha/Plagiobothrys spp.) purple owl's clover (Castilleja exserta) goldfields (Lasthenia spp.) snapdragon (Antirrhinum coulterianum) goldenstar (Muilla spp.) birds-beak (Cordylanthus rigidus) fiddleneck (Amsinckia menziesii var. intermedia) woolly plantain (Plantago patagonica) onion (Allium spp.) Chinese houses (Collinsia spp.) buckwheat (Eriogonum fasciculatum) ground pink (Linanthus dianthiflorus) **Butterfly Species** No. **Butterfly Species** No. Checkerspots Hairstreaks California patch (Chlosyne californica) great purple hairstreak (Atlides halesus corcorani) Gabb's checkerspot (C. gabbii) brown elfin (Callophrys augustinus) Quino checkerspot (Euphydryas editha quino) bramble (perplexing) hairstreak (C. dumetorum affinis) chalcedon checkerspot (E. chalcedona chalcedona) gray hairstreak (Strymon melinus pudica) Leanira checkerspot (Thessalia leanira wrighti) Ladies/Admirals Mylitta crescent (Phyciodes mylitta) California sister (Adelpha bredowii californica) Blues Lorquin's admiral (Limenitis lorquini) western pygmy-blue (Brephidium exila) west coast lady (Vanessa annabella) western tailed blue (Everes amyntula) red admiral (V. atalanta rubria) southern blue (Glaucopsyche lygdamus australis) painted lady (V. cardui) Edward's blue (Hemiargus ceraunus gyas) American (Virginia) lady (V. virginiensis) Acmon blue (Icaricia acmon acmon) unidentified lady (Vanessa sp.) marine blue (Leptotes marina) Swallowtails unidentified blue pale swallowtail (Papilio eurymedon) Whites western tiger swallowtail (P. rutulus) Sara orangetip (Anthocharis sara sara) anise swallowtail (P. zelicaon) desert (Felder's) orangetip (A. cethura) Miscellaneous common California ringlet (Coenonympha californica) monarch (Danaus plexippus) cabbage white (Pieris rapae) common buckeye (Junonia coenia grisea) checkered (common) white (Pontia protodice) mourning cloak (Nymphalis antiopa) spring white (P. sisymbrii) Skippers unidentified white funereal duskywing (Erynnis funeralis) Metalmarks mournful duskywing (Erynnis tristis) Behr's metalmark (Apodemia mormo virgulti) fiery skipper (Hylephila phyleus) Wright's metalmark (Calephelis wrighti) white (common) checkered-skipper (Pyrgus albescens) Sulphurs Other orange sulphur (Colias eurytheme) sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina) unidentified sulphur

Column Subtotal

H

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: B. Lohstal	1	Date: 2/21/15
Site Name: Proctor Valley	- Village 14 of Otay Ranch K	Site Visit No:
Acres Surveyed 110	Survey Time: 1000 - 1500	Acres per Hour: 7.3
Other Surveyors Present:	Towis cooper	
	Victor Novile	

		Field Condit	ions	
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	1000	70'F	3-5	90%
End	1500	70'r	5-7	764 50% thin clas
Start		/		
End				

Vegetation Communities Surveyed (inc. dominant spp.)								
(SS: Art col, Mal Laurina Acmispon Supportions								
Chamise Wap: Ade fac.								

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (Chlosyne californica)	1911	great purple hairstreak (Atlides halesus corcorani)	
Gabb's checkerspot (C. gabbii)		brown elfin (Callophrys augustinus)	-
Quino checkerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	11
chalcedon checkerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica)	1
Leanira checkerspot (Thessalia leanira wrighti)		Ladies/Admirals	3
Mylitta crescent (Phyciodes mylitta)		California sister (Adelpha bredowii californica)	
Blues		Lorquin's admiral (Limenitis lorquini)	
western pygmy-blue (Brephidium exila)		west coast lady (Vanessa annabella)	
western tailed blue (Everes amyntula)		red admiral (V. atalanta rubria)	
southern blue (Glaucopsyche lygdamus australis)	MILLER	painted lady (V. cardui)	1//
Edward's blue (Hemiargus ceraunus gyas)	Au	American (Virginia) lady (V. virginiensis)	
Acmon blue (Icaricia acmon acmon)		unidentified lady (Vanessa sp.)	
marine blue (Leptotes marina)	1	Swallowtails	
unidentified blue		pale swallowtail (Papilio eurymedon)	
Whites	14	western tiger swallowtail (P. rutulus)	
Sara orangetip (Anthocharis sara sara)		anise swallowtail (P. zelicaon)	
desert (Felder's) orangetip (A. cethura)		Miscèllaneous	
common California ringlet (Coenonympha californica)	3	monarch (Danaus plexippus)	
cabbage white (Pieris rapae)		common buckeye (Junonia coenia grisea)	
checkered (common) white (Pontia protodice)	1	mourning cloak (Nymphalis antiopa)	
spring white (P. sisymbrii)		Skippers	,
unidentified white		funereal duskywing (Erynnis funeralis)	1
Metalmarks		mournful duskywing (Erynnis tristis)	
Behr's metalmark (Apodemia mormo virgulti)	HTTHI	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (Calephelis wrighti)		white (common) checkered-skipper (Pyrgus albescens)	
Sulphurs	1	Other	
orange sulphur (Colias eurytheme)	116		
sleepy orange (Eurema nicippe)			
cloudless sulfur (Phoebus sennae marcellina)			
unidentified sulphur			
Column Subtotal	25	Column Subtotal	8
		Total	33

Baheopsis Las. Marium 545 hellus epodium Hirshine. HOUS ACMISPON SOP Salvia MUNZij Sanicula Mimulus Art. Dich cap Consera Sp cammissania chama syche mirabilis. viola ped. Dhus integ Escholz. cd. Rhamnos Croc. Pibes (chip covered) Evidictyon CM otalis p-c 150 mais eds. Savioula

moilla wor.

Dodewhen lep.

Surveyor:	TRAVIS	COUPER		Date:	2/21/	15	
Site Name:	Proctor Valley -	- Village 14 of Otay Ranch	J. L. K (.	South Site	Visit No:	1	
Acres Surve	yed 10	Survey Time:	5 hrs	Acres per	Hour:	7.3	
Other Survey	ors Present:	Victor Novik	, Brian 1	ostroh			
			1				

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

Vegetation Communities Surveyed (inc. dominant spp.)							
BULK HAL Down css,	AREA & Chamise	che parral	(chamise)				
CSS (BUCKWhent)	ren-pative grassland						

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (Chlosyne californica)		great purple hairstreak (Atlides halesus corcorani)	
Gabb's checkerspot (C. gabbii)		brown elfin (Callophrys augustinus)	
Quino checkerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	
chalcedon checkerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica)	1
Leanira checkerspot (Thessalia leanira wrighti)		Ladies/Admirals	
Mylitta crescent (Phyciodes mylitta)		California sister (Adelpha bredowii californica)	
Blues		Lorquin's admiral (Limenitis lorquini)	
western pygmy-blue (Brephidium exila)		west coast lady (Vanessa annabella)	
western tailed blue (Everes amyntula)		red admiral (V. atalanta rubria)	
southern blue (Glaucopsyche lygdamus australis)	Q	painted lady (V. cardui)	5
Edward's blue (Hemiargus ceraunus gyas)	- 0	American (Virginia) lady (V. virginiensis)	
Acmon blue (Icaricia acmon acmon)		unidentified lady (Vanessa sp.)	1
marine blue (Leptotes marina)	1	Swallowtails	
unidentified blue	8	pale swallowtail (Papilio eurymedon)	
Whites		western tiger swallowtail (P. rutulus)	
Sara orangetip (Anthocharis sara sara)	3	anise swallowtail (P. zelicaon)	
desert (Felder's) orangetip (A. cethura)		Miscellaneous	
common California ringlet (Coenonympha californica)	2	monarch (Danaus plexippus)	Trans.
cabbage white (Pieris rapae)		common buckeye (Junonia coenia grisea)	581
checkered (common) white (Pontia protodice)	1	mourning cloak (Nymphalis antiopa)	
spring white (P. sisymbrii)	10-0	Skippers	
unidentified white		funereal duskywing (Erynnis funeralis)	6
Metalmarks		mournful duskywing (Erynnis tristis)	
Behr's metalmark (Apodemia mormo virgulti)	29	fiery skipper (Hylephila phyleus)	
Wright's metalmark (Calephelis wrighti)		white (common) checkered-skipper (Pyrgus albescens)	
Sulphurs		Other	No.
orange sulphur (Colias eurytheme)		Cal Emeles	2
sleepy orange (Eurema nicippe)		3	
cloudless sulfur (Phoebus sennae marcellina)			
unidentified sulphur	105		
Column Subtotal	51	Column Subtotal	13
		Total	64

-15 2 30405	a dis	ns 4+H -
Cloud Cove	er	Other flavering plants Gradium SALI PICCAP Hirschfeldia Cyf Solanum Sp. CEA
grassl	and claten	SALCLE MIR SALCLE MIR SALMEL Lesi CEATON Can
pp.) edia)	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	Minulus sp. MIRLAE Lepidium sp. 2-Sp. Carnissonia sp.
orani) um affinis)	No.	CAL CIL HELSCO ACMGLA
97	2 9	LATVES CLAPUR DODCLE
	2	Gutierrez SISBEL Chanesyco SALMUN

	Time (24 hr)	Tempera		Wind Speed (mph)	Cloud Cove	r
Start	1040	66.	2	5-10	102%	
End	1615	11	6	0.5-7	2./	The same
Start				0.7		
End						
0720020						_
Vegetati	on Communities Surveyed (inc	. dominant s	pp.)	Lama Part Vice Affection Control		
	stal sace scoul	Salvia	- 70	budge dom) non-net		
			111111111111111111111111111111111111111	1 1 1	m grasse	no
(500	live + browns sp.	don.	Chan	ice chapaval (Adenos	ona fiscia	uamu
-	Host Plants	ZIA-A	Obs.	Nectar Plants		Obs.
dwarf pla	antain (Plantago erecta)		X	popcorn flower (Cryptantha/Plagiobo	thrys spp.)	X
purple or	wi's clover (Castilleja exserta)	44.5	Ý	goldfields (Lasthenia spp.)		X
	gon (Antirrhinum coulterianum)		^	goldenstar (Muilla spp.)		X
	ak (Cordylanthus rigidus)			fiddleneck (Amsinckia menziesii var.	intermedia)	X
woolly pl	lantain (Plantago patagonica)	2 Metuv		onion (Allium spp.)		X
Chinese	houses (Collinsia spp.)			buckwheat (Eriogonum fasciculatum		2
				ground pink (Linanthus dianthiflorus)		X
						,
	Butterfly Species		No.	Butterfly Species		No.
Checker		100	140.	Hairstreaks	Special No. of	140.
A STATE OF THE STA	a patch (Chlosyne californica)			great purple hairstreak (Atlides hales	us corcorani)	
	heckerspot (C. gabbii)	4. 4.7		brown elfin (Callophrys augustinus)	ac soronam)	
	eckerspot (Euphydryas editha qui	ino)	2 15	bramble (perplexing) hairstreak (C. d.	umetorum affinis	
	n checkerspot (E. chalcedona che			gray hairstreak (Strymon melinus pud		
	checkerspot (Thessalia leanira wri			Ladies/Admirals		_
arrantifecture const	escent (Phyciodes mylitta)	g/	791	California sister (Adelpha bredowii ca	lifornica)	74.
Blues				Lorquin's admiral (Limenitis lorquini)		44
	pygmy-blue (Brephidium exila)			west coast lady (Vanessa annabella)		
	tailed blue (Everes amyntula)	A 1 10 A		red admiral (V. atalanta rubria)	V	
	blue (Glaucopsyche lygdamus au	ıstralis)	13	painted lady (V. cardui)	x 42 - 48	2
	blue (Hemiargus ceraunus gyas)			American (Virginia) lady (V. virginiens	sis)	a
	lue (Icaricia acmon acmon)			unidentified lady (Vanessa sp.)		-
	lue (Leptotes marina)		4 4	Swallowtails		
unidentifi			4	pale swallowtail (Papilio eurymedon)		
Whites		C. Carlo	Allen III	western tiger swallowtail (P. rutulus)		
Sara orai	ngetip (Anthocharis sara sara)		2	anise swallowtail (P. zelicaon)	Carlo de la companya del companya de la companya del companya de la companya de l	
	elder's) orangetip (A. cethura)			Miscellaneous	1 5 5 72 9	277
	California ringlet (Coenonympha	californica)		monarch (Danaus plexippus)	100 100 100	7
	white (Pieris rapae)	3 1		common buckeye (Junonia coenia gr	isea)	
	d (common) white (Pontia protodi	ce)		mourning cloak (Nymphalis antiopa)		1
spring wt	nite (P. sisymbrii)	- Mar		Skippers		_
unidentifi				funereal duskywing (Erynnis funeralis	(a	2
Metalma	rks	ha		mournful duskywing (Erynnis tristis)	100	-
Behr's m	etalmark (Apodemia mormo virgu	fti)	26	fiery skipper (Hylephila phyleus)	M 17 4 5	
Vright's	metalmark (Calephelis wrighti)			white (common) checkered-skipper (Pyrqus albescens)	
Sulphurs			No.	Other	, g=0 and000113)	
	ılphur (Colias eurytheme)		2			
	ange (Eurema nicippe)		1.00			
	sulfur (Phoebus sennae marcellii	na)				1
	ed sulphur		- 1			
		n Subtotal	48		Column Subtotal	

Survey Time:

Site Visit No:

Site Name: Proctor Valley - Village 14 of Otay Ranch

Other Surveyors Present: Alicia Hil

Acres Surveyed

Eucrypta chysantemitalia, Camissonia spp. Calandrinia ciliata, Cuterrezia spp. Erodum sp., Solanum Parishii, Ceanothus tomentosus, Mirabilis laevis, Mimulus awantiacus, Lathynus vestitus, Oxdlis californica, Additumes. Acmispon glaber, Dichelostemma capitatum, Estischolzia californica, Sisyinchim bellum, Chamesyce Sp., Salvia munzin, Clarica sp., Calystegia macrostegio

Surveyor: Alicia Hill		Date: 2/24/19	
Site Name: Proctor Valley – Village 14 of Otay R	anch	Site visit No:	01
Acres Surveyed 45 Survey	Time:	5.S Acres per Hour: 10.9 (20,0
Other Surveyors Present: AUVIL C	orman		
	Field C	onditions	
Time (24 hr) Tem	perature (°F)	Wind Speed (mph) Cloud Cove	er
Start 1040 (0	6.2	5-10 2%	0
End 1/0/5	-1.10	0.5-7 20	0
Start	1,0		
End			
Ella			
Vegetation Communities Surveyed (inc. domination	nt spp.) (hance character non-nature	
MRSSIGNA CHARLED SACK	Suish	hamise chaparrolynon-native (D: Salvia munzi)	
Grassiana, Carstal 200	SCHWO	Co. allow mariety	
The second secon	W. O		
Host Plants	Obs.	Nectar Plants	Obs
dwarf plantain (Plantago erecta)	×	popcorn flower (Cryptantha/Plagiobothrys spp.)	X
ourple owl's clover (Castilleja exserta)	X	goldfields (Lasthenia spp.)	X
snapdragon (Antirrhinum coulterianum) birds-beak (Cordylanthus rigidus)		goldenstar (Muilla spp.) fiddleneck (Amsinckia menziesii var. intermedia)	X
woolly plantain (<i>Plantago patagonica</i>)		onion (Allium spp.)	X
Chinese houses (Collinsia spp.)		buckwheat (Eriogonum fasciculatum)	X
		ground pink (<i>Linanthus dianthiflorus</i>)	X
	1115	100	
Butterfly Species	No.	Butterfly Species	No
Checkerspots		Hairstreaks	
California patch (Chlosyne californica)		great purple hairstreak (Atlides halesus corcorani)	
Gabb's checkerspot (C. gabbii)		brown elfin (Callophrys augustinus)	
Quino checkerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	
halcedon checkerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica) Ladies/Admirals	
eanira checkerspot (<i>Thessalia leanira wrighti</i>) Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (Adelpha bredowii californica)	
Blues		Lorquin's admiral (<i>Limenitis Iorquini</i>)	
vestern pygmy-blue (Brephidium exila)		west coast lady (Vanessa annabella)	100
vestern tailed blue (Everes amyntula)		red admiral (V. atalanta rubria)	
outhern blue (Glaucopsyche lygdamus australis)	11	painted lady (V. cardui)	7
dward's blue (Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis)	-
Acmon blue (Icaricia acmon acmon) narine blue (Leptotes marina)		unidentified lady (Vanessa sp.) Swallowtails	10
inidentified blue	9	pale swallowtail (Papilio eurymedon)	
Vhites	10	western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (Anthocharis sara sara)	3	anise swallowtail (P. zelicaon)	
esert (Felder's) orangetip (A. cethura)		Miscellaneous	
ommon California ringlet (Coenonympha californica)		monarch (Danaus plexippus)	
abbage white (Pieris rapae)		common buckeye (Junonia coenia grisea)	me es
heckered (common) white (Pontia protodice) pring white (P. sisymbrii)		mourning cloak (Nymphalis antiopa) Skippers	Spanner.
nidentified white		funereal duskywing (Erynnis funeralis)	2
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
ehr's metalmark (Apodemia mormo virgulti)	19	fiery skipper (Hylephila phyleus)	
Vright's metalmark (Calephelis wrighti)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
ulphurs	-	Other	J.
range sulphur (Colias eurytheme)	2	Grey Burkeye	ď
leepy orange (Eurema nicippe) oudless sulfur (Phoebus sennae marcellina)			
nidentified sulphur	1		
Column Subtot	al itit	Column Subtotal	20
			(0)

PP)

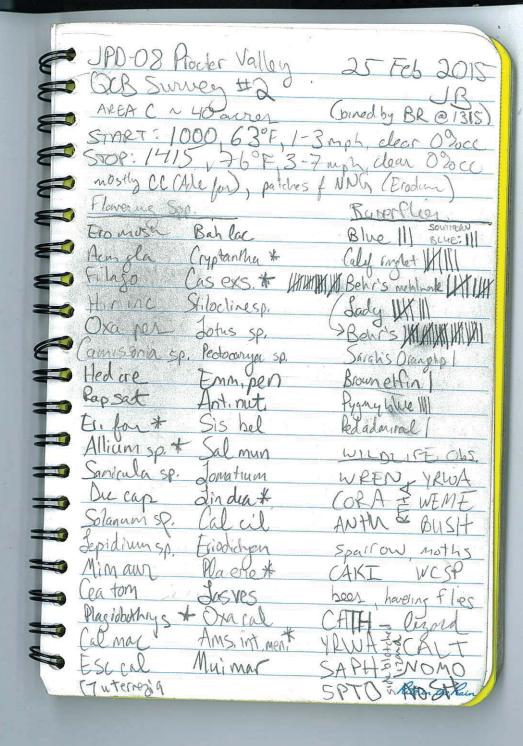
Surveyor:	Jasmine Bakke	r		Date: _2	2/25/2015	
Site Name:	Proctor Valley	– Village 14 of Otay Ranch (J	PD-08); Area C	Sit	e Visit No: 2	
Acres Surv	eyed 40	Survey Time:	4 hours 15 minutes	Acres pe	r Hour: 9.41	
Other Surve	eyors Present:	Stacy Nigro ~ Area A				
		loined by supervised individ	lual: Ren Rosenhaum 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 (Plantago erecta)	X	popcorn flower (Cryptantha/Plagiobothrys spp.)	Х
purple owl's clover (Castilleja exserta)	X	goldfields (Lasthenia spp.)	
snapdragon (Antirrhinum coulterianum)		goldenstar (Muilla spp.)	Х
birds-beak (Cordylanthus rigidus)		fiddleneck (Amsinckia menziesii var. intermedia)	Х
woolly plantain (Plantago patagonica)		onion (Allium spp.)	Х
Chinese houses (Collinsia spp.)		buckwheat (Eriogonum fasciculatum)	Х
		ground pink (Linanthus dianthiflorus)	Х

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



Surveyor:	Stacy Nigro			Date:	2/25/2015		
Site Name:	Proctor Valley	– Village 14 of Otay Ranch (J	PD-08); Area A		Site Visit No:	: 2	
Acres Surve	eyed 45	Survey Time:	4 hours 35 min	Acres	per Hour:	9.8	
Other Surve	eyors 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.)

<u>DCSS</u> – Artemisia californica, Erigonum fasciculatum, Salvia apiana, Acmispon glaber; <u>SMC</u> – Ceanothus tomentosus, Adenostoma fasciculatum, Xylococcus bicolor, Rhamnus crocea; <u>NNG</u> – Avena, bromes; <u>NG</u> – Stipa pulchra

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

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

#=dom. Sp: 2/2/15 p2/2	Saddes, Iso ment	Month Rut	AMKE ANHW Sosp KILL	SPTO coyote sext honout cox BLPH rabbit sext CAKI	1 12 4 8	W. Ferce by Bush AMCR Alter Soller
2 25 IS JPD-D Proctor Valles Otto	time start end Warrans time 9.45 14:20 = 4.55 hrs temp - 64°F 76° (98ac/hr)	teer 5% clear boutter this	Rephysol Solf page between 1. Silve blue = 5 Endirm of Bablac blue sp 1. 5 Cam bist Ams ment fundusty: 3	South asp. Bue salite S. one tip as = 4 Sich cap caland wil lacky spire = 3. Acm ala Plantene Plantene Plantene Sign for a sign as		Allian Sha Esch cal Clemstris parc Minimum Evida crada Normac Lin Dian Dad cle

		Surveyo	: Alicia Hill		,	Date: 2/25/19	
		Site Nam	ne: Proctor Valley – Village 14 of Otay	v Ranch	F	Site Visit No: 2	
		Acros Si	urveyed 137 Surv	ov Timo	. 26	5 person hours Acres per Hour: 5.37	
		Other Su	rveyors Present: Laune	00	Ma	n, Travis Cooper, Victor Nord	
					Field C	onditions	
			Time (24 hr) Te	emperat		Wind Speed (mph) Cloud Co	VOF
		Start					ACI
				72.			
		End	15:00	TCO.	0	3-8 2%	
		Start					
		End					
		Vegetation	on Communities Surveyed (inc. domi	inant sp	p.) (Chamise chapavrol, CSSCA	vienesa
		6	allia Wallan Gr G.	c' - '8	\ n	m-nature arissland 10 an	
		00	about Many El. ta	DIC.	1,1	ion-native grassland (Bron	rus,e
						<u> </u>	
			Host Plants		Obs.	Nectar Plants	Obs.
		dwarf pla	ntain (<i>Plantago erecta</i>)		X	popcorn flower (Cryptantha/Plagiobothrys spp.)	V
			ri's clover (Castilleja exserta)		V	goldfields (<i>Lasthenia</i> spp.)	10
2			on (Antirrhinum coulterianum)		1	goldenstar (Muilla spp.)	17
100		-	k (Cordylanthus rigidus)			fiddleneck (Amsinckia menziesii var. intermedia)	6
\$ 7			antain (<i>Plantago patagonica</i>)			onion (Allium spp.)	1
3			nouses (Collinsia spp.)			buckwheat (Eriogonum fasciculatum)	X
3			(1111)			ground pink (<i>Linanthus dianthiflorus</i>)	X
Lotus strigosus Lupinus sp.							1
3 3						The state of the s	
20	2		Butterfly Species		No.	Butterfly Species	No.
	P	Checkers				Hairstreaks	
	8		patch (Chlosyne californica)			great purple hairstreak (Atlides halesus corcorani)	-
	unculate		eckerspot (C. gabbii)			brown elfin (Callophrys augustinus)	
	. \\		ckerspot (Euphydryas editha quino)			bramble (perplexing) hairstreak (C. dumetorum affinis)	
ZI.	ノる		checkerspot (E. chalcedona chalcedon	na)		gray hairstreak (Strymon melinus pudica) Ladies/Admirals	
3,5	78		neckerspot (Thessalia leanira wrighti) scent (Phyciodes mylitta)		-	California sister (Adelpha bredowii californica)	
10	\mathcal{O}	Blues	scent (Fryclodes mymta)			Lorquin's admiral (<i>Limenitis lorquini</i>)	
3	200		ygmy-blue (<i>Brephidium exila</i>)	- 2000		west coast lady (Vanessa annabella)	-
38	2 2		iled blue (Everes amyntula)			red admiral (V. atalanta rubria)	
600	いし		olue (Glaucopsyche lygdamus australis))	1	painted lady (V. cardui)	
			blue (Hemiargus ceraunus gyas)	/	-1	American (Virginia) lady (V. virginiensis)	
		THE RESERVE THE PARTY OF THE PA	ue (Icaricia acmon acmon)			unidentified lady (Vanessa sp.)	10
(3		ie (Leptotes marina)		3	Swallowtails	10
à	10	unidentifie			12	pale swallowtail (Papilio eurymedon)	
	C 2	Whites				western tiger swallowtail (P. rutulus)	
N)	M. Cut	Sara orang	getip (Anthocharis sara sara)		2.	anise swallowtail (P. zelicaon)	1
DL. PAR	S :	desert (Fe	lder's) orangetip (A. cethura)			Miscellaneous	
17.00	9 I	common C	California ringlet (Coenonympha californ	nica)		monarch (Danaus plexippus)	
3 5	SIG	cabbage v	vhite (<i>Pieris rapae</i>)			common buckeye (Junonia coenia grisea)	
300	J &	checkered	(common) white (Pontia protodice)			mourning cloak (Nymphalis antiopa)	
•		spring whi	te (P. sisymbrii)			Skippers	
	B	unidentifie			2	funereal duskywing (Erynnis funeralis)	9/12
5	3	Metalmar				mournful duskywing (Erynnis tristis)	
6	~ ==	mary married and a second	talmark (Apodemia mormo virgulti)		10	fiery skipper (Hylephila phyleus)	
0	S-0		netalmark (Calephelis wrighti)			white (common) checkered-skipper (Pyrgus albescens	
0	2 8	Sulphurs			1	Other	
10	mier		phur (Colias eurytheme)		1		
= 3	ismie	sleepy ora	nge (Eurema nicippe)				
V 0	35	cloudless	sulfur (Phoebus sennae marcellina)				-
Plants in bloom! DIC, CAP.	20	unidentifie		total	21	Column Subtota	20
J. S.	Calandr		Column Sub	notal	31	Tota	-
	C ()	Alternation of the Control of the Co				Tota	1 Cel

		oot Butterfly Survey Form	0.1	4005
Surveyor: Laurie Go	cman	Date: 2-25-15	Pou	
Site Name: Proctor Valley - Village 14 of 0	Otav Ranch	intal Site Visit No: 2	FI	, K
Acres Surveyed 37	all the same	25,5 SW WAcres per Hour: 5.37	1	
		20; 5 VO Acres per Hour: 4.4	141	ř
Other Surveyors Present: Victo	r Novik	Travis Cooper, Alicia		1
		Party and Asset a		
		Say MASING		Ď
Time (24 be)		Conditions (i) Wind Speed (mph) Cloud Cov.	-	
Time (24 hr)	Temperature (*F	,	-	
Start 0800	62.	0-1 37.		
End 1500	760	3-8 3%	13	
Start	COAL SUMMERINGS		*9	
End				
/egetation Communities Surveyed (inc. d	tominant enn \			
1) 1		1:00 ==== 1/0		6 1 .
Chamise chagarral (c	hanise don); non-rative grassland Bromu	13,5%	coour
Coastal sage scrub (PRTCAL ACA	16LA ERIFAS)	# B	l ·
	*	there is the think of the said		l management
Host Plants	Obs.	Nectar Plants	Obs.	4534
twarf plantain (Plantago erecta)	1 *	popcorn flower (Cryptantha/Plagiobothrys spp.)		以よる
ourple owl's clover (Castilleja exserta)	X	goldfields (Lasthenia spp.)	LX-	CCAP
snapdragon (Antirrhinum coulterianum)		goldenstar (Muilla spp.)	 X	PHS.
pirds-beak (Cordylanthus rigidus)		fiddleneck (Amsinckia menziesii var. intermedia)	 X 	(4)o
woolly plantain (Plantago patagonica)		onion (Allium spp.)	 X	-
Chinese houses (Collinsia spp.)	16-5-16-1	buckwheat (Eriogonum fasciculatum)	 	0000
		ground pink (Linanthus dianthiflorus)		£ ₹ 5 K
				NE EX
Butterfly Species	No.	Butterfly Species	No.	CENTON Camisso Camisso
heckerspots		Hairstreaks		
California patch (Chlosyne californica)		great purple hairstreak (Attides halesus corcorani)		7580
Sabb's checkerspot (C. gabbil)		brown elfin (Callophrys augustinus)		
Quino checkerspot (Euphydryas editha quino))	bramble (perplexing) hairstreak (C. dumetorum affinis)		1 50
halcedon checkerspot (E. chalcedona chalc	redona)	gray hairstreak (Strymon melinus pudica)		1
eanira checkerspot (Thessalia leanira wrigh	nti)	Ladies/Admirals		OXA CAN Solanum
Mylitta crescent (Phyciodes mylitta)	APPLICATION OF	California sister (Adelpha bredowii californica)	2 TO 11	Solarus
Blues	to the second	Lorquin's admiral (Limenitis lorquini)		15 63.
vestern pygmy-blue (Brephidium exila)	THE SECTION	west coast lady (Vanessa annabella)	5	3 さて
vestern tailed blue (Everes amyntula)		red admiral (V. atalanta rubria)	200	5
outhern blue (Glaucopsyche lygdamus aust	ralis)	painted lady (V. cardui)		
dward's blue (Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis)		DX.
cmon blue (Icaricia acmon acmon)		unidentified lady (Vanessa sp.)	- 11	えると
narine blue (Leptotes marina)	and the second	Swallowtails		SALMAC ANTONIO
nidentified blue	18	pale swallowtail (Papilio eurymedon)		えから
Vhites	1.5 a. 250 ft 12.	western tiger swallowtail (P. rutulus)		SALMEL
ara orangetip (Anthocharis sara sara)	3	anise swallowtail (P. zelicaon)	\perp	1 7 -
esert (Felder's) orangetip (A. cethure)	1 THELE LAND	Miscellaneous		+ 721
ommon California ringlet (Coenonympha cal	lifornica)	monarch (Danaus plexippus)		HIR IN C
abbage white (<i>Pieris rapae</i>)	100 5 10	common buckeye (Junonia coenia grisea)		1 7 5
neckered (common) white (Pontia protodice)	mourning cloak (Nymphalis antiopa)	بمستبكات	1 423
oring white (P. sisymbrii)	2	Skippers		I S
nidentified white		funereal duskywing (Erynnis funeralis)	6	۱°°′
etalmarks	19	mournful duskywing (Erynnis tristis)	A	1 8
ehr's metalmark (Apodemia mormo virgulti)	27	fiery skipper (Hylephila phyleus)		
right's metalmark (Calephelis wrighti)		white (common) checkered-skipper (Pyrgus albescens) [4
Ilphurs	100	Other		
ange sulphur (Colies eurytheme)		A second control of the second	12 1]
eepy orange (Eurema nicippe)				3
oudless sulfur (Phoebus sennae marcellina)			19	
identified sulphur		The second secon		
MANUAL ALIF	P	Column Subtat	1 20	

Column Subtotal

コットファモ

Total 71

Column Subtotal

	e: Proctor Valley – Village						
Acres Su	irveyed137	Survey Tir	me:	7	Acres per Ho	ur: 5, 37	
Other Su	rveyors Present:						
	25	. 5 total por	son has				
				onditions			
	Time (24 hr)	Tempe	rature (°F)		d Speed (mph)	Cloud Cov	er
Start	\$ 844		20		0-1	5%	
End		-	760				
	1544	7	6		3-8	29	
Start						117	
End							
Vegetation	on Communities Surveyed	(inc. dominant	spp.)				
					111.0	17 50	211
	In mise Chaparra	1 (5)	Salvh m	unza Eri	garun) NNG	(Drams St.E)	10
	Host Plants		Obs.	1	Nectar Plants		1
dwarf pla	ntain (Plantago erecta)		V	popcorn flow	er (Cryptantha/Plagiobo	othrys spp.)	
	l's clover (Castilleja exserta)		/	goldfields (La		т., у с орр.)	
	on (Antirrhinum coulterianum			goldenstar (A			1
birds-bea	k (Cordylanthus rigidus)				msinckia menziesii var.	intermedia)	1
	intain (Plantago patagonica)			onion (Allium			
	nouses (Collinsia spp.)			buckwheat (E	riogonum fasciculatum)	
					Linanthus dianthiflorus)		
	Butterfly Species		No.		Butterfly Species		T
Checkers		19 1900		Hairstreaks	Dattorny operate		
	patch (Chlosyne californica)			-	airstreak (Atlides halest	us corcorani)	
	eckerspot (C. gabbii)				allophrys augustinus)		
	ckerspot (Euphydryas editha	auino)			lexing) hairstreak (C. di	umetorum affinis)	
	checkerspot (E. chalcedona				k (Strymon melinus pud		
	eckerspot (Thessalia leanira			Ladies/Admir	The second of th		
	scent (Phyciodes mylitta)			California siste	er (Adelpha bredowii ca	lifomica)	
Blues					iral (Limenitis lorquini)		
western p	rgmy-blue (Brephidium exila)	***			y (Vanessa annabella)		
	iled blue (Everes amyntula)				. atalanta rubria)		-
	lue (Glaucopsyche lygdamus	s australis)	15	painted lady (5
	olue (Hemiargus ceraunus gy		- Second		ginia) lady (V. virginiens	sis)	1
	ie (Icaricia acmon acmon)				dy (Vanessa sp.)		1
	e (Leptotes marina)		1	Swallowtails	, , , , , , , , , , , , , , , , , , , ,		
			5	pale swallowta	il (Papilio eurymedon)		1
					swallowtail (P. rutulus)		
unidentifie					ail (P. zelicaon)		
unidentifie Whites	jetip (Anthocharis sara sara)			anisc swanow			
unidentifie Whites Sara orang	getip (Anthocharis sara sara) Ider's) orangetip (A. cethura)			Miscellaneou	S		-
unidentifie Whites Sara orang desert (Fe	getip (<i>Anthocharis sara sara</i>) Ider's) orangetip (<i>A. cethura</i>) salifornia ringlet (<i>Coenonymp</i>			Miscellaneou			
unidentifie Whites Sara orand desert (Fe common C	lder's) orangetip (<i>A. cethura</i>) alifornia ringlet (<i>Coenonymp</i>			Miscellaneou monarch (Dan	aus plexippus)	(sea)	-
unidentifie Whites Sara orang desert (Fe common C cabbage v	lder's) orangetip (A. cethura)	ha californica)		Miscellaneou monarch (Dan common buck		(sea)	
unidentifie Whites Sara orang desert (Fe common C cabbage w checkered	lder's) orangetip (A. cethura) california ringlet (Coenonymp rhite (Pieris rapae)	ha californica)		Miscellaneou monarch (Dan common buck	aus plexippus) eye (Junonia coenia gri	(sea)	
unidentifie Whites Sara orang desert (Fe common C cabbage w checkered spring white	Ider's) orangetip (A. cethura) california ringlet (Coenonymp chite (Pieris rapae) (common) white (Pontia pro- cie (P. sisymbrii)	ha californica)		Miscellaneou monarch (Dan common buck mourning cloa Skippers	aus plexippus) eye (Junonia coenia gri		5
unidentifie Whites Sara orang desert (Fe common C cabbage v checkered spring whit unidentifie	Ider's) orangetip (A. cethura) california ringlet (Coenonymp white (Pieris rapae) (common) white (Pontia pro- cie (P. sisymbrii) d white	ha californica)		monarch (Dan common buck mourning cloa Skippers funereal dusky	aus plexippus) eye (Junonia coenia gri k (Nymphalis antiopa)		5
unidentifie Whites Sara orang desert (Fe common C cabbage v checkered spring white unidentifie	Ider's) orangetip (A. cethura) california ringlet (Coenonymp white (Pieris rapae) (common) white (Pontia pro- cie (P. sisymbrii) d white	ha californica) todice)	3/	monarch (Dan common buck mourning cloa Skippers funereal dusky mournful dusk	aus plexippus) eye (Junonia coenia gri k (Nymphalis antiopa) rwing (Erynnis funeralis		5
unidentifie Whites Sara orang desert (Fe common C cabbage v checkered spring whit unidentifie Metalmart Behr's me	Ider's) orangetip (A. cethura) california ringlet (Coenonymp thite (Pieris rapae) (common) white (Pontia pro- te (P. sisymbrii) d white ss talmark (Apodemia mormo vi	todice)	36	monarch (Dan common buck mourning cloa Skippers funereal dusky mournful dusk fiery skipper (A	aus plexippus) eye (Junonia coenia gri k (Nymphalis antiopa) rwing (Erynnis funeralis ywing (Erynnis tristis) Hylephila phyleus))	5
unidentifie Whites Sara orang desert (Fe common C cabbage w checkered spring whit unidentifie Metalmark Behr's me Wright's m	Ider's) orangetip (A. cethura) california ringlet (Coenonymp rhite (Pieris rapae) (common) white (Pontia pro- tie (P. sisymbrii) d white	todice)	36	monarch (Dan common buck mourning cloa Skippers funereal dusky mournful dusk fiery skipper (A	aus plexippus) eye (Junonia coenia gri k (Nymphalis antiopa) rwing (Erynnis funeralis ywing (Erynnis tristis))	<
unidentifie Whites Sara orang desert (Fe common C cabbage w checkered spring whir unidentifie Metalmark Behr's me Wright's m Sulphurs	Ider's) orangetip (A. cethura) california ringlet (Coenonymp chite (Pieris rapae) (common) white (Pontia pro- ce (P. sisymbrii) d white cs calmark (Apodemia mormo vi cetalmark (Calephelis wrighti)	todice)	36	monarch (Dan common buck mourning cloa Skippers funereal dusky mournful dusk fiery skipper (Hubble Common buck)	aus plexippus) eye (Junonia coenia gri k (Nymphalis antiopa) rwing (Erynnis funeralis ywing (Erynnis tristis) Hylephila phyleus))	<
unidentifie Whites Sara orang desert (Fe common C cabbage w checkered spring whi unidentifie Metalmar! Behr's me Wright's me Sulphurs orange sul	Ider's) orangetip (A. cethura) california ringlet (Coenonymp chite (Pieris rapae) (common) white (Pontia pro- cie (P. sisymbrii) d white cs talmark (Apodemia mormo vi cetalmark (Calephelis wrighti)	todice)	36	monarch (Dan common buck mourning cloa Skippers funereal dusky mournful dusk fiery skipper (Hubble Common buck)	aus plexippus) eye (Junonia coenia gri k (Nymphalis antiopa) rwing (Erynnis funeralis ywing (Erynnis tristis) Hylephila phyleus))	
unidentifie Whites Sara orang desert (Fe common C cabbage w checkered spring whi unidentifie Metalmarl Behr's me Wright's m Sulphurs orange sul sleepy ora	Ider's) orangetip (A. cethura) Ider's) orangetip (A. cethura) Ider's rapae) Ideric (Pieris rapae) Ideric (Pieris rapae) Ideric (P. sisymbrii) Ideric (Polias eurytheme) Ideric (Pieric (Pier	todice) irgulti)	36	monarch (Dan common buck mourning cloa Skippers funereal dusky mournful dusk fiery skipper (Hubble Common buck)	aus plexippus) eye (Junonia coenia gri k (Nymphalis antiopa) rwing (Erynnis funeralis ywing (Erynnis tristis) Hylephila phyleus))	*
unidentifie Whites Sara orang desert (Fe common C cabbage w checkered spring whi unidentifie Metalmar Behr's me Wright's m Sulphurs orange sul	Ider's) orangetip (A. cethura) california ringlet (Coenonymp chite (Pieris rapae) (common) white (Pontia pro- cie (P. sisymbrii) d white calmark (Apodemia mormo vi cetalmark (Calephelis wrighti) chur (Colias eurytheme) nge (Eurema nicippe) culfur (Phoebus sennae marc	todice) irgulti)	36	monarch (Dan common buck mourning cloa Skippers funereal dusky mournful dusk fiery skipper (Hubble Common buck)	aus plexippus) eye (Junonia coenia gri k (Nymphalis antiopa) rwing (Erynnis funeralis ywing (Erynnis tristis) Hylephila phyleus))	<

2015 Quino Checkerspot Butterfly Survey Form Jictor Novile Surveyor: Site Name: Proctor Valley - Village 14 of Otay Ranch Site Visit No: Acres per Hour: Survey Time: Acres Surveyed ravis Other Surveyors Present: Lel une **Field Conditions** Wind Speed (mph) Cloud Cover Time (24 hr) Temperature (°F) Start End Start End Vegetation Communities Surveyed (inc. dominant spp.) Host Plants Obs. **Nectar Plants** Obs. dwarf plantain (Plantago erecta) popcorn flower (Cryptantha/Plagiobothrys spp.) goldfields (Lasthenia spp.) purple owl's clover (Castilleja exserta) snapdragon (Antirrhinum coulterianum) goldenstar (Muilla spp.) fiddleneck (Amsinckia menziesii var. intermedia) birds-beak (Cordylanthus rigidus) onion (Allium spp.) woolly plantain (Plantago patagonica) buckwheat (Eriogonum fasciculatum) Chinese houses (Collinsia spp.) ground pink (Linanthus dianthiflorus) No. **Butterfly Species** No. **Butterfly Species** Checkerspots Hairstreaks great purple hairstreak (Atlides halesus corcorani) California patch (Chlosyne californica) brown elfin (Callophrys augustinus) Gabb's checkerspot (C. gabbii) bramble (perplexing) hairstreak (C. dumetorum affinis) Quino checkerspot (Euphydryas editha quino) gray hairstreak (Strymon melinus pudica) chalcedon checkerspot (E. chalcedona chalcedona) Ladies/Admirals Leanira checkerspot (Thessalia leanira wrighti) California sister (Adelpha bredowii californica) Mylitta crescent (Phyciodes mylitta) Lorquin's admiral (Limenitis Iorquini) Blues western pygmy-blue (Brephidium exila) west coast lady (Vanessa annabella) western tailed blue (Everes amyntula) red admiral (V. atalanta rubria) southern blue (Glaucopsyche lygdamus australis) painted lady (V. cardui) American (Virginia) lady (V. virginiensis) Edward's blue (Hemiargus ceraunus gyas) unidentified lady (Vanessa sp.) Acmon blue (Icaricia acmon acmon) Swallowtails marine blue (Leptotes marina) pale swallowtail (Papilio eurymedon) unidentified blue MI western tiger swallowtail (P. rutulus) Whites Sara orangetip (Anthocharis sara sara) anise swallowtail (P. zelicaon) Miscellaneous desert (Felder's) orangetip (A. cethura) common California ringlet (Coenonympha californica) monarch (Danaus plexippus) common buckeye (Junonia coenia grisea) cabbage white (Pieris rapae) mourning cloak (Nymphalis antiopa) checkered (common) white (Pontia protodice) Skippers spring white (P. sisymbrii) funereal duskywing (Erynnis funeralis) unidentified white mournful duskywing (Erynnis tristis) Metalmarks fiery skipper (Hylephila phyleus) Behr's metalmark (Apodemia mormo virgulti) white (common) checkered-skipper (Pyrgus albescens) Wright's metalmark (Calephelis wrighti) Other Sulphurs orange sulphur (Colias eurytheme) sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina) unidentified sulphur Column Subtotal

Total

Column Subtotal

2015 Quino Checkerspot Butterfly Survey Form Date: 2-26-15
____ Site Visit No: 2 Area J # ___
Acres per Hour: 6.59 pp Site Name: Proctor Valley - Village 14 of Otay Ranch Acres Surveyed Survey Time: Travis Other Surveyors Present: **Field Conditions** Time (24 hr) Temperature (°F) Wind Speed (mph) Cloud Cover Start End Start End Vegetation Communities Surveyed (inc. dominant spp.) Eriagrum NUTIVE Host Plants Obs. **Nectar Plants** Obs. dwarf plantain (Plantago erecta) popcorn flower (Cryptantha/Plagiobothrys spp.) purple owl's clover (Castilleja exserta) goldfields (Lasthenia spp.) snapdragon (Antirrhinum coulterianum) goldenstar (Muilla spp.) birds-beak (Cordylanthus rigidus) fiddleneck (Amsinckia menziesii var. intermedia) woolly plantain (Plantago patagonica) onion (Allium spp.) Chinese houses (Collinsia spp.) buckwheat (Eriogonum fasciculatum) ground pink (Linanthus dianthiflorus) **Butterfly Species** No. **Butterfly Species** No Checkerspots Hairstreaks California patch (Chlosyne ealifornica) great purple hairstreak (Atlides halesus corcorani) Gabb's checkerspot (C. gabbii) brown elfin (Callophrys augustinus) 491 Quino checkerspot (Euphydryas editha quino) bramble (perplexing) hairstreak (C. dumetorum affinis) chalcedon checkerspot (E. chalcedona chalcedona) gray hairstreak (Strymon melinus pudica) Leanira checkerspot (Thessalia leanira wrighti) Ladies/Admirals Mylitta crescent (Phyciodes mylitta) California sister (Adelpha bredowii californica) Lorquin's admiral (Limenitis lorquini) Blues western pygmy-blue (Brephidium exila) west coast lady (Vanessa annabella) western tailed blue (Everes amyntula) red admiral (V. atalanta rubria) southern blue (Glaucopsyche lygdamus australis) painted lady (V. cardui) American (Virginia) lady (V. virginiensis) Edward's blue (Hemiargus ceraunus gyas) unidentified lady (Vanessa sp.) Acmon blue (Icaricia acmon acmon) marine blue (Leptotes marina) Swallowtails pale swallowtail (Papilio eurymedon) unidentified blue Whites western tiger swallowtail (P. rutulus) Sara orangetip (Anthocharis sara sara) anise swallowtail (P. zelicaon) desert (Felder's) orangetip (A. cethura) Miscellaneous common California ringlet (Coenonympha californica) monarch (Danaus plexippus) cabbage white (Pieris rapae) common buckeye (Junonia coenia grisea) checkered (common) white (Pontia protodice) mourning cloak (Nymphalis antiopa) spring white (P. sisymbrii) Skippers unidentified white funereal duskywing (Erynnis funeralis) Metalmarks mournful duskywing (Erynnis tristis) Behr's metalmark (Apodemia mormo virgulti) fiery skipper (Hylephila phyleus) Wright's metalmark (Calephelis wrighti) white (common) checkered-skipper (Pyrgus albescens) Other Sulphurs + 10 +5 11 orange sulphur (Colias eurytheme) 1111 sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina) unidentified sulphur Column Subtotal Column Subtotal Total

	ANS COUPER		_	Date: 2/26/15
Site Name: Procto	r Valley – Village 14 o	of Otay Ranch	7+1	Site Visit No: 2
Acres Surveyed	39	Survey Time:	G.75 hrs	Acres per Hour: 6,59
Other Surveyors Pr	resent: Victor	Nark		

DICCAP BAHLAR PENAUR CASDEN GUTCAL TSOMEN BRANIS PERARIS EUCCHR PERARIS SIS ISEL MALFAR

SANBIP VIOPED LATHUES CALCIL

Field Conditions					
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover	
Start	0900	620	1-3	30%	
End	1545	72°	5-8	5 1/2	
Start					
End					

Vegetation Communities S	urveyed (inc. domin	nant spp.)			
Chamica	chaparral.	CSS (Eriagonum 10465)	NNG (Bromus	Endium)	Nata Cass
(Stipa spp.)			,		

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (Chlosyne californica)		great purple hairstreak (Atlides halesus corcorani)	
Gabb's checkerspot (C. gabbii)	5	brown elfin (Callophrys augustinus)	
Quino checkerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	
chalcedon checkerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica)	1
Leanira checkerspot (Thessalia leanira wrighti)		Ladies/Admirals	10 6-5-6
Mylitta crescent (Phyciodes mylitta)		California sister (Adelpha bredowii californica)	
Blues		Lorquin's admiral (Limenitis lorquini)	
western pygmy-blue (Brephidium exila)		west coast lady (Vanessa annabella)	2
western tailed blue (Everes amyntula)		red admiral (V. atalanta rubria)	
southern blue (Glaucopsyche lygdamus australis)	20	painted lady (V. cardui)	5
Edward's blue (Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis)	
Acmon blue (Icaricia acmon acmon)	1	unidentified lady (Vanessa sp.)	10
marine blue (Leptotes marina)		Swallowtails	
unidentified blue	15	pale swallowtail (Papilio eurymedon)	
Whites		western tiger swallowtail (P. rutulus)	
Sara orangetip (Anthocharis sara sara)	4	anise swallowtail (P. zelicaon)	
desert (Felder's) orangetip (A. cethura)		Miscellaneous	
common California ringlet (Coenonympha californica)	6	monarch (Danaus plexippus)	
cabbage white (Pieris rapae)		common buckeye (Junonia coenia grisea)	
checkered (common) white (Pontia protodice)		mourning cloak (Nymphalis antiopa)	
spring white (P. sisymbrii)		Skippers	
unidentified white		funereal duskywing (Erynnis funeralis)	10
Metalmarks		mournful duskywing (Erynnis tristis)	
Behr's metalmark (Apodemia mormo virgulti)	72	fiery skipper (Hylephila phyleus)	
Wright's metalmark (Calephelis wrighti)		white (common) checkered-skipper (Pyrgus albescens)	
Sulphurs		Other	
orange sulphur (Colias eurytheme)			
sleepy orange (Eurema nicippe)			
cloudless sulfur (Phoebus sennae marcellina)			
unidentified sulphur	1		
Column Subtotal	12-3	Column Subtotal	29
		Total	152

2015 Quino Checkerspot Butterfly Survey Form Laurie Gorman Date: 2-26-15 Site Visit No: 2 - Polygon M
Acres per Hour: 9.23 Site Name: Proctor Valley - Village 14 of Otay Ranch 30 Acres Surveyed Survey Time: Other Surveyors Present: none Field Conditions Cloud Cover Time (24 hr) Wind Speed (mph) Temperature ('F) 60% Start 1245 10% thin End 1600 Start End Vegetation Communities Surveyed (inc. dominant spp.) Nectar Plants Obs. Obs. **Host Plants** popcorn flower (Cryptantha/Plagiobothrys spp.) dwarf plantain (Plantago erecta) goldfields (Lasthenia spp.) purple owl's clover (Castilleja exserta) snapdragon (Antirrhinum coulterianum) goldenstar (Muilla spp.) fiddleneck (Amsinckia menziesii var. intermedia) birds-beak (Cordylanthus rigidus) woolly plantain (Plantago patagonica) onion (Allium spp.) buckwheat (Eriogonum fasciculatum) Chinese houses (Collinsia spp.) ground pink (Linanthus dianthiflorus) No. **Butterfly Species Butterfly Species** No. Hairstreaks Checkerspots great purple hairstreak (Atlides halesus corcorani) California patch (Chlosyne californica) brown elfin (Callophrys augustinus) Gabb's checkerspot (C. gabbii) bramble (perplexing) hairstreak (C. dumetorum affinis) Quino checkerspot (Euphydryas editha quino) gray hairstreak (Strymon melinus pudica) chalcedon checkerspot (E. chalcedona chalcedona) Ladies/Admirals Leanira checkerspot (Thessalia leanira wrighti) California sister (Adelpha bredowii californica) Mylitta crescent (Phyciodes mylitta) Lorquin's admiral (Limenitis lorquini) Blues west coast lady (Vanessa annabella) western pygmy-blue (Brephidium exila) red admiral (V. atalanta rubria) western tailed blue (Everes amyntula) painted lady (V. cardui) southern blue (Glaucopsyche lygdamus australis) American (Virginia) lady (V. virginiensis) Edward's blue (Hemiargus ceraunus gyas) unidentified lady (Vanessa sp.) Acmon blue (Icaricia acmon acmon) **Swallowtails** marine blue (Leptotes marina) pale swallowtail (Papilio eurymedon) unidentified blue western tiger swallowtail (P. rutulus) Whites anise swallowtail (P. zelicaon) Sara orangetip (Anthocharis sara sara) Miscellaneous desert (Felder's) orangetip (A. cethura) monarch (Danaus plexippus) common California ringlet (Coenonympha californica) common buckeye (Junonia coenia grisea) cabbage white (Pieris rapae) mourning cloak (Nymphalis antiopa) checkered (common) white (Pontia protodice) Skippers spring white (P. sisymbrii) funereal duskywing (Erynnis funeralis) unidentified white mournful duskywing (Erynnis tristis)

fiery skipper (Hylephila phyleus)

white (common) checkered-skipper (Pyrgus albescens)

Metalmarks

Sulphurs

unidentified sulphur

Behr's metalmark (Apodemia mormo virgulti)

cloudless sulfur (Phoebus sennae marcellina)

Column Subtotal

Wright's metalmark (Calephelis wrighti)

orange sulphur (Colias eurytheme) sleepy orange (Eurema nicippe)

Column Subtotal

10

The Housey plans

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Surveyor: J. Kocks		Date: 2/26/15	
Site Name: Proctor Valley - Village 14 of Otay	Ranch	Site Visit No: 2 20.25 Acres per Hour:	
Acres Surveyed 127 Survey	Time:	20, 25 Acres per Hour:	- 1
Other Surveyors Present: G. H. Hman	M. Du	cu s	0.
S - TOTT WAY	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Time (24 hr) Tem	776	Conditions	2 4 7 5 4 7 5
Start 0915	perature ('F		ver
	00	1-4 10%	
End 1600	70.5	1-5 100	0
Start			
End			
Variation Communities Surveyed (i.e. d			
Vegetation Communities Surveyed (inc. domina	int spp.)		
Host Plants	Obs.	Nectar Plants	Oho
dwarf plantain (Plantago erecta)	1	popcorn flower (Cryptantha/Plagiobothrys spp.)	Obs
ourple owl's clover (Castilleja exserta) C. denci flore	11	goldfields (Lasthenia spp.)	1
napdragon (Antirrhinum coulterianum)		goldenstar (Muilla spp.)	
irds-beak (Cordylanthus rigidus)		fiddleneck (Amsinckia menziesii var. intermedia)	1
voolly plantain (Plantago patagonica)		onion (Allium spp.)	1.
Chinese houses (Collinsia spp.)		buckwheat (Eriogonum fasciculatum)	
	1	ground pink (Linanthus dianthiflorus)	1
		Bahiopsis lac; Pentavrea, Dic Cap	
Butterfly Species heckerspots	No.	Butterfly Species	No.
alifornia patch (Chlosyne californica)		Hairstreaks	-
abb's checkerspot (C. gabbii)	1	great purple hairstreak (Atlides halesus corcorani) brown elfin (Callophrys augustinus)	-
uino checkerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	11.
nalcedon checkerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica)	113
eanira checkerspot (Thessalia leanira wrighti)		Ladies/Admirals	
ylitta crescent (Phyciodes mylitta)		California sister (Adelpha bredowii californica)	
lues	_ <u> </u>	Lorquin's admiral (Limenitis lorquini)	
estern pygmy-blue (<i>Brephidium exila</i>) estern tailed blue (<i>Everes amyntula</i>)		west coast lady (Vanessa annabella)	1
outhern blue (Glaucopsyche lygdamus australis)	((()	red admiral (V. atalanta rubria) painted lady (V. cardui)	76.1
dward's blue (Hemiargus ceraunus gyas)	101	American (Virginia) lady (V. virginiensis)	THE
cmon blue (Icaricia acmon acmon)	11.	unidentified lady (Vanessa sp.)	
arine blue (Leptotes marina)		Swallowtails	
identified blue		pale swallowtail (Papilio eurymedon)	
hites ara orangetip (Anthocharis sara sara)	-	western tiger swallowtail (P. rutulus)	
sert (Felder's) orangetip (A. cethura)	1	anise swallowtail (P. zelicaon) Miscellaneous	
mmon California ringlet (Coenonympha californica)		monarch (Danaus plexippus)	
bbage white (Pieris rapae)	1	common buckeye (Junonia coenia grisea)	
eckered (common) white (Pontia protodice)	1:	mourning cloak (Nymphalis antiopa)	
ring white (P. sisymbrii)		Skippers	
dentified white		funereal duskywing (Erynnis funeralis)	7441
hr's metalmark (Apodemia mormo virgulti)	7116 m 11	mournful duskywing (Erynnis tristis)	
hr's metalmark (Apodemia mormo virgulti) jh: ight's metalmark (Calephelis wrighti)	WITH	fiery skipper (Hylephila phyleus)	
Iphurs		white (common) checkered-skipper (<i>Pyrgus albescens</i>) Other	
inge sulphur (Colias eurytheme)		- Caller	
epy orange (Eurema nicippe)			
udless sulfur (Phoebus sennae marcellina)			
dentified sulphur Column Subtota	13		, î
0-1	11111	Column Subtotal	10

Surveyor:		PELANIE	DICUS			Date:		6-2015	
Site Name:	Procto	or Valley - Village	e 14 of Otay Ranch				Site Visit No:	2	
Acres Survey	/ed	127	Survey Time:	0915-	1600 x3 =	Zo. 2 Acres	per Hour:	5=10	6.27
Other Survey	ors Pro	sent JIM	ROCKS LANDO	- 11 Fm	0-1		· -		

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

Vegetation Communities Surveyed (inc. dominant spp.)

CHANISE CHARARAL, CSS

Obs.	Nectar Plants	Obs.
X		V V
	goldfields (Lasthenia spp.)	×
		-
		~
	onion (Allium spp.)	V
		1
	ground pink (Linanthus dianthiflorus)	X
		popcorn flower (Cryptantha/Plagiobothrys spp.) goldfields (Lasthenia spp.) goldenstar (Muilla spp.) fiddleneck (Amsinckia menziesii var. intermedia) onion (Allium spp.) buckwheat (Eriogonum fasciculatum)

Butterfly Species	No.	Butterfly Species	No
Checkerspots		Hairstreaks	140
California patch (Chlosyne californica)		great purple hairstreak (Atlides halesus corcorani)	+
Gabb's checkerspot (C. gabbii)		brown elfin (Callophrys augustinus)	-
Quino checkerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	17
chalcedon checkerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica)	7
Leanira checkerspot (Thessalia leanira wrighti)		Ladies/Admirals	-
Mylitta crescent (Phycicdes mylitta)		California sister (Adelpha bredowii californica)	-
Blues		Lorquin's admiral (Limenitis lorquini)	-
western pygmy-blue (Brephidium exila)		west coast lady (Vanessa annabella)	,
western tailed blue (Everes amyntula)		red admiral (V. atalanta rubria)	/
southern blue (Glaucopsyche lygdamus australis)	20	painted lady (V. cardui)	10
Edward's blue (Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis)	10
Acmon blue (Icaricia acmon acmon)		unidentified lady (Vanessa sp.)	
marine blue (Leptotes marina)		Swallowfails	
unidentified blue		pale swallowtail (Papilio eurymedon)	
Whites		western tiger swallowtail (P. rutulus)	
Sara orangetip (Anthocharis sara sara)	1	anise swallowtail (P. zelicaon)	
desert (Felder's) orangetip (A. cethura)	-	Miscellaneous	
common California ringlet (Coenonympha californica)			
cabbage white (Pieris rapae)		monarch (Danaus plexippus)	
checkered (common) white (Pontia protodice)		common buckeye (Junonia coenia grisea)	
spring white (P. sisymbrii)		mourning cloak (Nymphalis antiopa) Skippers	
unidentified white			
Metalmarks		funereal duskywing (Erynnis funeralis)	5
Behr's metalmark (Apodemia mormo virgulti)	30	mournful duskywing (Erynnis tristis)	
Vright's metalmark (Calephelis wrighti)	30	fiery skipper (Hylephila phyleus)	
Sulphurs		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
range sulphur (Colias eurytheme)		Other	
leepy orange (Eurema nicippe)	-		
loudless sulfur (Phoebus sennae marcellina)			
nidentified sulphur			
Column Subtotal	-1		
Coluinn Subtotal	51	Column Subtotal	20

•	0		pot Butterfly Survey Form	
Surveyo	0		Date: 2/26/15	
Site Nan	ne: Proctor Valley - Village 14 of Otay	Ranch	Site Visit No: 2	
Acres S	urveyed(27 Surve	y Time: اسلا	20. 25 Acres per Hour: 510	6.2
	urveyors Present: MR LANK			
	-NAZ CARONS	- UICC	D. DIV RUCES	
	A			
		Field	Conditions	
	Time (24 hr) Ten	perature ('F	F) Wind Speed (mph) Cloud Co	ver
Start	0915	60	1-3 10%	
End	1600 7	0.5	1-5 10%	11/03/19
Start	1000	0.7	1019	
End				
Voqeenti	on Communities Summered (in a desire			
vegetati	on Communities Surveyed (inc. domin	ant spp.)		
CH	amise CHAPARRAL,	CSS		
	Host Plants	Obs.	Nectar Plants	Obs.
	ntain (Plantago erecta)	X	popcorn flower (Cryptantha/Plagiobothrys spp.)	X
	rl's clover (Castilleja exserta)	X	goldfields (Lasthenia spp.)	X
	on (Antirrhinum coulterianum)		goldenstar (Muilla spp.)	
	k (Cordylanthus rigidus)		fiddleneck (Amsinckia menziesii var. intermedia)	X
	antain (Plantago patagonica)	_	onion (Allium spp.)	X
Chinese	houses (Collinsia spp.)	-	buckwheat (Eriogonum fasciculatum)	茎
		_	ground pink (Linanthus dianthiflorus)	X
				L.
	Butterfly Species	No.	Butterfly Species	No.
Checkers			Hairstreaks	1.5.
	patch (Chlosyne californica)		great purple hairstreak (Atlides halesus corcorani)	
	eckerspot (C. gabbii)		brown elfin (Callophrys augustinus)	
	ckerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	
	checkerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica)	
THE RESIDENCE OF THE PARTY OF T	eckerspot (Thessalia leanira wrighti)		Ladies/Admirals	
Blues	scent (Phyciodes mylitta)		California sister (Adelpha bredowii californica)	
	rgmy-blue (Brephidium exila)	_	Lorquin's admiral (Limenitis lorquini)	
	iled blue (Everes amyntula)		west coast lady (Vanessa annabella)	
	lue (Glaucopsyche lygdamus australis)	5	red admiral (V. atalanta rubria) painted lady (V. cardui)	
	olue (Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis)	10
	e (Icaricia acmon acmon)		unidentified lady (Vanessa sp.)	
	e (Leptotes marina)		Swallowtails	
unidentified	d blue		pale swallowtail (Papilio eurymedon)	
Whites			western tiger swallowtail (P. rutulus)	
	etip (Anthocharis sara sara)	1	anise swallowtail (P. zelicaon)	120000000000000000000000000000000000000
	der's) orangetip (A. cethura)		Miscellaneous	
	alifornia ringlet (Coenonympha californica)	monarch (Danaus plexippus)	//
	hite (Pieris rapae)		common buckeye (Junonia coenia grisea)	
	(common) white (Pontia protodice)	1	mourning cloak (Nymphalis antiopa)	44.5-45
unidentified	e (P. sisymbrii)		Skippers	
Metalmark			funereal duskywing (Erynnis funeralis)	10
	almark (Apodemia mormo virgulti)	25	mournful duskywing (Erynnis tristis)	
	etalmark (Calephelis wrighti)	25	fiery skipper (Hylephila phyleus)	
Sulphurs	Camphons Wilgha)		white (common) checkered-skipper (<i>Pyrgus albescens</i>) Other	
	hur (Colies eurytheme)		Outer	
	ge (Eurema nicippe)			
	ulfur (Phoebus sennae marcellina)			
unidentified				
	Column Subtot	1 27	Column Subtotal	1 1

Total

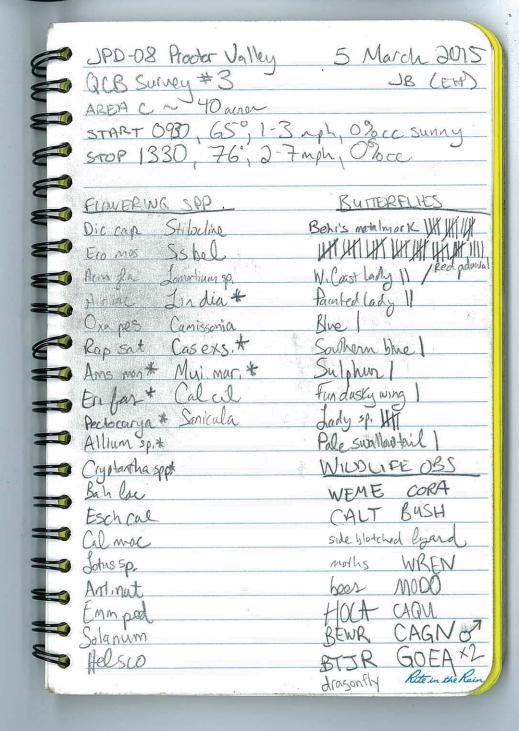
Surveyor: Jasmine Bakk	er	Date: 3/5/2015	
Site Name: Proctor Valley	y – Village 14 of Otay Ranch (JPD-08); Area C	Site Visit N	lo: <u>3</u>
Acres Surveyed 40	Survey Time: 4 hours	Acres per Hour:	10
Other Surveyors Present:	Erica Harris ~ Area A		

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

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



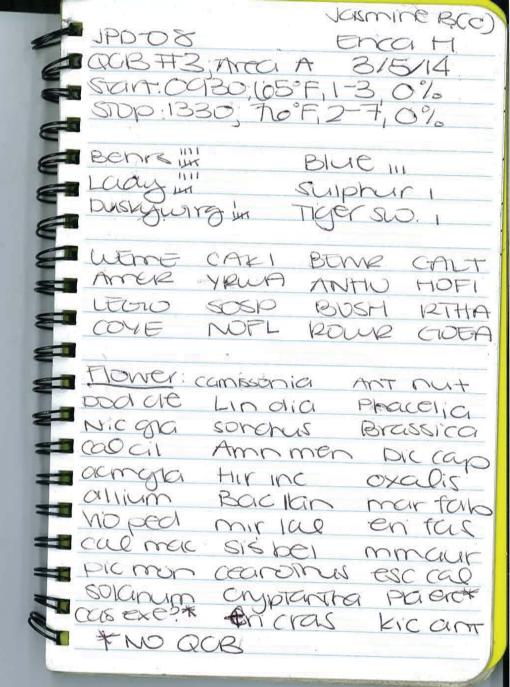
Surveyor:	Erica Harris		Date:	3/5/2015	
Site Name:	Proctor Valley	 Village 14 of Otay Ranch (JPD-0) 	8); Area A	Site Visit N	lo: _ 3
Acres Surv	eyed 45	Survey Time: 4 ho	ours Acres	per Hour:	11.25
Other Surve	eyors Present:	Jasmine Bakker ~ Area C		_	

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

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



2015 Quino Checkerspot Butterfly Survey Form Site Name: Proctor Valley - Village 14 of Otay Ranch Acres Surveyed Survey Time: Acres per Hour: Other Surveyors Present: 6. Huffman **Field Conditions** Time (24 hr) Temperature ('F) Wind Speed (mph) Cloud Cover Start 0850 End 0-4 0 Start End Vegetation Communities Surveyed (inc. dominant spp.) **Host Plants** Obs. **Nectar Plants** Obs. dwarf plantain (Plantago erecta) popcorn flower (Cryptantha/Plagiobothrys spp.) purple owl's clover (Castilleja exserta) goldfields (Lasthenia spp.) snapdragon (Antirrhinum coulterianum) goldenstar (Muilla spp.) birds-beak (Cordylanthus rigidus) fiddleneck (Amsinckia menziesii var. intermedia) woolly plantain (Plantago patagonica) onion (Allium spp.) Chinese houses (Collinsia spp.) buckwheat (Eriogonum fasciculatum) ground pink (Linanthus dianthiflorus) Lasthenia **Butterfly Species** No. **Butterfly Species** No.

Checkerspots	14	Hairstreaks	NO.
California patch (Chlosyne californica)		great purple hairstreak (Atlides halesus corcorani)	-
Gabb's checkerspot (C. gabbii)	1	brown elfin (Callophrys augustinus)	1
Quino checkerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	1
chalcedon checkerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica)	111
Leanira checkerspot (Thessalia leanira wrighti)		Ladies/Admirals	-
Mylitta crescent (Phyciodes mylitta)		California sister (Adelpha bredowii californica)	-
Blues	1	Lorquin's admiral (Limenitis lorquini)	-
western pygmy-blue (Brephidium exila)		west coast lady (Vanessa annabella)	-
western tailed blue (Everes amyntula)	1	red admiral (V. atalanta rubria)	1
southern blue (Glaucopsyche lygdamus australis)	MINI 1	painted lady (V. cardui)	I I I
Edward's blue (Hemiargus ceraunus gyas)	I'M IN		111-111
Acmon blue (Icaricia acmon acmon)	-	American (Virginia) lady (V. virginiensis)	
marine blue (Leptotes marina)	-	unidentified lady (Vanessa sp.) Swallowtails	
unidentified blue			
Whites		pale swallowtail (Papilio eurymedon)	1
Sara orangetip (Anthocharis sara sara)		western tiger swallowtail (P. rutulus)	
desert (Felder's) orangetip (A. cethura)		anise swallowtail (P. zelicaon) Miscellaneous	
common California ringlet (Coenonympha californica)	11		
cabbage white (Pieris rapae)	1	monarch (Danaus plexippus)	
checkered (common) white (Pontia protodice)		common buckeye (Junonia coenia grisea)	
spring white (P. sisymbrii)		mourning cloak (Nymphalis antiopa)	
unidentified white		Skippers	
Metalmarks		funereal duskywing (Erynnis funeralis)	羊羊
Dobe's malabased (4	VD) >(0	mournful duskywing (Erynnis tristis)	
Wright's metalmark (Calephelis wrighti)	州州	fiery skipper (Hylephila phyleus)	
Sulphurs		white (common) checkered-skipper (Pyrgus albescens)	
orange sulphur (Colias eurytheme)	18	Other	
sleepy orange (Eurema nicippe)	11		
cloudless sulfur (Phoebus sennae marcellina)	-		~
unidentified sulphur			
Column Subtotal	32	Column Subtotal	2
	16	Column Subtotal	26

Striped Racer Horned Lizard

				ot Butterfly Su			
Surveyo		uffman			Date:	3/05/15	
Site Nam	Proctor Valley – Village	14 of Otay Ran	ch		Site Vi	sit No: 3	
Acres St	urveyed 120	Survey Tin	ne: 7	hrs	Acres per Ho	our: 5-10	
Other Su	irveyors Present: 51 m	ROUG	5	MG1 ANIG	DICHS	3	
		1 1000	,	Mail	Dio		
				onditions		Cloud Cove	
	Time (24 hr)	Temper	ature ('F)		Speed (mph)		н
Start	08,30	V 2)	2 -	9	ø	
End	1530	74	9	0-	7	Ø	
Start							
End							
Vacatati	ion Communities Surveyed (line deminent	\			- ilas	

CH	AMISE CHAPALRAL	css, css	>				
		~					
	Host Plants		Obs.		Nectar Plants		Obs.
dwarf pla	antain (Plantago erecta)		×.	popcorn flower (Cryptantha/Plagiob	othrys spp.)	4
	wl's clover (Castilleja exserta)		¥	goldfields (Lasth			X
	gon (Antirrhinum coulterianum			goldenstar (Muil	la spp.)		V
birds-be	ak (Cordylanthus rigidus)				inckia menziesii var	: intermedia)	X
	lantain (Plantago patagonica)			onion (Allium sp	p.) gonum fasciculatun	2)	4
Chinese	houses (Collinsia spp.)			ground pink (Lin	anthus dianthiflorus	3)	×
				ground plink (E.	and a diameter	,	
				-	D. H. D. Sassies	10	No.
	Butterfly Species		No.	Heimtrooko	Butterfly Species		
Checker				dreat purple hairs	streak (Atlides hales	sus corcorani)	
California	a patch (Chlosyne californica)		1	brown elfin (Callo	ophrys augustinus)		
Gabb's d	checkerspot (C. gabbii) neckerspot (Euphydryas editha	quino)	•	bramble (perplex	ing) hairstreak (C. o	lumetorum affinis)	2.
chalcedo	on checkerspot (E. chalcedona	chalcedona)			Strymon melinus pu	dica)	
Leanira	checkerspot (Thessalia leanira	wrighti)		Ladies/Admirals	s Adelpha bredowii ca	alifornica)	
Mylitta c	rescent (Phyciodes mylitta)			California sister ((Limenitis lorquini)	amorrica	
Blues	- 1.1			west coast lady (Vanessa annabella)	
western	pygmy-blue (Brephidium exila)			red admiral (V. a	talanta rubria)		5
western	tailed blue (Everes amyntula) blue (Glaucopsyche lygdamu	s australis)	30	painted lady (V.	cardui)		25
southern	blue (Hemiargus ceraunus g	yas)			ia) lady (V. virginier	isis)	
Acmon b	lue (Icaricia acmon acmon)			unidentified lady	(Vanessa sp.)		
marine b	lue (Leptotes marina)			Swallowtails	Papilio eurymedon		-1
unidentifi			-	western tiger swa	allowtail (P. rutulus)		
Whites				anise swallowtail	(P. zelicaon)		
Sara ora	ngetip (Anthocharis sara sara)			Miscellaneous			
desert (F	elder's) orangetip (A. cethura) California ringlet (Coenonymp	ha californica)	2	monarch (Danau	s plexippus)		
	bito (Diaris ranae)			common buckey	e (Junonia coenia g	risea)	
cabbage	white (Pieris rapae) d (common) white (Pontia pro	todice)			Nymphalis antiopa)		
checkere	ite (P. sisymbrii)			Skippers funereal duskywi	ing (Erynnis funeral	is)	25
unidentific	ed white			mournful duskyw	ring (Erynnis tristis)		Water of Decision
	1		7100	fiery skipper (Hy	lephila phyleus)		
Daha'a me	stalmark (Apodemia mornio vi	rguiti)	7100	white (common)	checkered-skipper	(Pyrgus albescens)	
Wright's r	netalmark (Calephells Wilght)			Other			
O. Inhurs							-
arange SII	Inhur (Colias eurytriettie)						
	TOTAL SELIPEMA NICIODO	ellina)					
cloudless	sulfur (Phoebus sennae marc					Column Subtotal	59

unidentified sulphur

Column Subtotal

Column Subtotal

Total 19

Surveyor: MELANIE DICUS		Date: O	3-05-2015
	age 14 of Otay Ranch	Site Visit N	lo: 3
Acres Surveyed /20	Survey Time:	Acres per Hour:	6-10
Other Surveyors Present: (a	ARRET AUFFMAN	VIII.	
	IM ROOKS		

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

Vegetation Communities Surveyed (inc. dominant spp.)

CHAMISE CHAPARRAL, LARSSLAND, CSS

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	41-2-3-3-
California patch (Chlosyne californica)		great purple hairstreak (Atlides halesus corcorani)	
Gabb's checkerspot (C. gabbii)	/	brown elfin (Callophrys augustinus)	
Quino checkerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	4
chalcedon checkerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica)	
Leanira checkerspot (Thessalia leanira wrighti)		Ladies/Admirals	
Mylitta crescent (Phyciodes mylitta)		California sister (Adelpha bredowii californica)	
Blues		Lorquin's admiral (Limenitis lorquini)	
western pygmy-blue (Brephidium exila)		west coast lady (Vanessa annabella)	
western tailed blue (Everes amyntula)		red admiral (V. atalanta rubria)	1
southern blue (Glaucopsyche lygdamus australis)	10	painted lady (V. cardui)	8
Edward's blue (Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis)	
Acmon blue (Icaricia acmon acmon)		unidentified lady (Vanessa sp.)	
marine blue (Leptotes marina)		Swallowtails	
unidentified blue		pale swallowtail (Papilio eurymedon)	A
Whites		western tiger swallowtail (P. rutulus)	1
Sara orangetip (Anthocharis sara sara)		anise swallowtail (P. zelicaon)	
desert (Felder's) orangetip (A. cethura)	une second	Miscellaneous	
common California ringlet (Coenonympha californica)	Z	monarch (Danaus plexippus)	
cabbage white (Pieris rapae)		common buckeye (Junonia coenia grisea)	
checkered (common) white (Pontia protodice)		mourning cloak (Nymphalis antiopa)	
spring white (P. sisymbrii)	-14	Skippers	
unidentified white		funereal duskywing (Erynnis funeralis)	10
Metalmarks		mournful duskywing (Erynnis tristis)	
Behr's metalmark (Apodemia mormo virgulti)	105	fiery skipper (Hylephila phyleus)	7
Wright's metalmark (Calephelis wrighti)		white (common) checkered-skipper (Pyrgus albescens)	
Sulphurs		Other	
orange sulphur (Colias eurytherne)			-
sleepy orange (Eurema nicippe)	A		
cloudless sulfur (Phoebus sennae marcellina)			T
unidentified sulphur			1
Column Subtotal	118	Column Subtotal	24
20.000	1.0	Total	-

Field Conditions Time (24 hr) Temperature ('F) Wind Speed (mph) Cloud Cover 8:30 Start 5:30 End Start End Vegetation Communities Surveyed (inc. dominant spp.) Chamise chaparrol, non-native grassland (Acm.gla. Obs. **Host Plants** Obs. **Nectar Plants** dwarf plantain (Plantago erecta) popcorn flower (Cryptantha/Plagiobothrys spp.) purple owl's clover (Castilleja exserta) dersiflora goldfields (Lasthenia spp.) snapdragon (Antirrhinum coulterianum) goldenstar (Muilla spp.) birds-beak (Cordylanthus rigidus) fiddleneck (Amsinckia menziesii var. intermedia) woolly plantain (Plantago patagonica) onion (Allium spp.) Chinese houses (Collinsia spp.) buckwheat (Eriogonum fasciculatum) ground pink (Linanthus dianthiflorus) **Butterfly Species** No. **Butterfly Species** No. Checkerspots Hairstreaks California patch (Chlosyne californica) great purple hairstreak (Atlides halesus corcorani) Gabb's checkerspot (C. gabbii) brown elfin (Callophrys augustinus) Quino checkerspot (Euphydryas editha quino) bramble (perplexing) hairstreak (C. dumetorum affinis) gray hairstreak (Strymon melinus pudica) chalcedon checkerspot (E. chalcedona chalcedona) Leanira checkerspot (Thessalia leanira wrighti) Ladies/Admirals Mylitta crescent (Phyciodes mylitta) California sister (Adelpha bredowii californica) Blues Lorquin's admiral (Limenitis lorquini) western pygmy-blue (Brephidium exila) west coast lady (Vanessa annabella) western tailed blue (Everes amyntula) red admiral (V. atalanta rubria) southern blue (Glaucopsyche lygdamus australis) 5 painted lady (V. cardui) 4 American (Virginia) lady (V. virginiensis) Edward's blue (Hemiargus ceraunus gyas) unidentified lady (Vanessa sp.) Acmon blue (Icaricia acmon acmon) 10 marine blue (Leptotes marina) **Swallowtails** unidentified blue 0 pale swallowtail (Papilio eurymedon) Whites western tiger swallowtail (P. rutulus) Sara orangetip (Anthocharis sara sara) anise swallowtail (P. zelicaon) desert (Felder's) orangetip (A. cethura) Miscellaneous common California ringlet (Coenonympha californica) monarch (Danaus plexippus) cabbage white (Pieris rapae) common buckeye (Junonia coenia grisea) checkered (common) white (Pontia protodice) mourning cloak (Nymphalis antiopa) spring white (P. sisymbrii) Skippers unidentified white funereal duskywing (Erynnis funeralis) 16 Metalmarks mournful duskywing (Erynnis tristis) Behr's metalmark (Apodemia mormo virgulti) 44 fiery skipper (Hylephila phyleus) white (common) checkered-skipper (Pyrgus albescens) Wright's metalmark (Calephelis wrighti) Other Sulphurs 2 orange sulphur (Colias eurytheme) sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina) unidentified sulphur Column Subtotal 58 Column Subtotal Total

2015 Quino Checkerspot Butterfly Survey Form

Travis cooper, Victor Novick

Site Visit No: 3

Acres per Hour: (0 9

Surveyor:

Acres Surveyed

Other Surveyors Present:

Site Name: Proctor Valley - Village 14 of Otay Ranch

145 Survey Time:

Field C rature (°F)	F, G, H Site Visit No:	Cover
Field Cerature (°F)	Wind Speed (mph) Cloud	Cover
Field Cerature (°F)	Wind Speed (mph) Cloud	Cover
spp.)	Wind Speed (mph) Cloud	7.
spp.)	Wind Speed (mph) Cloud	7.
spp.)	Wind Speed (mph) Cloud	7.
spp.)	0-7 0	7.
spp.)		71
spp.)	0-3	1
		1
	and the same of th	
s, Acmi	(w)	
Obs.	Nectar Plants	Ob
X	popcorn flower (Cryptantha/Plagiobothrys spp.)	X
X	goldfields (Lasthenia spp.)	X
		X
		X
		X
		X
	ground print (Emanutus diantimorus)	
No.	Butterfly Species	No
		in in)
		nis)
	red admiral (V. atalanta rubria)	
6	painted lady (V. cardui)	8
	American (Virginia) lady (V. virginiensis)	
	unidentified lady (Vanessa sp.)	IV.
4		
1		
1		
1		
1		
	Skippers	
	funereal duskywing (Erynnis funeralis)	10
	mournful duskywing (Erynnis tristis)	
144	fiery skipper (Hylephila phyleus)	4555
		ens)
	Other	
1		
	T	
1		
	No.	popcorn flower (Cryptantha/Plagiobothrys spp.) goldfields (Lasthenia spp.) goldenstar (Muilla spp.) fiddleneck (Amsinckia menziesii var. intermedia) onion (Allium spp.) buckwheat (Eriogonum fasciculatum) ground pink (Linanthus dianthiflorus) No. Butterfly Species Hairstreaks great purple hairstreak (Atlides halesus corcorani) brown elfin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dumetorum affi gray hairstreak (Strymon melinus pudica) Ladies/Admirals California sister (Adelpha bredowii californica) Lorquin's admiral (Limenitis lorquini) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiensis) unidentified lady (Vanessa sp.) Swallowtails pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Miscellaneous monarch (Danaus plexippus) common buckeye (Junonia coenia grisea) mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis) moumful duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus) white (common) checkered-skipper (Pyrgus albeso

SALMUN CLATOR CALMAR CUTCA EROSPO. GULCHE PREDEDS OXAPES AMTNUT SILCAD CALCIL SISBEL DICCAD

CRYSPO. SOLPAR MIRLAE ALMOLA

2015 Quino Checkerspot Butterfly Survey Form 1)31.1 Surveyor: Site Visit No: 3 Site Name: Proctor Valley - Village 14 of Otay Ranch Acres per Hour: Survey Time: Acres Surveyed Hill, Travis coope: Other Surveyors Present: Field Conditions Cloud Cover Wind Speed (mph) Temperature (°F) Time (24 hr) Start End Start End Vegetation Communities Surveyed (inc. dominant spp.) GT Chamse chap Nectar Plants Obs. popcorn flower (Cryptantha/Plagiobothrys spp.) **Host Plants** dwarf plantain (Plantago erecta) goldfields (Lasthenia spp.) purple owl's clover (Castilleja exserta) goldenstar (Muilla spp.) snapdragon (Antirrhinum coulterianum) fiddleneck (Amsinckia menziesii var. intermedia) birds-beak (Cordylanthus rigidus) onion (Allium spp.) woolly plantain (Plantago patagonica) buckwheat (Eriogonum fasciculatum) Chinese houses (Collinsia spp.) ground pink (Linanthus dianthiflorus) No. **Butterfly Species** No. **Butterfly Species** Hairstreaks great purple hairstreak (Atlides halesus corcorani) Checkerspots California patch (Chlosyne californica) brown elfin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dumetorum affinis) Gabb's checkerspot (C. gabbii) Quino checkerspot (Euphydryas editha quino) gray hairstreak (Strymon melinus pudica) chalcedon checkerspot (E. chalcedona chalcedona) Ladies/Admirals Leanira checkerspot (Thessalia leanira wrighti) California sister (Adelpha bredowii californica) Mylitta crescent (Phyciodes mylitta) Lorquin's admiral (Limenitis lorquini) west coast lady (Vanessa annabella) Blues western pygmy-blue (Brephidium exila) red admiral (V. atalanta rubria) western tailed blue (Everes amyntula) painted lady (V. cardui) southern blue (Glaucopsyche lygdamus australis) American (Virginia) lady (V. virginiensis) Edward's blue (Hemiargus ceraunus gyas) unidentified lady (Vanessa sp.) Acmon blue (Icaricia acmon acmon) Swallowtails marine blue (Leptotes marina) pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) unidentified blue anise swallowtail (P. zelicaon) Whites Sara orangetip (Anthocharis sara sara) Miscellaneous desert (Felder's) orangetip (A. cethura) monarch (Danaus plexippus) common California ringlet (Coenonympha californica) common buckeye (Junonia coenia grisea) cabbage white (Pieris rapae) mourning cloak (Nymphalis antiopa) checkered (common) white (Pontia protodice) Skippers UNI spring white (P. sisymbrii) funereal duskywing (Erynnis funeralis) unidentified white mournful duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus) Metalmarks Behr's metalmark (Apodemia mormo virgulti) white (common) checkered-skipper (Pyrgus albescens) Wright's metalmark (Calephelis wrighti) Other Sulphurs orange sulphur (Colias eurytheme) sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina) Column Subtotal unidentified sulphur Column Subtotal Total

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Be hrz

CAL. CIL. Phacella cicutana Mimulus.
CAL. CIL.
Raphanus Phacella cicu Lupinus spp. Broght Endictyon. Miraballs cal. DIC. GP. 145. CAP. 220. 448. Erodium Spp.

Surveyor: HICA HIII		200	Date: 3/0/15			
Site Name: Proctor Valley - Village 14 of Otay Rand		y Ranch	J, K, M Site Visit No	3		
Acres Su	rveyed III Surv	rey Time:	Acres per Hour:	0.2		
	veyors Present: Travis					
	1,0000	1090				
	<u> </u>					
			onditions			
	Time (24 hr) To	emperature (°F)	Wind Speed (mph)	Cloud Cover		
Start	8:15	63	0-3	0/0		
End	19:15	82	1-5	0%		
Start						
End						
Vegetatio	n Communities Surveyed (inc. domi	inant spp.)	hamlse chaparrol, di	strubed		
0.55	ART CAL, ERI SAS	, ACM - C	LA), non-native grass	ilam		
		/)			
	Host Plants	Obs.	Nectar Plants	Ob		
	tain (Plantago erecta)	V	popcorn flower (Cryptantha/Plagiobothry	s spp.)		
purple owl	's clover (Castilleja excerta) PUSIS	iora V	goldfields (Lasthenia spp.)	~		
	on (Antirrhinum coulterianum)		goldenstar (Muilla spp.)	~		
	(Cordylanthus rigidus)		fiddleneck (Amsinckia menziesii var. inter	rmedia) ~		
	ntain (Plantago patagonica)		onion (Allium spp.)	~		
Chinese h	ouses (Collinsia spp.)		buckwheat (Eriogonum fasciculatum)	V		
_			ground pink (Linanthus dianthiflorus)	~		
	Butterfly Species	No.	Butterfly Species	No		
Checkers			Hairstreaks			
	patch (Chlosyne californica)		great purple hairstreak (Atlides halesus co	orcorani)		
	eckerspot (C. gabbii)	60	brown elfin (Callophrys augustinus)			
	ckerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumet	torum affinis) 2		
	checkerspot (E. chalcedona chalcedon	na)	gray hairstreak (Strymon melinus pudica)			
	eckerspot (Thessalia leanira wrighti)		Ladies/Admirals			
-	scent (Phyciodes mylitta)		California sister (Adelpha bredowii californ	ilca)		
Blues	amu blue (Breakidium avila)		Lorquin's admiral (Limenitis Iorquini)			
	gmy-blue (Brephidium exila)		west coast lady (Vanessa annabella) red admiral (V. atalanta rubria)			
	led blue (Everes amyntula) lue (Glaucopsyche lygdamus australis	\	painted lady (V. cardui)	Y-		
	olue (Hemiargus ceraunus gyas)	/	American (Virginia) lady (V. virginiensis)	1		
	e (Icaricia acmon acmon)		unidentified lady (Vanessa sp.)	11		
	e (Leptotes marina)		Swallowtails	11		
unidentified		12	pale swallowtail (Papilio eurymedon)			
Whites			western tiger swallowtail (P. rutulus)			
The second second	etip (Anthocharis sara sara)	2	anise swallowtail (P. zelicaon)	1		
	der's) orangetip (A. cethura)		Miscellaneous			
	alifornia ringlet (Coenonympha californ	nica) 7	monarch (Danaus plexippus)			
cabbage w	hite (Pieris rapae)		common buckeye (Junonia coenia grisea)			
checkered	(common) white (Pontia protodice)		mourning cloak (Nymphalis antiopa)			
spring whit	e (P. sisymbrii)		Skippers			
unidentified	d white		funereal duskywing (Erynnis funeralis)	12		
Metalmark			mournful duskywing (Erynnis tristis)			
	almark (Apodemia mormo virgulti)	48	fiery skipper (Hylephila phyleus)			
	etalmark (Calephelis wrighti)		white (common) checkered-skipper (Pyrgu	us albescens)		
Sulphurs			Other			
-	ohur (Colias eurytheme)		Strated Queen	2		
	nge (Eurema nicippe)					
cloudless s	ulfur (Phoebus sennae marcellina)					
	l acclada ca					
unidentified	I sulphur Column Sul	ototal Ho	Cale	umn Subtotal 22		

2015 Quino Checkerspot Butterfly Survey Form

Surveyor:	TRAVIS COOPER		Date: 3 /6/15	
Site Name	: Proctor Valley - Village 14 of Otay Ra	nch	Date: 3/6/15 K, J, M Site Visit No: 3 6hrs Acres per Hour: 6.	
Acres Sur	veved 1/1 Survey T	ime:	6hrs Acres per Hour: 6.	
Othor Sur	vovors Present: ALICIA HILL	1/1/	The Land	
Other Sur	veyors resent.	, 010	102 /0501/R	
		Field C	onditions	
E E	Time (24 hr) Temp	erature (°F) Wind Speed (mph) Cloud	Cover
Start	0818	30	0-3	3%
End	1416 8	10		1
Start	****	44.	1 3	, 7
End				
Vonetetier	Communities Communed (inc. dominan	t onn l		
	n Communities Surveyed (inc. dominan	-		
CI	naming Chap. , C55-015turn	d (Bri	Mariam, Acmoram	
	ING (Ender Bayers)			
	Host Plants	Obs.	Nectar Plants	Obs
	tain (Plantago erecta)		popcorn flower (Cryptantha/Plagiobothrys spp.)	X
	s clover (Castilleja exserta)		goldfields (<i>Lasthenia</i> spp.) goldenstar (<i>Muilla</i> spp.)	- X
	n (Antirrhinum coulterianum) (Cordylanthus rigidus)		fiddleneck (Amsinckia menziesii var. intermedia)	X
	ntain (<i>Plantago patagonica</i>)		onion (Allium spp.)	X
	ouses (Collinsia spp.)		buckwheat (Eriogonum fasciculatum)	7
15.25	lleja densiflora	X	ground pink (<i>Linanthus dianthiflorus</i>)	Ŷ
JUN 1	30 31 11012			13-
01 1	Butterfly Species	No.	Butterfly Species	No.
Checkersp			Hairstreaks	
	atch (Chlosyne californica) ckerspot (C. gabbii)	,	great purple hairstreak (Atlides halesus corcorani) brown elfin (Callophrys augustinus)	
	kerspot (<i>E. gabbii</i>)	6	bramble (perplexing) hairstreak (C. dumetorum affinis)	
	checkerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica)	,,,,,
	eckerspot (Thessalia leanira wrighti)		Ladies/Admirals	
	cent (Phyciodes mylitta)		California sister (Adelpha bredowii californica)	
Blues			Lorquin's admiral (Limenitis lorquini)	
western pyg	gmy-blue (<i>Brephidium exila</i>)		west coast lady (Vanessa annabella)	
western tail	ed blue (<i>Everes amyntula</i>)		red admiral (V. atalanta rubria)	
	ue (Glaucopsyche lygdamus australis)	7	painted lady (V. cardui)	6
	lue (Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis)	
	e (Icaricia acmon acmon)	4.8	unidentified lady (Vanessa sp.)	14
unidentified	e (Leptotes marina)	10	Swallowtails	2000
Whites	Dide		pale swallowtail (<i>Papilio eurymedon</i>) western tiger swallowtail (<i>P. rutulus</i>)	
	etip (Anthocharis sara sara)		anise swallowtail (P. zelicaon)	
	der's) orangetip (A. cethura)		Miscellaneous	
	alifornia ringlet (Coenonympha californica)	11	monarch (Danaus plexippus)	
	hite (Pieris rapae)	1	common buckeye (Junonia coenia grisea)	
	(common) white (Pontia protodice)		mourning cloak (Nymphalis antiopa)	
spring white	e (P. sisymbrii)		Skippers	4
unidentified			funereal duskywing (Erynnis funeralis)	9
Metalmark			mournful duskywing (Erynnis tristis)	
	almark (Apodemia mormo virgulti)	62	fiery skipper (Hylephila phyleus)	
	etalmark (Calephelis wrighti)		white (common) checkered-skipper (<i>Pyrgus albesce</i>	ens)
Sulphurs	hus (Caling aunth and)		Other	q
	hur (Colias eurytheme)		Queen	9 *
	ge (Eurema nicippe) ulfur (Phoebus sennae marcellina)			
unidentified		1		
	Column Subtota	1 98	Column Subt	otal 37

Total

130

SOLPER CANSPP. DICCAP
AUTTEX GROSP. HERLING
MIRLA LONSUB RABBAT
AMOLIA OXACAT SISTEM
SILLAL PERSONERS

ARRAIL, J. M 2015 Quino Checkerspot Butterfly Survey Form Victor NOU.16 Site Visit No: Surveyor: Site Name: Proctor Valley - Village 14 of Otay Ranch Acres per Hour: Survey Time: Acres Surveyed Other Surveyors Present: Alica Hill, Travis cooper **Field Conditions** Cloud Cover Wind Speed (mph) Temperature (°F) Time (24 hr) 0815 Start End Start End Vegetation Communities Surveyed (inc. dominant spp.) J-7 chumbe chap Artimus, ERIE Obs. **Nectar Plants** Obs popcorn flower (Cryptantha/Plagiobothrys spp.) Host Plants dwarf plantain (Plantago erecta) goldfields (Lasthenia spp.) purple owl's clover (Castilleja exserta) goldenstar (Muilla spp.) snapdragon (Antirrhinum coulterianum) fiddleneck (Amsinckia menziesii var. intermedia) birds-beak (Cordylanthus rigidus) onion (Allium spp.) woolly plantain (Plantago patagonica) buckwheat (Eriogonum fasciculatum) Chinese houses (Collinsia spp.) ground pink (Linanthus dianthiflorus) No. **Bufterfly Species** No. **Butterfly Species** Hairstreaks great purple hairstreak (Atlides halesus corcorani) Checkerspots California patch (Chlosyne californica) brown elfin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dumetorum affinis) Gabb's checkerspot (C. gabbii) Quino checkerspot (Euphydryas editha quino) gray hairstreak (Strymon melinus pudica) chalcedon checkerspot (E. chalcedona chalcedona) Ladies/Admirals Leanira checkerspot (Thessalia leanira wrighti) California sister (Adelpha bredowii californica) Mylitta crescent (Phyciodes mylitta) Lorquin's admiral (Limenitis lorquini) west coast lady (Vanessa annabella) Blues western pygmy-blue (Brephidium exila) red admiral (V. atalanta rubria) western tailed blue (Everes amyntula) painted lady (V. cardui) southern blue (Glaucopsyche lygdamus australis) American (Virginia) lady (V. virginiensis) Edward's blue (Hemiargus ceraunus gyas) JH LH LA unidentified lady (Vanessa sp.) Acmon blue (Icaricia acmon acmon) Swallowtails pale swallowtail (Papilio eurymedon) marine blue (Leptotes marina) 411 western tiger swallowtail (P. rutulus) unidentified blue anise swallowtail (P. zelicaon) Whites Sara orangetip (Anthocharis sara sara) Miscellaneous desert (Felder's) orangetip (A. cethura) monarch (Danaus plexippus) common California ringlet (Coenonympha californica) common buckeye (Junonia coenia grisea) cabbage white (Pieris rapae) mourning cloak (Nymphalis antiopa) checkered (common) white (Pontia protodice) Skippers funereal duskywing (Erynnis funeralis) spring white (P. sisymbrii) mournful duskywing (Erynnis tristis) unidentified white fiery skipper (Hylephila phyleus) Behr's metalmark (Apodemia mormo virgulti) white (common) checkered-skipper (Pyrgus albescens) WHIT HAT UNIT Wright's metalmark (Calephelis wrighti) Other · A RAYIEY Sulphurs orange sulphur (Colias eurytheme) sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina) Column Subtotal unidentified sulphur Column Subtotal Total

Behrs Will

dwarf plantain (Plantago erecta) popcorn flower (Cryptantha/Plagiobothrys spp.) purple owl's clover (Castilleja exserta) snapdragon (Antirnhinum coulterianum) pidid-sheak (Cordylanthus rigidus) swoolly plantain (Plantago patagonica) Chinese houses (Collinsia spp.) Chinese houses (Collinsia spp.) Chinese houses (Collinsia spp.) Butterfly Species No.				,	
Chem		veved 93 Survey T			
Field Conditions Time (24 hr) Temperature (F) Wind Speed (mph) Cloud Cover Temperature (F) Wind Speed (mph) Cloud Cover End 1345					
Time (24 hr) Temperature (F) Wind Speed (mph) Cloud Cover	Other Sur				
Start End 1345 Start End 1345 Wegetation Communities Surveyed (inc. dominant spp.) Wegetation Survey Survey Surveyed (inc. dominant spp.) Wegetation Communities (inc. dominant spp.) Wegetation Communities Su		NNG,	Makane lo	7 th Xland	
Start End 1346 Megetation Communities Surveyed (inc. dominant spp.) Wegetation Communities Surveyed (inc. dominant spp.) Host Plants Obs. Nectar			Field C	onditions	
Start End 1346 Wegetation Communities Surveyed (inc. dominant spp.) Host Plants Obs. Nectar Plants Obs. Nectar Plants Obs. Nectar Plants Obs. Popocorn flower (Cryptanthar/Plagiobothrys spp.) Soliderials (Lasthenia spp.) Soliderials (Lasthenia spp.) Soliderials (Lasthenia spp.) Soliderials (Lasthenia spp.) Soliderials (Mulia spp.) Soliderials (Time (24 hr) Tempe			ver
No. Plants Description	Start		(10		
No. Plants Description		(317)	0 P		
Negetation Communities Surveyed (inc. dominant spp.) Charter Communities Surveyed (inc. dominant spp.) Supprise own's clover (Castille) acreating spot (Castille) acreating spp.) Supprise own's clover (Castille) acreating spp.) Supprise Castille Supprise S		1545	ý 🖻	1 - 3 m plan	
Host Plants	Start				
Host Plants Obs. Nectar Plants Obs. Popuple owl's clover (Castilleja exserta) Snapdragon (Antirhinum coulterianum) Sinday description of the properties of t	End				
Host Plants Obs. Nectar Plants Obs. Popuple owl's clover (Castilleja exserta) Snapdragon (Antirhinum coulterianum) Sinday description of the properties of t	27004/2-002				
Host Plants Obs. Nectar Plants Odwarf plantain (Plantago erecta) purple owl's clover (Castilleja exserta) snapdragon (Antirhinum coulterianum) purple owl's clover (Astilleja exserta) snapdragon (Antirhinum coulterianum) goldenstar (Muilla spp.) Xindensek (Cordylanthus rigidus) fiddleneck (Annanckia menziesii var. intermedia) Xindensek (Cordylanthus rigidus) Xindensek (Collinis spp.) Xindense houses (Collinis as spp.) Xindense houses (Collinis as spp.) Xindensek (Cordylanthus dianthiflorus) Xindensek (Cordinathus dianthiflorus) Xindensek (Cordinathiflo	Vegetatio	n Communities Surveyed (inc. dominant	spp.)		
Host Plants Obs. Nectar Plants Odwarf plantain (Plantago erecta) purple owl's clover (Castilleja exserta) snapdragon (Antirhinum coulterianum) purple owl's clover (Astilleja exserta) snapdragon (Antirhinum coulterianum) goldenstar (Muilla spp.) Xindensek (Cordylanthus rigidus) fiddleneck (Annanckia menziesii var. intermedia) Xindensek (Cordylanthus rigidus) Xindensek (Collinis spp.) Xindense houses (Collinis as spp.) Xindense houses (Collinis as spp.) Xindensek (Cordylanthus dianthiflorus) Xindensek (Cordinathus dianthiflorus) Xindensek (Cordinathiflo		Chine Chie NUG	NE DO	. 55	
dwarf plantain (<i>Plantago erecta</i>) purple owl's clover (<i>Castilleja exserta</i>) spurple owl's clover (<i>Castilleja exserta</i>) spoldfields (<i>Lasthenia</i> spp.) birds-beak (<i>Cordylanthus rigidus</i>) birds-beak (<i>Cordylanthus rigidus</i>) fiddleneck (<i>Amsinckia menziesii</i> var. <i>intermedia</i>) yoloplantain (<i>Plantago patagonica</i>) chinese houses (<i>Collinsia</i> spp.) buckwheat (<i>Eriogonum fasciculatum</i>) yorund pink (<i>Linanthus dianthiflorus</i>) Butterfly Species No. B			1		
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Chinese houses (Collinsia spp.) Butterfly Species No. Butterfly Species No	birds-beak	(Cordylanthus rigidus)		fiddleneck (Amsinckia menziesii var. intermedia)	X
Butterfly Species No.					X
Butterfly Species No. Hairstreaks Great purple hairstreak (Atlides halesus corcorant) brown elfin (Callophrys augustinus) Duino checkerspot (E. gabbii) Duino checkerspot (E. gabbii) Duino checkerspot (E. chaicedona chaleedona) Leanira checkerspot (Thesaila leanira wrighti) Mylitta crescent (Phyciodes mylitta) Sulues California sister (Adelpha bredowii californica) Lorquin's admiral (Limenitis lorquini) vestern tailed blue (Everes amyntula) vestern tailed blue (Everes amyntula) vestern blue (Glaucopsyche lygdamus australis) California control (V. atalanta rubria) painted lady (V. atalanta rubria) painted lady (V. atalanta rubria) painted lady (V. virginia) lady (V. virginiensis) unidentified blue ID pale swallowtail (Papilio eurymedon) Whites Sara orangetip (Anthocharis sara sara) lesert (Felder's) orangetip (A. cethura) ommon California ringlet (Coenonympha californica) Salbage white (Pieris rapae) checkered (common) white (Pontia protodice) spring white (P. sisymbrii) unidentified white Metalmarks and common California mormo virgulti) Night's metalmark (Apodemia mormo virgulti) Night's metalmark (Calephelis wright) white (common) checkered-skipper (Pyrgus albescens) Other Nother					X
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nidentified sulphur					-
		uitur (Pnoebus sennae marcellina)			
CAHIMA SIMMAMIL COLLEGE			- 1		

SOLPAR SANDA BAHLAL
MOTEX MOTED PENAUR
ALIA SILCA CALMAD
ACACLA SILCAP COTCAT
SISSEL PER ARB

Chaparral fed vine - unthous

Total

	1.1.		ckerspo	t Butterfly Survey Form Date:	3/9/1 = ARE	:A L)
					7///	
	Site Name: Proctor Valley – Village 14	of Otay Ranch	1		Visit No:	الاتر
	Acres Surveyed 93	Survey Tim	e:	Acres per H	lour:	7
	Other Surveyors Present:	ulis 1	OODEr			
335	Other Surveyors reseme		- Octor			
2 2 3	-		Field Co	nditions		
1 25 2	Time (24 hr)	Tempera		Wind Speed (mph)	Cloud Cove	r
1>2	1 7 1	/	te i	2 -1	A	
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3 22	End 3 45	86		1-5	0	
5 1252	Start					
F 33 3-	End					
- 3 # 3 3	Eliu					
C & & & C	Vegetation Communities Surveyed (inc	c. dominant s	app.)			
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	L/T NDG'	JC1, L	(00)	Chamise Chap		
7 7 -	1	(
2 2 3						-
101921 1192	Host Plants		Obs.	Nectar Plants		Obs.
3 10:7	dwarf plantain (Plantago erecta)		X	popcorn flower (Cryptantha/Plagic	obothrys spp.)	10
٧,	purple owl's clover (Castilleja exserta)			goldfields (Lasthenia spp.)		V
0	snapdragon (Antirrhinum coulterianum)			goldenstar (Muilla spp.)		X
9	birds-beak (Cordylanthus rigidus)			fiddleneck (Amsinckia menziesii v	ar. intermedia)	<u> </u>
	woolly plantain (Plantago patagonica)			onion (Allium spp.)		->/
15. S.C.	Chinese houses (Collinsia spp.)			buckwheat (Eriogonum fasciculat		X
シュデ				ground pink (Linanthus dianthiflor	rus)	
075						
	D. H. H. Cassics		No.	Butterfly Speci	ies	No.
	Butterfly Species		140.	Hairstreaks		
	Checkerspots California patch (Chlosyne californica)	_		great purple hairstreak (Atlides ha	lesus corcorani)	
	Gabb's checkerspot (C. gabbii)			brown elfin (Callophrys augustinus	and the same of th	À
	Quino checkerspot (Euphydryas editha qu	uino)		bramble (perplexing) hairstreak (C		1
	chalcedon checkerspot (E. chalcedona ch			gray hairstreak (Strymon melinus	Taranto Orina Cross	,
	Leanira checkerspot (Thessalia leanira wi			Ladies/Admirals		
	Mylitta crescent (Phyciodes mylitta)	rigita		California sister (Adelpha bredowi	i californica)	
	Blues			Lorquin's admiral (Limenitis lorquii		
	western pygmy-blue (Brephidium exila)			west coast lady (Vanessa annabe		
	western tailed blue (Everes amyntula)		2	red admiral (V. atalanta rubria)		
	southern blue (Glaucopsyche lygdamus a	australis)	ALLY	painted lady (V. cardui)		1 3
	Edward's blue (Hemiargus ceraunus gyas		NA.	American (Virginia) lady (V. virginia	iensis)	
	Acmon blue (Icaricia acmon acmon)	•		unidentified lady (Vanessa sp.)		HALL
	marine blue (Leptotes marina)			Swallowtails		4,11,11
	unidentified blue		WILL	pale swallowtail (Papilio eurymedo	on)	
	Whites		MINTER	western tiger swallowtail (P. rutulu	21.71	4
	Sara orangetip (Anthocharis sara sara)			anise swallowtail (P. zelicaon)		1
	desert (Felder's) orangetip (A. cethura)		20	Miscellaneous		
	common California ringlet (Coenonympha	a californica)	1111	monarch (Danaus plexippus)		
	cabbage white (Pieris rapae)		yi II	common buckeye (Junonia coenia	a grisea)	
	checkered (common) white (Pontia protoc	dice)		mourning cloak (Nymphalis antiop		
	spring white (<i>P. sisymbrii</i>)			Skippers		
	unidentified white			funereal duskywing (Erynnis funer	ralis)	HIT
	Motalmarks		7	mournful duskywing (Erynnis tristi	77703	1
MININ LY	Behr's metalmark (Apodemia mormo virg	rulti) LHT 144	THING	fiery skipper (Hylephila phyleus)		
THANK THE	Wright's metalmark (Calephelis wrighti)	7.11 1/11	2117111	white (common) checkered-skippe	er (Pyrgus albescens)	
-	Sulphurs			Other		
	orange sulphur (Colias eurytheme)					
	sleepy orange (Eurema nicippe)					
	cloudless sulfur (Phoebus sennae marcel	llina)	. ur			
	unidentified sulphur		1	W.		
	THE PROPERTY OF THE PROPERTY O		252 1		Caluma Cubtotal	7/

10 + 20

Surveyor:	Jasmine Bakker	•		Date:	3/9/2015		
Site Name:	Proctor Valley -	- Village 14 of Otay Ranch (J	PD-08); Area A	;	Site Visit N	o: 4	
Acres Surve	eyed 45	Survey Time:	4 hours 45 min	Acres	per Hour:	9.47	
Other Surve	yors Present:	Stacy Nigro (with supervise	d individual Ben Rosenbaun	- n) ∼ Area	С		
	•						

	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						

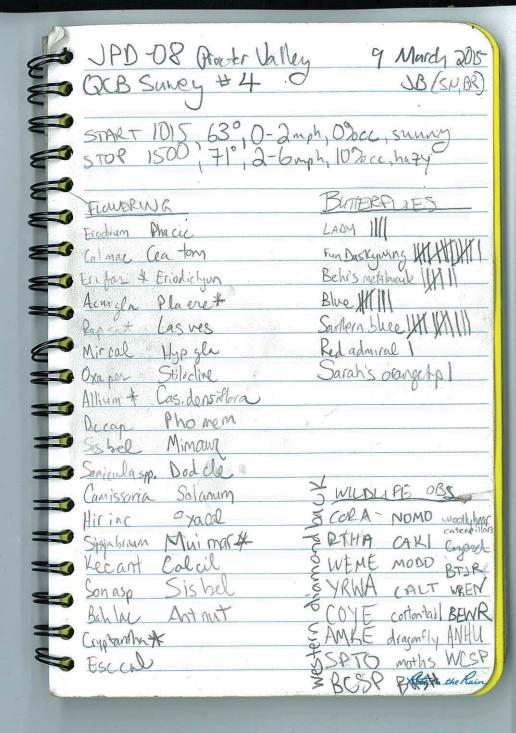
Vegetation Communities Surveyed (inc. dominant spp.)

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

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



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 ~ Δrea Δ		

	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.)

<u>CC/SMC</u> – Adenostoma fasciculatum, Xylococcus bicolor, Erigonum fasciculatum, Acmispon glaber <u>NNG</u> – Avena, bromes, Erodium

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

Butterfly Species		Butterfly Species	
Checkerspots		Hairstreaks	
California patch (Chlosyne californica)		great purple hairstreak (Atlides halesus corcorani)	
Gabb's checkerspot (C. gabbii)		brown elfin (Callophrys augustinus)	
Quino checkerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	
chalcedon checkerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica)	
Leanira checkerspot (Thessalia leanira wrighti)		Ladies/Admirals	
Mylitta crescent (Phyciodes mylitta)		California sister (Adelpha bredowii californica)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (Brephidium exila)		west coast lady (Vanessa annabella)	
western tailed blue (Everes amyntula)		red admiral (V. atalanta rubria)	
southern blue (Glaucopsyche lygdamus australis)	2	painted lady (<i>V. cardui</i>)	1
Edward's blue (Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis)	
Acmon blue (Icaricia acmon acmon)		unidentified lady (Vanessa sp.)	1
marine blue (Leptotes marina)		Swallowtails	
unidentified blue	2	pale swallowtail (Papilio eurymedon)	
Whites		western tiger swallowtail (P. rutulus)	
Sara orangetip (Anthocharis sara sara)	1	anise swallowtail (P. zelicaon)	
desert (Felder's) orangetip (A. cethura)		Miscellaneous	
common California ringlet (Coenonympha californica)		monarch (Danaus plexippus)	
cabbage white (Pieris rapae)		common buckeye (Junonia coenia grisea)	
checkered (common) white (Pontia protodice)		mourning cloak (Nymphalis antiopa)	
spring white (P. sisymbrii)		Skippers	
unidentified white	1	funereal duskywing (Erynnis funeralis)	4
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (Apodemia mormo virgulti)	73	fiery skipper (Hylephila phyleus)	
Wright's metalmark (Calephelis wrighti)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (Colias eurytheme)			
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (Phoebus sennae marcellina)			
unidentified sulphur	1		
Column Subtotal	80	Column Subtotal	6
		Total	86

S.N1690 JPD-OK 3/9/15 3		AD Hirs I	Eschical Le	Plag. Sp. Lin day.	Sol par 18:54 bell	Hed cret (2008 -> Tox for (200 fre)	poly Lasth cel		Calys may lind lind	gas sol, AMCR	What of which is the work of the working.
3/9/15 JPD-08 S.101670	Area C QCB Survey #4 + torces	Start end p1/2	10:40 14:45 2-Smoh 2-6	Jes Jes	butter-free NO QCB	Behrs way 2 12 12 12 12 13 " " " 12 13	(ady 50, = 1 blue sp = 2	Supplier = 4 Total butterthes=	otd ledge = 1 whitespe=1	Veg comm. Surveyed	

Surveyor: Mulanie	Rocks	Butterfly Survey Form Date: 3/9/	12015
Site Name: Proctor Valley – Village Acres Surveyed 127	e 14 of Otay Ranch — Pa Survey Time: 2	rcels BDE Site Visit No. Hr Acres per Hour:	6.05
Other Surveyors Present:	Diens, 6.	Hyffman	

Field Conditions						
	Time (24 hr)	Temperature (*F)	Wind Speed (mph)	Cloud Cover		
Start	0920	61	1-2	0%		
End						
Start	12 45	77	2-9	0%		
End	1615	78	1-2	02		

Vegetation C	ommunities Surveyed (inc. dominant spp.)		
DCSS,	Change Chaparral	Disturbed	NNG	
	,			

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (Chlosyne californica)		great purple hairstreak (Atlides halesus corcorani)	
Gabb's checkerspot (C. gabbii)		brown elfin (Callophrys augustinus)	
Quino checkerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	
chalcedon checkerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica)	
Leanira checkerspot (Thessalia leanira wrighti)		Ladies/Admirals	
Mylitta crescent (Phyciodes mylitta)		California sister (Adelpha bredowii californica)	
Blues		Lorquin's admiral (Limenitis lorquini)	
western pygmy-blue (Brephidium exila)		west coast lady (Vanessa annabella)	
western tailed blue (Everes amyntula)		red admiral (V. atalanta rubria)	
southern blue (Glaucopsyche lygdamus australis)	1111	painted lady (V. cardui)	
Edward's blue (Hemiargus ceraunus gyas)	1""	American (Virginia) lady (V. virginiensis)	
Acmon blue (Icaricia acmon acmon)		unidentified lady (Vanessa sp.)	111
marine blue (Leptotes marina)		Swallowtails	
unidentified blue		pale swallowtail (Papilio eurymedon)	
Whites		western tiger swallowtail (P. rutulus)	
Sara orangetip (Anthocharis sara sara)		anise swallowtail (P. zelicaon)	
desert (Felder's) orangetip (A. cethura)		Miscellaneous	
common California ringlet (Coenonympha californica)	1	monarch (Danaus plexippus)	
cabbage white (Pieris rapae)		common buckeye (Junonia coenia grisea)	
checkered (common) white (Pontia protodice)		mourning cloak (Nymphalis antiopa)	
spring white (P. sisymbrii)		Skippers	
unidentified white		funereal duskywing (Erynnis funeralis)	1111
Metalmarks		mournful duskywing (Erynnis tristis)	1
Behr's metalmark (Apodemia mormo virgulti) LUL	ar white	fiery skipper (Hylephila phyleus)	
Wright's metalmark (Calephelis wrighti)	11/11	white (common) checkered-skipper (Pyrgus albescens)	
Sulphurs		Other	
orange sulphur (Colias eurytheme)			
sleepy orange (Eurema nicippe)			
cloudless sulfur (Phoebus sennae marcellina)			
unidentified sulphur			
Column Subtotal	33	Column Subtotal	7
		Total	40

Surveyor:	MELANIE	DICUS	Date:	03-09	9-2015	
Site Name:	Victorian Victorian	- Village 14 of Otay Ranch			Site Visit No:	4
Acres Surve	yed 120	Survey Time:	0915-1615	Acres	oer Hour:	6.05
Other Surve	yors Present:	GARRETT NUFFMA	IN, MELANIE	ROCKS		

		Field Condit	ions	
	Time (24 hr)	Temperature ('F)	Wind Speed (mph)	Cloud Cover
Start	0915	60.6	1-2	Ø
End	1615	78	1-2	Ø
Start				3 - 10 - 10 - 10 - 10 - 10 - 10 - 10 - 1
End				

Vegetation Communities Surveyed (inc. dominant spp.)	
CHAMISE COTAPARRAL	

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

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

Surveyo		1	Date: 3/9/15	
Site Nan	ne: Proctor Valley - Village 14 of Ota	y Ranch -	Parcels BD & Site Visit No: 4	
Acres Si	urveyed 120 Surve	y Time:	Acres per Hour: 6.0	5
Other St	irveyors Present: MGLANIS	10 n. v	S, MELANIE DICHS	
		- AVIE	- Inglance DICIS	
		Field	Conditions	
	Time (24 hr) Te	mperature ("I	F) Wind Speed (mph) Cloud C	over
Start	0920	ad °	1-2 N	
End	16 15	1000	1-7	
Start	160	TU	1 2	
End		-		- and
Vanatatio	on Communities Successful 1			
vegetatio	on Communities Surveyed (inc. domin	nant spp.)		
		58		
1	Host Plants	Obs.	Nectar Plants	Obs
dwarf plai	ntain (Plantago erecta)	×	popcorn flower (Cryptantha/Plagiobothrys spp.)	V
purple ow	rl's clover (Castilleja exserta)	X	goldfields (Lasthenia spp.)	X
birds boo	on (Antirrhinum coulterianum)		goldenstar (Muilla spp.)	
woolly pla	k (Cordylanthus rigidus) Intain (Plantago patagonica)		fiddleneck (Amsinckia menziesii var. intermedia)	
Chinese h	nouses (Collinsia spp.)	-	onion (Allium spp.)	X
0111110001	iouses (cominsia spp.)		buckwheat (Eriogonum fasciculatum)	X
			ground pink (Linanthus dianthiflorus)	X
01 1	Butterfly Species	No.	Butterfly Species	No.
Checkerspots			Hairstreaks	4
California (California patch (Chlosyne californica) Gabbi's checkerspot (C. gabbii)		great purple hairstreak (Atlides halesus corcorani)	
Quino chec	ckerspot (Euphydryas editha quino)		brown elfin (Callophrys augustinus)	THE RES
chalcedon	checkerspot (E. chalcedona chalcedona	1	bramble (perplexing) hairstreak (C. dumetorum affinis)	
Leanira che	eckerspot (Thessalia leanira wrighti)		gray hairstreak (Strymon melinus pudica) Ladies/Admirals	
	scent (Phyciodes mylitta)			
Blues	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		California sister (Adelpha bredowii californica) Lorquin's admiral (Limenitis lorquini)	
western py	gmy-blue (Brephidium exila)	-	west coast lady (Vanessa annabella)	-
western tai	led blue (Everes amyntula)		red admiral (V. atalanta rubria)	-
southern bl	ue (Glaucopsyche lygdamus australis)	10-		5
Edward's b	lue (Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis)	-
	e (Icaricia acmon acmon)		unidentified lady (Vanessa sp.)	
	(Leptotes marina)		Swallowtails	
unidentified Whites	Diue		pale swallowtail (Papilio eurymedon)	
CALL CONTROL OF CONTRO	etip (Anthocharis sara sara)		western tiger swallowtail (P. rutulus)	
desert (Felc	der's) orangetip (A. cethura)		anise swallowtail (P. zelicaon)	
common Ca	alifornia ringlet (Coenonympha californica	2)	Miscellaneous	
	nite (Pieris rapae)	1)	monarch (Danaus plexippus)	
	common) white (Pontia protodice)	_	common buckeye (Junonia coenia grisea)	
	(P. sisymbrii)		mourning cloak (Nymphalis antiopa) Skippers	No.
unidentified			funereal duskywing (Erynnis funeralis)	_
Vietalmarks			mournful duskywing (Erynnis tristis)	15
Behr's meta	lmark (Apodemia mormo virgulti)	(pt)	fiery skipper (Hylephila phyleus)	-
Vright's me	talmark (Calephelis wrighti)	47	white (common) checkered-skipper (Pyrgus albescens)	
ulphurs			Other	
	nur (Colias eurytheme)			
leepy orang	ge (Eurema nicippe)			
oudless su	lfur (Phoebus sennae marcellina)			
nidentified :	10.00 • A.100.000			
	Column Subtot	al 740	Column Subtotal	70

Total

Description of the common of		Site Name:	Proctor Valley - Village 14 of 0	Otav Rancl	h 1	F. K (29ac.) Site Vi	sit No:				
Field Conditions Time (24 hr) Temperature (°F) Wind Speed (mph) Cloud Cover		Acres Cum	Superior College	unyou Tim		G Acros por He	(25				
Field Conditions Time (24 hr) Temperature (°F) Wind Speed (mph) Cloud Cover ### ### ### ### #### ###############		Acres Surv	eyedS	urvey iim	ie:	Acres per no	our: 6,73				
Time (24 hr) Temperature (F) Wind Speed (mph) Cloud Cover		Other Surv	eyors Present: Victor A	VOUIK	····	11 11 11 11 11 11 11 11 11 11 11 11 11					
Time (24 hr) Temperature (F) Wind Speed (mph) Cloud Cover											
Time (24 hr) Temperature (F) Wind Speed (mph) Cloud Cover	r										
End Go Go Go Go Go Go Go G											
End Vegetation Communities Surveyed (inc. dominant spp.) Host Plants Description (Plantago erecta) Javard plantaini (Plantago pategorica) Javard plantaini (Javardini) Javard plantaini (Javardini) Javardini (Javardini) Javardin				Tempera	ature (°F)	Wind Speed (mph)	Cloud Cove	∍r			
Host Plants Dos. Nectar Plants Obs. Nectar Plants Obs. Obs. Nectar Plants Obs. O		Start	1040	7	26	1-2	80%				
Host Plants Dos. Nectar Plants Obs. Nectar Plants Obs. Obs. Nectar Plants Obs. O		End	1640	コ	10	1-2	80%				
Find Food Post Plants P		Start			- D		00%				
Host Plants											
Host Plants Obs. Nectar Plants Obs. Nectar Plants Odivard plantain (Plantago erecta) purple owl's clover (Castlieig exserta) snapdragon (Antirrhinum coulterianum) polides-beak (Cordylanthus rigidus) polides-beak (Cordylanthus rigidus) polidensek (Cordylantylanthus) polidensek (Cordylantylanthus) polidensek (Cordylantylanthus) polidensek (Cordylanthus rigidus) polidensek (Prolidensek rigidu		End									
Host Plants Obs. Nectar Plants Obs. Nectar Plants Odivard plantain (Plantago erecta) purple owl's clover (Castlieig exserta) snapdragon (Antirrhinum coulterianum) polides-beak (Cordylanthus rigidus) polides-beak (Cordylanthus rigidus) polidensek (Cordylantylanthus) polidensek (Cordylantylanthus) polidensek (Cordylantylanthus) polidensek (Cordylanthus rigidus) polidensek (Prolidensek rigidu			172-90-								
Host Plants Obs. Nectar Plants Obs. Nectar Plants Obs. Nectar Plants Obs. Nectar Plants Obs. popporn flower (Cryptanthai/Plagiobothrys spp.) goldfields (Lasthenia spp.) purple owl's clover (Castilleja exserta) goldfields (Lasthenia spp.) polidis-beak (Cordylanthus rigidus) Noolly plantain (Plantago patagonica) Chinese houses (Collinsia spp.) Ch		Vegetation	Communities Surveyed (inc. do	ominant s	pp.)						
Host Plants Obs. Nectar Plants Obs. Nectar Plants Obs. Nectar Plants Obs. Nectar Plants Obs. popporn flower (Cryptanthai/Plagiobothrys spp.) goldfields (Lasthenia spp.) purple owl's clover (Castilleja exserta) goldfields (Lasthenia spp.) polidis-beak (Cordylanthus rigidus) Noolly plantain (Plantago patagonica) Chinese houses (Collinsia spp.) Ch			Chambe, Ch	20	DCS	SS (8. manzii E. facsic	Ula + m				
dwarf plantain (*Plantago erecta*) popcom flower (*Cryptantha/Plagiobothrys spp.) purple owl's clover (*Castilleja exserta*) goldfields (*Lasthenia spp.) pirds-beak (*Cordylanthus rigidus) poinds-beak (*Cordylanthus rigidus) poinds (*Linanthus dianthiflorus) poind pink (*Linanthus dianthiflorus) pround pink (*Linanthus dianthif											
dwarf plantain (*Plantago erecta*) popcom flower (*Cryptantha/Plagiobothrys spp.) purple owl's clover (*Castilleja exserta*) goldfields (*Lasthenia spp.) pirds-beak (*Cordylanthus rigidus) poinds-beak (*Cordylanthus rigidus) poinds (*Linanthus dianthiflorus) poind pink (*Linanthus dianthiflorus) pround pink (*Linanthus dianthif						WW TOWN					
dwarf plantain (*Plantago erecta*) popcom flower (*Cryptantha/Plagiobothrys spp.) purple owl's clover (*Castilleja exserta*) goldfields (*Lasthenia spp.) pirds-beak (*Cordylanthus rigidus) poinds-beak (*Cordylanthus rigidus) poinds (*Linanthus dianthiflorus) poind pink (*Linanthus dianthiflorus) pround pink (*Linanthus dianthif	ſ		Host Plants		Obs.	Nectar Plants		Ob			
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2015 Quino Checkerspot Butterfly Survey Form Victor Nodi Project Name: Section Survey Time (hrs): Other Surveyors Present: **Field Conditions** Time (24 hr) Temperature (°F) Wind Speed (mph) Cloud Cover (%) Start End Start End Vegetation communities surveyed: list dominant species Erifos, Adefin, lotsio, sulmun Quino Host Plants (2014 USFWS Protocol) Present?/Flowering? Quino Nectar Plants Present?/Flowering? birds-beak (Cordylanthus rigidus) Chinese houses (Collinsia heterophylla) dot-seed plantain (Plantago erecta) while purple owl's clover (Castilleja exserta) 9.m=m snapdragon (Antirrhinum coulterianum) woolly plantain (Plantago patagonica) **Butterfly Species** Tally **Butterfly Species** Tally No. Checkerspots Hairstreaks California patch brown elfin chalcedon checkerspot bramble (perplexing) hairstreak Gabb's checkerspot gr: y hairstreak Leanira checkerspot great purple hairstreak Mylitta crescent Ladies/Admirals/Allies Quino checkerspot American (Virginia) lady Blues painted lady Acmon blue west coast lady Edward's (Ceranaus) blue unidentified lady marine blue California sister Silvery (southern) blue Lorquin's admiral western pygmy-blue red admiral western tailed blue Swallowtails unidentified blue anise swallowtail pale swallowtail Whites western tiger swallowtail cabbage white Miscellaneous checkered (common) white common buckeye California ringlet monarch - MAP THIS SPECIES desert orangetip mourning cloak Sara orangetip Striated queen spring (California) white Hermes copper - MAP THIS SPECIES unidentified white Skippers Metalmarks funereal duskywing Behr's metalmark mournful duskywing Wright's metalmark fiery skipper Sulphurs white (common) checkered skipper cloudless sulfur Other species orange sulphur sleepy orange unidentified sulphur

Total

2015 Quino Checkerspot Butterfly Survey Form Surveyor: Site Name: Proctor Valley - Village 14 of Otay Ranch Survey Time: Acres per Hour: _ Acres Surveyed **Other Surveyors Present: Field Conditions** Time (24 hr) Temperature (°F) Wind Speed (mph) Cloud Cover Start 0% End Start End Chamse chaparice, non-native Vegetation Communities Surveyed (inc. dominant spp.) **Host Plants** Obs. **Nectar Plants** Obs. dwarf plantain (Plantago erecta) popcorn flower (Cryptantha/Plagiobothrys spp.) purple owl's clover (Castilleja exserta) goldfields (Lasthenia spp.) snapdragon (Antirrhinum coulterianum) goldenstar (Muilla spp.) birds-beak (Cordylanthus rigidus) fiddleneck (Amsinckia menziesii var. intermedia) woolly plantain (Plantago patagonica) onion (Allium spp.) buckwheat (Eriogonum fasciculatum) Chinese houses (Collinsia spp.) ground pink (Linanthus dianthiflorus) **Butterfly Species Butterfly Species** No. No. Hairstreaks Checkerspots California patch (Chlosyne californica) great purple hairstreak (Atlides halesus corcorani) Gabb's checkerspot (C. gabbii) brown elfin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dumetorum affinis) Quino checkerspot (Euphydryas editha quino) chalcedon checkerspot (E. chalcedona chalcedona) gray hairstreak (Strymon melinus pudica) Ladies/Admirals Leanira checkerspot (Thessalia leanira wrighti) Mylitta crescent (Phyciodes mylitta) California sister (Adelpha bredowii californica) Blues Lorquin's admiral (Limenitis lorquini) western pygmy-blue (Brephidium exila) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) western tailed blue (Everes amyntula) painted lady (V. cardui) southern blue (Glaucopsyche lygdamus australis) 4 Edward's blue (Hemiargus ceraunus gyas) American (Virginia) lady (V. virginiensis) unidentified lady (Vanessa sp.) Acmon blue (Icaricia acmon acmon) marine blue (Leptotes marina) **Swallowtails** pale swallowtail (Papilio eurymedon) unidentified blue western tiger swallowtail (P. rutulus) Whites Sara orangetip (Anthocharis sara sara) anise swallowtail (P. zelicaon) desert (Felder's) orangetip (A. cethura) Miscellaneous common California ringlet (Coenonympha californica) monarch (Danaus plexippus) cabbage white (Pieris rapae) common buckeye (Junonia coenia grisea) mourning cloak (Nymphalis antiopa) checkered (common) white (Pontia protodice) spring white (P. sisymbrii) Skippers funereal duskywing (Erynnis funeralis) unidentified white Metalmarks mournful duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus) Behr's metalmark (Apodemia mormo virguiti) Wright's metalmark (Calephelis wrighti) white (common) checkered-skipper (Pyrgus albescens) Sulphurs orange sulphur (Colias eurytheme) Shorter Willen sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina) unidentified sulphur

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2015 Quino Checkerspot Butterfly Survey Form TRAUS COPER Surveyor: Proctor Valley - Village 14 of Otay Ranch Site Name: 123 Acres per Hour: Survey Time: Acres Surveyed Alicia Hill Victor Movik Other Surveyors Present: **Field Conditions** Time (24 hr) Temperature (°F) Wind Speed (mph) **Cloud Cover** Start 0830 End 1430 Start End Vegetation Communities Surveyed (inc. dominant spp.) C 5 5 Chamise Unop, NNG **Host Plants** Obs. **Nectar Plants** Obs. dwarf plantain (Plantago erecta) popcorn flower (Cryptantha/Plagiobothrys spp.) purple owl's clover (Castilleja exserta) den Siriolica goldfields (Lasthenia spp.) snapdragon (Antirrhinum coulterianum) goldenstar (Muilla spp.) birds-beak (Cordylanthus rigidus) fiddleneck (Amsinckia menziesii var. intermedia) woolly plantain (Plantago patagonica) onion (Allium spp.) buckwheat (Eriogonum fasciculatum) Chinese houses (Collinsia spp.) ground pink (Linanthus dianthiflorus) **Butterfly Species Butterfly Species** No. No. Checkerspots Hairstreaks great purple hairstreak (Atlides halesus corcoraní) California patch (Chlosyne californica) Gabb's checkerspot (C. gabbii) brown elfin (Callophrys augustinus) Quino checkerspot (Euphydryas editha quino) bramble (perplexing) hairstreak (C. dumetorum affinis) chalcedon checkerspot (E. chalcedona chalcedona) gray hairstreak (Strymon melinus pudica) Ladies/Admirals Leanira checkerspot (Thessalia leanira wrighti) Mylitta crescent (Phyciodes mylitta) California sister (Adelpha bredowii californica) Lorquin's admiral (Limenitis lorquini) Blues western pygmy-blue (Brephidium exila) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) western tailed blue (Everes amyntula) painted lady (V. cardui) southern blue (Glaucopsyche lygdamus australis) American (Virginia) lady (V. virginiensis) Edward's blue (Hemiargus ceraunus gyas) unidentified lady (Vanessa sp.) Acmon blue (Icaricia acmon acmon) **Swallowtails** marine blue (Leptotes marina) pale swallowtail (Papilio eurymedon) unidentified blue western tiger swallowtail (P. rutulus) Whites anise swallowtail (P. zelicaon) Sara orangetip (Anthocharis sara sara) Miscellaneous desert (Felder's) orangetip (A. cethura) common California ringlet (Coenonympha californica) monarch (Danaus plexippus) cabbage white (Pieris rapae) , common buckeye (Junonia coenia grisea) mourning cloak (Nymphalis antiopa) checkered (common) white (Pontia protodice) spring white (P. sisymbrii) Skippers funereal duskywing (Erynnis funeralis) 1 unidentified white Metalmarks Z Z X X X X X mournful duskywing (Erynnis tristis)

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> Behr's metalmark (Apodemia mormo virgulti) X Wright's metalmark (Calephelis wrighti)

cloudless sulfur (Phoebus sennae marcellina)

Column Subtotal

orange sulphur (Colias eurytheme)

sleepy orange (Eurema nicippe)

unidentified sulphur

Sulphurs

Surveyor	: Victor Douik		Date: 3/12/15					
	e: Proctor Valley - Village 14 of Otay							
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	on (Antirrhinum coulterianum)	- X		dfields (Lasthenia spp.)		1.X		
	(Cordylanthus rigidus)			denstar (Muilla spp.)		-X		
	ntain (Plantago patagonica)			leneck (Amsinckia menziesii v on (Allium spp.)	rar, intermedia)	1		
Control of the Contro	ouses (Collinsia spp.)		-	kwheat (<i>Eriogonum fasciculat</i>	tum\	1		
	comment opper			and pink (Linanthus dianthiflor	100000000000000000000000000000000000000	12		
			9.00	and print (Emarianas diariaminos	43)	1		
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	eckerspot (Thessalia leanira wrighti)	3)		Ladies/Admirals				
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western py	gmy-blue (Brephidium exila)			coast lady (Vanessa annabe		-		
	led blue (Everes amyntula)			dmiral (V. atalanta rubria)	iid)	+		
and the second second second second	lue (Glaucopsyche lygdamus australis)			ed lady (V. cardui)		11		
	lue (Hemiargus ceraunus gyas)			rican (Virginia) lady (V. virginia	ensis)	11		
Acmon blue	e (Icaricia acmon acmon)			entified lady (Vanessa sp.)		1		
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unidentified	d blue	1	pale	swallowtail (Papilio eurymedo	n)	1		
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	der's) orangetip (A. cethura)		-	ellaneous				
	alifornia ringlet (Coenonympha california	(a)		arch (Danaus plexippus)				
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	almark (Apodemia mormo virgulti)	THUMBLE	9	skipper (<i>Hylephila phyleus</i>)	.)			
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	ge (Eurema nicippe)		- 1					
	ulfur (Phoebus sennae marcellina)							
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Surveyor:	All CIA HILL	1	b T	T	Date:	3/13/15	
	Proctor Valley – Village			1.00		sit No:	<u> </u>
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Other Surv	veyors Present:	avis co	open,	Vic	ATON NOVICK, B	nan Loh	240
			Field C	onditio	ons		
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	s clover (Castilleja exserta)	wall sand	1		Ifields (Lasthenia spp.)	осинус орр.)	X
	n (Antirrhinum coulterianum				lenstar (Muilla spp.)		X
	(Cordylanthus rigidus)			-	eneck (<i>Amsinckia menziesii</i> va	r, intermedia)	X
	tain (Plantago patagonica)				on (Allium spp.)		X
	uses (Collinsia spp.)				kwheat (Eriogonum fasciculatur	m)	X
				grou	und pink (<i>Linanthus dianthifloru</i>	s)	X
	Butterfly Species		No.		Butterfly Species	s	No.
Checkersp					streaks		
	atch (Chiosyne californica)			_	purple hairstreak (Atlides hale	sus corcoraní)	
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-	ed blue (Everes amyntula)			-	dmiral (V. atalanta rubria)	4)	
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	ite (<i>Pieris rapae</i>)				non buckeye (<i>Junonia coenia</i> g		
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	nur (Colias eurytheme)	A PARTIES AND A	N. T. S.				1
	ge (Eurema nicippe)			10	motock's fintallary		1
	lfur (<i>Phoebus sennae marc</i>	ellina)		1			
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2015 Quino Checkerspot Butterfly Survey Form TRAVIS COOPER Site Name: Proctor Valley – Village 14 of Otay Ranch 145 Survey Time: Acres per Hour: Acres Surveyed Other Surveyors Present: Alicia Hill, Victor Vovik, Brian **Field Conditions** Time (24 hr) Temperature (°F) Wind Speed (mph) Cloud Cover OSUD Start End Start End Vegetation Communities Surveyed (inc. dominant spp.) Chamise chaparral **Host Plants** Obs. Obs. **Nectar Plants** dwarf plantain (Plantago erecta) popcorn flower (Cryptantha/Plagiobothrys spp.) purple owl's clover (Castilleja exserta) de Sittera goldfields (Lasthenia spp.) snapdragon (Antirrhinum coulterianum) goldenstar (Muilla spp.) birds-beak (Cordylanthus rigidus) fiddleneck (Amsinckia menziesii var. intermedia) woolly plantain (Plantago patagonica) onion (Allium spp.) Chinese houses (Collinsia spp.) buckwheat (Eriogonum fasciculatum) ground pink (Linanthus dianthiflorus) **Butterfly Species Butterfly Species** No. Checkerspots Hairstreaks California patch (Chlosyne californica) great purple hairstreak (Atlides halesus corcorani) Gabb's checkerspot (C. gabbii) brown elfin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dumetorum affinis) Quino checkerspot (Euphydryas editha quino) chalcedon checkerspot (E. chalcedona chalcedona) gray hairstreak (Strymon melinus pudica) Leanira checkerspot (Thessalia leanira wrighti) Ladies/Admirals California sister (Adelpha bredowii californica) Mylitta crescent (Phyciodes mylitta) Lorquin's admiral (Limenitis lorquini) Blues western pygmy-blue (Brephidium exila) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) western tailed blue (Everes amyntula) southern blue (Glaucopsyche lygdamus australis) painted lady (V. cardui) American (Virginia) lady (V. virginiensis) Edward's blue (Hemiargus ceraunus gyas) unidentified lady (Vanessa sp.) Acmon blue (Icaricia acmon acmon) marine blue (Leptotes marina) **Swallowtails** pale swallowtail (Papilio eurymedon) unidentified blue Whites western tiger swallowtail (P. rutulus) 35 Sara orangetip (Anthocharis sara sara) anise swallowtail (P. zelicaon) desert (Felder's) orangetip (A. cethura) Miscellaneous common California ringlet (Coenonympha californica) monarch (Danaus plexippus) cabbage white (Pieris rapae) common buckeye (Junonia coenia grisea) checkered (common) white (Pontia protodice) mourning cloak (Nymphalis antiopa) spring white (P. sisymbrii) funereal duskywing (Erynnis funeralis) 36 unidentified white mournful duskywing (Erynnis tristis) Metalmarks fiery skipper (Hylephila phyleus) Behr's metalmark (Apodemia mormo virgulti) Wright's metalmark (Calephelis wrighti) white (common) checkered-skipper (Pyrgus albescens) Other Sulphurs orange sulphur (Colias eurytheme) Comstock's Fritallary sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina)

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unidentified sulphur

Column Subtotal

2015 Quino Checkerspot Butterfly Survey Form Surveyor: Site Name: Proctor Valley - Village 14 of Otay Ranch Acres per Hour: Acres Surveyed Survey Time: Other Surveyors Present: **Field Conditions** Time (24 hr) Temperature (°F) Wind Speed (mph) Cloud Cover Start End Start End Vegetation Communities Surveyed (inc. dominant spp.) Chamse **Host Plants** Obs. **Nectar Plants** Obs. dwarf plantain (Plantago erecta) popcorn flower (Cryptantha/Plagiobothrys spp.) purple owl's clover (Castilleja exserta) goldfields (Lasthenia spp.) snapdragon (Antirrhinum coulterianum) goldenstar (Muilla spp.) birds-beak (Cordylanthus rigidus) fiddleneck (Amsinckia menziesii var. intermedia) woolly plantain (Plantago patagonica) onion (Allium spp.) buckwheat (Eriogonum fasciculatum) Chinese houses (Collinsia spp.) ground pink (Linanthus dianthiflorus) **Butterfly Species Butterfly Species** No. No. Checkerspots Hairstreaks California patch (Chlosyne californica) great purple hairstreak (Atlides halesus corcorani) brown elfin (Callophrys augustinus) Gabb's checkerspot (C. gabbii) bramble (perplexing) hairstreak (C. dumetorum affinis) Quino checkerspot (Euphydryas editha quino) chalcedon checkerspot (E. chalcedona chalcedona) gray hairstreak (Strymon melinus pudica) Ladies/Admirals Leanira checkerspot (Thessalia leanira wrighti) Mylitta crescent (Phyciodes mylitta) California sister (Adelpha bredowii californica) Blues Lorquin's admiral (Limenitis lorquini) western pygmy-blue (Brephidium exila) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) western tailed blue (Everes amyntula) painted lady (V. cardui) southern blue (Glaucopsyche lygdamus australis) 4 American (Virginia) lady (V. virginiensis) Edward's blue (Hemiargus ceraunus gyas) unidentified lady (Vanessa sp.) Acmon blue (Icaricia acmon acmon) **Swallowtails** marine blue (Leptotes marina) pale swallowtail (Papilio eurymedon) unidentified blue western tiger swallowtail (P. rutulus) Whites anise swallowtail (P. zelicaon) Sara orangetip (Anthocharis sara sara) desert (Felder's) orangetip (A. cethura) Miscellaneous monarch (Danaus plexippus) common California ringlet (Coenonympha californica) cabbage white (Pieris rapae) common buckeye (Junonia coenia grisea) checkered (common) white (Pontia protodice) mourning cloak (Nymphalis antiopa) spring white (P. sisymbrii) Skippers funereal duskywing (Erynnis funeralis) unidentified white Metalmarks mournful duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus) Behr's metalmark (Apodemia mormo virguiti) Wright's metalmark (Calephelis wrighti) white (common) checkered-skipper (Pyrgus albescens) Sulphurs orange sulphur (Colias eurytheme) Strated Willen sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina) unidentified sulphur

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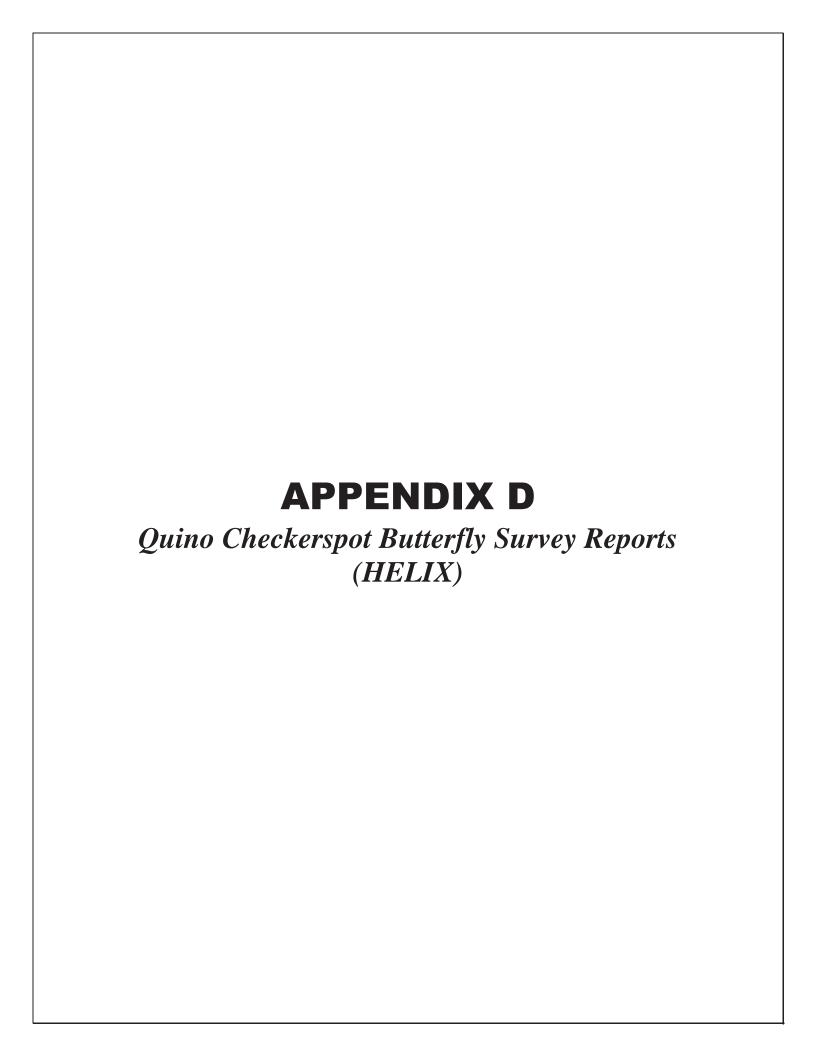
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Otay Ranch Proctor Valley Village 14 & Preserve

Quino Checkerspot Butterfly Survey Report

May 13, 2016

Prepared for:

Jackson Pendo Development Company for GDCI Proctor Valley, LP

2245 San Diego Avenue, Suite 223 San Diego, CA 92110 Prepared by:

HELIX Environmental Planning, Inc.

7578 El Cajon Boulevard La Mesa, CA 91942

Otay Ranch Proctor Valley Village 14 & Preserve 2016 Quino Checkerspot Butterfly Survey Report

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

Erica Harris	Amy Martson	Jarmine Bakker
TE-778195-12.2	TE-778195-12.2	TE-778195-12.2
Darin Busby	Diana Saucedo	Erik LaCoste
TE-115373-3	TE-811615-6.1	TE-115373-3
Gretchen Cummings TE-031850-4	John Lovio TE-065741-3	Melanie Rocks TE-082908-1
Melissa Busby	Monica Alfaro	Natalie Brodie
TE-080779-2	TE 051242–3	TE-135948-2
Renee Owens	Garrett Huffman	John Dicus
TE-799569-5	TE-20186A-1	TE-839960-6
Matin M. Din	Almo All	fri by

Alicia Hill

TE-06145B-0

Travis Cooper TE-170389-5

Melanie Dicus

TE-049175-4

Coesard magge Chez Brungraber

TE-14231A-1

TE-092162-2

Nicole Kimball TE-053598-4

Brenna Ogg TE 134338-3

TE-063608-5

TE 067347-5

TE-797665-9

Otay Ranch Proctor Valley Village 14 & Preserve Quino Checkerspot Butterfly Survey Report

TABLE OF CONTENTS

Section	<u>Title</u> <u>Page</u>			
1.0	INTRODUCTION			
2.0	METHODS			
	2.1 Habitat Assessment12.2 Host Plant Mapping22.3 Quino Checkerspot Butterfly Surveys2			
3.0	RESULTS			
4.0	REFERENCES6			
LIST OF APPENDICES				
<u>Letter</u>	<u>Title</u>			
A B C	Survey Information Survey Forms and Field Notes Butterfly Checklist			
LIST OF FIGURES				
<u>Number</u>	Title Follows Page			
1 2 3a-u	Project Vicinity Map			

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1.0 INTRODUCTION

This report documents the results of HELIX Environmental Planning, Inc.'s (HELIX's) 2016 Quino checkerspot butterfly (*Euphydryas editha quino*; QCB) survey of the Otay Ranch Proctor Valley Village 14 and Preserve (project). HELIX performed the protocol survey (comprising five site visits) under HELIX's Threatened/Endangered Species Permit No. TE778195, with the support of a number of sub-consultants and independent consultants who are permitted to survey for the species.

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 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 the Upper Otay Reservoir and west of the Jamul Mountains. The project site also includes portions of the California Department of Fish and Wildlife (CDFW) 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

2.1 HABITAT ASSESSMENT

HELIX completed a site habitat assessment in accordance with the 2016 Quino Checkerspot Butterfly Survey Protocol that was developed in coordination with the U. S. Fish and Wildlife Service (USFWS), County of San Diego, and the Building Industry Association (hereafter referred to as the "2016 USFWS Survey Protocol"). The study area comprises the proposed development footprint (including limits of brush management), open space areas, and potential Proctor Valley Road realignment areas (Figure 2). A QCB habitat assessment of the study area was conducted by HELIX biologist Jasmine Bakker on February 12, 2015. An updated QCB habitat assessment was conducted by Ms. Bakker and HELIX biologists Erica Harris and Talaya Rachels on February 2, 2016. Habitat within the study area was evaluated on foot, and excluded areas were mapped on an aerial photograph in accordance with the guidance in the 2016 USFWS Survey Protocol. Several different aerial photographs, including Google Earth and Bing Maps, were used to aid in assessing canopy cover and habitat density, as well as to locate suitable openings in habitat. Based on this habitat assessment and consultation with USFWS, approximately 57 acres were considered excluded areas, which resulted in 1,600 acres of total survey area. The excluded areas represent dense patches of chamise chaparral or southern mixed chaparral, developed areas, and eucalyptus woodland. Dense patches of excluded chaparral represented closed-canopy vegetation where the branches from shrubs overlapped, leaving no open space areas and preventing physical access to the area. Areas where there were suitable openings in the vegetation at least within 100 meters of each other were included in the survey

area. The 1,600-acre QCB survey area was divided into smaller areas and distributed amongst the surveyors.

2.2 HOST PLANT MAPPING

HELIX and Busby Biological Services, Inc. (Busby) biologists mapped host plants within the survey area between February 15 and March 1, 2016 prior to the initiation of protocol surveys (Figures 3a - 3u). Biologists conducted pedestrian surveys within the survey area recording the location, size, and conditions of host plants. Host plants were mapped with the aid of global positioning system (GPS) units. Patches of host plants larger than approximately 250 square feet were mapped as polygons. Patches of host plants were categorized as low density (1 - 100 plants), medium density (100 - 1,000 plants), or high density (1,000 - 10,000 plants). Host plants were also mapped incidentally when encountered during protocol surveys.

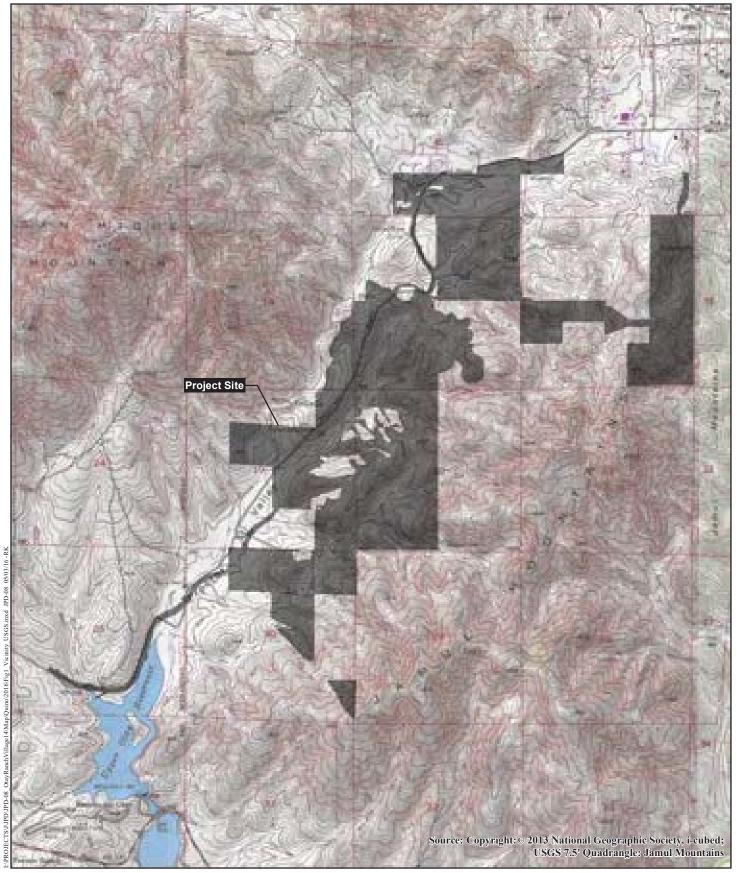
2.3 QUINO CHECKERSPOT BUTTERFLY SURVEYS

Five weekly protocol surveys were conducted in accordance with the 2016 USFWS Survey Protocol by HELIX biologists Ms. Harris, Amy Mattson and Ms. Bakker, and consultants Busby, SummitWest Environmental, Inc., Halcyon Environmental, John Dicus, Melanie Dicus, and Garrett Huffman (Appendix A). HELIX biologists Ms. Rachels, Ben Rosenbaum, Hannah Sadowski, and consultants Andy Smisek, Griffin Brungraber, and Patrick Hord participated as supervised individuals. Surveys began on February 24, 2016 and continued through March 31, 2016. Surveys began following the first observation of adult QCB in San Diego County ([County] reported by Korey Klutz [Klutz Biological Consulting] on February 22 at east Otay Mesa [Quino Biologists United 2016]). Additional sightings of QCB were reported in lower numbers throughout the County between February 25 and March 25, 2016. Surveys were discontinued after the fifth survey week, in coordination with USFWS personnel (email from Eric Porter to Rob Cameron dated April 4, 2016), based on the lack of recent QCB sightings, which indicated that the flight season along the coastal regions was completed. The last, fresh QCB sighting was reported on March 17, two weeks prior to the last survey, when a QCB was observed at San Vicente Reservoir. The last reported QCB sighting of a single worn individual occurred on March 25 in Marron Valley.

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

Identification of butterflies was based on personal knowledge, museum specimens, the San Diego Natural History Museum (SDNHM) 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.

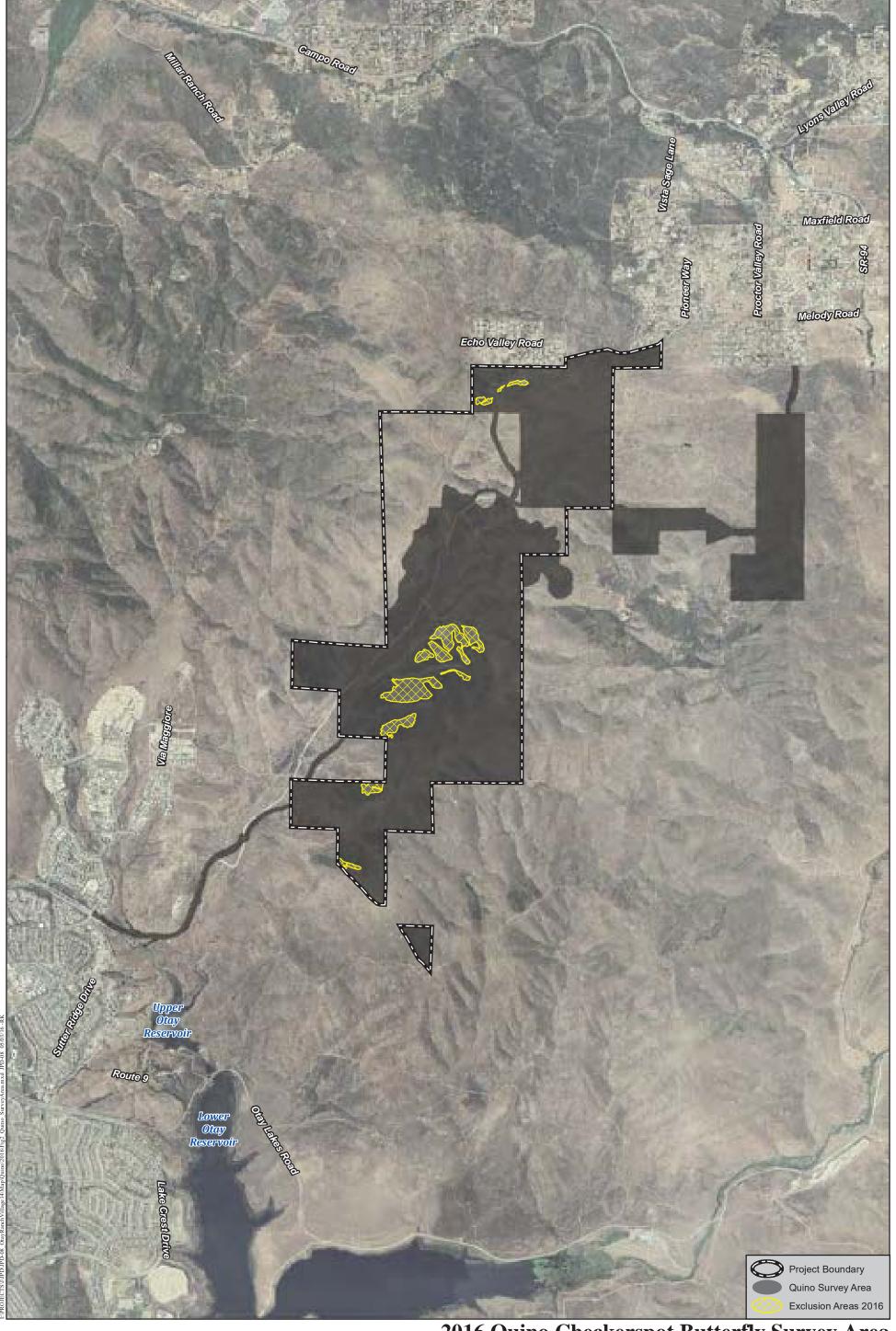




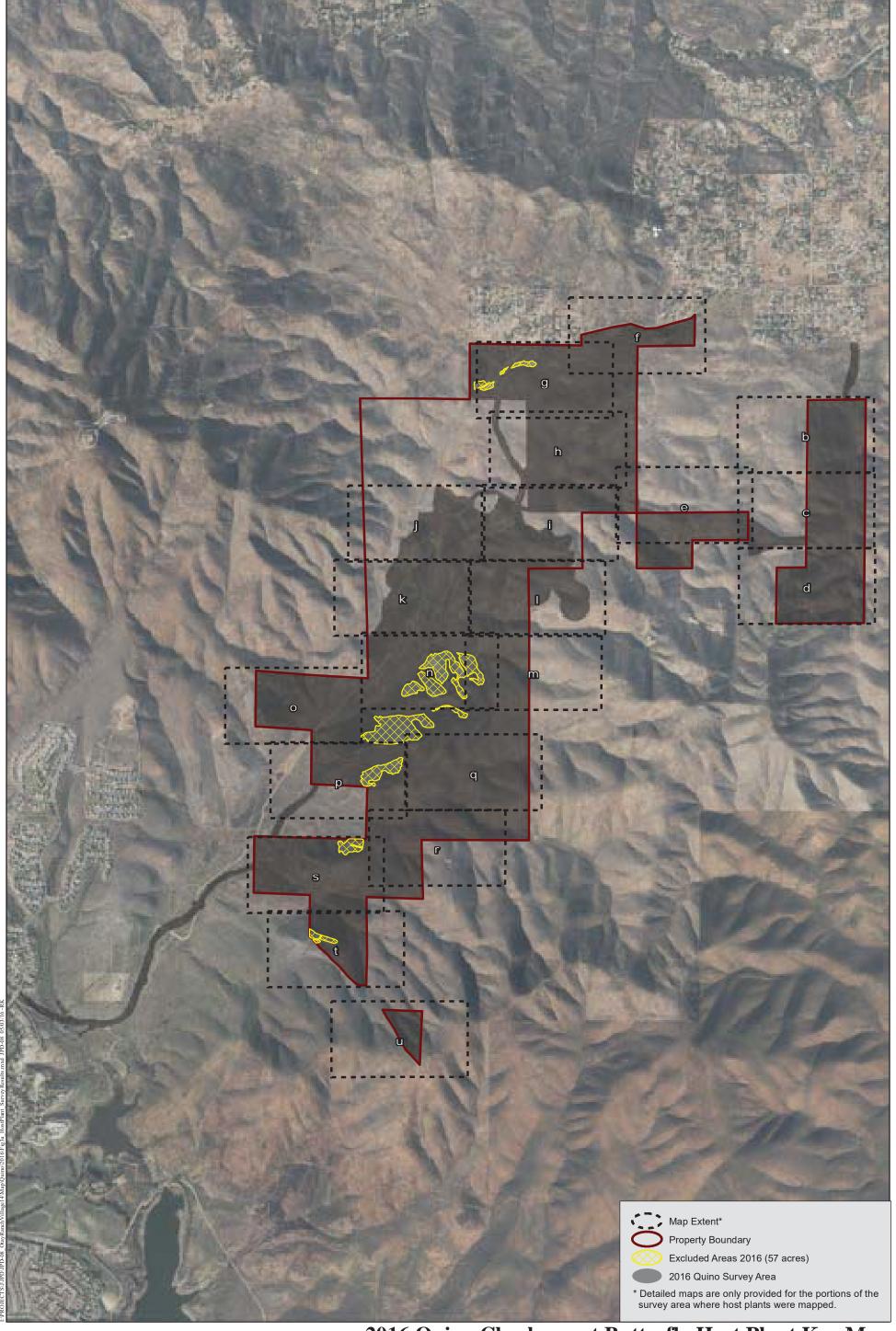
Project Vicinity Map







2016 Quino Checkerspot Butterfly Survey Area



2016 Quino Checkerspot Butterfly Host Plant Key Map













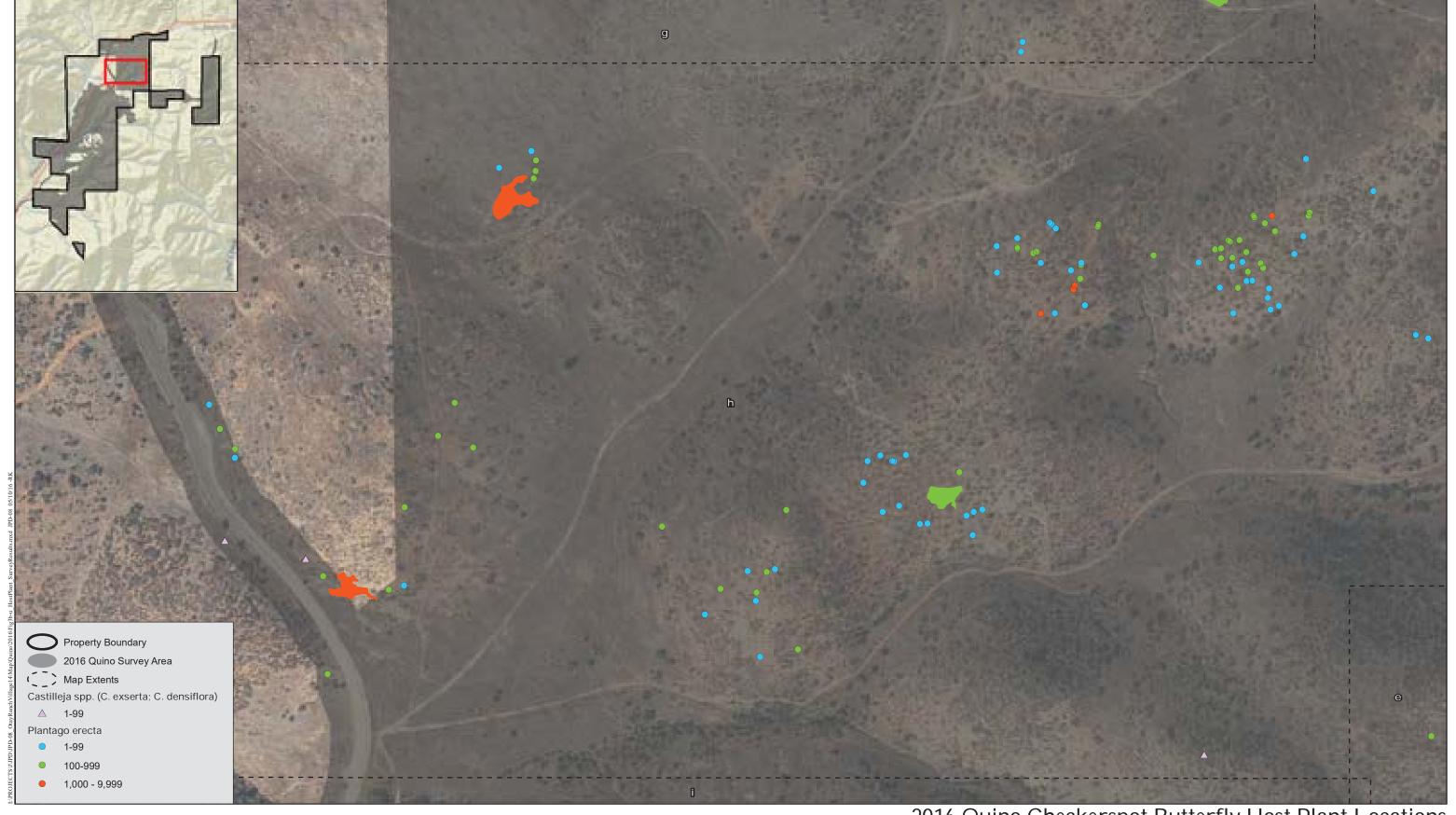












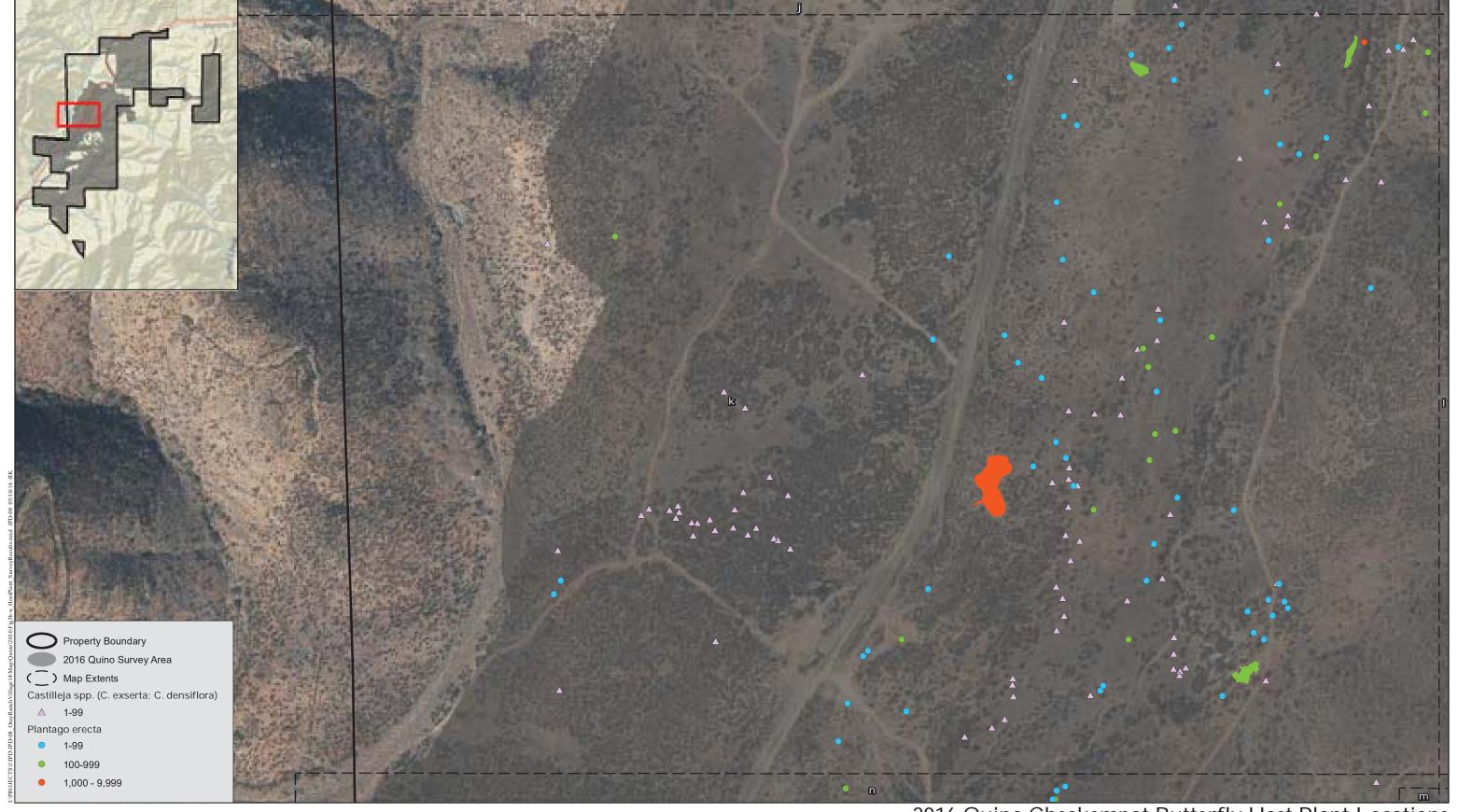




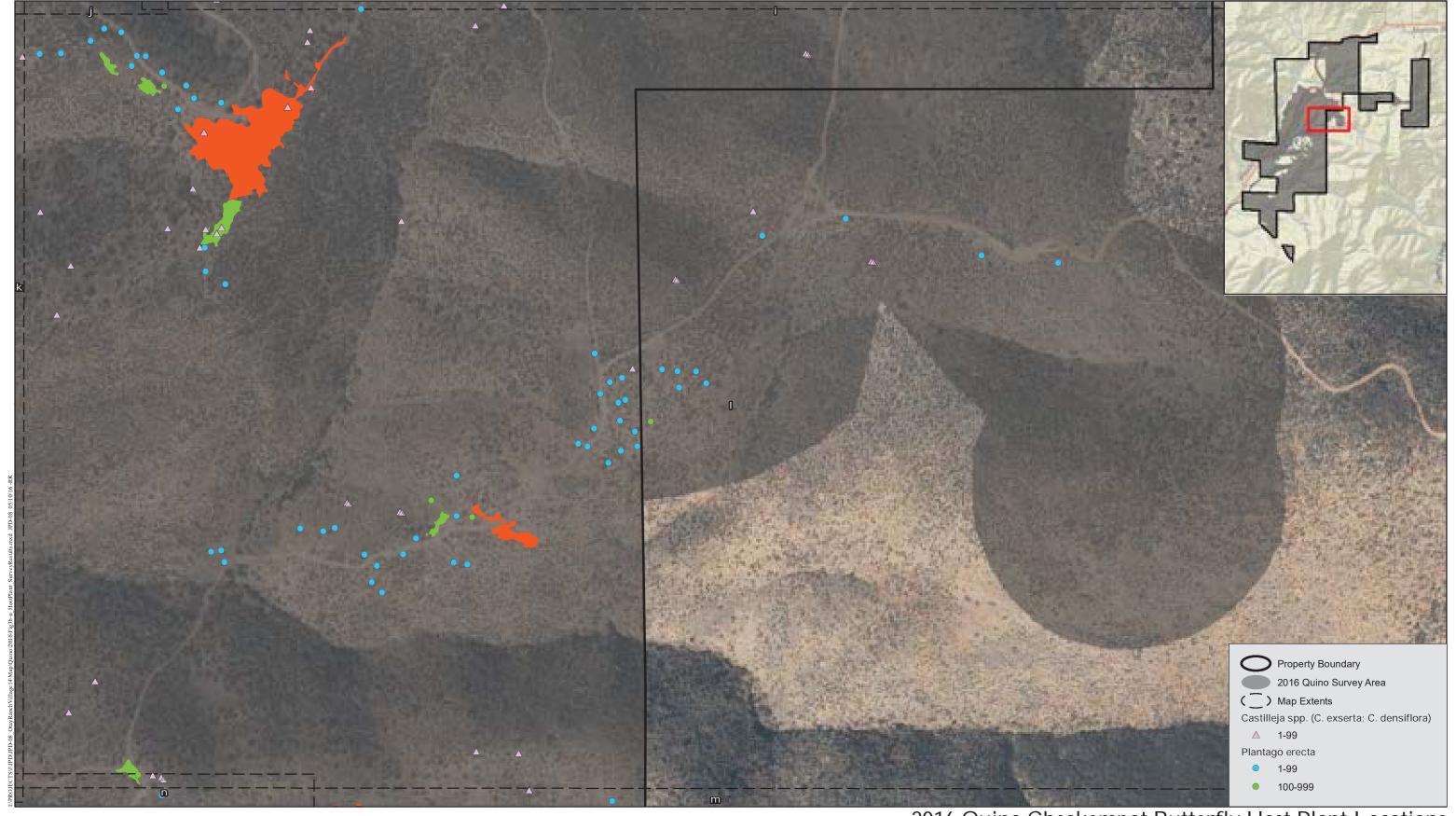




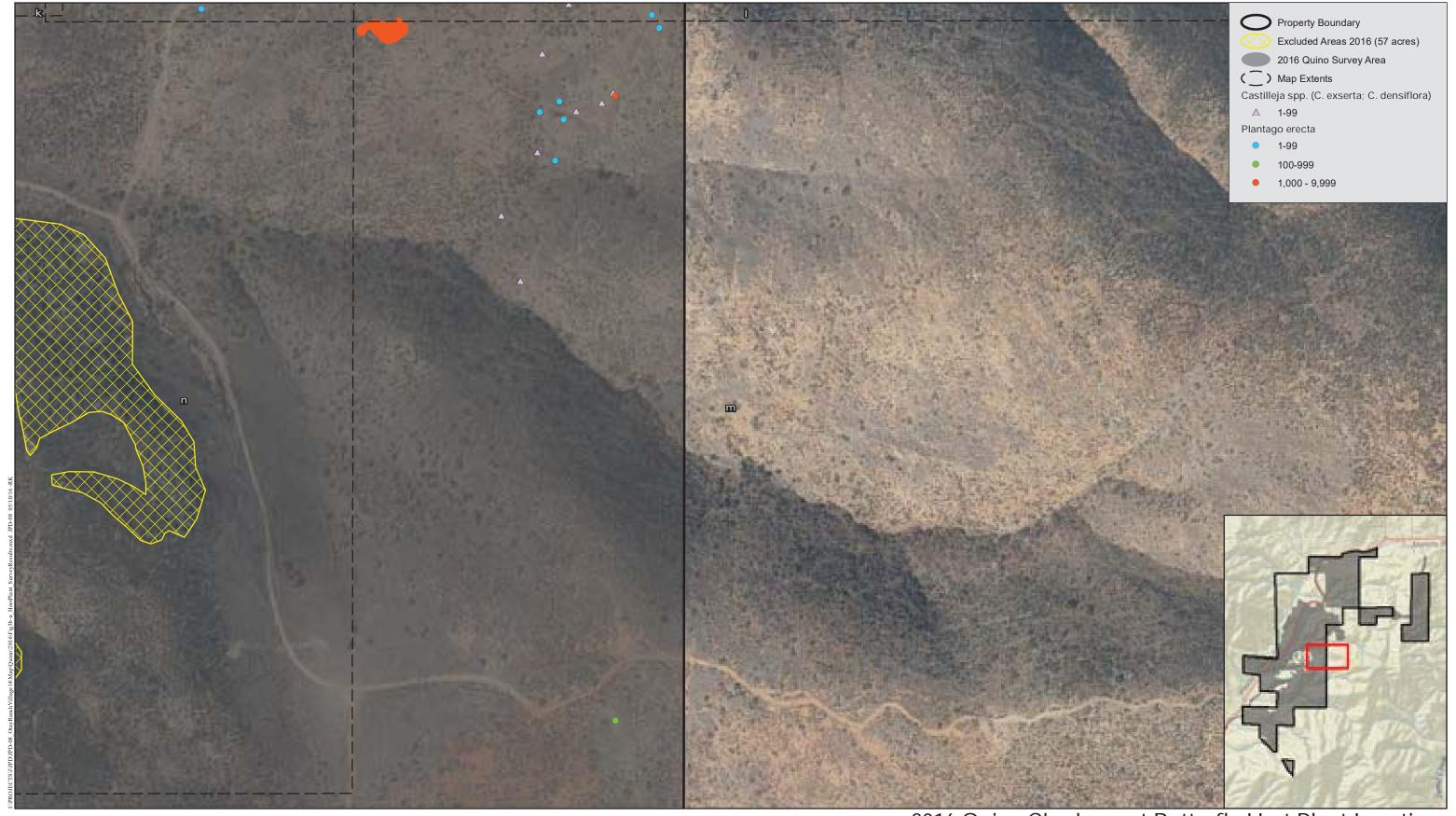






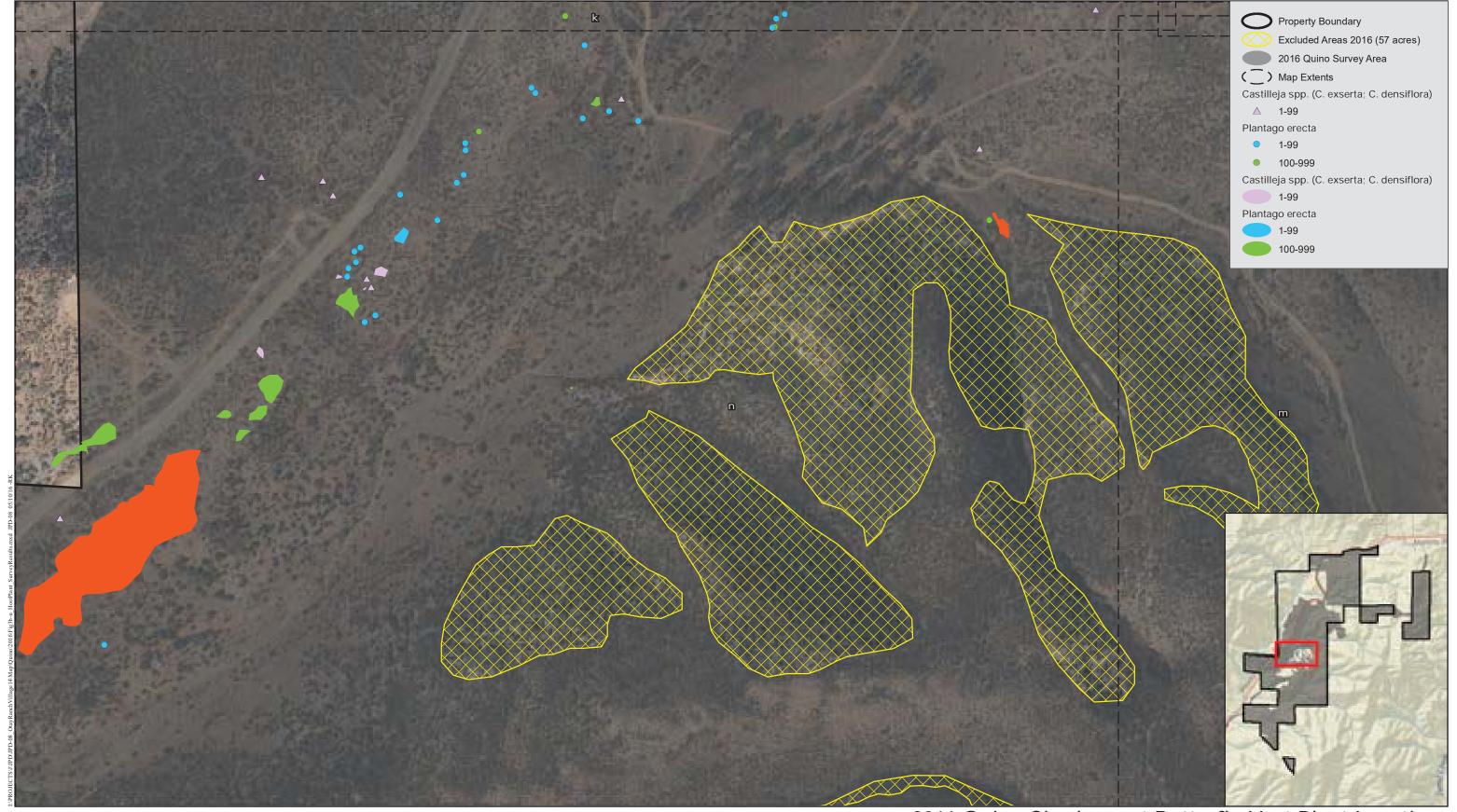






2016 Quino Checkerspot Butterfly Host Plant Locations

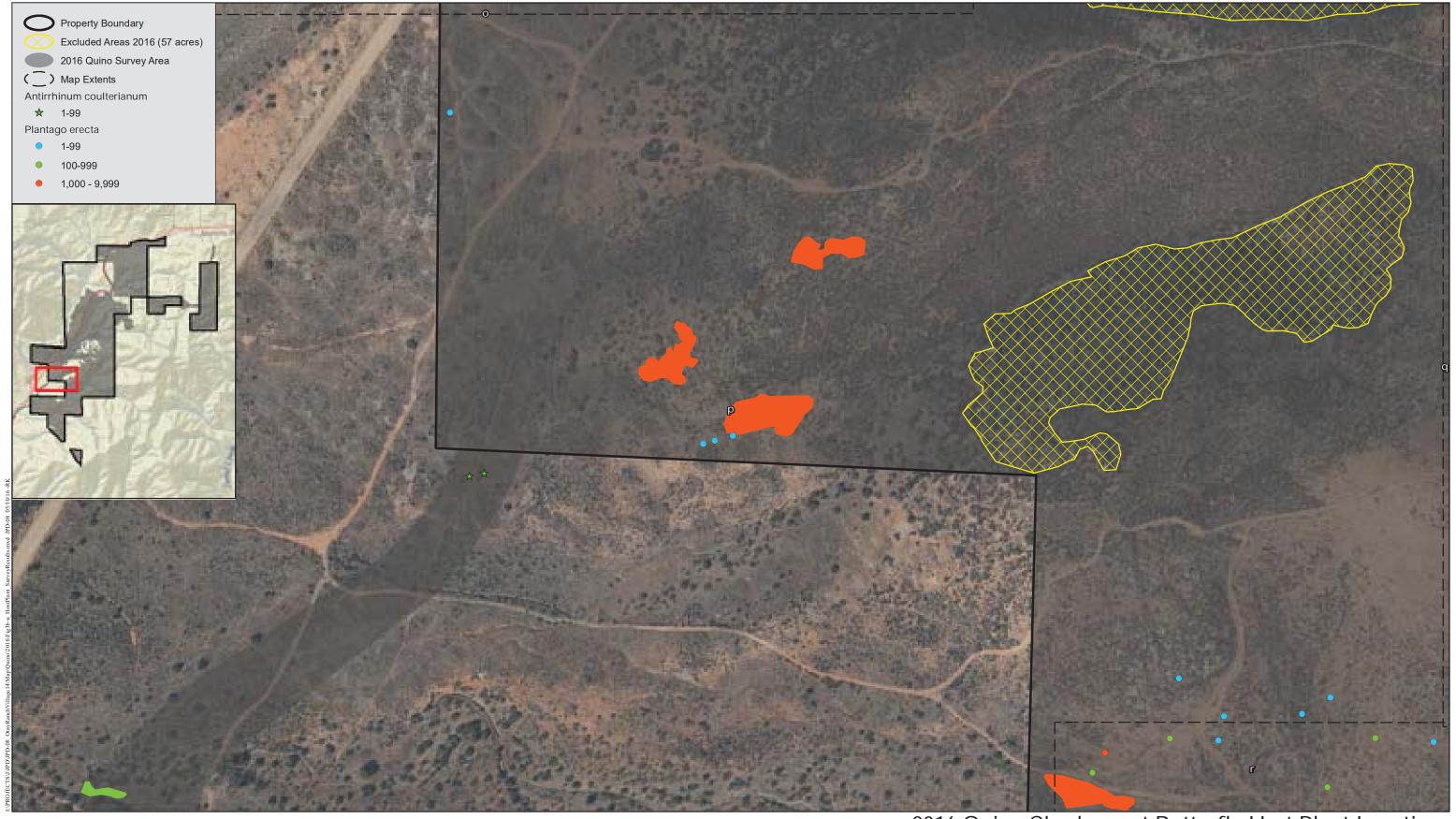




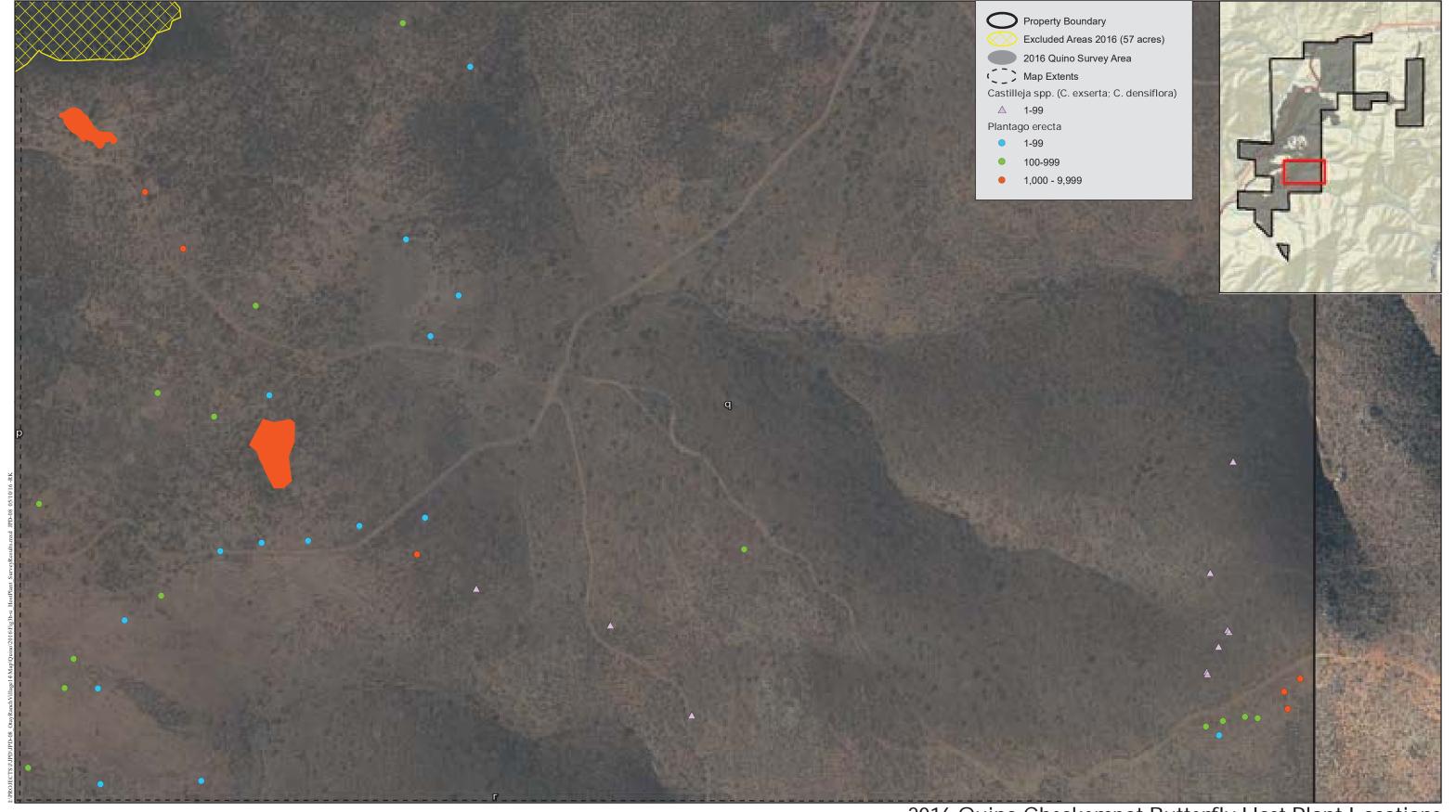
2016 Quino Checkerspot Butterfly Host Plant Locations







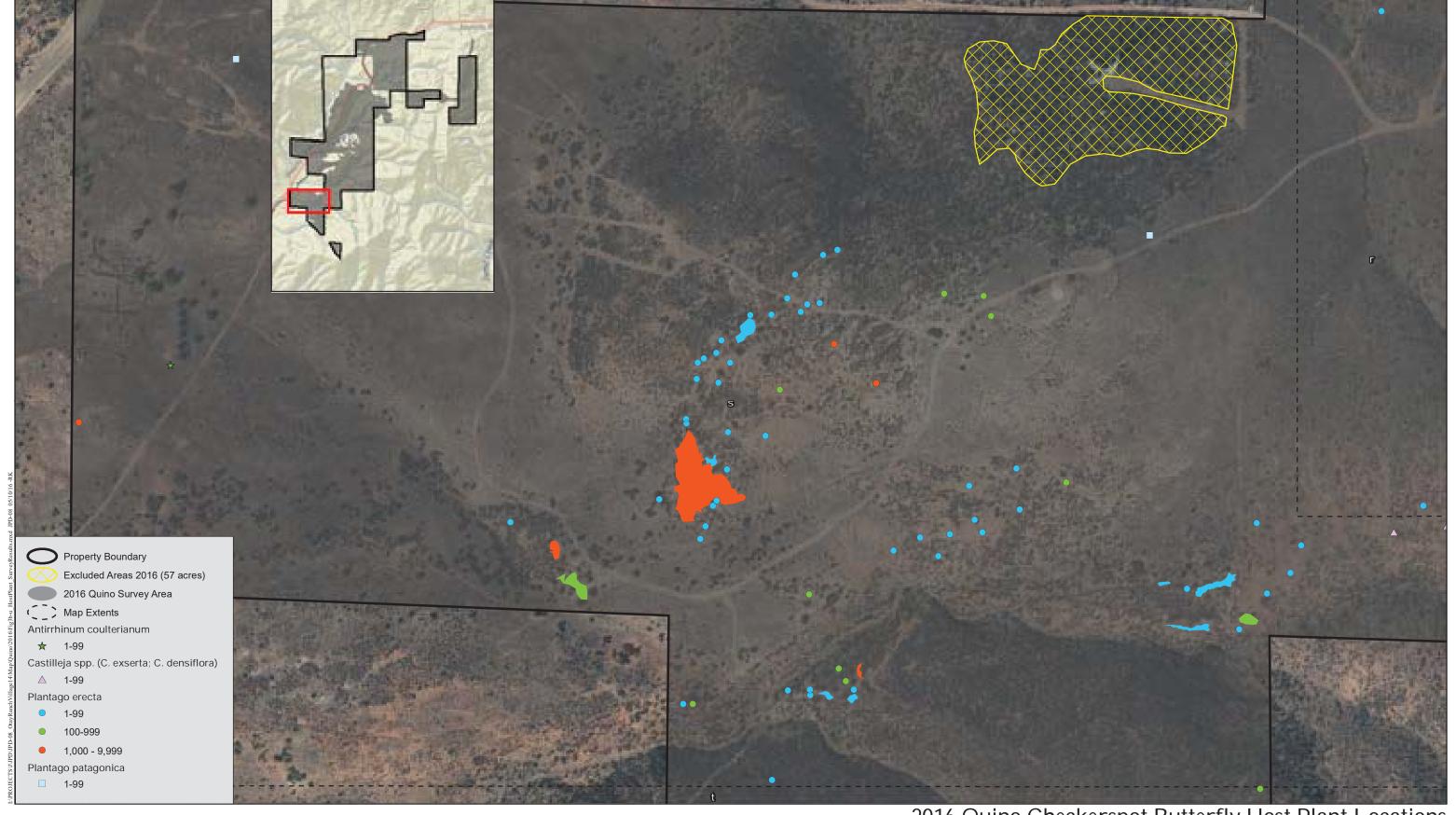
















2016 Quino Checkerspot Butterfly Host Plant Locations





2016 Quino Checkerspot Butterfly Host Plant Locations

3.0 RESULTS

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

No QCB or QCB larvae were observed within the survey area during the 2016 protocol surveys. Surveyors observed 12,624 butterfly individuals, representing at least 54 butterfly species during the five surveys. The most common butterflies observed were Behr's metalmark (*Apodemia mormo virgulti*), funereal duskwing (*Erynnis funeralis*), white (common) checkered-skipper (*Pyrgus albescens*), Common California ringlet (*Coenonympha californica*), and Sara's orangetip (*Anthocharis sara sara*).

Five larval host plant species were observed within the survey area (Figures 3a – 3u): dwarf plantain (*Plantago erecta*), purple owl's clover (*Castilleja exserta*), snapdragon (*Antirrhinum coulterianum*), woolly plantain (*Plantago patagonica*), and Chinese houses (*Collinsia* spp.).

Dwarf plantain was the most abundant larval host plant observed and recorded within the survey area. Dwarf plantain was mapped in patches of low density (1 - 100 plants), medium density (100 - 1,000 plants), and high density (1,000 - 10,000 plants). No patches with a density larger than 10,000 individuals per 250 square feet were encountered during surveys. High density patches of dwarf plantain were mapped as polygons if they were in areas larger than approximately 250 square feet.

Dwarf plantain was prevalent throughout the survey area in scattered patches of varying densities. Clusters of dwarf plantain patches were most common in the northwestern and southern portions. Most observations of dwarf plantain were of low density and located in small patches under 250 square feet. Dwarf plantain was uncommon within the northern and northeastern portions and was concentrated along hilltops and southern-facing slopes in low to medium densities. Larger patches of dwarf plantain that were recorded as polygons were found within the northwestern and southern portions of the site. The majority of these large patches were also observed during the 2015 QCB surveys (HELIX 2015); however, patches observed in 2016 were often of smaller size and lower densities that those observed in 2015. No patches greater than 10,000 plants were recorded in 2016. Dwarf plantain was recorded in more locations and was more widely distributed throughout the survey area than in 2015 (where the survey areas overlap). The highest densities of dwarf plantain tended to be observed within the southern portion of the survey area along southern-facing slopes. All dwarf plantain plants throughout the site appeared healthy and were flowering throughout all surveys. The dwarf plantain had begun to dry up and senesce during the fifth week of surveys.

All other larval host plant species were observed in low and medium densities. Host plant species were observed widely scattered throughout the project site with owl's clover (*Castilleja* spp.), which was the second-most abundant larval host plant species. Owl's clover was most common within the northwestern portion of the site but uncommon in the northeastern portion.



More chaparral portions of the project were surveyed in 2016 than in 2015, as it was not considered excluded habitat according to the 2016 USFWS Survey Protocol. However, there were few host plant areas mapped in the chaparral areas surveyed in 2016.

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 species within coastal sage scrub and was observed flowering throughout the five 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 occasionally occurred 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 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.

The 2016 QCB protocol developed in conjunction with the USFWS, County of San Diego, and Building Industry Association states: "If no Quino are observed in the first 5 weeks, surveys will continue until the flight season is over or demonstrably on the decline in the reference site as determined in coordination with the surveyor and the Service." No QCB were observed in the survey area during the five weeks of surveys for the project, and HELIX coordinated with USFWS, as required by the protocol, to determine whether the flight season was over or demonstrably on the decline in the reference site. Host plant conditions at the Marron Valley reference site had demonstrably declined in late March (2016 personal communication between Shelby Howard [HELIX] and Korey Klutz [Klutz Biological Consulting]), and a worn QCB was observed at Marron Valley on March 25. No fresh QCB had been observed since March 17, which is when a QCB was observed at San Vicente Reservoir. However, no fresh Quino had been observed in the southern portion of San Diego County since March 9 (Marron Valley).

With USFWS concurrence, HELIX proposed that additional surveys for the Proctor Valley project and preserve be conducted only if a fresh QCB observation was made at the Otay Ranch Village 13 site on March 31, 2016. Otay Ranch Village 13 was selected because of its adjacency to the project site and because a number of QCB had been observed on Village 13 during the same 2016 USFWS Survey Protocol period. The areas selected for the March 31 survey on Village 13 focused on areas where QCB exhibited territorial or hilltopping behavior and excluded locations where QCB had been observed in active flight through the area. No QCB were observed on the Village 13 site on March 31, 2016 (2016a email from Anita Hayworth [Dudek] to Shelby Howard [HELIX] and Susan Wynn [USFWS] dated March 31, 2016). On April 4, USFWS confirmed that no additional QCB surveys were necessary for the Village 14



project, consistent with the 2016 USFWS Survey Protocol (email from Eric Porter [USFWS] to Rob Cameron [Jackson Pendo] dated April 4, 2016).

QCB were observed in southern San Diego County in 2016, especially during the early portion of the flight season. During the week of February 29 through March 3, Dudek documented 15 QCB at Otay Ranch Village 13 (2016b, personal communication between Barry Jones [HELIX] and Anita Hayworth [Dudek]). The locations where QCB were documented on Village 13 were less than one mile from the southern portion of the Village 14 survey area. While surveys for Village 14 commenced prior to the QCB sightings on Village 13 and were conducted on the same days when QCB were observed on Village 13, no QCB were seen on Village 14. The 2016 survey and results are considered valid because the surveys were conducted in accordance with the 2016 USFWS Survey Protocol, QCB were documented in the immediate vicinity during the same time when surveys for Village 14 were conducted, and host plant and site conditions were adequate for detecting QCB.



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2016. Email Communication between Mr. Eric Porter with USFWS and Mr. Rob Cameron of Jackson Pendo Development Co. April 4.



Appendix A SURVEY INFORMATION

	SURVEY 1						
DATE	BIOLOGIST	ACRES	AC/HR	TIME*	WEATHER (CONDITIONS	RESULTS†
DATE	bioLogisi	HERES	AC/IIX	(start/end)	Start	End	RESCEIS
February 24, 2016	E. Harris^	42	10	0900/1312	0% cloud, 75°F, wind 4-8 mph	0% cloud, 84°F, wind 1-3 mph	No QCB Observed
February 24, 2016	G. Huffman	65	9.3	0900/1600	0% cloud, 70°F, wind 5-10 mph	0% cloud, 78°F, wind 3-6 mph	No QCB Observed
February 24, 2016	C. Brungraber $^{\psi}$	58	8	0915/1630	0% cloud, 70°F, wind 0-3 mph	0% cloud, 87°F, wind 0-3 mph	No QCB Observed
February 24,	A. Hill ^β	107	6.7	0845/1205	0% cloud, 70°F, wind 1-5 mph	0% cloud, 88°F, wind 0-1 mph	No QCB Observed
2016	T. Cooper $^{\beta}$	107	8.8	1230/1605	0% cloud, 88°F, wind 0-1 mph	0% cloud, 85°F, wind 1-3 mph	No QCB Observed
February 25, 2016	C. Brungraber ^ψ	53	6.6	0820/1615	0% cloud, 69.1°F, wind 0-3 mph	0% cloud, 80.6°F, wind 3-5 mph	No QCB Observed
February 25, 2016	G. Huffman	66	8.3	0800/1600	0% cloud, 60°F, wind 0-2 mph	0% cloud, 75°F, wind 4-6 mph	No QCB Observed
February 25, 2016	E. Harris^	55	10	0910/1440	0% cloud, 76°F, wind 0-3 mph	0% cloud, 86°F, wind 1-6 mph	No QCB Observed
February 25, 2016	E. LaCoste*	34	9.7	1200/1530	0% cloud, 87°F, wind 1-2 mph	0% cloud, 82°F, wind 2-5 mph	No QCB Observed
February 26, 2016	C. Dickson*	57	9.5	0900/1500	0% cloud, 69°F, wind 3 mph	20% cloud, 75°F, wind 1 mph	No QCB Observed
February 26, 2016	C. Brungraber ^Ψ	45	5.8	0815/1600	5% cloud, 66°F, wind 0-3 mph	80% cloud, 81°F, wind 0-5 mph	No QCB Observed
February 26,	C H-ff	20	5.4	0930/1315	10% cloud, 70°F, wind 2-5 mph	20% cloud, 82°F, wind 0-4 mph	No QCB Observed
2016	G. Huffman	30	5.4	1345/1800	20% cloud, 82°F, wind 0-4 mph	40% cloud, 74°F, wind 2-5 mph	No QCB Observed
February 26, 2016	G. Cummings*	48	9.6	0930/1430	0% cloud, 78°F, wind 1 mph	30% cloud, 79°F, wind 3-6 mph	No QCB Observed
February 26, 2016	E. LaCoste*	62	9.9	0900/1515	0% cloud, 69°F, wind 2-4 mph	0% cloud, 81°F, wind 4-7 mph	No QCB Observed
February 27, 2016	G. Huffman	55	7.3	0830/1600	0% cloud, 60°F, wind 0-1 mph	5% cloud, 75°F, wind 2-3 mph	No QCB Observed

^Signifies HELIX biologist

					SURVEY 1 (cont.)		
DATE	BIOLOGIST	ACRES	AC/HR	TIME*	WEATHER (CONDITIONS	RESULTS†
	210200101	1101120	110/1111	(start/end)	Start	End	1000010
February 27, 2016	B. Ogg*	47	8.8	0735/1315	0% cloud, 61°F, wind 0-2	0% cloud, 81°F, wind 2-6 mph	No QCB Observed
February 27, 2016	C Brungraber ^Ψ	58	7	0830/1645	10% cloud, 60°F, wind 0-1 mph	0% cloud, 78°F, wind 0-3 mph	No QCB Observed
February 27, 2016	C. Brungraber ^Ψ	47	5.3	0800/1650	0% cloud, 63°F, wind 0-3 mph	0% cloud, 76°F, wind 4-7 mph	No QCB Observed
February 27, 2016	C. Dickson*	54	9	0800/1400	0% cloud, 62°F, wind 1 mph	0% cloud, 86°F, wind 2 mph	No QCB Observed
February 27, 2016	J. Dicus M. Dicus	108	7.7	0830/1530	0% cloud, 64°F, wind 0 mph	0% cloud, 77°F, wind 3 mph	No QCB Observed
February 28, 2016	J. Dicus M. Dicus	93	6.06	0810/1550	5% cloud, 61°F, wind 0 mph	10% cloud, 72°F, wind 3 mph	No QCB Observed
February 28, 2016	C. Dickson*	55	8.8	0745/1400	0% cloud, 65°F, wind 3 mph	0% cloud, 87°F, wind 3 mph	No QCB Observed
February 28, 2016	N. Brodie [‡] B. Ogg [‡]	93	7.4	0800/1415	0% cloud, 61°F, 0-2 wind	60% cloud, 82°F, wind 0-5 mph	No QCB Observed
February 28, 2016	C. Brungraber ^Ψ	46	5.5	0810/1635	10% cloud, 66°F, wind 0-2 mph	35% cloud, 76°F, wind 3-5 mph	No QCB Observed
February 28, 2016	B. Parker*	51	8.5	0820/1420	0% cloud, 64°F, wind 0-1 mph	10% cloud, 75°F, wind 4-6 mph	No QCB Observed
February 28, 2016	G. Huffman	50	6	0800/1630	5% cloud, 60°F, wind 0-2 mph	60 cloud, 79°F, wind 0-3 mph	No QCB Observed
March 1, 2016	C. Brungraber ^Ψ	42	6	0845/1545	15% cloud, 67°F, wind 0-3 mph	5% cloud, 87°F, wind 0-3 mph	No QCB Observed
March 1, 2016	M. Rocks‡ M. Alfaro‡	99	7.9	0830/1445	1% cloud, 70°F, wind 1-2 mph	5% cloud, 79°F, wind 2-3 mph	No QCB Observed

^{*}Signifies Busby biologist

βSignifies Halcyon biologist

ΨSignifies SummitWest Biologist

*Supervised Individual

					SURVEY 2		
DATE	BIOLOGIST	ACRES	AC/HR	TIME* (start/end)		CONDITIONS	RESULTS†
				(start/enu)	Start	End	
March 2, 2016	C. Brungraber ^Ψ A. Borcher ^Ψ E. Harris^ B. Rosenbaum*	148	6.3	0830/1620	20% cloud, 67°F, wind 0-3 mph	10% cloud, 67°F, wind 1-3 mph	No QCB Observed
March 2, 2016	G. Huffman	65	8.1	0800/1600	20% cloud, 68°F, wind 1-3 mph	20% cloud, 75°F, wind 2-4 mph	No QCB Observed
March 2, 2016	M. Busby*	65	9	0920/1630	0% cloud, 77°F, wind 1-3 mph	0% cloud, 80°F, wind 3-5 mph	No QCB Observed
March 3, 2016	C. Brungraber ^Ψ A. Borcher ^Ψ	97	6.3	0815/1600	15% cloud, 60°F, wind 0 mph	90% cloud, 70°F, wind 0-3 mph	No QCB Observed
March 3, 2016	M. Busby‡ D. Busby‡ D. Saucedo‡	77	10	0900/1630	0% cloud, 65°F, wind 0-2 mph	0% cloud, 72°F, wind 3-7 mph	No QCB Observed
March 3, 2016	J. Lovio*	40	11.4	0900/1230	50% cloud, 64°F, wind 1 mph	100% cloud, 80°F, wind 1-5 mph	No QCB Observed
March 3, 2016	D. Busby*	5	10	1550/1630	100% cloud, 75°F, wind 3-7 mph	100% cloud, 72°F, wind 3-7 mph	No QCB Observed
March 4, 2016	J. Bakker^	44	9.8	1005/1435	20% cloud, 65°F, wind 0 mph	10% cloud, 74°F, wind 0-3 mph	No QCB Observed
March 4, 2016	J. Lovio*	55	10	0955/1530	80% cloud, 63°F, wind 1 mph	30% cloud, 72°F, wind 8 mph	No QCB Observed
March 4, 2016	G. Huffman E. Harris^	65	6.1	1020/1600	15% cloud, 65°F, wind 0-3 mph	60% cloud, 63°F, wind 1-6 mph	No QCB Observed
March 4, 2016	C Brungraber ^Ψ	10	5.1	1540/1645	30% cloud, 66°F, wind 0-4 mph	100% cloud, 70°F, wind 0-3 mph	No QCB Observed
March 4, 2016	G. Cummings*	51	9.7	1015/1530	40% cloud, 65°F, wind 6 mph	50% cloud, 71°F, wind 3-6 mph	No QCB Observed
March 4, 2016	C. Dickson*	60	10	0940/1545	20% cloud, 73°F, wind 2-7 mph	50% cloud, 68°F, wind 5-9 mph	No QCB Observed

SURVEY 2 (cont.)

DATE	BIOLOGIST	ACRES	AC/HR	TIME*	WEATHER (CONDITIONS	RESULTS†
				(start/end)	Start	End	'
March 4, 2016	A. Mattson[^]C. Brungraber^Ψ	97	9.7	1015/1515	5% cloud, 74°F, wind 0 mph	3% cloud, 69°F, wind 5-7 mph	No QCB Observed
March 5, 2016	J. Dicus M. Dicus	108	8	0915/1555	40% cloud, 60°F, wind 2 mph	50% cloud, 60°F, wind 2 mph	No QCB Observed
March 5, 2016	G. Huffman E. Harris	121	10	1000/1600	40% cloud, 65°F, wind 1-5 mph	100% cloud, 68°F, wind 2-7 mph	No QCB Observed
March 5, 2016	B. Parker*	33	9.4	1125/1455	40% cloud, 70°F, wind 0 mph	70% cloud, 68°F, wind 5-8 mph	No QCB Observed
March 5, 2016	C. Dickson*	42	8	0900/1411	90% cloud, 60°F, wind 2 mph	95% cloud, 71°F, wind 4 mph	No QCB Observed
March 5, 2016	D. Saucedo*	57	9.5	0915/1330	60% cloud, 64°F, wind 0-3 mph	90% cloud, 74°F, wind 0-7 mph	No QCB Observed No QCB Observed
March 5, 2016	J. Dicus M. Dicus	93	8.9	1030/1545	40% cloud, 65°F, wind 1-4 mph	50% cloud, 68°F, wind 1-3 mph	No QCB Observed
March 5, 2016	A. Hill ^β	63	9.7	0845/1535	70% cloud, 70°F, wind 1-3 mph	95% cloud, 77°F, wind 4-8 mph	No QCB Observed
March 8,	C. Brungraber ^Ψ A. Borcher ^Ψ	100		0900/1215	0% cloud, 60°F, wind 0-1 mph	0% cloud, 66°F, wind 3-5 mph	N. OCD OL
2016	E. Harris^ B. Rosenbaum*	100	6	1400/1615	0% cloud, 67°F, wind 3-5 mph	0% cloud, 66°F, wind 3-5 mph	No QCB Observed

[^]Signifies HELIX biologist *Signifies Busby biologist *Signifies Halcyon biologist *Signifies SummitWest Biologist *Supervised Individual

			SURVEY 3					
DATE	BIOLOGIST	ACRES	AC/HR	TIME*	WEATHER (CONDITIONS	RESULTS†	
21112	210200101	1101125	110/1111	(start/end)	Start	End		
March 8, 2016	C. Brungraber ^Ψ A. Borcher ^Ψ E. Harris^	30	10	1230/1330	0% cloud, 64°F, wind 3-5 mph	0% cloud, 65°F, wind 3-5 mph	No QCB Observed	
March 9, 2016	C. Brungraber ^Ψ A. Mattson^	97	9.8	0845/1505	0% cloud, 64°F, wind 0 mph	1% cloud, 74°F, wind 0-2 mph	No QCB Observed	
March 9, 2016	A. Borcher ^Ψ	60	7.5	0900/1700	0% cloud, 63°F, wind 1-3 mph	40% cloud, 68°F, wind 2-8 mph	No QCB Observed	
March 9, 2016	E. LaCoste* G. Cummings* E. Harris^ B. Rosenbaum^	152	9.4	0915/1445	0% cloud, 64°F, wind 0-1 mph	0% cloud, 75°F, wind 5-7 mph	No QCB Observed	
March 10, 2016	C. Dickson*	60	9.2	0830/1450	10% cloud, 65°F, wind 1-9 mph	10% cloud, 72°F, wind 2-5 mph	No QCB Observed	
March 10, 2016	C. Brungraber ^ψ A. Borcher ^ψ	104	7	0830/1600	10% cloud, 63°F, wind 0-2 mph	80% cloud, 74°F, wind 2-4 mph	No QCB Observed	
March 10, 2016	J. Lovio*	55	8.8	0945/1555	50% cloud, 66°F, wind 1 mph	100% cloud, 78°F, wind 5 mph	No QCB Observed	
March 10, 2016	G. Huffman	65	7.6	0800/1630	20% cloud, 64°F, wind 0-2 mph	40% cloud, 71°F, wind 3-6 mph	No QCB Observed	
March 11, 2016	C. Brungraber ^Ψ G. Brungraber*	40	9.4	1100/1515	25% cloud, 68°F, wind 2-7 mph	100% cloud, 70°F, wind 7-10 mph	No QCB Observed	
March 11, 2016	B. Ogg* B. Lohstroh* M. Alfaro* J. Lovio*	79	7.9	1045/1317	100% cloud, 63°F, wind 5-10 mph	20% cloud, 67°F, wind 8-12 mph	No QCB Observed	

SURVEY 3 (cont.) TIME* WEATHER CONDITIONS **ACRES** DATE **BIOLOGIST** AC/HR **RESULTS**† (start/end) Start End B. Ogg* March 11, B. Lohstroh 28 9.3 1415/1515 40% cloud, 65°F, wind 3-5 mph 100% cloud, 85°F, wind 5-10 mph No OCB Observed 2016 M. Alfaro* C. Dickson* March 12, B. Ogg* 39 6.6 75% cloud, 71°F, wind 0-8 mph 100% cloud, 68°F, wind 5 mph 1130/1300 No OCB Observed 2016 D. Saucedo* March 12. M. Dicus 10 45% cloud, 61°F, wind 2 mph 50% cloud, 61°F, wind 1 mph 10 1025/1055 No OCB Observed J. Dicus 2016 50% cloud, 61°F, wind 0-3 mph 65% cloud, 62°F, wind 4-8 mph No QCB Observed March 12, 0900/1100 G. Huffman 50 10 1400/1700 No QCB Observed 20% cloud, 63°F, wind 2-6 mph 10% cloud, 62°F, wind 3-6 mph 2016 March 13. B. Parker* 1100/1530 25% cloud, 75°F, wind 3-5 mph 60% cloud, 67°F, wind -10 mph No QCB Observed 75 8.3 2016 C. Dickson* 0830/1630 40% cloud, 60°F, wind 0-2 mph 40% cloud, 70°F, wind 3-7 mph No QCB Observed March 13, G. Huffman 59 7.3 2016 0830/1630 40% cloud, 60°F, wind 0-2 mph 40% cloud, 70°F, wind 3-7 mph No QCB Observed M. Dicus March 13, 100 7.4 0945/1630 30% cloud, 60°F, wind 2 mph 35% cloud, 61°F, wind 4 mph No OCB Observed J. Dicus 2016 March 13, G. Huffman 59 40% cloud, 60°F, wind 0-2 mph 40% cloud, 70°F, wind 3-7 mph No QCB Observed 7.3 0830/1630 2016 C. Brungraber^Ψ March 13, 30% cloud, 63°F, wind 0-2 mph 35% cloud, 63°F, wind 2-5 mph 43 8.6 1130/1630 No OCB Observed G. Brungraber* 2016 A. Hill^β March 13, 25% cloud, 71°F, wind 1-4 mph 9.1 1420/1645 60% cloud, 70°F, wind 2-6 mph No QCB Observed 44 T. Cooper β 2016 March 14, G. Huffman 30% cloud, 61°F, wind 0-3 mph 100% cloud, 67°F, wind 4-8 mph No QCB Observed 30 10 0830/1130 2016 March 14, A. Hill^β 63 10 1415/1725 95% cloud, 72°F, wind 2-5 mph 65% cloud, 72°F, wind 1-3 mph No QCB Observed 2016 March 15, C. Brungraber $^{\Psi}$ 68 8.3 0915/1730 0% cloud, 63°F, wind 0-1 mph 0% cloud, 74°F, wind 2-4 mph No QCB Observed 2016

SURVEY 3 (cont.)

DATE	BIOLOGIST	ACRES	AC/HR	TIME*	WEATHER C	CONDITIONS	RESULTS†
				(start/end)	Start	End	
March 15, 2016	D. Saucedo*	34	8.3	1100/1510	10% cloud, 82°F, wind 0-1 mph	0% cloud, 82°F, wind 1-5 mph	No QCB Observed
March 15, 2016	M. Dicus J. Dicus	93	6	0900/1650	5% cloud, 61°F, wind 2 mph	0% cloud, 74°F, wind 3 mph	No QCB Observed
March 15, 2016	G. Huffman	62	7.3	0830/1700	0% cloud, 60°F, wind 0-3 mph	0% cloud, 74°F, wind 2-7 mph	No QCB Observed
March 15, 2016	M. Busby* M. Rocks*	60	9.5	0930/1600	0% cloud, 63°F, wind 0-2 mph	0% cloud, 78°F, wind 4-7 mph	No QCB Observed

[^]Signifies HELIX biologist

*Signifies Busby biologist

*Signifies Halcyon biologist

*Signifies SummitWest Biologist

*Supervised Individual

					SURVEY 4		
DATE	BIOLOGIST	ACRES	AC/HR	TIME* (start/		CONDITIONS	RESULTS†
				end)	Start	End	
March 16, 2016	G. Cummings* E. LaCoste* E. Harris^	166	9.62	0815/1400	0% cloud, 64°F, wind 0-1 mph	0% cloud, 87°F, wind 4-7 mph	No QCB Observed
March 16, 2016	C. Brungraber ^Ψ	40	6.7	0900/1500	0% cloud, 67°F, wind 0-2 mph	0% cloud, 80°F, wind 2-5 mph	No QCB Observed
March 16, 2016	G. Huffman	15	5	1200/1500	0% cloud, 80°F, wind 4-8 mph	0% cloud, 78°F, wind 4-8 mph	No QCB Observed
March 16, 2016	A. Mattson^ B. Rosenbaum*	55	10	0925/1455	0% cloud, 76°F, wind 0-1 mph	0% cloud, 80°F, wind 2-8 mph	No QCB Observed
March 17, 2016	A. Mattson^	42	9.8	1025/1445	0% cloud, 79°F, wind 0-1 mph	0% cloud, 74°F, wind 0-4 mph	No QCB Observed
March 17, 2016	C. Brungraber ^Ψ	30	8	1300/1645	0% cloud, 78°F, wind 2-5 mph	0% cloud, 73°F, wind 0-3 mph	No QCB Observed
March 17, 2016	A. Hill ^β	44	8.8	0930/1430	0% cloud, 68°F, wind 0-1 mph	0% cloud, 88°F, wind 1-4 mph	No QCB Observed
March 18, 2016	C. Brungraber ^Ψ	46	8.36	1115/1645	0% cloud, 76°F, wind 0-4 mph	0% cloud, 74°F, wind 3-7 mph	No QCB Observed
March 18, 2016	G. Cummings* E. Harris	75	10	0920/1305	10% cloud, °63 F, wind 0-1 mph	0% cloud, 1-3°F, wind 1-3 mph	No QCB Observed
March 18, 2016	J. Lovio*	48	9	1055/1605	0% cloud, 70°F, wind 0 mph	0% cloud, 85°F, wind 5-8 mph	No QCB Observed
March 18, 2016	B. Lohstroh*	47	8.9	0910/1430	0% cloud, 64°F, wind 0-3 mph	0% cloud, 78°F, wind 2-7 mph	No QCB Observed
March 18, 2016	G. Huffman	65	8	0830/1630	0% cloud, 61°F, wind 2-4 mph	0% cloud, 68°F, wind 4-8 mph	No QCB Observed
March 19, 2016	C. Brungraber ^Ψ	78	10	1000/1800	5% cloud, 68°F, wind 0-3 mph	20% cloud, 65°F, wind 0-3 mph	No QCB Observed

^Signifies HELIX biologist

SURVEY 4 (cont.)

				TIME*	WEATHER (CONDITIONS	
DATE	BIOLOGIST	ACRES	AC/HR	(start/ end)	Start	End	RESULTS†
March 20, 2016	J. Dicus M. Dicus	108	7.2	0920/1650	25% cloud, 60 °F, wind 1-2 mph	20% cloud, 72 °F, wind 0-2 mph	No QCB Observed
March 20, 2016	B. Parker* C. Dickson*	57	9.3	1215/1520	5% cloud, 75°F, wind 1-3 mph	5% cloud, 75°F, wind 4-7 mph	No QCB Observed
March 20, 2016	G. Huffman	85.5	10	0900/1720	40% cloud, 60°F, wind 0-1 mph	25% cloud, 72°F, wind 0-2 mph	No QCB Observed
March 20, 2016	T. Cooper ^β	63	10	1000/1620	25% cloud, 61°F, wind 1-3 mph	5% cloud, 78°F, wind 4-7 mph	No QCB Observed
March 20, 2016	B. Parker# C. Dickson # A. Smisek*	34	6.8	0945/1215	5% cloud, 62°F, wind 1-3 mph	5% cloud, 75°F, wind 1-3 mph	No QCB Observed
March 21, 2016	J. Dicus M. Dicus	93	6.6	0930/1630	10% cloud, 60 °F, wind 1-2 mph	15% cloud, 70 °F, wind 5-6 mph	No QCB Observed
March 21, 2016	M. Alfaro*	57	9.25	0925/1536	30% cloud, 63°F, wind 1-2 mph	50% cloud, 76°F, wind 6-8 mph	No QCB Observed
March 21, 2016	C. Brungraber ^Ψ N. Kimball ^Ψ	93	6	0930/1715	40% cloud, 60°F, wind 0-1 mph	45% cloud, 69°F, wind 5-10 mph	No QCB Observed
March 22, 2016	G. Huffman	85.5	10	0900/1730	45% cloud, 60°F, wind 3-8 mph	15% cloud, 64°F, wind 2-8 mph	No QCB Observed
March 23, 2016	C. Brungraber ^Ψ N. Kimball ^Ψ	58	8.9	1400/1715	0% cloud, 81°F, wind 3-5 mph	0% cloud, 81°F, wind 4-7 mph	No QCB Observed
March 23, 2016	G. Cummings*	54	9.8	0920/1450	0% cloud, 62°F, wind 3 mph	0% cloud, 77°F, wind 2-10 mph	No QCB Observed
March 23, 2016	D. Busby*	62	~9	1000/1645	0% cloud, 73°F, wind 0-2 mph	0% cloud, 75°F, wind 5-8 mph	No QCB Observed

^βSignifies Busby biologist ^βSignifies Halcyon biologist ^ΨSignifies SummitWest Biologist *Supervised Individual

		SURVEY 5					
DATE	BIOLOGIST	ACRES	AC/HR	TIME* (start/	WEATHER (CONDITIONS	RESULTS†
				end)	Start	End	'
March 23, 2016	D. Busby [‡]	82	9	1000/1645	0% cloud, 73°F, wind 0-2 mph	0% cloud, 75°F, wind 5-8 mph	No QCB Observed
March 23, 2016	C. Brungraber ^Ψ	50	10	0900/1400	0% cloud, 61°F, wind 0-2 mph	0% cloud, 81°F, wind 4-7 mph	No QCB Observed
March 24, 2016	J. Lovio*	48	9	1000/1500	0% cloud, 76°F, wind 2 mph	0% cloud, 83°F, wind 5-10 mph	No QCB Observed
March 24, 2016	A. Mattson^	42	9.5	1120/1545	0 % cloud, 79°F, wind 0-1 mph	0% cloud, 82°F, wind 0-6 mph	No QCB Observed
March 24, 2016	G. Huffman	30	8.1	0830/1330 1400/1700	0% cloud, 63°F, wind 0-2 mph 0% cloud, 82°F, wind 2-4 mph	0% cloud, 81°F, wind 2-4 mph 0% cloud, 76°F, wind 2-6 mph	No QCB Observed
March 24, 2016	C. Brungraber ^Ψ N. Kimball ^Ψ	108	6.1	0915/1800	0% cloud, 72°F, wind 0-2 mph	0% cloud, 79°F, wind 0-3 mph	No QCB Observed
March 25, 2016	A. Mattson^ T. Rachels*	55	9.8	0915/1450	0% cloud, 71°F, wind 0 mph	50% cloud, 79°F, wind 0-3 mph	No QCB Observed
March 25, 2016	E. LaCoste* E. Harris^ H. Sadowski*	91	9.8	0830/1310	0 % cloud, 63°F, wind 0-1 mph	0% cloud, 82°F, wind 4-7 mph	No QCB Observed
March 25, 2016	G. Huffman	40	5	0830/1630	0% cloud, 66°F, wind 1-4 mph	20% cloud, 73°F, wind 3-8 mph	No QCB Observed
March 25, 2016	C. Brungraber ^Ψ G. Brungraber*	46	10	1330/1800	30% cloud, 76°F, wind 2-5 mph	0% cloud, 72°F, wind 0-3 mph	No QCB Observed
March 25, 2016	B. Parker*	62	9.9	0915/1530	0% cloud, 63°F, wind 3-5 mph	0% cloud, 74°F, wind 5-8 mph	No QCB Observed
March 25, 2016	B. Lohstroh≠	57	9.2	0840/1450	0% cloud, 64°F, wind 0-1 mph	0% cloud, 86°F, wind 0-4 mph	No QCB Observed
March 26, 2016	R. Owens*	42	7	0835/1425	0% cloud, 62°F, wind 0 mph	0% cloud, 74°F, wind 0 mph	No QCB Observed
March 26, 2016	N. Brodie [‡] B. Ogg [‡] A. Smisek*	55	8.9	1230/1540	0% cloud, 69°F, wind 2-6 mph	0% cloud, 80°F, wind 2-9 mph	No QCB Observed
March 26, 2016	N. Brodie [‡] B. Ogg [‡]	60	10	0915/1215	0% cloud, 61°F, wind 0-2 mph	0% cloud, 69°F, wind 2-6 mph	No QCB Observed

SURVEY 5 (cont.)

DATE	BIOLOGIST	ACRES	AC/HR	TIME* (start/	WEATHER (CONDITIONS	RESULTS†
Ditte	DIOLOGIST	TORES	110/1110	end)	Start	End	KESCETS
March 27, 2016	N. Brodie [‡] B. Ogg [‡]	51	8.5	0945/1245	5% cloud, 62°F, wind 1-3 mph	10% cloud, 76°F, wind 4-8 mph	No QCB Observed
March 27, 2016	R. Owens* Patrick Hord*	47	8.5	0810/1340	0% cloud, 61°F, wind 0 mph	0% cloud, 73°F, wind 3 mph	No QCB Observed
March 27, 2016	N. Brodie [‡] B. Ogg [‡]	33	8.6	1300/1455	10% cloud, 76°F, wind 4-8 mph	15% cloud, 78°F, wind 2-8 mph	No QCB Observed
March 27, 2016	G. Huffman	61	7.6	0830/1630	0% cloud, 60°F, wind 2-4 mph	0% cloud, 70°F, wind 3-8 mph	No QCB Observed
March 27, 2016	A. Hill ^β T. Cooper ^β	137	10	0850/1420	0% cloud, 68°F, wind 0-1 mph	0% cloud, 78°F, wind 2-5 mph	No QCB Observed
March 27, 2016	M. Dicus J. Dicus	133	8.3	0845/1645	0% cloud, 63°F, wind 1 mph	1% cloud, 72°F, wind 5 mph	No QCB Observed
March 27, 2016	C. Brungraber ^Ψ N. Kimball ^Ψ G. Brungraber*	72	5.8	0945/1600	0% cloud, 66°F, wind 0-1 mph	2% cloud, 74°F, wind 4-7 mph	No QCB Observed
March 29, 2016	C. Brungraber ^Ψ	30	9.2	1100/1415	35% cloud, 60°F, wind 4-9 mph	40% cloud, 63°F, wind 4-9 mph	No QCB Observed
March 29, 2016	M. Dicus J. Dicus	68	8	1200/1615	30% cloud, 60°F, wind 2 mph	40% cloud, 60°F, wind 7-9 mph	No QCB Observed
March 30, 2016	G. Huffman	55	9	0830/1130 1400/1700	10% cloud, 60°F, wind 2-4 mph 50% cloud, 58°F, wind 2-6 mph	70% cloud, 58°F, wind 3-8 mph 30% cloud, 60°F, wind 3-8 mph	No QCB Observed
March 31, 2016	G. Huffman	65	8.1	0830/1630	0% cloud, 60°F, wind 2-5 mph	1% cloud, 63°F, wind 3-8 mph	No QCB Observed
March 31, 2016	C. Brungraber ^Ψ	30	7.5	1315/1715	0% cloud, 75°F, wind 4-7 mph	2% cloud, 67°F, wind 4-9 mph	No QCB Observed
March 31, 2016	R. Owens*	54	8.3	0805/1420	0% cloud, 60°F, wind 0 mph	0% cloud, 71°F, wind 4 mph	No QCB Observed

[^]Signifies HELIX biologist *Signifies Busby biologist *Signifies Halcyon biologist *Signifies SummitWest Biologist *Supervised Individual

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Appendix B

SURVEY FORMS AND FIELD NOTES

Surveyor: C Dickson		oot Butterfly Survey Form	
		Date: 2/28/16 Site Visit No: _/	
Site Name: JPD-08 Proctor Valley – Village 1	4 of Otay Ranch	Site Visit No: $\frac{1}{\mathcal{E}.\mathcal{B}}$	
	/ey Time:(ø	Acres per Hour: C.O	
Other Surveyors Present: NA			
	Field C	Conditions	_
Time (24 hr) T	emperature ('F)) Wind Speed (mph) Cloud Cove	r
Start 0745	152	3.1 090	
End 1400	65.2 86.7	2.5 0%	
	00.7	2.3	
Start			
End			
Vegetation Communities Surveyed (inc. dom	inant spp.)		
CSS/NNG/CHAP	=======================================		
Host Plants	Obs.	Nectar Plants	Obs.
dwarf plantain (Plantago erecta)	N	popcorn flower (Cryptantha/Plagiobothrys spp.)	X
purple owl's clover (Castilleja exserta)	N	goldfields (Lasthenia spp.)	N
snapdragon (Antirrhinum coulterianum)	N	goldenstar (Muilla spp.)	N
birds-beak (Cordylanthus rigidus)	N	fiddleneck (Amsinckia menziesii var. intermedia)	N
woolly plantain (Plantago patagonica)	N.	onion (Allium spp.)	X
Chinese houses (Collinsia spp.)	N	buckwheat (Eriogonum fasciculatum)	X
		ground pink (Linanthus dianthiflorus)	N
Host Plant Mapping Updated (circle) Yes	(No)	New Area of Existing Area (circle) New Existing	Both
Species updated (list)			
Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (Chlosyne californica)		great purple hairstreak (Atlides halesus corcorani)	
Gabb's checkerspot (C. gabbii)		brown elfin (Callophrys augustinus)	_
Quino checkerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	
chalcedon checkerspot (E. chalcedona chalcedo	na)	gray hairstreak (Strymon melinus pudica)	
Leanira checkerspot (Thessalia leanira wrighti)		Ladies/Admirals	
Mylitta crescent (Phyciodes mylitta)		California sister (Adelpha bredowii californica)	
Blues		Lorquin's admiral (Limenitis lorquini)	
western pygmy-blue (<i>Brephidium exila</i>) western tailed blue (<i>Everes amyntula</i>)		west coast lady (Vanessa annabella)	
southern blue (Glaucopsyche lygdamus australis	6) <i>U</i>	red admiral (V. atalanta rubria) painted lady (V. cardui)	1
Edward's blue (Hemiargus ceraunus gyas)	,	American (Virginia) lady (V. virginiensis)	
Acmon blue (Icaricia acmon acmon)		unidentified lady (<i>Vanessa</i> sp.)	
marine blue (Leptotes marina)		Swallowtails	
unidentified blue		pale swallowtail (Papilio eurymedon)	
Whites		western tiger swallowtail (P. rutulus)	
Sara orangetip (Anthocharis sara sara)	14	anise swallowtail (P. zelicaon)	
desert (Felder's) orangetip (A. cethura)		Miscellaneous	
common California ringlet (Coenonympha californ		monarch (Danaus plexippus)	
cabbage white (Pieris rapae)	2	common buckeye (Junonia coenia grisea)	10.0
checkered (common) white (Pontia protodice)		mourning cloak (Nymphalis antiopa)	
spring white (P. sisymbrii)		Skippers	-
unidentified white		funereal duskywing (Erynnis funeralis)	5
Metalmarks Behr's metalmark (Apodemia mormo virgulti)	11	mournful duskywing (<i>Erynnis tristis</i>) flery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)	4		
Sulphurs	332	white (common) checkered-skipper (<i>Pyrgus albescens</i>) Other	
orange sulphur (Colias eurytheme)	u	Other	
sleepy orange (Eurema nicippe)		(8	
cloudless sulfur (<i>Phoebus sennae marcellina</i>)	201		
unidentified sulphur			
Column Sul	ototal 29	Column Subtotal	6

Total

Surveyor Chez Brungraber

Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch

Acres Surveyed 47 (26th (20)

Acres Surveyed 47 (cast (AA) Survey Time: 8.83 hrs (8hrs0m) Acres per Hour: 5.32
Other Surveyors Present:

	Time (241)	Field Co	onditions	
0	Time (24 hr)	Temperature ('F)	Wind Speed (mph)	Cloud Cover
Start	0800	63.1	0-3	0
End	1650	75.5	4-7	0
Start		13.0	1	
End				

Vegetation Communities Surveyed (inc. dominant spp.)

Native burch grass grassland (Stipa sp., Sdanunsp., Mirahitis laevis, Dichelusterma capitata, Malacothemnus)
open Malasna chaparal w/some chamie + Rhamus thereta crocea

Host Plants	Obs.	Nectar Plants	Obs.
dwarf plantain (Plantago erecta)		popcorn flower (Cryptantha/Plagiobothrys spp.)	flor - M
purple owl's clover (Castilleja exserta)		goldfields (Lasthenia spp.)	Awr
snapdragon (Antirrhinum coulterianum)	Aw	goldenstar (Muilla spp.)	
birds-beak (Cordylanthus rigidus)		fiddleneck (Amsinckia menziesii var. intermedia)	Aur
woolly plantain (Plantago patagonica)		onion (Allium spp.)	flur
Chinese houses (Collinsia spp.)		buckwheat (Eriogonum fasciculatum)	ves
		ground pink (Linanthus dianthiflorus)	IRIWI
Host Plant Mapping Updated (circle) Yes	No	New Area or Existing Area (circle) New Existing	Both
Species updated (list)			

Butterfly Species	No.	Butterfly Species	110.
Checkerspots	-	Hairstreaks	
California patch (Chlosyne californica)		great purple hairstreak (Atlides halesus corcorani)	
Gabb's checkerspot (C. gabbii)		brown elfin (Callophrys augustinus)	
Quino checkerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	
chalcedon checkerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica)	1
Leanira checkerspot (Thessalia leanira wrighti)		Ladies/Admirals	
Mylitta crescent (Phyciodes mylitta)		California sister (Adelpha bredowii californica)	
Blues		Lorquin's admiral (Limenitis lorquini)	
western pygmy-blue (Brephidium exila)		west coast lady (Vanessa annabella)	
western tailed blue (Everes amyntula)		red admiral (V. atalanta rubria)	
southern blue (Glaucopsyche lygdamus australis)	MITHE	painted lady (V. cardui)	
Edward's blue (Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis)	
Acmon blue (Icaricia acmon acmon)		unidentified lady (Vanessa sp.)	11
marine blue (Leptotes marina)	1	Swallowtails	
unidentified blue	111	A STATE OF THE PROPERTY OF THE	6
Whites		western tiger swallowtail (P. rutulus)	
	WHITHIH	anise swallowtail (P. zelicaon)	11
desert (Felder's) orangetip (A. cethura)		Miscellaneous	
common California ringlet (Coenonympha californica)	PIN WILHTLE	monarch (Danaus plexippus)	
cabbage white (Pieris rapae)		common buckeye (Junonia coenia grisea)	
checkered (common) white (Pontia protodice)		mourning cloak (Nymphalis antiopa)	
spring white (P. sisymbrii)		Skippers	
unidentified white	LAT III	funereal duskywing (Erynnis funeralis)	UKI
Metalmarks		mournful duskywing (Erynnis tristis)	
Behr's metalmark (Apodemia mormo virgulti)	WY HILLER CH	fiery skipper (Hylephila phyleus)	
Wright's metalmark (Calephelis wrighti)	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	white (common) checkered-skipper (Pyrgus albescens)	1
Sulphurs		Other	
orange sulphur (Colias eurytheme)			
sleepy orange (Eurema nicippe)			
cloudless sulfur (Phoebus sennae marcellina)			
inidentified sulphur			
Column Subtotal	120	Column Subtotal	13
		Total	133

(1) HITHITH

2016 Quino Checkerspot Butterfly Survey Form

Surveyor: N. Brodu & B. Co	9 (TE 19546-Z + 134338-2)	Date: 28 Feb 2016
Site Name: JPD-08 Proctor Valley - Vi	lage 14 of Otay Ranch - Poly B	Site Visit No:
Acres Surveyed 60	Survey Time: 3 hrs 25 min X2 Ac	cres per Hour: 8.8
Other Surveyors Present: -		

	Field Conditions					
	Time (24 hr)	Temperature (*F)	Wind Speed (mph)	Cloud Cover		
Start	0800	6	0-2	0% clear		
End	0 920	63	0-2	15%		
Start	1210	75°	9-10	60% thin, high		
End	1415	82°	0-5	60% thin, high		

Vegetation Communities Surveyed (inc. dominant spp.)	
coastal sage sont (Eribs, Artcal)	
charparval (Adelas Ceatom)	

Host Plants	Obs.	Nectar Plants	Obs.
dwarf plantain (Plantago erecta)	V	popcorn flower (Cryptantha/Plagiobothrys spp.)	1
purple owl's clover (Castilleja exserta)		goldfields (Lasthenia spp.)	
snapdragon (Antirrhinum coulterianum)		goldenstar (Muilla spp.)	-
birds-beak (Cordylanthus rigidus)		fiddleneck (Amsinckia menziesii var. intermedia)	
woolly plantain (Plantago patagonica)		onion (Allium spp.)	~
Chinese houses (Collinsia spp.)		buckwheat (Eriogonum fasciculatum)	~
		ground pink (Linanthus dianthiflorus)	
Host Plant Mapping Updated (circle) Yes	(No)	New Area or Existing Area (circle) New Existing	Both
Species undated (list)		V - 1	

+ Diccap Bahlac

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	I KANDON KINASTA
California patch (Chlosyne californica)		great purple hairstreak (Atlides halesus corcorani)	
Gabb's checkerspot (C. gabbii)		brown elfin (Callophrys augustinus)	
Quino checkerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	
chalcedon checkerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica)	1
Leanira checkerspot (Thessalia leanira wrighti)		Ladies/Admirals	
Mylitta crescent (Phyciodes mylitta)		California sister (Adelpha bredowii californica)	
Blues		Lorquin's admiral (Limenitis Iorquini)	
western pygmy-blue (Brephidium exila)		west coast lady (Vanessa annabella)	
western tailed blue (Everes amyntula)		red admiral (V. atalanta rubria)	
southern blue (Glaucopsyche lygdamus australis)		painted lady (V. cardui)	3
Edward's blue (Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis)	2
Acmon blue (Icaricia acmon acmon)	-8	unidentified lady (Vanessa sp.)	_1_
marine blue (Leptotes marina)	2	Swallowtails	
unidentified blue	3	pale swallowtail (Papilio eurymedon)	Against acc
Whites		western tiger swallowtail (P. rutulus)	A10 (
Sara orangetip (Anthocharis sara sara)	16	anise swallowtail (P. zelicaon)	1
desert (Felder's) orangetip (A. cethura)		Miscellaneous	
common California ringlet (Coenonympha californica)		monarch (Danaus plexippus)	
cabbage white (Pieris rapae)		common buckeye (Junonia coenia grisea)	0- 3400
checkered (common) white (Pontia protodice)		mourning cloak (Nymphalis antiopa)	
spring white (P. sisymbril)		Skippers	
unidentified white	2	funereal duskywing (Erynnis funeralis) : [1]	9
Metalmarks		mournful duskywing (Erynnis tristis)	
Behr's metalmark (Apodemia mormo virgulti) און און און און	12	fiery skipper (Hylephila phyleus)	
Wright's metalmark (Calephelis wrighti)		white (common) checkered-skipper (Pyrgus albescens)	2
Sulphurs		Other	
orange sulphur (Colias eurytheme)		approxima Harfords sviking NI	3
sleepy orange (Eurema nicippe)		Erynnis sp. III	3
cloudless sulfur (Phoebus sennae marcellina)			111000000
unidentified sulphur \(\(\)	3		and the second
Column Subtotal	38	Column Subtotal	25
		Total	63

actes Sin	e: JPD-08 Proctor Valley - Village 14	ofo	Papot Butterfly Survey Form Date: 2/28//6	
Other o	e: JPD-08 Proctor Valley - Village 14 rveyed BB - 4k cures Surve	of Otay Ranch	Date: 0/00/16	
other Su	rveyors Present: Surve	y Time: 8h-	Site Visit No:	
		by Time: Bhr	Acres per Hour: 5.5	
Start	Time (24 hr)	Fie	ld Conditions	
End			Wind Speed (seek)	
	1635	06.1	Wind Speed (mph) Cloud Co	over
Start	7	6.3	0-2 10%	
End			3-5 35%	
Venetati				
o derati	on Communities Surveyed (inc. domin			
Chani	Se Classa (nant spp.)		
buck	Line (schib oak, char	misel NNG	(2	
VICE	when somb (Enios fair	011	(Bromus dia, Endium sp. D. Capitata,	A menzi
Host Pla	nts	THUM SP, D	(Bromus dia, Endium sp., D. Capitata, 1 Capitata, Stipa sp.)	
dwarf pla	ntain (Plantago erecta)	Obs.	Nectar Plants	
Laubic Of	VIS Clover (Castillain average)	ELWI	popcorn flower (Cryptantha/Plagiobothrys spp.)	
- inabaila	On (Antimhinum coultories)		goldfields (Lasthenia spp.)	5 W
211 43 106	in (Cordvianthus rigidus)	-	goldenstar (Muilla spp.)	
WOOlly DI	antain (Plantago natagonias)		fiddleneck (Amsinckia menziesii var. intermedia)	CL
Chinese	houses (Collinsia spp.)	Aur	onion (Allium spp.)	Sur
		flur	buckwheat (Eriogonum fasciculatum)	flur
Host Pla	nt Mapping Updated (circle) Yes	100 11	ground pink (Linanthus dianthiflorus)	FLWI
Species	updated (list) tons of Di. 1.		New Area or Existing Area (circle) New Existing	Both
	- rentago	- will ons	it plant team did not, but I don't have map	suet
Butterfly		No.	Butterfly Species	
Checkers		-	Hainstreaks	No.
California	patch (Chlosyne californica)		great purple hairstreak (Atlides halesus corcorani)	
Outpook	neckerspot (C. gabbii)		brown elfin (Callophrys augustinus)	
chalanda	eckerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	11
Loopise	n checkerspot (E. chalcedona chalcedona	a)	gray hairstreak (Strymon melinus pudica)	1
Mulitta or	heckerspot (Thessalia leanira wrighti)		Ladles/Admirals	1
Blues	escent (Phyciodes mylitta)		California sister (Adelpha bredowii californica)	
the contract of the contract of	oygmy-blue (Brephidium exila)		Lorquin's admiral (Limenitis lorquini)	
western t	ailed blue (Everes amyntula)	11	west coast lady (Vanessa annabella)	
	blue (Glaucopsyche lygdamus australis)		red admiral (V. atalanta rubria)	
	blue (Hemiargus ceraunus gyas)		painted lady (V. cardui)	
CONTRACTOR OF THE	ue (Icaricia acmon acmon)		American (Virginia) lady (V. virginiensis)	
	ue (Leptotes marina)		unidentified lady (Vanessa sp.) Swallowtails	11)
unidentifi		144111	pale swallowtail (Papilio eurymedon)	
Whites		NO III	western tiger swallowtail (P. rutulus)	
	getip (Anthocharis sara sara)	HH HH WINDE	anise swallowtail (P. zelicaon)	
	elder's) orangetip (A. cethura)	The state of	Miscellaneous	
	California ringlet (Coenonympha californio	(a) (1)(monarch (Danaus plexippus)	
	white (Pieris rapae)		common buckeye (Junonia coenia grisea)	
checkered	(common) white (Pontia protodice)		mourning cloak (Nymphalis antiopa)	
	ite (P. sisymbrii)		Skippers	
unidentifie		JK (1)	funereal duskywing (Erynnis funeralis)	
Vetalmar	ks		mournful duskywing (Erynnis tristis)	
Behr's me	talmark (Apodemia mormo virgulti)	111 Uturatur		
	etalmark (Calephelis wrighti)	12 17 17 17	white (common) checkered-skipper (Pyrgus albescens)	1
ulphurs			Other Widowhed Will	4
	ohur (Colias eurytheme)	1	MINION COMPA	1
range suit	TOTAL CONTROL OF THE PROPERTY			
	ige (Eurema nicippe)			
eepy orar	nge (Eurema nicippe) ulfur (Phoebus sennae marcellina)			

2016 Quino Checkerspot Butterfly Survey Form Surveyor: N. Brodin (TE 135948-Z) 28 Feb 2016 Poly C Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch Site Visit No: Survey Time: 2h 30m x2 Acres per Hour: 6.6 Acres Surveyed (TE 134338-2) B. 000 Other Surveyors Present: Field Conditions Wind Speed (mph) Cloud Cover Time (24 hr) Temperature (°F) 15% 63° Start 12-2 End Start high, thin clouds 9-10, gust to 15 10% End 1200 Vegetation Communities Surveyed (inc. dominant spp.) Scrub (Erifas, Artcal) (Adefas, ceatom) Chaparra **Host Plants** Obs. **Nectar Plants** Obs popcorn flower (Cryptantha/Plagiobothrys spp.) your. dwarf plantain (Plantago erecta) bluedicker goldfields (Lasthenia spp.) purple owl's clover (Castilleja exserta) shooting snapdragon (Antirrhinum coulterianum) goldenstar (Muilla spp.) fiddleneck (Amsinckia menziesii var. intermedia) birds-beak (Cordylanthus rigidus) Bahlac woolly plantain (Plantago patagonica) onion (Allium spp.) buckwheat (Eriogonum fasciculatum) Chinese houses (Collinsia spp.) ground pink (Linanthus dianthiflorus) Host Plant Mapping Updated (circle) (No) New Area or Existing Area (circle) New Existing Both Species updated (list) **Butterfly Species Butterfly Species** No. Checkerspots Hairstreaks California patch (Chlosyne californica) great purple hairstreak (Attides halesus corcorani) Gabb's checkerspot (C. gabbii) brown elfin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dumetorum affinis) Quino checkerspot (Euphydryas editha quino) chalcedon checkerspot (E. chalcedona chalcedona) gray hairstreak (Strymon melinus pudica) Leanira checkerspot (Thessalia leanira wrighti) Ladies/Admirals Mylitta crescent (Phyciodes mylitta) California sister (Adelpha bredowii californica) Blues Lorquin's admiral (Limenitis lorquini) western pygmy-blue (Brephidium exila) west coast lady (Vanessa annabella) western tailed blue (Everes amyntula) red admiral (V. atalanta rubria) southern blue (Glaucopsyche lygdamus australis) painted lady (V. cardui) Edward's blue (Hemiargus ceraunus gyas) American (Virginia) lady (V. virginiensis) | | unidentified lady (Vanessa sp.) Acmon blue (Icaricia acmon acmon) marine blue (Leptotes marina) **Swallowtails** unidentified blue 2 pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) Sara orangetip (Anthocharis sara sara)| W W W 260 anise swallowtail (P. zelicaon) desert (Felder's) orangetip (A. cethura) Miscellaneous common California ringlet (Coenonympha californica) monarch (Danaus plexippus) cabbage white (Pieris rapae) common buckeye (Junonia coenia grisea) checkered (common) white (Pontia protodice) mourning cloak (Nymphalis antiopa) spring white (P. sisymbrii) Skippers funereal duskywing (Erynnis funeralis) unidentified white 2 mournful duskywing (Erynnis tristis) Metalmarks Behr's metalmark (Apodemia mormo virgulti) | i|(4 fiery skipper (Hylephila phyleus) Wright's metalmark (Calephelis wrighti) white (common) checkered-skipper (Pyrgus albescens)

Erynnis sp.

Column Subtotal

12

Sulphurs

orange sulphur (Colias eurytheme)

cloudless sulfur (Phoebus sennae marcellina)

VIII

Column Subtotal

sleepy orange (Eurema nicippe)

unidentified sulphur

Star,

Area Cum		Village 14 of		rspot Butterfly Survey Form	3/1/6	
Other Sulfy	eyed CC Acre	es Surveyed	Jay Ranch	Site Visit No:	-1	
Other Sun	veyors Present:	3 Surveyed	42	Survey Time: 7hrs	Acres per Hour:	(
				7.00	Acres per riour.	
Start	Time (24 hr)	Temp	Fie erature ('F)	ld Conditions		
	0845	1.6	media (L)	Wind Speed (mph)	Cloud Co	var
End	1545	66.		0-3	15%	
Start	1010	87.	1	0-3	1000	
End					5%	
Vegetatio	- 0-					
Ol	n Communities Surveyed (inc. dominan	t snn)			
Chamise	e chap (change)	-1-1-1	торр.ј			
native	busel bushise, b	uckulat	, NNG	(Avena so Bonaus a Ent	War All	1
VIVI IIVE	sinch grassland (Stipa sp.	blue the	(Avera sp. Bronns sp. End.	my a dur an	
Host Plan	its	1 11		B, solanum sp, Sisyi-bel)		
dwarf plan	ntain (Plantago erecta)		Obs.	Nectar Plants		
purple ow	l's clover (Castilleja exserta)		fur	popcorn flower (Cryptantha/Plagiobo	thrys spp.)	41
snapdrago	on (Antirrhinum coulterianum	1		goldfields (Lasthenia spp.)		A
birds-beal	k (Cordylanthus rigidus))		goldenstar (Muilla spp.)		
woolly pla	intain (Plantago patagonica)			fiddleneck (Amsinckia menziesii var.	intermedia)	
Chinese h	nouses (Collinsia spp.)			onion (Allium spp.)		
				buckwheat (Eriogonum fasciculatum)		46
Host Plan	nt Mapping Updated (circle)	Yes	No	ground pink (Linanthus dianthiflorus) New Area or Existing Area (circle)	New Fateries	13
Species	updated (list)		()	New Area or Existing Area (Circle)	New Existing	
Butterfly :			No.	Butterfly Species		
Checkers		-		Hairstreaks		
	patch (Chlosyne californica)		1	great purple hairstreak (Atlides halesu	s corcorani)	
	eckerspot (C. gabbii)			brown elfin (Callophrys augustinus)		
	eckerspot (Euphydryas editha					
				pramble (perplexing) hairstreak (C. du	metorum affinis)	
	checkerspot (E. chalcedona			bramble (perplexing) hairstreak (C. du gray hairstreak (Strymon melinus pudi		
Leanira ch	n checkerspot (<i>E. chalcedona</i> neckerspot (<i>Thessalia leanira</i>			gray hairstreak (C. du gray hairstreak (Strymon melinus pudi Ladies/Admirals		
Mylitta cre	neckerspot (<i>Thessalia leanira</i> escent (<i>Phyciodes mylitta</i>)			gray hairstreak (Strymon melinus pudi Ladies/Admirals	ca)	
	neckerspot (<i>Thessalia leanira</i> escent (<i>Phyciodes mylitta</i>)			gray hairstreak (Strymon melinus pudi	ca)	
Mylitta cre Blues western p	neckerspot (<i>Thessalia leanira</i> escent (<i>Phyciodes mylitta</i>) ygmy-blue (<i>Brephidium exila</i>)	wrighti)		gray hairstreak (Strymon melinus pudi Ladies/Admirals California sister (Adelpha bredowii cal	ca)	
Mylitta cre Blues western p	neckerspot (<i>Thessalia leanira</i> escent (<i>Phyciodes mylitta</i>) ygmy-blue (<i>Brephidium exila</i>) ailed blue (<i>Everes amyntula</i>)	wrighti)		gray hairstreak (Strymon melinus pudi Ladies/Admirals California sister (Adelpha bredowii cal Lorquin's admiral (Limenitis lorquini)	ca)	
Mylitta cre Blues western p western ta southern ta	neckerspot (Thessalia leanira escent (Phyciodes mylitta) ygmy-blue (Brephidium exila) ailed blue (Everes amyntula) blue (Glaucopsyche lygdamus	wrighti) s australis)		gray hairstreak (Strymon melinus pudi Ladies/Admirals California sister (Adelpha bredowii cal Lorquin's admiral (Limenitis lorquini) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) painted lady (V. cardui)	ica) ifornica)	
Mylitta cre Blues western p western ta southern t Edward's	neckerspot (Thessalia leanira escent (Phyciodes mylitta) ygmy-blue (Brephidium exila) ailed blue (Everes amyntula) blue (Glaucopsyche lygdamus blue (Hemiargus ceraunus gy	wrighti) s australis)		gray hairstreak (Strymon melinus pudi Ladies/Admirals California sister (Adelpha bredowii cal Lorquin's admiral (Limenitis lorquini) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiensi	ica) ifornica)	
Mylitta cre Blues western p western ta southern t Edward's Acmon blue	neckerspot (Thessalia leanira escent (Phyciodes mylitta) ygmy-blue (Brephidium exila) ailed blue (Everes amyntula) blue (Glaucopsyche lygdamus blue (Hemiargus ceraunus gy ue (Icaricia acmon acmon)	wrighti) s australis)		gray hairstreak (Strymon melinus pudi Ladies/Admirals California sister (Adelpha bredowii cal Lorquin's admiral (Limenitis lorquini) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiensi unidentified lady (Vanessa sp.)	ica) ifornica)	1)
Mylitta cre Blues western p western ta southern t Edward's Acmon blu marine blu	neckerspot (Thessalia leanira escent (Phyciodes mylitta) ygmy-blue (Brephidium exila) ailed blue (Everes amyntula) blue (Glaucopsyche lygdamus blue (Hemiargus ceraunus gy ue (Icaricia acmon acmon) ue (Leptotes marina)	wrighti) s australis)		gray hairstreak (Strymon melinus pudi Ladies/Admirals California sister (Adelpha bredowii cal Lorquin's admiral (Limenitis lorquini) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiensi unidentified lady (Vanessa sp.) Swallowtails	ica) ifornica)	11
Mylitta cre Blues western p western ta southern t Edward's Acmon blu marine blu unidentifie	neckerspot (Thessalia leanira escent (Phyciodes mylitta) ygmy-blue (Brephidium exila) ailed blue (Everes amyntula) blue (Glaucopsyche lygdamus blue (Hemiargus ceraunus gy ue (Icaricia acmon acmon) ue (Leptotes marina)	wrighti) s australis)	I I	gray hairstreak (Strymon melinus pudi Ladies/Admirals California sister (Adelpha bredowii cal Lorquin's admiral (Limenitis lorquini) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiensi unidentified lady (Vanessa sp.) Swallowtails pale swallowtail (Papilio eurymedon)	ica) ifornica)	1\
Mylitta cre Blues western p western ta southern ta Edward's Acmon blu marine blu unidentifie Whites	neckerspot (Thessalia leanira escent (Phyciodes mylitta) ygmy-blue (Brephidium exila) ailed blue (Everes amyntula) blue (Glaucopsyche lygdamus blue (Hemiargus ceraunus gy ue (Icaricia acmon acmon) ue (Leptotes marina)	wrighti) s australis)		gray hairstreak (Strymon melinus pudi Ladies/Admirals California sister (Adelpha bredowii cal Lorquin's admiral (Limenitis lorquini) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiensi unidentified lady (Vanessa sp.) Swallowtails pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus)	ica) ifornica)	1/
Mylitta cre Blues western p western ta southern ta Edward's Acmon blu marine blu unidentifie Whites Sara orang	neckerspot (Thessalia leanira escent (Phyciodes mylitta) ygmy-blue (Brephidium exila) ailed blue (Everes amyntula) blue (Glaucopsyche lygdamus blue (Hemiargus ceraunus gy ue (Icaricia acmon acmon) ue (Leptotes marina) ed blue	wrighti) s australis)	Het M M I	gray hairstreak (Strymon melinus pudi Ladies/Admirals California sister (Adelpha bredowii cal Lorquin's admiral (Limenitis lorquini) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiensi unidentified lady (Vanessa sp.) Swallowtails pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon)	ica) ifornica)	11
Mylitta cre Blues western p western ta southern ta Edward's Acmon blu marine blu unidentifie Whites Sara orang desert (Fe	neckerspot (Thessalia leanira escent (Phyciodes mylitta) ygmy-blue (Brephidium exila) ailed blue (Everes amyntula) blue (Glaucopsyche lygdamus blue (Hemiargus ceraunus gy ue (Icaricia acmon acmon) ue (Leptotes marina) ed blue getip (Anthocharis sara sara) elder's) orangetip (A. cethura)	wrighti) s australis) vas)	HH M M I	gray hairstreak (Strymon melinus pudi Ladies/Admirals California sister (Adelpha bredowii cal Lorquin's admiral (Limenitis lorquini) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiensi unidentified lady (Vanessa sp.) Swallowtails pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Miscellaneous	ica) ifornica)	1/
Mylitta cre Blues western p western ta southern ta Edward's Acmon blu marine blu unidentifie Whites Sara orang desert (Fe common C	peckerspot (Thessalia leanira escent (Phyciodes mylitta) ygmy-blue (Brephidium exila) ailed blue (Everes amyntula) blue (Glaucopsyche lygdamus blue (Hemiargus ceraunus gy ue (Icaricia acmon acmon) ue (Leptotes marina) ed blue getip (Anthocharis sara sara) elder's) orangetip (A. cethura) California ringlet (Coenonympl	wrighti) s australis) vas)		gray hairstreak (Strymon melinus pudi Ladies/Admirals California sister (Adelpha bredowii cal Lorquin's admiral (Limenitis lorquini) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiensi unidentified lady (Vanessa sp.) Swallowtails pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Miscellaneous monarch (Danaus plexippus)	ifornica)	11
Mylitta cre Blues western p western ta southern ta Edward's Acmon blu marine blu unidentifie Whites Sara orang desert (Fe common C cabbage w	preckerspot (Thessalia leaniral ascent (Phyciodes mylitta) sygmy-blue (Brephidium exila) alled blue (Everes amyntula) alled blue (Glaucopsyche lygdamus blue (Hemiargus ceraunus gyue (Icaricia acmon acmon) are (Leptotes marina) and blue getip (Anthocharis sara sara) alder's) orangetip (A. cethura) california ringlet (Coenonymple white (Pieris rapae)	wrighti) s australis) vas) na californica)	HH M M I	gray hairstreak (Strymon melinus pudi Ladies/Admirals California sister (Adelpha bredowii cal Lorquin's admiral (Limenitis lorquini) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiensi unidentified lady (Vanessa sp.) Swallowtails pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Miscellaneous monarch (Danaus plexippus) common buckeye (Junonia coenia gris	ifornica)	11/
Mylitta cre Blues western p western ta southern ta Edward's Acmon blu marine blu unidentifie Whites Sara orang desert (Fe common C cabbage w checkered	preckerspot (Thessalia leaniral escent (Phyciodes mylitta) sygmy-blue (Brephidium exila) alled blue (Everes amyntula) blue (Glaucopsyche lygdamus blue (Hemiargus ceraunus gyue (Icaricia acmon acmon) are (Leptotes marina) ed blue getip (Anthocharis sara sara) elder's) orangetip (A. cethura) california ringlet (Coenonympi white (Pieris rapae)	wrighti) s australis) vas) na californica)	HH M M I	gray hairstreak (Strymon melinus pudi Ladies/Admirals California sister (Adelpha bredowii cal Lorquin's admiral (Limenitis lorquini) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiensi unidentified lady (Vanessa sp.) Swallowtails pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Miscellaneous monarch (Danaus plexippus) common buckeye (Junonia coenia gris mourning cloak (Nymphalis antiopa)	ifornica)	1/
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Total

Surveyor 2016 Quino Checkerspot Butterfly Survey Form Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch Date: 2/26/16 Acres Surveyed DD, Zust AAuest Survey Time: 7.75 hrs Site Visit No: Acres per Hour: 5.8 Time (24 hr) **Field Conditions** Temperature ('F) Start 0815 Wind Speed (mph) Cloud Cover 66.2 End 600 0-3 590 81.1 Start 0-5 80 20 End Vegetation Communities Surveyed (inc. dominant spp.) Chamise chap (chamise Xyloroccas books), annual grass (s. apiana, Plogio sp., Mirabilis, lathyrus sp., solanua sp.) Salvia develondii scrub w venegana capesiides **Host Plants** dwarf plantain (Plantago erecta) **Nectar Plants** Obs. flur popcorn flower (Cryptantha/Plagiobothrys spp.) purple owl's clover (Castilleja exserta) quir goldfields (Lasthenia spp.) snapdragon (Antirrhinum coulterianum) Flor goldenstar (Muilla spp.) FLUIT birds-beak (Cordylanthus rigidus) fiddleneck (Amsinckia menziesii var. intermedia) woolly plantain (Plantago patagonica) onion (Allium spp.) Chinese houses (Collinsia spp.) JES buckwheat (Eriogonum fasciculatum) ground pink (Linanthus dianthiflorus) Host Plant Mapping Updated (circle) Yes (M) No Existing New Area or Existing Area (circle) Both New Species updated (list) maybe added more grantap - not sure until I see data **Butterfly Species** No. No. **Butterfly Species** Checkerspots Hairstreaks California patch (Chlosyne californica) great purple hairstreak (Atlides halesus corcorani) Gabb's checkerspot (C. gabbii) brown elfin (Callophrys augustinus) Quino checkerspot (Euphydryas editha quino) bramble (perplexing) hairstreak (C. dumetorum affinis) chalcedon checkerspot (E. chalcedona chalcedona) gray hairstreak (Strymon melinus pudica) Leanira checkerspot (Thessalia leanira wrighti) Ladies/Admirals Mylitta crescent (Phyciodes mylitta) California sister (Adelpha bredowii californica) Blues Lorquin's admiral (Limenitis lorquini) western pygmy-blue (Brephidium exila) 11 west coast lady (Vanessa annabella) western tailed blue (Everes amyntula) red admiral (V. atalanta rubria) southern blue (Glaucopsyche lygdamus australis) HT HT THI painted lady (V. cardui) Edward's blue (Hemiargus ceraunus gyas) American (Virginia) lady (V. virginiensis) Acmon blue (Icaricia acmon acmon) V unidentified lady (Vanessa sp.) 111 marine blue (Leptotes marina) **Swallowtails** unidentified blue pale swallowtail (Papilio eurymedon) 111 11 western tiger swallowtail (P. rutulus) Whites Sara orangetip (Anthocharis sara sara) anise swallowtail (P. zelicaon) 11 JULY JULY WE A Miscellaneous desert (Felder's) orangetip (A. cethura) M monarch (Danaus plexippus) common California ringlet (Coenonympha californica) WATE THE THE THE cabbage white (Pieris rapae) common buckeye (Junonia coenia grisea) checkered (common) white (Pontia protodice) mourning cloak (Nymphalis antiopa) spring white (P. sisymbrii) Skippers funereal duskywing (Erynnis funeralis) unidentified white 111 111 mournful duskywing (Erynnis tristis) Metalmarks THE THE THE fiery skipper (Hylephila phyleus) Behr's metalmark (Apodemia mormo virgulti) Wright's metalmark (Calephelis wrighti) white (common) checkered-skipper (Pyrgus albescens). Other Sulphurs orange sulphur (Colias eurytheme) JHH 111 sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina) unidentified sulphur Column Subtotal Column Subtotal 121

_	$\widehat{}$		rspot Butterfly Survey Form	
	1: BRIAN PARKOR		Date: 2-23-2016	
Site Nan	ne: JPD-08 Proctor Valley – Village 14	of Otay Ranch	Site Visit No:	
Acres S	urveyed 51 Surve	y Time:	.O Acres per Hour: 8.5	
Other St	urveyors Present:			
		Fie	ld Conditions	
	Time (24 hr) Te	mperature (°F)	Wind Speed (mph) Cloud Cov	er
Start	0320	64	0-1 0%	
End		75		
CONTRACTOR	1420	, ,	4-6 10%	
Start				
End				
Voqetati	on Communities Surveyed (inc. domi	nont onn \		
		Section 1 - Control of the Control o		
	- ERIFES	SMC - Ade	fas, lea tom,	
cc-	Ade fors			
Host Pla	into:	Obs.	Nectar Plants	Obs.
	Intain (Plantago erecta)	Obs.	popcorn flower (<i>Cryptantha/Plagiobothrys</i> spp.)	X
	wl's clover (Castilleja exserta)	. ×	goldfields (<i>Lasthenia</i> spp.)	
	gon (Antirrhinum coulterianum)		goldenstar (Muilla spp.)	
	ak (Cordylanthus rigidus)		fiddleneck (Amsinckia menziesii var. intermedia)	
-	antain (Plantago patagonica)		onion (Allium spp.)	X
Chinese	houses (Collinsia spp.)		buckwheat (Eriogonum fasciculatum)	×
			ground pink (Linanthus dianthiflorus)	
	nt Mapping Updated (circle) Yes	No	New Area or Existing Area (circle) New Existing	Both
Species	updated (list)			
Butterfly	Species	No.	Butterfly Species	No.
Checkers			Hairstreaks	
California	patch (Chlosyne californica)		great purple hairstreak (Atlides halesus corcorani)	
Gabb's ch	neckerspot (C. gabbii)		brown elfin (Callophrys augustinus)	2
	eckerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	
	n checkerspot (E. chalcedona chalcedon	a)	gray hairstreak (Strymon melinus pudica)	ATHLE TO STATE OF THE STATE OF
	heckerspot (Thessalia leanira wrighti)		Ladies/Admirals	
	escent (Phyciodes mylitta)	-	California sister (Adelpha bredowii californica)	
Blues	ygmy-blue (Brephidium exila)		Lorquin's admiral (Limenitis Iorquini)	
	ailed blue (Everes amyntula)		west coast lady (Vanessa annabella) red admiral (V. atalanta rubria)	
	blue (Glaucopsyche lygdamus australis)		painted lady (V. cardui)	
	blue (Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis)	
	ue (Icaricia acmon acmon)		unidentified lady (Vanessa sp.)	
marine blu	ue (Leptotes marina)		Swallowtails	
unidentifie	ed blue	2	pale swallowtail (Papilio eurymedon)	
Whites			western tiger swallowtail (P. rutulus)	
	getip (Anthocharis sara sara)		anise swallowtail (P. zelicaon)	
	elder's) orangetip (A. cethura)		Miscellaneous	
	California ringlet (Coenonympha californi white (Pieris rapae)	ca)	monarch (Danaus plexippus) common buckeye (Junonia coenia grisea)	
	d (common) white (Pontia protodice)		mourning cloak (Nymphalis antiopa)	
	ite (P. sisymbrii)		Skippers	
unidentifie			funereal duskywing (Erynnis funeralis)	2
Metalmar			mournful duskywing (Erynnis tristis)	
Behr's me	talmark (Apodemia mormo virgulti)	1	fiery skipper (Hylephila phyleus)	MARCHAR STREET
Wright's m	netalmark (Calephelis wrighti)		white (common) checkered-skipper (Pyrgus albescens)	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
Sulphurs			Other	
	lphur (Colias eurytheme)			
	inge (Eurema nicippe)	-		
unidentifie	sulfur (Phoebus sennae marcellina)	70	-	
undentine	a sulphur Column Subt	otal / 6	Column Subtotal	4
	O O I O I I I I I I I I I I I I I I I I		(Column Subtotal	7

Total

	GARRETT HUF	FMAN	rspot Butterfly Survey Form Date: 2 2 1 1 0 Site Visit No: 1 EE	P
Site Name	e: JPD-08 Proctor Valley - Village 1	4 of Otay Ranch	4 : P.	-6:
Acres Su	rveyed 43 Surv	ey Time: 0930	Site Visit No: Acres per Hour: EE - 4 ; P.	
Other Su	rveyors Present: NONE	8	1.5 110013	
ouiei ou	TOTAL	P: .I	ld Conditions Cloud Cov	
			d Conditions Cloud Cov Wind Speed (mph) Cloud Cov	er
	Time (24 hr)	emperature ('F)	2-5	
Start	0930	70	20	
End	1315	82	0-9	
		82	0 1	
Start	1345	74	2-5 40	
End	Hebia 1800	74		
Host Pl	ants	×	popcorn flower (Cryptanthar-ragiosotth) 5 Spr.	×
(MASSLANO		Nectar Plants	Ob
Host Pl	ants	×	popcorn flower (Cryptantha/Plagiobothrys spp.)	×
dwarf pl	antain (Plantago erecta)		goldfields (Lasthenia spp.)	
purple o			11 ter (Muilla con)	
	wl's clover (Castilleja exserta)		goldenstar (Muilla spp.)	
snapdra	gon (Antirrhinum coulterianum)		fiddleneck (Amsinckia menziesii var. intermedia)	×
snapdra birds-be	gon (Antirrhinum coulterianum) eak (Cordylanthus rigidus)		fiddleneck (Amsinckia menziesii var. Intermedia)	
snapdra birds-be	ngon (Antirrhinum coulterianum) Bak (Cordylanthus rigidus) Diantain (Plantago patagonica)		fiddleneck (Amsinckia menziesii var. Intermedia) onion (Allium spp.) buckwheat (Eriogonum fasciculatum)	
snapdra birds-be	gon (Antirrhinum coulterianum) eak (Cordylanthus rigidus)		fiddleneck (Amsinckia menziesii var. Intermedia) onion (Allium spp.) buckwheat (Eriogonum fasciculatum) ground pink (Linanthus dianthiflorus)	×
birds-be woolly p	ngon (Antirrhinum coulterianum) Pak (Cordylanthus rigidus) Pantain (Plantago patagonica) Pa houses (Collinsia spp.)	s (No)	fiddleneck (Amsinckia menziesii var. Intermedia) onion (Allium spp.) buckwheat (Eriogonum fasciculatum) buckwheat (Lineathus dianthiflorus)	Х Х Вс
snapdra birds-be woolly p Chinese	agon (Antirrhinum coulterianum) Bak (Cordylanthus rigidus) Bahtain (Plantago patagonica) Be houses (Collinsia spp.) Bant Mapping Updated (circle) Ye	s (No)	fiddleneck (Amsinckia menziesii var. Intermedia) onion (Allium spp.) buckwheat (Eriogonum fasciculatum) ground pink (Linanthus dianthiflorus)	× Bo
snapdra birds-be woolly p Chinese	ngon (Antirrhinum coulterianum) Pak (Cordylanthus rigidus) Pantain (Plantago patagonica) Pa houses (Collinsia spp.)		fiddleneck (Amsinckia menziesii var. Intermedia) onion (Allium spp.) buckwheat (Eriogonum fasciculatum) ground pink (Linanthus dianthiflorus) New Area or Existing Area (circle) New Cexisting	× Bo
snapdra birds-be woolly p Chinese Host P Specie	agon (Antirrhinum coulterianum) Bak (Cordylanthus rigidus) Blantain (Plantago patagonica) Be houses (Collinsia spp.) Blant Mapping Updated (circle) Supdated (list)	s Ng	fiddleneck (Amsinckia menziesii var. Intermedia) onion (Allium spp.) buckwheat (Eriogonum fasciculatum) ground pink (Linanthus dianthiflorus) New Area or Existing Area (circle) Butterfly Species	× Bo
snapdra birds-be woolly i Chinese Host P Specie	agon (Antirrhinum coulterianum) Bak (Cordylanthus rigidus) Blantain (Plantago patagonica) Be houses (Collinsia spp.) Blant Mapping Updated (circle) Supdated (list) By Species		fiddleneck (Amsinckia menziesii var. Intermedia) onion (Allium spp.) buckwheat (Eriogonum fasciculatum) ground pink (Linanthus dianthiflorus) New Area or Existing Area (circle) New Existing Butterfly Species Hairstreaks great purple hairstreak (Atlides halesus corcorani)	×
snapdra birds-be woolly p Chinese Host P Specie Butterff Checke Californ	agon (Antirrhinum coulterianum) sak (Cordylanthus rigidus) blantain (Plantago patagonica) e houses (Collinsia spp.) lant Mapping Updated (circle) s updated (list) ly Species erspots ia patch (Chlosyne californica)		fiddleneck (Amsinckia menziesii var. Intermedia) onion (Allium spp.) buckwheat (Eriogonum fasciculatum) ground pink (Linanthus dianthiflorus) New Area or Existing Area (circle) New Lexisting Butterfly Species Hairstreaks great purple hairstreak (Atlides halesus corcorani)	× Bo
snapdra birds-be woolly i Chinese Host P Specie Butterfi Checke Californ	agon (Antirrhinum coulterianum) sak (Cordylanthus rigidus) blantain (Plantago patagonica) e houses (Collinsia spp.) lant Mapping Updated (circle) s updated (list) ly Species erspots ia patch (Chlosyne californica) checkerspot (C. gabbii)		fiddleneck (Amsinckia menziesii var. Intermedia) onion (Allium spp.) buckwheat (Eriogonum fasciculatum) ground pink (Linanthus dianthiflorus) New Area or Existing Area (circle) New Area or Existing Area (circle) Butterfly Species Hairstreaks great purple hairstreak (Attides halesus corcorani) brown elfin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dumetorum affinis)	× Be
snapdra birds-be woolly i Chinese Host P Specie Butterfi Checke Californ Gabb's	agon (Antirrhinum coulterianum) sak (Cordylanthus rigidus) sak (Cordylanthus rigidus) sah (Plantago patagonica) sah houses (Collinsia spp.) sant Mapping Updated (circle) supdated (list) supdated (list) sy Species supports sia patch (Chlosyne californica) checkerspot (C. gabbii)	No.	fiddleneck (Amsinckia menziesii var. Intermedia) onion (Allium spp.) buckwheat (Eriogonum fasciculatum) ground pink (Linanthus dianthiflorus) New Area or Existing Area (circle) New Area or Existing Area (circle) Butterfly Species Hairstreaks great purple hairstreak (Attides halesus corcorani) brown elfin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dumetorum affinis)	× Bo
snapdra birds-be woolly p Chinese Host P Specie Butterff Checke Californ Gabb's Quino C	agon (Antirrhinum coulterianum) sak (Cordylanthus rigidus) blantain (Plantago patagonica) se houses (Collinsia spp.) lant Mapping Updated (circle) se updated (list) ly Species serspots sia patch (Chlosyne californica) checkerspot (C. gabbii) sheckerspot (Euphydryas editha quino)	No.	fiddleneck (Amsinckia menziesii var. Intermedia) onion (Allium spp.) buckwheat (Eriogonum fasciculatum) ground pink (Linanthus dianthiflorus) New Area or Existing Area (circle) New Area or Existing Area (circle) New Area or Existing Area (circle) Butterfly Species Hairstreaks great purple hairstreak (Atlides halesus corcorani) brown elfin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dumetorum affinis) gray hairstreak (Strymon melinus pudica)	× Bo
snapdra birds-be woolly i Chinese Host P Specie Butterfi Checke Californ Gabb's Quino c chalced	agon (Antirrhinum coulterianum) sak (Cordylanthus rigidus) sak (Cordylanthus rigidus) sah (Plantago patagonica) sah houses (Collinsia spp.) sant Mapping Updated (circle) supdated (list) supdated (list) sy Species supports sia patch (Chlosyne californica) checkerspot (C. gabbii)	No.	fiddleneck (Amsinckia menziesii var. Intermedia) onion (Allium spp.) buckwheat (Eriogonum fasciculatum) ground pink (Linanthus dianthiflorus) New Area or Existing Area (circle) New Area or Existing Area (circle) Butterfly Species Hairstreaks great purple hairstreak (Attides halesus corcorani) brown elfin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dumetorum affinis)	B

Species apartic	No.	Butterfly Species	140.
Butterfly Species		III to to a beautiful in the second of the s	
Checkerspots		great purple hairstreak (Atlides halesus corcorani)	
California patch (Chlosyne californica)		(Callanhrys augustinus)	1
Gabb's checkerspot (C. gabbii)		bramble (perplexing) hairstreak (C. dumetorum anims)	-
Quino checkerspot (Euphydryas editha quino)		gray hairstreak (Strymon melinus pudica)	
chalcedon checkerspot (E. chalcedona chalcedona)		Ladios/Admirals	
Leanira checkerspot (Thessalia leanira Wrighti)		California sister (Adelpha bredowii californica)	
Mylitta crescent (Phyciodes mylitta)		Lorquin's admiral (Limenitis lorquini)	
Riues		west coast lady (Vanessa annabella)	
western pygmy-blue (Brephidium exila)		red admiral (V. atalanta rubria)	-
wastern tailed blue (Everes amyntula)	-	painted lady (V. cardui)	3
southern blue (Glaucopsyche lygdamus australis)		American (Virginia) lady (V. virginiensis)	
Edward's blue (Hemiargus ceraunus gyas)		unidentified lady (Vanessa sp.)	
Acmon blue (Icaricia acmon acmon)		Swallowtails	
marine blue (Leptotes marina)		pale swallowtail (Papilio eurymedon)	
unidentified blue		western tiger swallowtail (P. rutulus)	
Whites	1 10	anise swallowtail (P. zelicaon)	10
Sara orangetip (Anthocharis sara sara)	60	Miscellaneous	
desert (Felder's) orangetip (A. cethura)		monarch (Danaus plexippus)	
common California ringlet (Coenonympha californica)	25	common buckeye (Junonia coenia grisea)	
cabbage white (Pieris rapae)	. 6	mourning cloak (Nymphalis antiopa)	
checkered (common) white (Pontia protodice)	10		
spring white (P. sisymbrii)		Skippers (Enuncis funeralis)	3
unidentified white		funereal duskywing (Erynnis funeralis)	
Metalmarks		mournful duskywing (Erynnis tristis)	
Behr's metalmark (Apodemia mormo virgulti)	20	fiery skipper (Hylephila phyleus)	5
Wright's metalmark (Calephelis wrighti)		white (common) checkered-skipper (Pyrgus albescens)	
Sulphurs		Other	
orange sulphur (Colias eurytheme)			
sleepy orange (Eurema nicippe)			
cloudless sulfur (Phoebus sennae marcellina)			
unidentified sulphur			
Column Subtotal	17.0	Column Subtotal	143

2016 Quino Checkerspot Butterfly Survey Form												
Surveyor: Crit Lacate Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch Acres Surveyed 34 Survey Time: 3.5 W3 Acres per Hour: 9.7 Other Surveyors Present: Wall												
Site Name: JPD-08 Proctor Valley – Village 14 of Otay Ranch Site Visit No:												
Acres Si	urveyed 34	Survey Tim	1e: 3.	3.5 hrs Acres per Hour 9. F								
Other Surveyors Present: WAL												
Field Conditions												
	Time (24 hr) Tempera				Wind Speed (mph) Cloud Cov							
Start	12:00	87		1.0 avg 2.3 mas 0 7.7 avg 5.4 max 0		_						
End	3:30	82			2 Tava 5 ymax							
Start												
End				*								
LIIG				J								
Vegetation Communities Surveyed (inc. dominant spp.)												
CSS, mix chaparal												
	, wax couples.	,,,,										
27.2												
	Host Plants		Obs.		Nectar Plants	Obs.						
dwarf pla	antain (<i>Plantago erecta</i>)		N	pop	corn flower (Cryptantha/Plagiobothrys spp.)	Ч						
	vl's clover (Castilleja exserta)		И	gold	75							
	gon (Antirrhinum coulterianum)		_n		denstar (Muilla spp.)	17						
	ak (Cordylanthus rigidus)		И		fiddleneck (Amsinckia menziesii var. intermedia)							
	antain (Plantago patagonica)		n		on (Allium spp.)	7						
Chinese	houses (Collinsia spp.)		h		kwheat (Eriogonum fasciculatum)	ÿ						
Host Pla	unt Mapping Updated (circle) Y	es No			und pink (<i>Linanthus dianthiflorus</i>) v Area of Existing Area (circle) New Existing	Both						
	updated (list)	63 140		1464	VAICE OF EXISTING AFER (CITOIC) NOW EXISTING	Dour						
0,000.00	apactor (not)		_	-								
Butterfly Species .			No.		Butterfly Species							
Checkerspots					streaks							
California patch (Chlosyne californica)			-	+-	t purple hairstreak (Atlides halesus corcorani)							
Gabb's checkerspot (C. gabbii)				+	brown elfin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dumetorum affinis)							
Quino checkerspot (Euphydryas editha quino) chalcedon checkerspot (E. chalcedona chalcedona)				gray								
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)				Ladi								
Mylitta crescent (Phyciodes mylitta)				_	ornia sister (Adelpha bredowii californica)							
Blues				Lorq	\$							
western pygmy-blue (Brephidium exila)				west	coast lady (Vanessa annabella)	2						
western tailed blue (Everes amyntula)			_ ^ _	red a	admiral (V. atalanta rubria)							
	blue (Glaucopsyche lygdamus au		<u>le</u>	painted lady (V. cardui)		4						
Edward's blue (Hemiargus ceraunus gyas)					rican (Virginia) lady (V. virginiensis)							
Acmon blue (Icaricia acmon acmon)			10	_	entified lady (Vanessa sp.)							
	ue (Leptotes marina)		*		Ilowtails swallowtail (Papilio eurymedon)	2						
unidentified blue Whites				+	ern tiger swallowtail (<i>P. rutulus</i>)	OL-						
Sara orangetip (Anthocharis sara sara)			21	_	e swallowtail (<i>P. zelicaon</i>)							
	elder's) orangetip (A. cethura)		~_		cellaneous							
common California ringlet (Coenonympha californica)			_	mon	arch (Danaus plexippus)							
cabbage white (Pieris rapae)				comi	mon buckeye (Junonia coenia grisea)							
checkered (common) white (Pontia protodice)				mou	rning cloak (Nymphalis antiopa)							
spring white (P. sisymbrii)					pers	_						
unidentified white				_	real duskywing (Erynnis funeralis)	10						
Metalmarks			12		rnful duskywing (Erynnis tristis)							
Behr's metalmark (Apodemia mormo virgulti)			1	_	skipper (Hylephila phyleus)	ı						
Wright's metalmark (Calephelis wrighti)					e (common) checkered-skipper (<i>Pyrgus albescens</i>)	197						
Sulphurs			3	Othe		1						
orange sulphur (<i>Colias eurytheme</i>) sleepy orange (<i>Eurema nicippe</i>)					A ringles	1.						
	sulfur (<i>Phoebus sennae marcellii</i>	na)										
	ed sulphur	,		-								
		nn Subtotal	32		Column Subtotal	17						

Total 44

no itali	Chez Brugraber JPD-08 Proctor Valley			Date: 2/29/16		
Acres St	ie: JPD-08 Proctor Valley - Village Irveyed FF - 5 8 apres Simple Simp	14 of Otay I	Ranch	Site Visit No: 1		
Other Su	Irveyed FF - 5 8 acres Surveyors Present:	vey Time:	BI.	Assessment 7		
	resent:		- On	Acres per Hour: 7		
24	Time (24 hr)	Tomposit	Fie	ld Conditions		
Start		Temperatu	re ('F)	Wind Speed (mph) Cloud Co.	ver	
End	1645	60.4		0-1 10%		
Start		77.6		0.0		
End			0-3 0%			
Vegetati	on Communities 8					
NINIC	on Communities Surveyed (inc. do	minant spp	.)			
1100	(1signus, Avera) native	12-101		ssign of (Stopa sp. blue dicks, Solan um s	-	
buck	wheat south debut	1 (= 1	n you	Sand Stopa sp. While dicks, Solancins	p. Miral	
Host Pla	wheat soub, disturbe	a (Enoch	uns	<i>(-)</i>		
- 1	antain (Plantago erecta)		Obs.	Nectar Plants	Ohe	
purple o	wl's clover (Castilleja exserta)	6	tur	popcorn flower (Cryptantha/Plagiobothrys spp.)	Slur	
snapdra	gon (Antirrhinum coulterianum)			goldfields (Lasthenia spp.)	-sur	
birds-be	ak (Cordylanthus rigidus)	4	iur	goldenstar (Muilla spp.)	fur	
woolly p	lantain (Plantago patagonica)	0	w	fiddleneck (Amsinckia menziesii var. intermedia)	Shur	
Chinese	houses (Collinsia spp.)	1	UV	onion (Allium spp.)	stur	
				buckwheat (Eriogonum fasciculatum) ground pink (Linanthus dianthiflorus)	Rur	
	ant Mapping Updated (circle) Ye	s (M) No		New Area or Existing Area (circle) New Existing	Both	
Species	s updated (list)		011	check maps		
Butterfly	Species		_			
Checker	•	-3	No.	Butterfly Species	No.	
	a patch (Chlosyne californica)			great purple hairstreak (Attides halesus corcorani)		
Gabb's checkerspot (C. gabbii)				brown elfin (Callophrys augustinus)		
Quino checkerspot (Euphydryas editha quino)				bramble (perplexing) hairstreak (C. dumetorum affinis)		
chalcedon checkerspot (E. chalcedona chalcedona)				gray hairstreak (Strymon melinus pudica)		
Leanira	checkerspot (Thessalia leanira wrighti)			Ladies/Admirals		
Blues	rescent (Phyciodes mylitta)			California sister (Adelpha bredowii californica)		
	pygmy-blue (Brephidium exila)			Lorquin's admiral (Limenitis lorquini) west coast lady (Vanessa annabella)		
	tailed blue (Everes amyntula)			red admiral (V. atalanta rubria)		
southern blue (Glaucopsyche lygdamus australis)				painted lady (V. cardui)		
Edward's blue (Hemiargus ceraunus gyas)				American (Virginia) lady (V. virginiensis)		
Acmon blue (Icaricia acmon acmon)				unidentified lady (Vanessa sp.)		
	lue (Leptotes marina)			Swallowtails		
unidentif	ied blue	14	1	pale swallowtail (Papilio eurymedon)		
Whites	ngotin (Anthochoria para cara)	lu s	-711	western tiger swallowtail (P. rutulus)		
	ngetip (Anthocharis sara sara) elder's) orangetip (A. cethura)	144	MII	anise swallowtail (P. zelicaon)		
	California ringlet (Coenonympha califor	mica) lux	ux	Miscellaneous monarch (Daneus playingue)	19	
	white (Pieris rapae)	mica) JHT	,hi	monarch (Danaus plexippus) common buckeye (Junonia coenia grisea)	100	
	d (common) white (Pontia protodice)			mourning cloak (Nymphalis antiopa)		
	ite (P. sisymbrii)			Skippers		
unidentifie)((funereal duskywing (Erynnis funeralis)	In	
Metalmarks				mournful duskywing (Erynnis tristis)	1	
Behr's me	talmark (Apodemia mormo virgulti)	ith.	1444	fiery skipper (Hylephila phyleus)		
Vright's rr	netalmark (Calephelis wrighti)			white (common) checkered-skipper (Pyrgus albescens)	114	
ulphurs				Other	14	
range sul	phur (Colias eurytheme)	1		Northern while skipper	1	
	nge (Eurema nicippe)				1	
COUNTRACTOR	ulfur (Phoebus sennae marcellina)					
nidentified						