

2015 Quino Checkerspot Butterfly Survey Form

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

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

Vegetation Communities Surveyed (inc. dominant spp.)

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

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

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

Total = 37

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

2015 Quino Checkerspot Butterfly Survey Form

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

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

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

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

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

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: V. for Novik

Date: 2/21/15

Site Name: Proctor Valley - Village 14 of Otay Ranch

Site Visit No: 1

Acres Surveyed 110

Survey Time: 5 hrs

Acres per Hour: 7.3

Other Surveyors Present: Brian Lotstrom, Travis Cooper

Field Conditions

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

Vegetation Communities Surveyed (inc. dominant spp.)

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

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

1000
 1500
 70
 70
 3-5
 5-7
 90%
 50% then
 mixed CS
 Malasoma laury
 Erigo Fas
 dwarf plantain
 purple owl's clover
 snapdragon
 birds-beak
 woolly plantain
 Chinese houses
 popcorn flower
 goldfields
 goldenstar
 fiddleneck
 onion
 buckwheat
 ground pink

2015 Quino Checkerspot Butterfly Survey Form

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

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

Vegetation Communities Surveyed (inc. dominant spp.)

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

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

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

Marium
erodium

Baheopsis Lind.
Syl bellus

Hirschii.

~~Acnidos~~ scop

Salvia Munzii

Sanicula

minutus Ar.

Dich cap

lonicera sp

cammissana

chama syche

mirabilis

Viola ped.

Dws. integ

Escholz. cd.

Rhamnus, croc.

Ribes (chip. cruent)

Eriodictyon (m)

oxalis p-c

isomeris eds.

Sanicula

niella var.

Dodecatheon lep.

2015 Quino Checkerspot Butterfly Survey Form

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

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

Vegetation Communities Surveyed (inc. dominant spp.)

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

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

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

Polygons
G+H

2015 Quino Checkerspot Butterfly Survey Form

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

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

Vegetation Communities Surveyed (inc. dominant spp.)

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

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

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

Total: 62

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

2015 Quino Checkerspot Butterfly Survey Form

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

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

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

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

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

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

2015 Quino Checkerspot Butterfly Survey Form

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

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

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

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

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

JPD-08 Procter Valley

25 Feb 2015

GCB Survey #2

JB

AREA C ~ 40 acres

(joined by BR @ 1315)

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

STOP: 1415, 76°F, 3-7 mph, clear 0%cc

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

Flowering Sp.

Bumblebees

Ero mosk Bah lac

Blue III

SOUTHERN BLUE: III

Acm gla Cryptantha *

Calif night III

Filago Cas exs. *

Behr's meadow III

Hir inc Stilobolus sp.

Lady III

Oxa per Lotus sp.

Behr's III

Camissonia sp. Pectocarya sp.

Sarah's Orange I

Hed cre Emm. per

Brown elfin I

Pap sat Ant. nut

Pygmy blue III

Er. for * Sis hel

Red Admiral I

Allium sp. * Sal mun

WILDLIFE OBS.

Sanicula sp. Lomatium

WREN YRWA

Duc cap Lin dia *

CORA WEME

Solanum sp. Cal cil

ANTH BUSIT

Lepidium sp. Erodichyn

Sparrow, moths

Mim aur Placere *

CAKI WCSP

Cea tom Jas ves

bees, hovering flies

Plagiodonchys * Oxa cal

CATH lizard

Cal mac Ams. int. men. *

YRWA CALT

Esc cal Mui mar

SAPH NOMO

T. uterog

SPTO in rain

2015 Quino Checkerspot Butterfly Survey Form

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

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

Vegetation Communities Surveyed (inc. dominant spp.)

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

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

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

2/25/15 JPD-08 S. NIGRO
Proctor Valley Otter Ranch
Village 14

QCB Survey #2
Area A 45 acres

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

9.8 ac/hr

butterflies:

plants in bloom:	silk blue :: = 3
Raph sat Sol par	helium :: = 5
Erodium sp. Beh lac	blue sp :: = 5
Cann bist Ams ment	fun dusky :: = 2
Viol pend Sisymb sp.	CA ring let :: = 3
Sorgh asp. Bee salis	S. erg tip :: = 4
Dich czp Caland. cil	lady sp :: = 3
Acm gla Plantere	TOTAL = 25

Mir. cal (sev)	Crypt. sp.	Phac cic	Sisy bell
Erio fasc	Plagio sp	Gneph cal	Mim ar
Hirsc inc	Carti. exs	Ant nunt	
Gly mac	Lath. Vest (clipped)		
Oxa pes-c	Can tom	Lom dary	
Allium	Sp Esch cal	Clemstris pac	
Linanthus	Eriod crass	Marmac	
	Lin dian	Dad cla	

JPD-08 p2/2

2/25/15

* = dom. sp.

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

NNGS = bromes*, Avena*

DCSS = Art cal* Eriodac*, Sol 22pi, Mal 2m

SMC = Can 22pi, Rham croc, Mal 2m
Xyl bic* Ade fasc*

AMKE ANHU

SOSP KILL

WEME Uta stans

SPTO Coyote scat

honey bee BLPH

rabbit scat CAKI

SAPH Sporn beech

CATH Rd Di. Rth male ←

CORA And cthrtl (going easterly)

ROWR BTJR

w. fence lg BUSH

AMCR

Rite in the Rain

2015 Quino Checkerspot Butterfly Survey Form

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

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

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

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

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

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

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Laurie Gorman

Date: 2-25-15

Polygons

Site Name: Proctor Valley - Village 14 of Otay Ranch

Site Visit No: 2

F, I, K

Acres Surveyed: 137

total

Survey Time: 25.5

Acres per Hour: 5.37

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

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

Vegetation Communities Surveyed (inc. dominant spp.)

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

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

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

Total 71

2015 Quino Checkerspot Butterfly Survey Form

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

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

Vegetation Communities Surveyed (inc. dominant spp.)
<u>Chamise Chaparral, CSS (Salix munzii, Eriogonum) NAG (Dromystrum)</u>

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

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

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 O TACAL
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 SALANU

2015 Quino Checkerspot Butterfly Survey Form

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

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0800	62.1	0-1	4.3%
End	1500	76	3-8	2%
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

Chemise chaparral chemise, Erigeron, Salvia musc.,
1 = Csi Erigeron, Lotus, Mulsomia, Nilot - Bromus sp

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

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

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Victor Noville

Date: 2-26-15

Site Name: Proctor Valley - Village 14 of Otay Ranch

Site Visit No: 2 Area J#1

Acres Surveyed 89

Survey Time: 6.75

Acres per Hour: 6.54 pp

Other Surveyors Present: Travis Cooper

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

Vegetation Communities Surveyed (inc. dominant spp.)

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

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

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

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2015 Quino Checkerspot Butterfly Survey Form

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

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

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

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

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

BAH LAC PENAR
 TSONEN
 GUT CAL
 PERARIS
 MAL FAC
 DIC CAP
 CASDEN
 BRAVIG
 EUC CHR
 CIS DEL
 SAN BIP
 VIO PED
 LATH VES
 OVA CAL
 CALCIL
 SOLPAR
 MIR LAG
 ALMGLA
 LOM DAS
 END JM

2015 Quino Checkerspot Butterfly Survey Form

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

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

Vegetation Communities Surveyed (inc. dominant spp.)

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

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

total 10

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

2015 Quino Checkerspot Butterfly Survey Form

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

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

Vegetation Communities Surveyed (inc. dominant spp.)

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	11
chalcid checkerspot (<i>E. chalcidona chalcidona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	1
western tailed blue (<i>Evers amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	111	painted lady (<i>V. cardui</i>)	111
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)	11	unidentified lady (<i>Vanessa</i> sp.)	
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue		pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	1	anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)	1	mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	111
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	111	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)			
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur			
Column Subtotal	2725	Column Subtotal	14
		Total	37

38286152

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: MELANIE DICUS Date: 02-26-2015
 Site Name: Proctor Valley - Village 14 of Otay Ranch Site Visit No: 2
 Acres Surveyed 127 Survey Time: 0915-1600 x3 = 20.25 Acres per Hour: 5.10 6.27
 Other Surveyors Present: JIM ROCKS, GARRET HUFFMAN

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

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

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

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

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: GARRET HUFFMAN

Date: 2/26/15

Site Name: Proctor Valley - Village 14 of Otay Ranch

Site Visit No: 2

Acres Surveyed 127

Survey Time: 6:45 20.25

Acres per Hour: 5.10 6.27

Other Surveyors Present: MELANIE DICUS, TIM ROCKS

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

Vegetation Communities Surveyed (inc. dominant spp.)

CHAMISE CHAPARRAL, CSS

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

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

2015 Quino Checkerspot Butterfly Survey Form

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

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

Vegetation Communities Surveyed (inc. dominant spp.)

NNG, DCSS, CC, SMC

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

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

JPD-08 Procter Valley

5 March 2015

QCB Survey #3

JB (CW)

AREA C ~ 40 acres

START 0930, 65°, 1-3 mph, 0% cc sunny

STOP 1330, 76°, 2-7 mph, 0% cc

FLOWERING SPP.

Dic cap Stilbene

Ero mos Ss bel

Acro glau Lomatium sp.

Alum mac Lin dia *

Oxa pes Camissonia

Rap sat Cas exs. *

Ams mos * Mui. mar. *

Eri far * Cal cil

Pectocarya * Sanicula

Allium sp. *

Cryptantha spp *

Bah lac

Esch cal

Cal mac

Lotus sp.

Art. nat

Emm ped

Solanum

Helsco

BUTTERFLIES

Behr's metalmark IIII IIII IIII

IIII IIII IIII IIII IIII IIII IIII

W. Coast lady II / Red admiral

Painted lady II

Blue I

Southern blue I

Sulphur I

Fun dusky wing I

Lady sp. IIII

Pale swallowtail I

WILDLIFE OBS

WEME CORA

CALT BUSH

side blotched lizard

moths WREN

bees MODO

HOLA CAQU

BEWR CAGN ♂

BTJR GOEA x2

dragonfly Rite in the Rain

2015 Quino Checkerspot Butterfly Survey Form

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

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

Vegetation Communities Surveyed (inc. dominant spp.)

NNG, DCSS, CC, SMC

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

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

Jasmine BCo)

JPD-08

Enca M

QCB #3, Area A 3/5/14

Start: 0930, 65°F, 1-3, 0%

Stop: 1330, 70°F, 2-7, 0%

Behr ^{III}

Blue ^{III}

Lady ^{III}

Sulphur ^I

Duskywing ^I

Tiger SW. ^I

WEME CAKI BEWE GALT

Amber YRWA ANHU HOPI

LEBU SOSO BUSH RTHA

COYE NOPL ROWR GIOBA

Flower: camissonia Ant nut

pod ole Lin dia Phacelia

Nic glia sonchus Brassica

cal cil Amn men Dic cap

acm glia tur inc oxalis

allium Bac llin mar fabo

no ped mir lal en fal

cal mac sis bel mmaur

pic mon ceardhus esc cal

Solanum cryptantha Paier*

cas exe? * An cras kic ant

* NO QCB

2015 Quino Checkerspot Butterfly Survey Form

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

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

Vegetation Communities Surveyed (inc. dominant spp.)

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbi</i>)	1	brown elfin (<i>Callophrys augustinus</i>)	1
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	11
chalcid checkerspot (<i>E. chalcidona chalcidona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Myliatta crescent (<i>Phyciodes myliatta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	1
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	11
southern blue (<i>Glaucopsyche lygdamus australis</i>)	11	painted lady (<i>V. cardui</i>)	11
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue		pale swallowtail (<i>Papilio eurymedon</i>)	1
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)		anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)	11	monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	11
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemis mormo virgulti</i>)	1	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)	11		
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur			
Column Subtotal	32	Column Subtotal	26
		Total	58

Striped Racer
 Horned Lizard

2015 Quino Checkerspot Butterfly Survey Form

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

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

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

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

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

2015 Quino Checkerspot Butterfly Survey Form

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

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

Vegetation Communities Surveyed (inc. dominant spp.)

CHAMISE CHAPARRAL, GRASSLAND, CSS

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

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

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Alicia Hill Date: 3/5/15
 Site Name: Proctor Valley - Village 14 of Otay Ranch (F, G, H) Site Visit No: 3
 Acres Surveyed: 45 Survey Time: 7 Acres per Hour: 6.9
 Other Surveyors Present: Travis Cooper, Victor Novak

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

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

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

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

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

2015 Quino Checkerspot Butterfly Survey Form

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

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

Vegetation Communities Surveyed (inc. dominant spp.)

Chamise chap, NVG (Bons, Amerson)

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

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

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

AREA F, H, G

2015 Quino Checkerspot Butterfly Survey Form

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

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

Vegetation Communities Surveyed (inc. dominant spp.)

F- Chamise Chaparral Chamise Chap
 H- NDM, Lotus

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

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

Behr's ||||

2015 Quino Checkerspot Butterfly Survey Form

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

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

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

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

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

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

2015 Quino Checkerspot Butterfly Survey Form

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

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

Vegetation Communities Surveyed (inc. dominant spp.)

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

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

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

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

AREAL, J. M.

Musgard	Phacel	En-d	Scarb
erotic	Diap	world	En-Cras
Lafco	Infest	Repsat	Disbe
Gilga	Doubleton	Primeur	
	Vigle		

End			
Vegetation Communities Surveyed (inc. dominant spp.)			
			<i>Is chlorococcoid</i>

Vegetation Communities Surveyed (inc. dominant spp.)

K - Chamise chap, DCS, NBY → chamise chap
M - NBY, DCS DCS Artemisia, ER, kw

Nectar Plants

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)	1111	great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcid checkerspot (<i>E. chalcidona chalcidona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Myliatta crescent (<i>Phyciodes myliatta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	1111
southern blue (<i>Glaucopsyche lygdamus australis</i>)	1111	painted lady (<i>V. cardui</i>)	
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	1111
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa sp.</i>)	
marine blue (<i>Leptotes marina</i>)	111111	Swallowtails	
unidentified blue		pale swallowtail (<i>Papilio eurymedon</i>)	
Whites	11	western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)		anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)	1	common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	1111
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	1111111111111111	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)		LA Ringlet	1111
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur	1		
Column Subtotal	87	Column Subtotal	27
		Total	13

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

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

Change C_{NP} , NVG , NG , $DCSS$

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

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

SOLPAR
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MIRLAE
ACINGLA
ERODIUM
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AREA 2,1

Date: 3/2/15

Site Visit No:

Survey Time:

Acres per Hour:

Travis Cooper

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L/I NNG, NG, DCSS, Chamise Chap

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

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

2015 Quino Checkerspot Butterfly Survey Form

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

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

Vegetation Communities Surveyed (inc. dominant spp.)

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

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

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

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

JPD 08 Procter Valley
QCB Survey #4

9 March 2015

JB (SN, BR)

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

FLOWERING

Erodium Phacel
Cal mac. Cea tom
Eri for * Eriodictyon
Acnigla Placere*
Pap cat Las ves
Mir cal Hyp gla
Oxa per Stilactine
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BUTTERFLIES

LAQM IIII
Fun Darkwing IIII
Beh's metalmark IIII
Blue IIII
Southern blue IIII
Red admiral I
Sarah's orange tip I

WILDLIFE OBS

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

western diamond

2015 Quino Checkerspot Butterfly Survey Form

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

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

Vegetation Communities Surveyed (inc. dominant spp.)

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

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

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

3/9/15 JPD-08

S. NIGRO
w/R. Rosabam

Area C QCB Survey #4

40ac

40 acres

Start

end

p1/2

65°

71°

10:40

14:45

2-5 mph

2-6

<5% / clear

<5% / clear

4.08 hrs

9.8 ac/hr

butterflies

NO QCB

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

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

South. blue ♀ = 2 blue sp. = 2

lady sp. = 1

fin dashy ♂ = 4

Sulphur ♂ = 1

Savannah ♂ = 1

ptd lady ♂ = 1

white sp. = 1

Total butterflies =

86

Veg comm. Surveyed

NING - bromes, Area, Eradum = 10m
Sinc - Ab. fas, Xyl. bic, Erio-fus

S. NIGRO

3/9/15

QCB #4, Area C

p2/2

plants in bloom

Allium sp. | Sisym. sp. | Pseu cal

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

Cryptantha sp. | Hirs. inc. | Gbbs car

Sil. gal | Bah. lac | Osteo. frut.

Acm. gla | Esch. cal | Loma das.

Erio fas | Plag. sp. | Lin dian.

Dich czp | Plant ere | Cala. cil

Lup bic | Eriod. crass | Pent. ann

Sal par | Sisy bell

~~Hel. seo~~ | Guit sar

Cast. ~~ermodens.~~

Hed cut | Ziga ♂ → Tox fr (Zig fr)

Sav ^{bip} ang? | Acm mic?

Med poly | Lasth cal

Ans mof | Ade fasc

Meli off | Ant nut

Oxa pos. c. | Emm pend

Calys. mac | Uro lind

CAL, NANO, MODO, WENE, CALT, CATH

WESP, CORA, gol sgl, ANCR, BUSH

WREN, BEWB, CAGN, CAQU, SDHL

Uta st.

Plants in bloom

2015 Quino Checkerspot Butterfly Survey Form

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

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

Vegetation Communities Surveyed (inc. dominant spp.)

DCSS, Chamise Chaparral, Disturbed, NWG

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

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

2015 Quino Checkerspot Butterfly Survey Form

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

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

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

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

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

2015 Quino Checkerspot Butterfly Survey Form

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

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

Vegetation Communities Surveyed (inc. dominant spp.)

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

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

2015 Quino Checkerspot Butterfly Survey Form

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

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

Vegetation Communities Surveyed (inc. dominant spp.)	
<u>Chamise chap. DCSS (S. monzii, E. fasciculatum)</u>	

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

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

SULPAR
 DANCA
 PERAR
 WILSO
 DELEAS
 PHALIC
 CUCUR
 SISBEL
 RAP-SAT
 SALMUN
 SISBEL
 GUTCAL

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Victor Nodji Date: 3/11/15

Project Name: PV QCB

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

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

Vegetation communities surveyed: *list dominant species*

-hamise Chaparral, Brisas, Adeline, lotsoo, Salomon

Quino Host Plants (2014 USFWS Protocol)	Present?/Flowering?	Quino Nectar Plants	Present?/Flowering?
birds-beak (<i>Cordylanthus rigidus</i>)	/	<i>Lupinus sp</i>	X / X
Chinese houses (<i>Collinsia heterophylla</i>)	/	<i>Phlox sp</i>	X / X
dot-seed plantain (<i>Plantago erecta</i>)	/	<i>Basil wheel</i>	X / X
purple owl's clover (<i>Castilleja eximia</i>)	Yes /	<i>2m in</i>	X / X
snapdragon (<i>Antirrhinum coulterianum</i>)	/		/
woolly plantain (<i>Plantago patagonica</i>)	X / X		/
			/

Butterfly Species	Tally	No.	Butterfly Species	Tally	No.
Checkerspots			Hairstreaks		
California patch			brown elfin		
chalcedon checkerspot			bramble (perplexing) hairstreak		
Gabb's checkerspot			grey 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 (Ceraueus) blue			unidentified lady		7
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		
			western tiger swallowtail		
Whites			Miscellaneous		
cabbage white		1	common buckeye		
checkered (common) white			monarch - MAP THIS SPECIES		
California ringlet			mourning cloak		
desert orangetip			Striated queen		
Sara orangetip		2	Hermes copper - MAP THIS SPECIES		
spring (California) white			Skippers		
unidentified white		1	funereal duskywing		8
Metalmarks			mournful duskywing		
Behr's metalmark		20	fieri skipper		
Wright's metalmark			white (common) checkeder skipper		
Sulphurs			Other species		
cloudless sulfur					
orange sulphur					
sleepy orange					
unidentified sulphur		2			
Total					91

Total	41
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2015 Quino Checkerspot Butterfly Survey Form

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

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

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

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

SIL CAL
 ECH. CAL
 MIR CAL
 Mimulus spp.

MALFAS
 SAL MUN
 ANT NUT
 OXA spp.

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

CALCIL
 DIC CAP
 SIS BEL


2015 Quino Checkerspot Butterfly Survey Form

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

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

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

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

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

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

Other Surveyors Present: Alicia Hill, Travis Cooper

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

Vegetation Communities Surveyed (inc. dominant spp.)

Mixed Chap - Adelfos,

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)	1	brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcidon checkerspot (<i>E. chalcidona chalcidona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thestialia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciododes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)		painted lady (<i>V. cardui</i>)	11
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa sp.</i>)	1
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue	1	pale swallowtail (<i>Papilio eurymedon</i>)	1
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	1	anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)	1	monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white	1	funereal duskywing (<i>Erynnis funeralis</i>)	111111
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	1111111111	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)			
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur	1		
Column Subtotal	60	Column Subtotal	13
Total		Total	93

Surveyor: Alicia Hill Date: 3/13/15
 Site Name: Proctor Valley - Village 14 of Otay Ranch I, J, K, L Site Visit No: 4
 Acres Surveyed 145 Survey Time: 6:00 Acres per Hour: 6.04
 Other Surveyors Present: Travis Cooper, Victor Novick, Brian Lohstroh

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0800	62	0-1	0%
End	1400	91	4-7	0 2/10
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.) chamise chaparral, non-native grassland, CSS (ARTCAL, ERIETHS, ACMGLA)

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)	1	brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcodon checkerspot (<i>E. chalcodona chalcodona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Myliatta crescent (<i>Phyciodes myliatta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	1	painted lady (<i>V. cardui</i>)	
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	12
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue	4	pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	2	anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white	3	funereal duskywing (<i>Erynnis funeralis</i>)	34
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	410	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)		Carabstock's fritillary	1
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur	6		
Column Subtotal	600	Column Subtotal	46
		Total	106

DEL FAS	CAL CIL	SOL PAR	ceradum sp
MIR LAE	CIA PUR	LOtus sp.	SIL GAL
VIO PED	SIS BEL	DIC CAP	GWIT CAL

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: TRAVIS COOPER Date: 3/13/15
 Site Name: Proctor Valley - Village 14 of Otay Ranch ITK (10 acres) L Site Visit No: 4
 Acres Surveyed: 145 Survey Time: 6 hrs Acres per Hour: 6.04
 Other Surveyors Present: Alicia Hill, Victor Novik, Brian Kostoh

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0800	62°	0-1	0
End	1400	91°	4-7	0
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

Chemise chaparral,
 NUG, NG

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)	1	brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcid checkerspot (<i>E. chalcidona chalcidona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Myliatta crescent (<i>Phyciodes myliatta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	8	painted lady (<i>V. cardui</i>)	
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)	1	unidentified lady (<i>Vanessa</i> sp.)	
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue	6	pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	25	anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	36
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	71	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)		Comstock's fritillary	1
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur			
Column Subtotal		Column Subtotal	
		Total	
		136	

SIDSPA
 DEIFAS
 DICAP
 SISBEL
 BAHLAG
 SUTCAL
 PCH AUP
 SAUBIP
 VOPED
 CALCIL
 SILGAL
 ACMLA
 SULPAR
 MRJAE
 KANAB
 CROSR

2015 Quino Checkerspot Butterfly Survey Form

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

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	830	63°F	0-1	0%
End	1430	85°F	3-5	0%
Start				
End				

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

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

SIL CAL
 ECH. CAL
 MIR CAL
 Mimulus spp.

MALFAS
 SAL MUN
 ANT NUT
 OXA spp.

Cryptantha sp.
 Camissonia sp.
 Gradiun sp.
 SOL DAP.

CALCIL
 DIC CAP
 SIS BEL

APPENDIX D

Quino Checkerspot Butterfly Survey Reports (HELIX)

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:



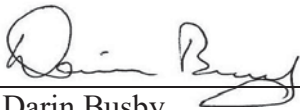
Erica Harris
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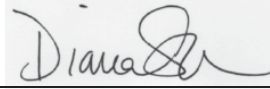
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Jasmine Bakker
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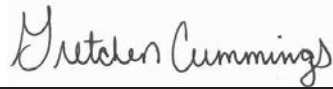
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Diana Saucedo
TE-811615-6.1



Erik LaCoste
TE-115373-3



Gretchen Cummings
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John Lovio
TE-065741-3



Melanie Rocks
TE-082908-1



Melissa Busby
TE-080779-2



Monica Alfaro
TE 051242-3



Natalie Brodie
TE-135948-2



Renee Owens
TE-799569-5



Garrett Huffman
TE-20186A-1



John Dicus
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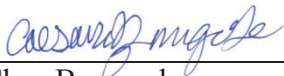
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Alicia Hill
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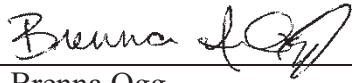
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Andrew Borchert
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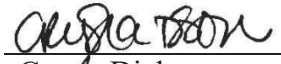
Nicole Kimball
TE-053598-4



Brenna Ogg
TE 134338-3



Brian Lohstroh
TE-063608-5



Crysta Dickson
TE 067347-5



Brian Parker
TE-797665-9

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

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1.0 INTRODUCTION

This report documents the results of HELIX Environmental Planning, Inc.'s (HELIX's) 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

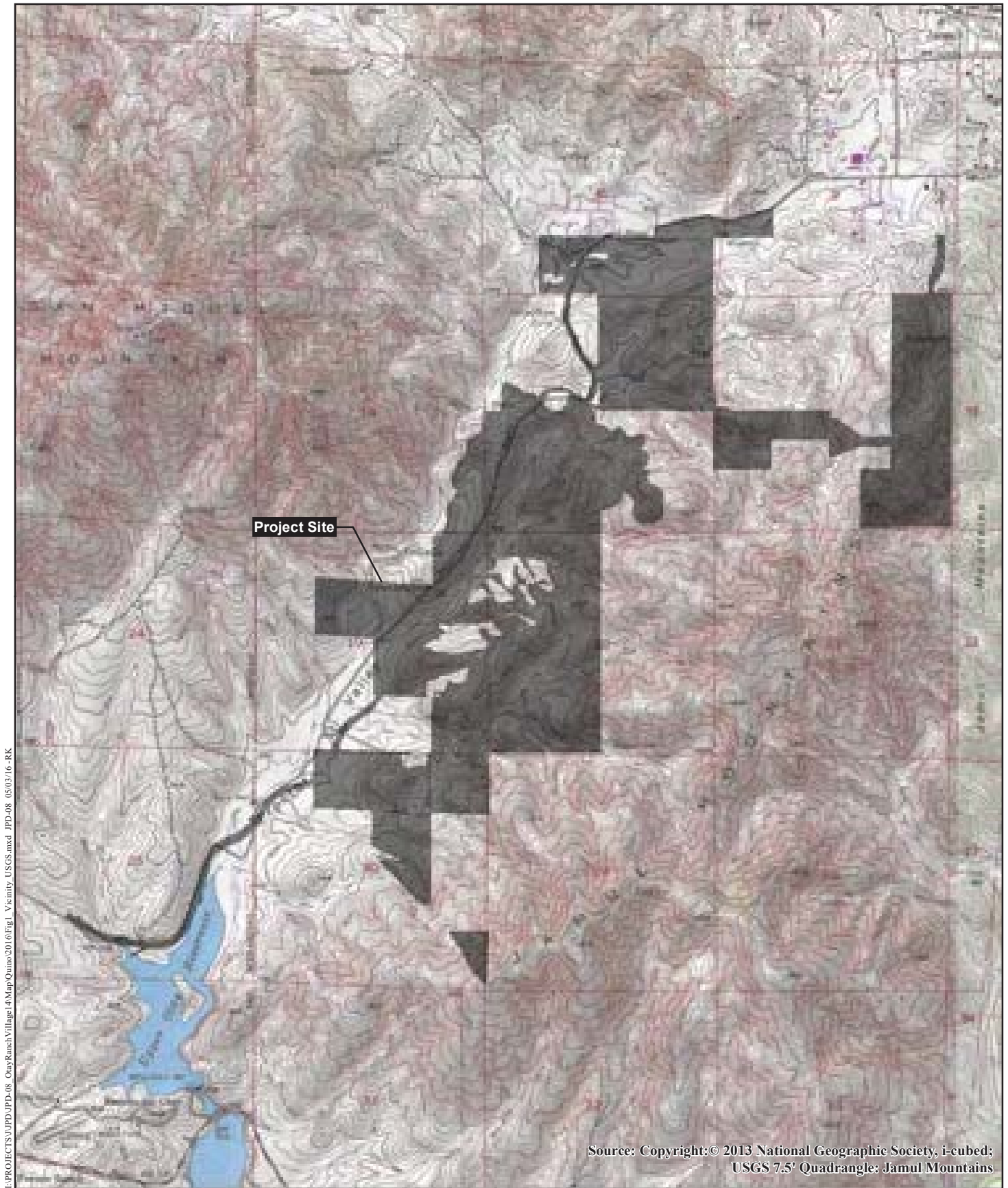
HELIX and Busby Biological Services, Inc. (Busby) biologists mapped host plants within the survey area between February 15 and March 1, 2016 prior to the initiation of protocol surveys (Figures 3a – 3u). Biologists conducted pedestrian surveys within the survey area recording the location, size, and 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.

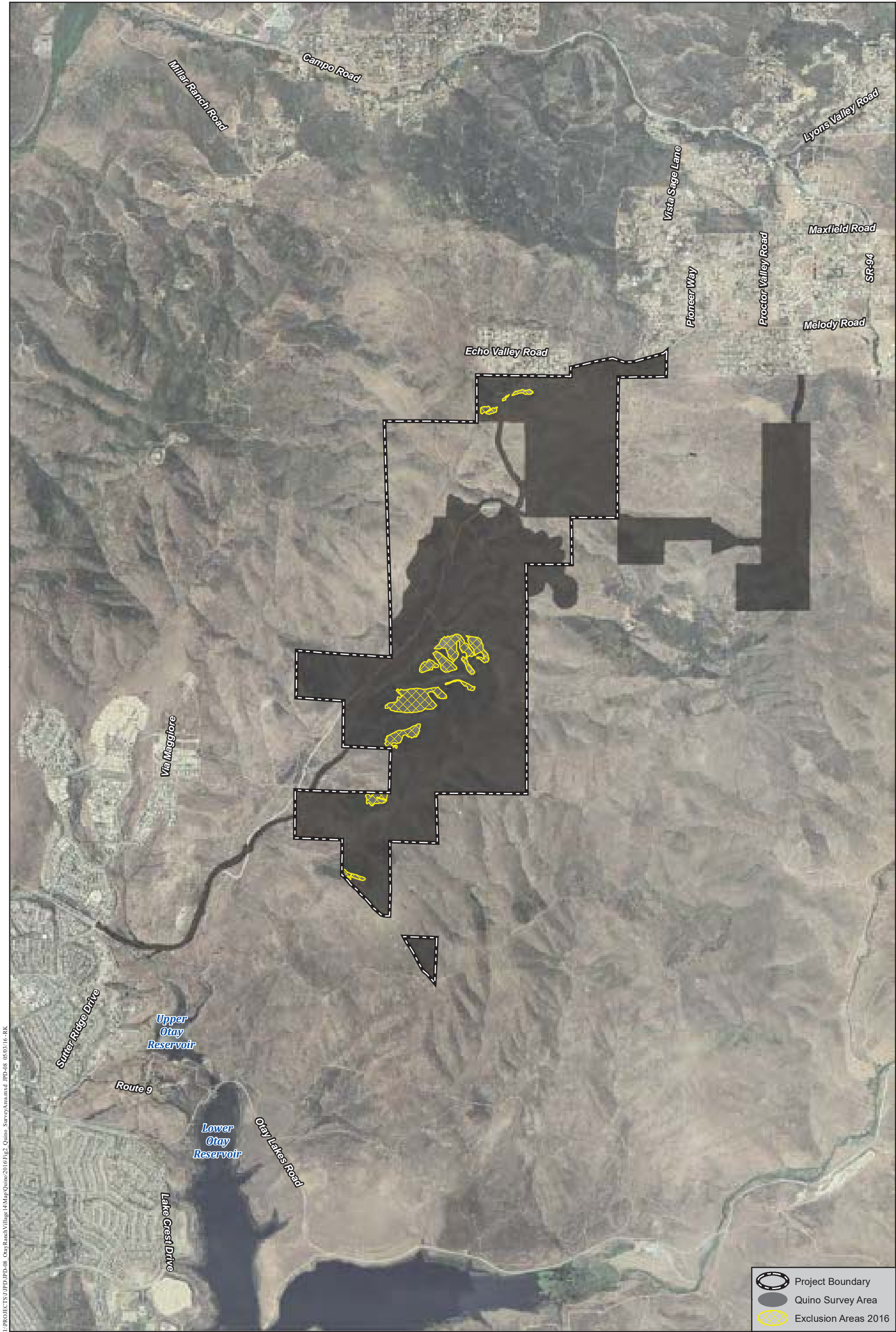
Surveys consisted of walking through appropriate habitat and identifying all butterflies observed by sight and with the aid of binoculars. Larval host plants not previously documented were mapped with the aid of GPS units when encountered during surveys, and potential nectar plant species were documented.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



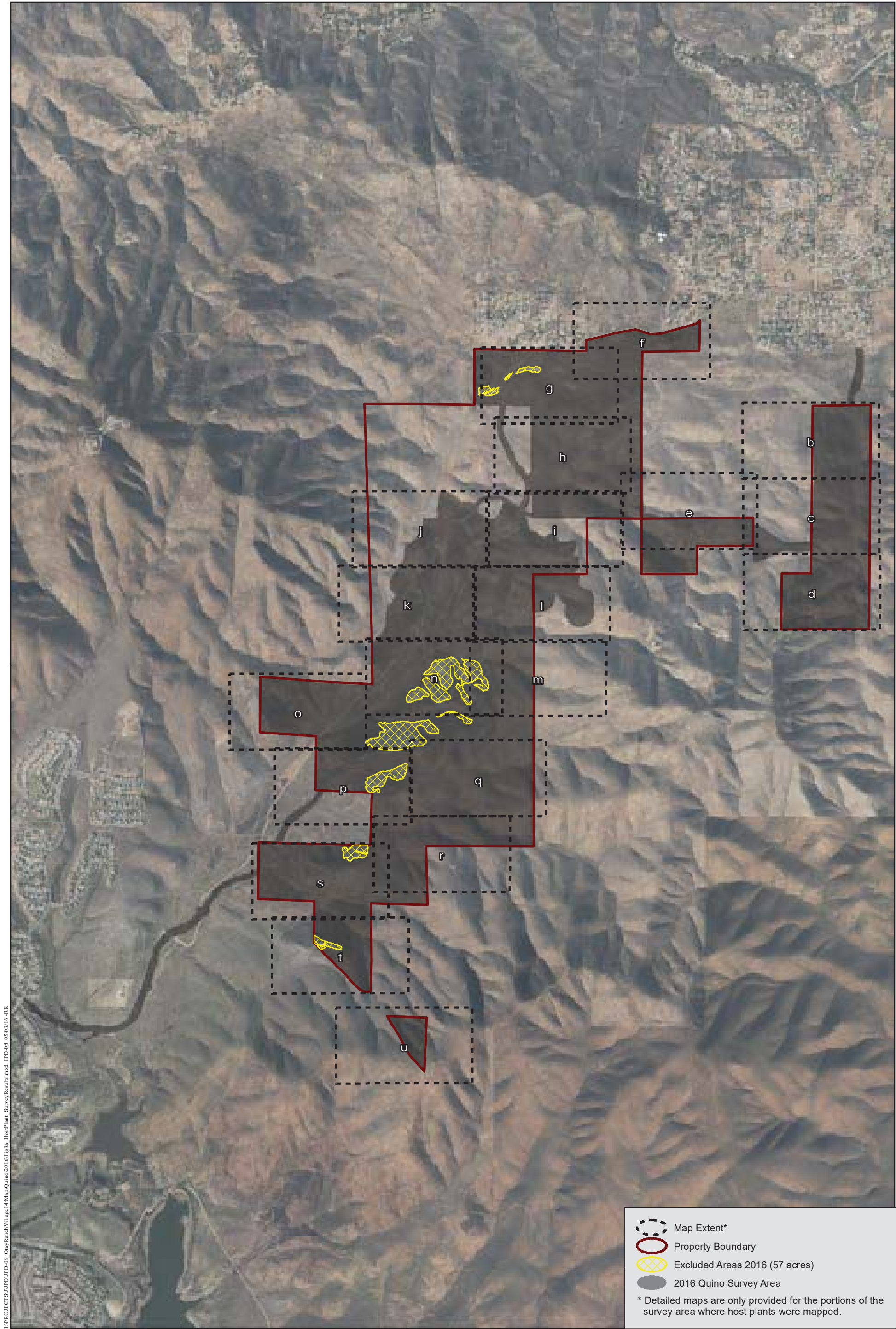
Project Vicinity Map

OTAY RANCH PROCTOR VALLEY VILLAGE 14 AND PRESERVE



2016 Quino Checkerspot Butterfly Survey Area

OTAY RANCH PROCTOR VALLEY VILLAGE 14 AND PRESERVE



2016 Quino Checkerspot Butterfly Host Plant Key Map

OTAY RANCH PROCTOR VALLEY VILLAGE 14 AND PRESERVE



2016 Quino Checkerspot Butterfly Host Plant Locations

OTAY RANCH PROCTOR VALLEY VILLAGE 14 AND PRESERVE



2016 Quino Checkerspot Butterfly Host Plant Locations

OTAY RANCH PROCTOR VALLEY VILLAGE 14 AND PRESERVE



2016 Quino Checkerspot Butterfly Host Plant Locations

OTAY RANCH PROCTOR VALLEY VILLAGE 14 AND PRESERVE



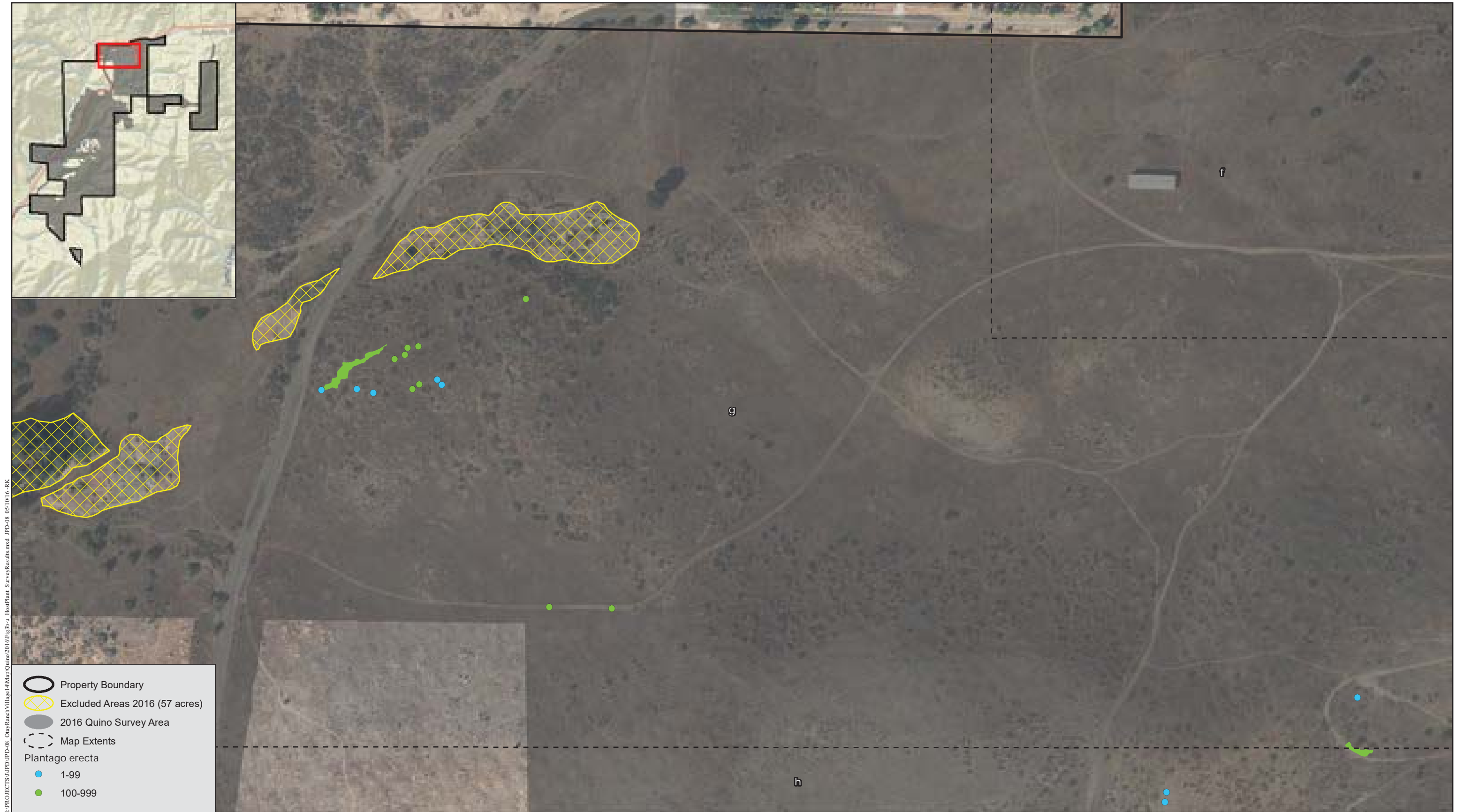
2016 Quino Checkerspot Butterfly Host Plant Locations

OTAY RANCH PROCTOR VALLEY VILLAGE 14 AND PRESERVE



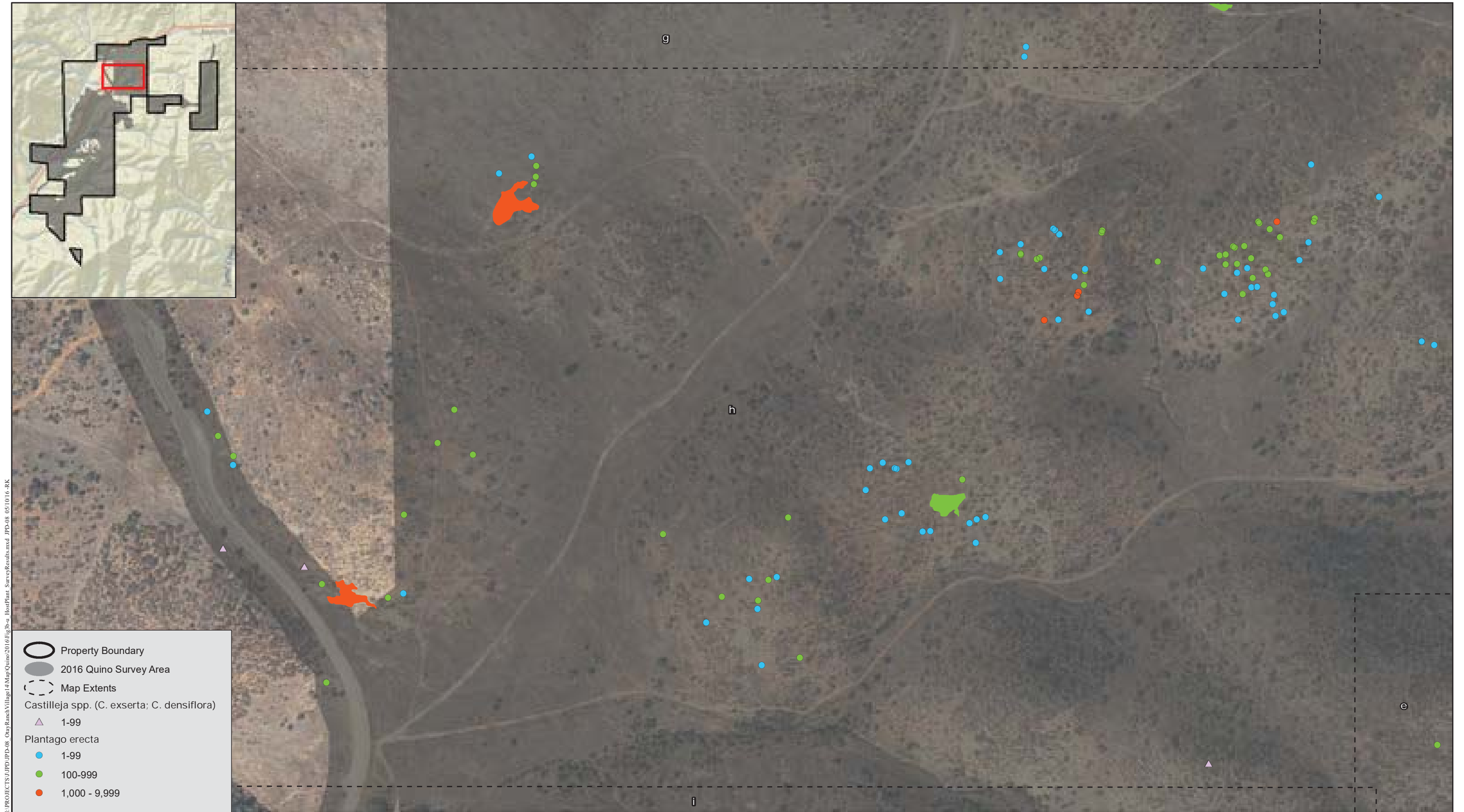
2016 Quino Checkerspot Butterfly Host Plant Locations

OTAY RANCH PROCTOR VALLEY VILLAGE 14 AND PRESERVE



2016 Quino Checkerspot Butterfly Host Plant Locations

OTAY RANCH PROCTOR VALLEY VILLAGE 14 AND PRESERVE



2016 Quino Checkerspot Butterfly Host Plant Locations

OTAY RANCH PROCTOR VALLEY VILLAGE 14 AND PRESERVE



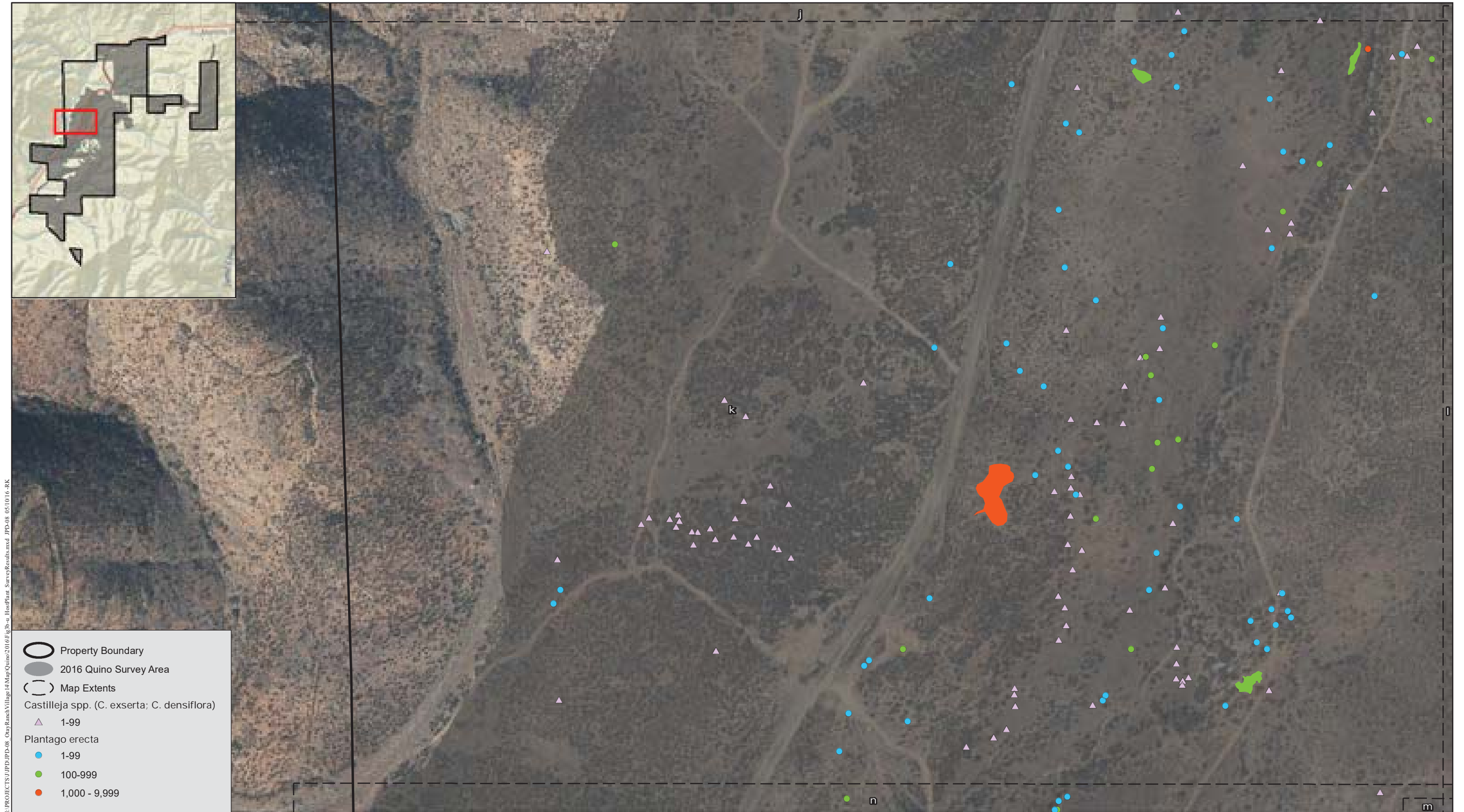
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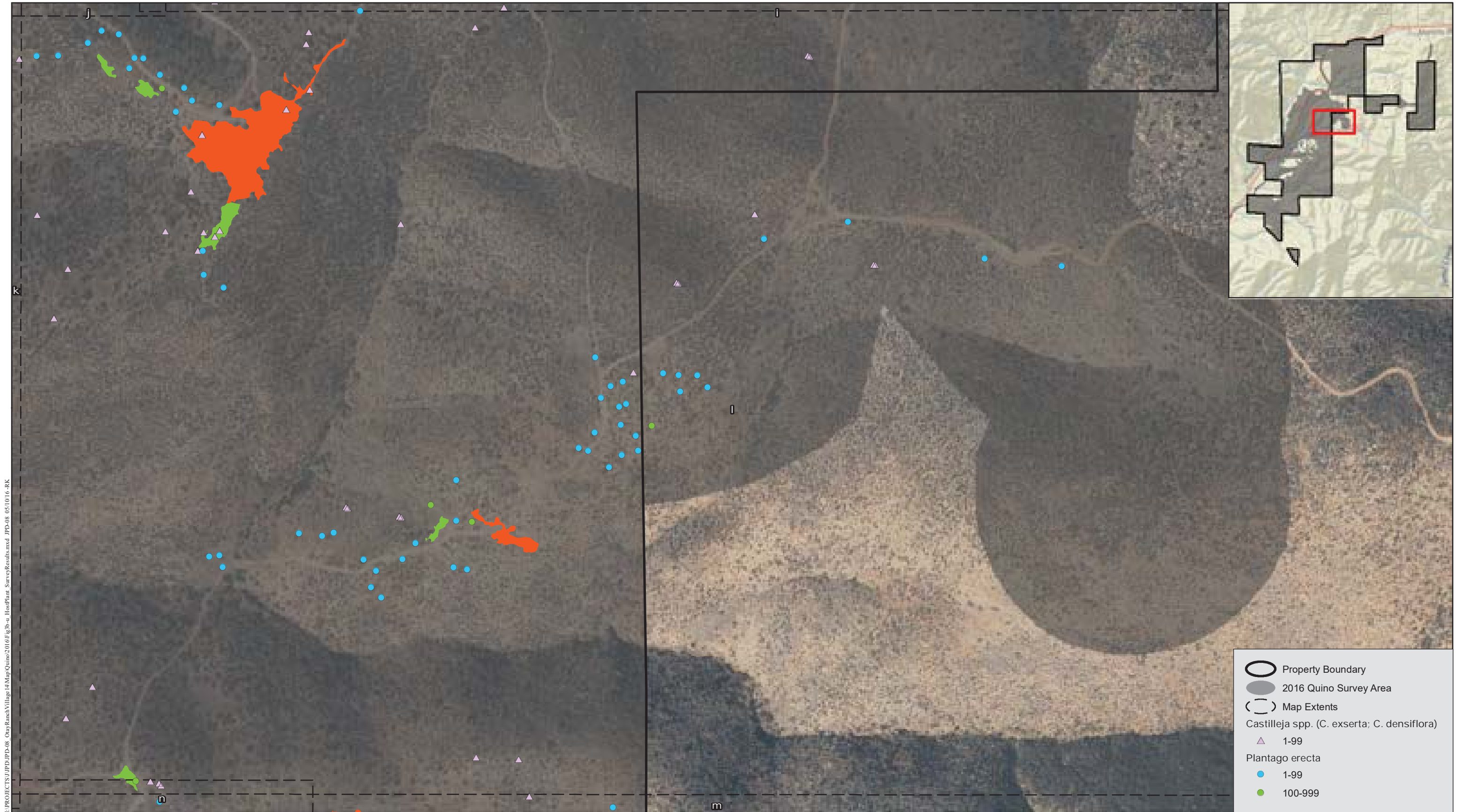
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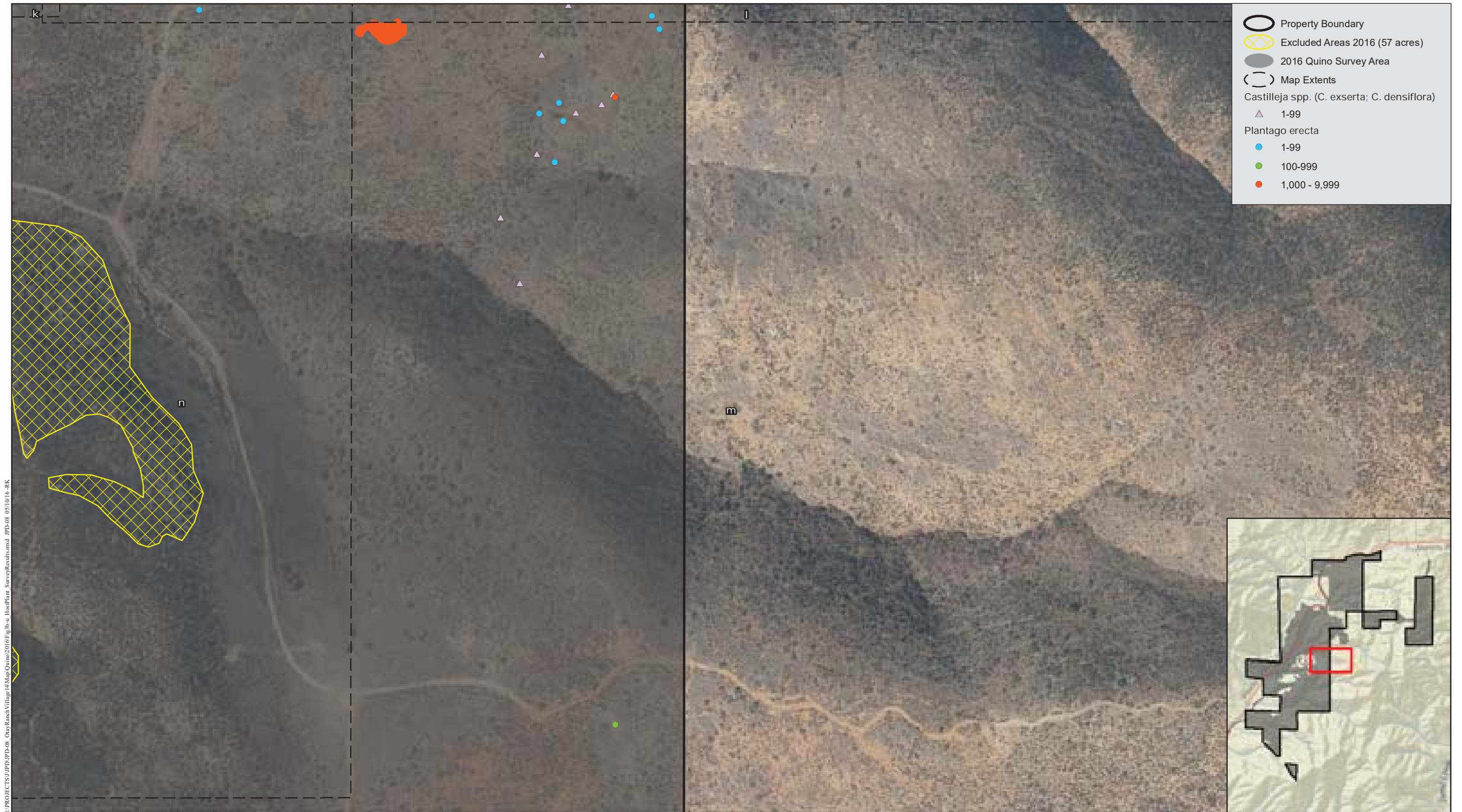
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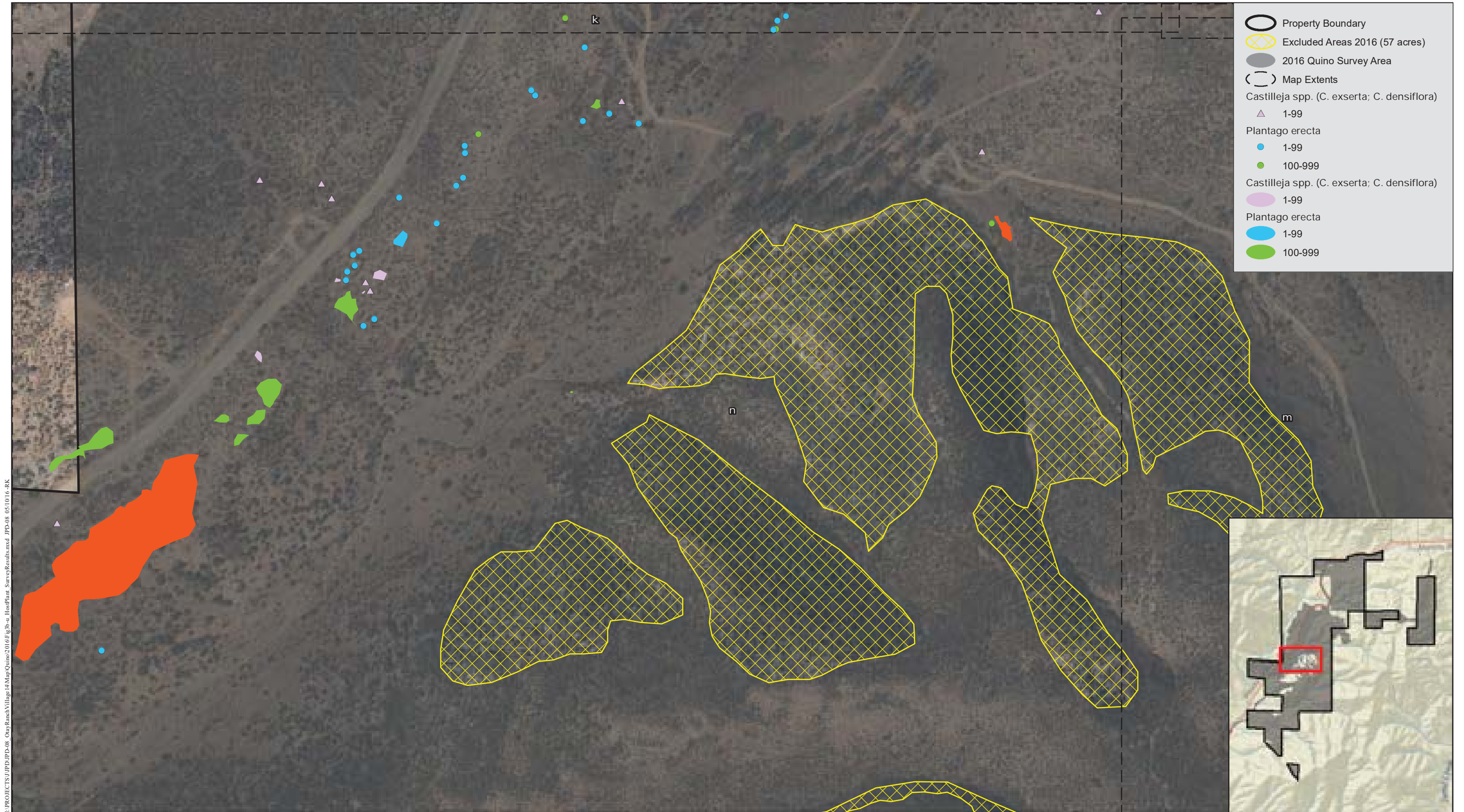
2016 Quino Checkerspot Butterfly Host Plant Locations

OTAY RANCH PROCTOR VALLEY VILLAGE 14 AND PRESERVE



2016 Quino Checkerspot Butterfly Host Plant Locations

OTAY RANCH PROCTOR VALLEY VILLAGE 14 AND PRESERVE



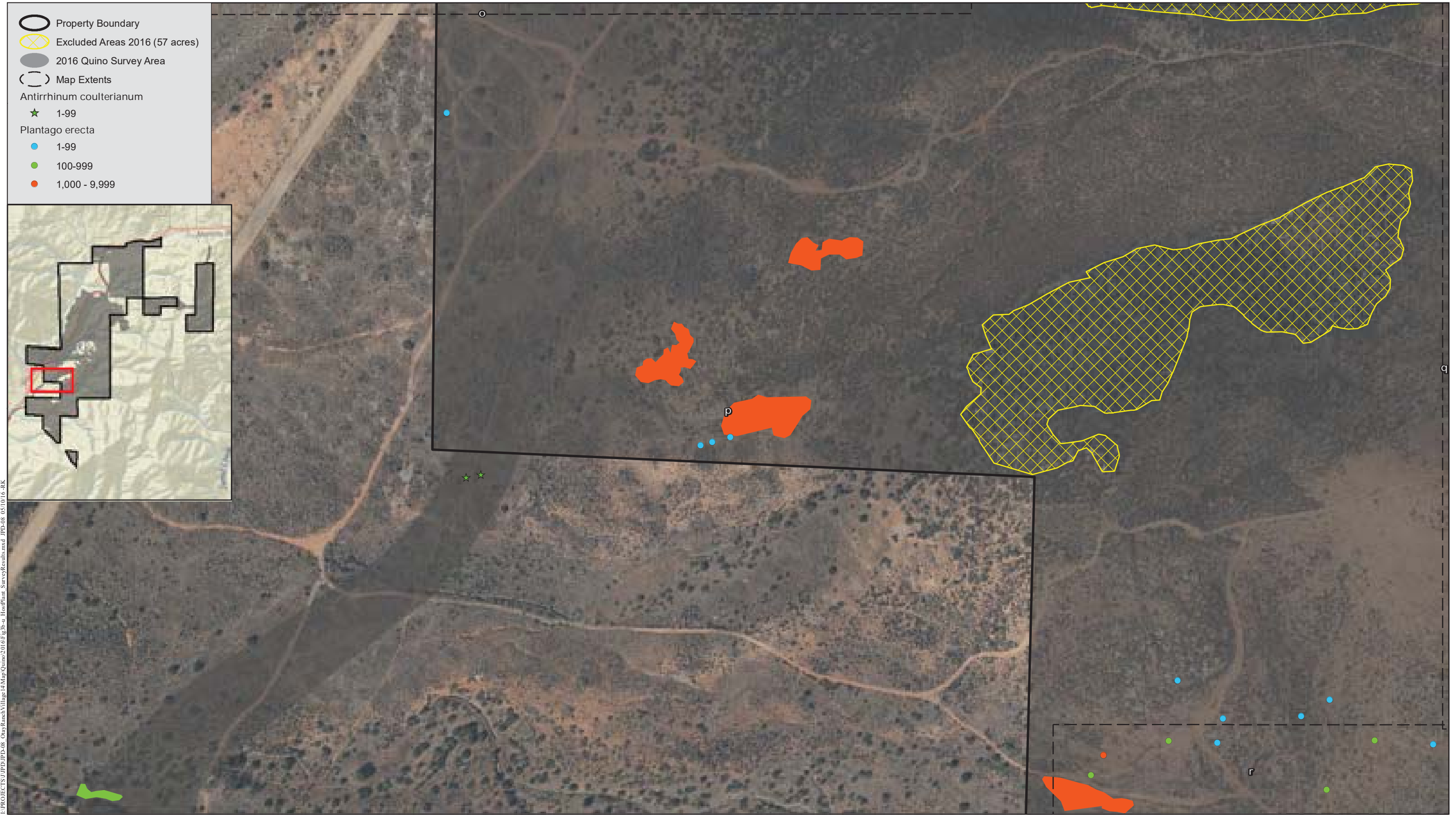
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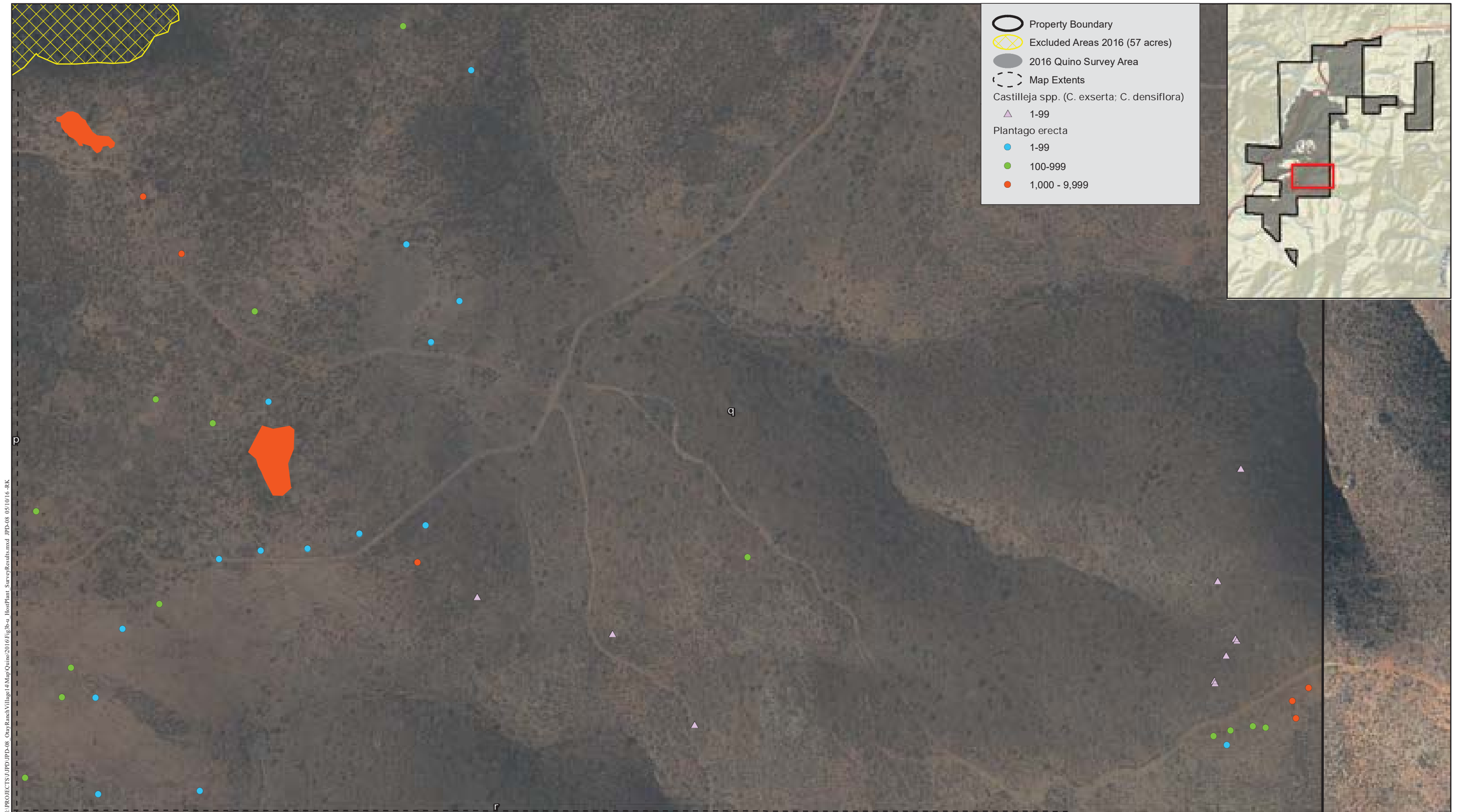
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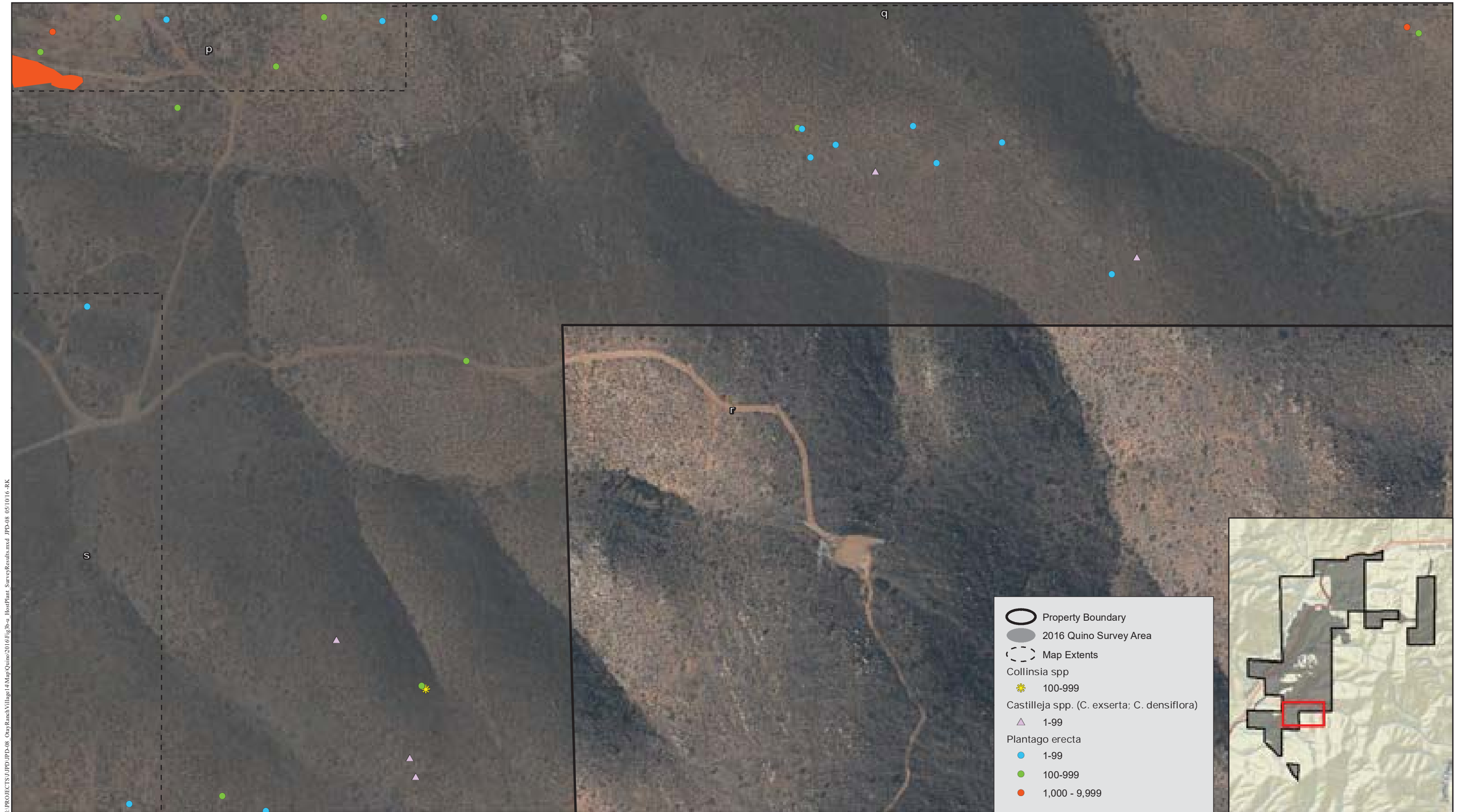
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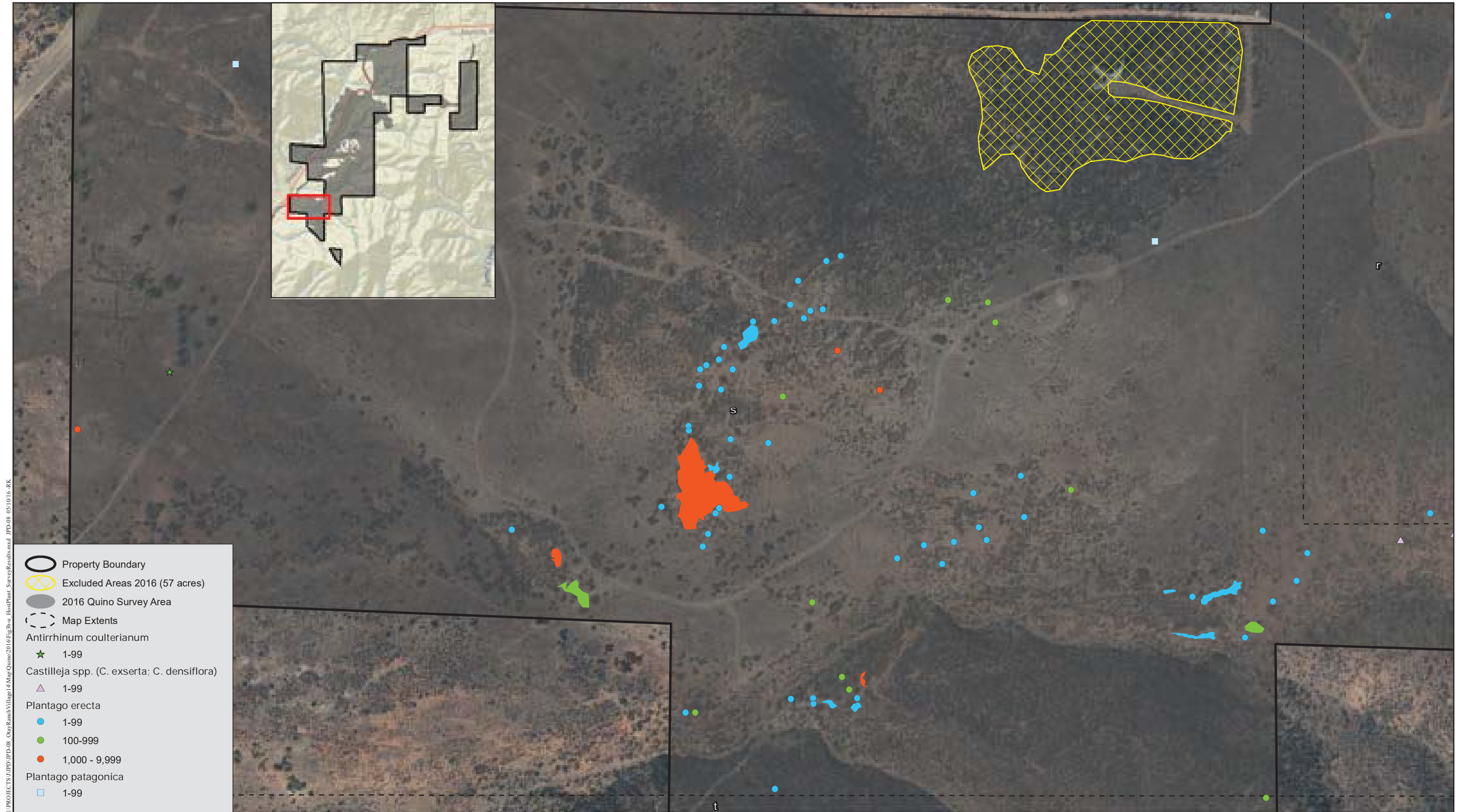
2016 Quino Checkerspot Butterfly Host Plant Locations

OTAY RANCH PROCTOR VALLEY VILLAGE 14 AND PRESERVE



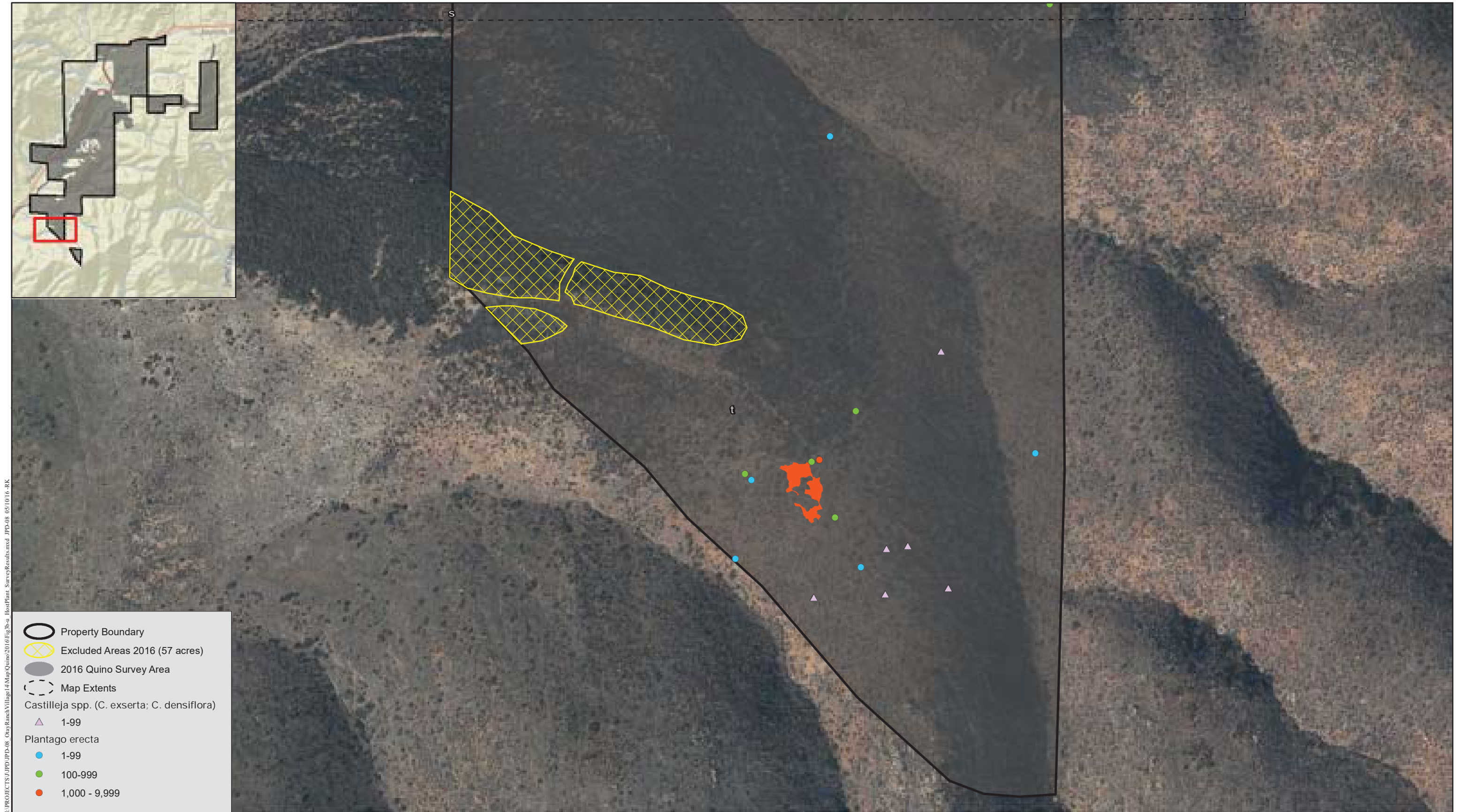
2016 Quino Checkerspot Butterfly Host Plant Locations

OTAY RANCH PROCTOR VALLEY VILLAGE 14 AND PRESERVE



2016 Quino Checkerspot Butterfly Host Plant Locations

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2016 Quino Checkerspot Butterfly Host Plant Locations

OTAY RANCH PROCTOR VALLEY VILLAGE 14 AND PRESERVE

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 than 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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Appendix A

SURVEY INFORMATION



Appendix A
SURVEY INFORMATION
OTAY RANCH PROCTOR VALLEY VILLAGE 14 & PRESERVE

SURVEY 1							
DATE	BIOLOGIST	ACRES	AC/HR	TIME* (start/end)	WEATHER CONDITIONS		RESULTS†
					Start	End	
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 ^ψ	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, 2016	A. Hill ^β T. Cooper ^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
			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, 2016	G. Huffman	30	5.4	0930/1315	10% cloud, 70°F, wind 2-5 mph	20% cloud, 82°F, wind 0-4 mph	No QCB Observed
				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

Appendix A (cont.)
SURVEY INFORMATION
OTAY RANCH PROCTOR VALLEY VILLAGE 14 & PRESERVE

^Signifies HELIX biologist

SURVEY 1 (cont.)							
DATE	BIOLOGIST	ACRES	AC/HR	TIME* (start/end)	WEATHER CONDITIONS		RESULTS†
					Start	End	
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

‡Signifies Halcyon biologist

ψSignifies SummitWest Biologist

*Supervised Individual

Appendix A (cont.)
SURVEY INFORMATION
OTAY RANCH PROCTOR VALLEY VILLAGE 14 & PRESERVE

SURVEY 2							
DATE	BIOLOGIST	ACRES	AC/HR	TIME* (start/end)	WEATHER CONDITIONS		RESULTS†
					Start	End	
March 2, 2016	C. Brungraber ^ψ A. Borchert ^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. Borchert ^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

Appendix A (cont.)
SURVEY INFORMATION
OTAY RANCH PROCTOR VALLEY VILLAGE 14 & PRESERVE

SURVEY 2 (cont.)							
DATE	BIOLOGIST	ACRES	AC/HR	TIME* (start/end)	WEATHER CONDITIONS		RESULTS†
					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, 2016	C. Brungraber ^ψ A. Borchert ^ψ E. Harris^ B. Rosenbaum*	100	6	0900/1215	0% cloud, 60°F, wind 0-1 mph	0% cloud, 66°F, wind 3-5 mph	No QCB Observed
				1400/1615	0% cloud, 67°F, wind 3-5 mph	0% cloud, 66°F, wind 3-5 mph	

^Signifies HELIX biologist

‡Signifies Busby biologist

^βSignifies Halcyon biologist

^ψSignifies SummitWest Biologist

*Supervised Individual

Appendix A (cont.)
SURVEY INFORMATION
OTAY RANCH PROCTOR VALLEY VILLAGE 14 & PRESERVE

SURVEY 3							
DATE	BIOLOGIST	ACRES	AC/HR	TIME* (start/end)	WEATHER CONDITIONS		RESULTS†
					Start	End	
March 8, 2016	C. Brungraber ^W A. Borchert ^W 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 ^W 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. Borchert ^W	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 ^W A. Borchert ^W	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 ^W 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

Appendix A (cont.)
SURVEY INFORMATION
OTAY RANCH PROCTOR VALLEY VILLAGE 14 & PRESERVE

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

Appendix A (cont.)
SURVEY INFORMATION
OTAY RANCH PROCTOR VALLEY VILLAGE 14 & PRESERVE

SURVEY 3 (cont.)							
DATE	BIOLOGIST	ACRES	AC/HR	TIME* (start/end)	WEATHER CONDITIONS		RESULTS†
					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

Appendix A (cont.)
SURVEY INFORMATION
OTAY RANCH PROCTOR VALLEY VILLAGE 14 & PRESERVE

SURVEY 4							
DATE	BIOLOGIST	ACRES	AC/HR	TIME* (start/ end)	WEATHER CONDITIONS		RESULTS†
					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

Appendix A (cont.)
SURVEY INFORMATION
OTAY RANCH PROCTOR VALLEY VILLAGE 14 & PRESERVE

^Signifies HELIX biologist

SURVEY 4 (cont.)							
DATE	BIOLOGIST	ACRES	AC/HR	TIME* (start/ end)	WEATHER CONDITIONS		RESULTS†
					Start	End	
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‡	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‡ N. Kimball‡	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‡ N. Kimball‡	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

‡Signifies Busby biologist

‡Signifies Halcyon biologist

‡Signifies SummitWest Biologist

*Supervised Individual

Appendix A (cont.)
SURVEY INFORMATION
OTAY RANCH PROCTOR VALLEY VILLAGE 14 & PRESERVE

SURVEY 5							
DATE	BIOLOGIST	ACRES	AC/HR	TIME* (start/ end)	WEATHER CONDITIONS		RESULTS†
					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 ^W	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 ^W N. Kimball ^W	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 ^W 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

Appendix A (cont.)
SURVEY INFORMATION
OTAY RANCH PROCTOR VALLEY VILLAGE 14 & PRESERVE

SURVEY 5 (cont.)							
DATE	BIOLOGIST	ACRES	AC/HR	TIME* (start/ end)	WEATHER CONDITIONS		RESULTS†
					Start	End	
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 [‡] T. Cooper [‡]	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 [‡] N. Kimball [‡] 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 [‡]	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	10% cloud, 60°F, wind 2-4 mph	70% cloud, 58°F, wind 3-8 mph	No QCB Observed
				1400/1700	50% cloud, 58°F, wind 2-6 mph	30% cloud, 60°F, wind 3-8 mph	
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 [‡]	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

Appendix A (cont.)
SURVEY INFORMATION
OTAY RANCH PROCTOR VALLEY VILLAGE 14 & PRESERVE

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Appendix B

SURVEY FORMS AND FIELD NOTES



2016 Quino Checkerspot Butterfly Survey Form

Surveyor: C Dickson

Date: 2/28/16

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

Site Visit No: 1

Acres Surveyed 35

Survey Time: 6.25

Acres per Hour: 8.8

Other Surveyors Present: N/A

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	<u>0745</u>	<u>65.2</u>	<u>3.1</u>	<u>0%</u>
End	<u>1400</u>	<u>86.7</u>	<u>2.5</u>	<u>0%</u>
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

<u>CSS / NNG / CHAP</u>

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcedon checkerspot (<i>E. chalcedona chalcedona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	<u>4</u>	painted lady (<i>V. cardui</i>)	<u>1</u>
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)	<u>1</u>	unidentified lady (<i>Vanessa</i> sp.)	
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue		pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	<u>14</u>	anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)	<u>2</u>	common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	<u>5</u>
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	<u>4</u>	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescent</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)	<u>4</u>		
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur			
Column Subtotal	<u>29</u>	Column Subtotal	<u>6</u>
		Total	<u>35</u>

Date: 2/27/15

Site Visit No: _____

Survey Time: 8.93 hrs (8hr 50min)

Site Visit No: _____

Other Surveyors Present:

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcodon checkerspot (<i>E. chalcodona chalcodona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	1
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	11111111	painted lady (<i>V. cardui</i>)	
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	1
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa sp.</i>)	11
marine blue (<i>Leptotes marina</i>)	1	Swallowtails	
unidentified blue	111	pale swallowtail (<i>Papilio eurymedon</i>)	1
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	11 111 111 111 111 111 111	anise swallowtail (<i>P. zelicaon</i>)	11
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)	111 111 111 111 111	monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white	111 111	funereal duskywing (<i>Erynnis funeralis</i>)	111 1
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	11 111 111 111 111	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	1
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)			
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur			
Column Subtotal	120	Column Subtotal	13
		Total	133

2016 Quino Checkerspot Butterfly Survey Form

Surveyor: N. Bradu & B. Oyg (TE 135948-2 & 134338-2) Date: 28 Feb 2016
 Site Name: JPD-08 Proctor Valley - Village 14 of Olay Ranch - Poly B Site Visit No: 1
 Acres Surveyed 60 Survey Time: 3 hrs 25 min x2 Acres per Hour: 8.8
 Other Surveyors Present: -

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0800	61	0-2	0% clear
End	0920	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 scrub (Eriogon, Artemisia)
chaparral (Adelpha, Ceanothus)

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

+ Diccup
Bahla

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcid checkerspot (<i>E. chalcidona chalcidona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	1
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)		painted lady (<i>V. cardui</i>)	11
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	11
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	1
marine blue (<i>Leptotes marina</i>)	11	Swallowtails	
unidentified blue	11	pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	11	anise swallowtail (<i>P. zelicaon</i>)	1
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white	11	funereal duskywing (<i>Erynnis funeralis</i>)	9
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	12	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	11
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)		dark star sulphur	11
sleepy orange (<i>Eurema nicippe</i>)		<i>Erynnis</i> sp.	11
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur	11		
Column Subtotal	38	Column Subtotal	25
		Total	63

2016 Quino Checkerspot Butterfly Survey Form

Surveyor: Chez Brungaber
 Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch Date: 2/28/16
 Acres Surveyed: BB - 46 acres Survey Time: 9hr 25min Site Visit No: 1
 Other Surveyors Present: / Acres per Hour: 5.5

	Time (24 hr)	Field Conditions		
		Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	<u>0810</u>	<u>66.1</u>	<u>0-2</u>	<u>10%</u>
End	<u>1635</u>	<u>76.3</u>	<u>3-5</u>	<u>35%</u>
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

Chamise Chap (scrub oak, chamise) NNG (Bromus dia., Erodium sp., D. capitata, A. menziesii)
buckwheat scrub (Eriog. fasc., Allium sp., D. capitata, Stipa sp.)

Host Plants		Nectar Plants	
	Obs.		Obs.
dwarf plantain (<i>Plantago erecta</i>)		popcorn flower (<i>Cryptantha/Plagiobothrys</i> spp.)	flwr
purple owl's clover (<i>Castilleja exserta</i>)	flwr	goldfields (<i>Lasthenia</i> spp.)	
snapdragon (<i>Antirrhinum coulterianum</i>)		goldenstar (<i>Muilla</i> spp.)	
birds-beak (<i>Cordylanthus rigidus</i>)		fiddleneck (<i>Amsinckia menziesii</i> var. <i>intermedia</i>)	flwr
woolly plantain (<i>Plantago patagonica</i>)	flwr	onion (<i>Allium</i> spp.)	flwr
Chinese houses (<i>Collinsia</i> spp.)	flwr	buckwheat (<i>Eriogonum fasciculatum</i>)	flwr
		ground pink (<i>Linanthus dianthiflorus</i>)	flwr
Host Plant Mapping Updated (circle) Yes (M) No		New Area or Existing Area (circle) New Existing Both	
Species updated (list) tons of Plantago - will Gps if plant team did not, but I don't have maps yet			

Butterfly Species		Butterfly Species	
Checkerspots	No.	Checkerspots	No.
California patch (<i>Chlosyne californica</i>)		Hairstreaks	
Gabb's checkerspot (<i>C. gabbi</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		brown elfin (<i>Callophrys augustinus</i>)	<u>1</u>
chalcid checkerspot (<i>E. chalcidona chalcidona</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	<u>11</u>
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	<u>1</u>
Mylitta crescent (<i>Phyciodes mylitta</i>)		Ladies/Admirals	
Blues		California sister (<i>Adelpha bredowii californica</i>)	
western pygmy-blue (<i>Brephidium exila</i>)	<u>11</u>	Lorquin's admiral (<i>Limenitis lorquini</i>)	
western tailed blue (<i>Everes amyntula</i>)		west coast lady (<i>Vanessa annabella</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)		red admiral (<i>V. atalanta rubria</i>)	
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		painted lady (<i>V. cardui</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
marine blue (<i>Leptotes marina</i>)		unidentified lady (<i>Vanessa</i> sp.)	<u>11</u>
unidentified blue	<u>11111</u>	Swallowtails	
Whites		pale swallowtail (<i>Papilio eurymedon</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	<u>11111</u>	western tiger swallowtail (<i>P. rutulus</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		anise swallowtail (<i>P. zelicaon</i>)	
common California ringlet (<i>Coenonympha californica</i>)	<u>111</u>	Miscellaneous	
cabbage white (<i>Pieris rapae</i>)		monarch (<i>Danaus plexippus</i>)	
checkered (common) white (<i>Pontia protodice</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
spring white (<i>P. sisymbrii</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
unidentified white	<u>11111</u>	Skippers	
Metalmarks		funereal duskywing (<i>Erynnis funeralis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	<u>111</u>	mournful duskywing (<i>Erynnis tristis</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		fiery skipper (<i>Hylephila phyleus</i>)	
Sulphurs		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	<u>1</u>
orange sulphur (<i>Colias eurytheme</i>)	<u>1</u>	Other <u>unidentified skipper</u>	<u>1</u>
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)	<u>1</u>		
unidentified sulphur	<u>1</u>		
Column Subtotal	<u>7675</u>	Column Subtotal	<u>9</u>
		Total	<u>8584</u>

2016 Quino Checkerspot Butterfly Survey Form

Surveyor: N. Brodie (TE 135948-2) Date: 28 Feb 2016
 Site Name: JPD-08 Proctor Valley - Village 14 of Olay Ranch Poly C Site Visit No: 1
 Acres Surveyed 33 Survey Time: 2h 30m x 2 Acres per Hour: 6.6
 Other Surveyors Present: B. Ogg (TE 134338-2)

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0930	63°	0-2	15%
End				
Start				
End	1200	75°	9-10, gust to 15	60% high, thin clouds

Vegetation Communities Surveyed (inc. dominant spp.)

coastal sage scrub (Eriofas. Arctcal)
 chaparral (Adefas. ceatom)

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

Wren,
 bluebird,
 shooting
 star,
 Bahlae

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcedon checkerspot (<i>E. chalcedona chalcedona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Evers amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)		painted lady (<i>V. cardui</i>)	
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	3
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	1
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue	11	pale swallowtail (<i>Papilio eurymedon</i>)	1
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	26	anise swallowtail (<i>P. zelicaon</i>)	1
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white	11	funereal duskywing (<i>Erynnis funeralis</i>)	5
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	4	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescent</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)		<i>Erynnis</i> sp.	1
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur	11		
Column Subtotal	38	Column Subtotal	12
		Total	50

Surveyor

2016 Quino Checkerspot Butterfly Survey Form

Site Name: Chez Brungaber
JPD-08 Proctor Valley - Village 14 of Otay RanchDate: 3/1/16Area Surveyed CCAcres Surveyed 42Site Visit No: 1

Other Surveyors Present:

Survey Time: 7hrsAcres per Hour: 6

	Time (24 hr)	Field Conditions		
		Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	<u>0845</u>	<u>66.7</u>	<u>0-3</u>	<u>15%</u>
End	<u>1545</u>	<u>87.1</u>	<u>0-3</u>	<u>5%</u>
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

Chamise chap (chamise, buckwheat), NNG (Avena sp., Bromus sp., Erodium sp., blue dicks),
Native bunch grassland (Stipa sp., blue dicks, Solanum sp., Sisyr-bel)

Host Plants		Obs.	Nectar Plants		Obs.
dwarf plantain (<i>Plantago erecta</i>)		<u>flwr</u>	popcorn flower (<i>Cryptantha/Plagiobothrys</i> spp.)		<u>flwr</u>
purple owl's clover (<i>Castilleja exserta</i>)			goldfields (<i>Lasthenia</i> spp.)		<u>flwr</u>
snapdragon (<i>Antirrhinum coulterianum</i>)			goldenstar (<i>Mulla</i> spp.)		
birds-beak (<i>Cordylanthus rigidus</i>)			fiddleneck (<i>Amsinckia menziesii</i> var. <i>intermedia</i>)		
woolly plantain (<i>Plantago patagonica</i>)			onion (<i>Allium</i> spp.)		
Chinese houses (<i>Collinsia</i> spp.)			buckwheat (<i>Eriogonum fasciculatum</i>)		<u>flwr</u>
			ground pink (<i>Linanthus dianthiflorus</i>)		<u>flwr</u>
Host Plant Mapping Updated (circle)		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	New Area or Existing Area (circle)		
Species updated (list)			New	Existing	Both

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)	<u>1</u>	great purple hairstreak (<i>Atides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcid checkerspot (<i>E. chalcidona chalcidona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	<u>1</u>	painted lady (<i>V. cardui</i>)	
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	<u>11</u>
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue	<u>1111</u>	pale swallowtail (<i>Papilio eurymedon</i>)	<u>1</u>
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	<u>114</u>	anise swallowtail (<i>P. zelicaon</i>)	<u>1</u>
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)	<u>111111</u>	monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white	<u>111</u>	funereal duskywing (<i>Erynnis funeralis</i>)	<u>1111</u>
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	<u>1111111111</u>	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)	<u>1</u>	<u>Pearly marble</u>	<u>1</u>
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur	<u>11</u>		
Column Subtotal		<u>102</u>	
			Column Subtotal <u>9</u>
			Total <u>111</u>

Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch
Acres Surveyed DD 3.4 + 4.4

Date: 2/26/16

Other: DD, 4 west AA west

Site Visit No: 1

Other Surveyors Present: _____ Survey Time: 7.75 hrs

Acres per Hour: 5.0

Time (24 hr)		Field Conditions		
Start	End	Temperature (°F)	Wind Speed (mph)	Cloud Cover
0815	1600	66.2	0-3	5%
		81.1	0-5	80%

Vegetation Communities Surveyed (inc. dominant spp.)

Chamise chap (chamise, *Xylorhiza bicolor*), annual grass (*S. apiana*, *Poa* sp., *Mirabilis*, *Lathyrus* sp., *Solanum* sp.)
Salvia clevelandii shrub w/ *Veronica carpesioides*

Host Plants		Obs.	Nectar Plants	Obs.
dwarf plantain (<i>Plantago erecta</i>)		flwr	popcorn flower (<i>Cryptantha/Plagiobothrys</i> spp.)	flwr
purple owl's clover (<i>Castilleja exserta</i>)			goldfields (<i>Lasthenia</i> spp.)	
snapdragon (<i>Antirrhinum coulterianum</i>)		flwr	goldenstar (<i>Mulla</i> spp.)	flwr
birds-beak (<i>Cordylanthus rigidus</i>)			fiddleneck (<i>Amsinckia menziesii</i> var. <i>intermedia</i>)	flwr
woolly plantain (<i>Plantago patagonica</i>)			onion (<i>Allium</i> spp.)	flwr
Chinese houses (<i>Collinsia</i> spp.)			buckwheat (<i>Eriogonum fasciculatum</i>)	veg
			ground pink (<i>Linanthus dianthiflorus</i>)	flwr
Host Plant Mapping Updated (circle)	Yes <input checked="" type="radio"/> No <input type="radio"/>		New Area or Existing Area (circle)	New Existing Both
Species updated (list) <i>manis added more plantain - not sure what I see data</i>				

Butterfly Species	No.	Butterfly Species	No.
Checkerspot		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)	I	brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcedon checkerspot (<i>E. chalcedona chalcedona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)	II	west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	III III III I	painted lady (<i>V. cardui</i>)	
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)	II	unidentified lady (<i>Vanessa</i> sp.)	III
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue	III	pale swallowtail (<i>Papilio eurymedon</i>)	II
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	II I III	anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)	III	Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)	III III III III III	monarch (<i>Danaus plexippus</i>)	I
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	I
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white	III	funereal duskywing (<i>Erynnis funeralis</i>)	III
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	II II III III III	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	I
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)	III II		
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur	III		
Column Subtotal	121	Column Subtotal	11
		Total	132

2016 Quino Checkerspot Butterfly Survey Form

Surveyor: Brian Parker

Date: 2-28-2016

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

Site Visit No: 1

Acres Surveyed 51

Survey Time: 6.0

Acres per Hour: 8.5

Other Surveyors Present: —

Field Conditions

	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0820	64	0-1	0%
End	1420	75	4-6	10%
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

DCSS - Eri fcs

SMC - Ade fcs, Geo tom,

CC - Ade fcs

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	2
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcedon checkerspot (<i>E. chalcedona chalcedona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)		painted lady (<i>V. cardui</i>)	
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue	2	pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	11	anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	2
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	1	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)			
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)	2		
unidentified sulphur	2		
Column Subtotal	16	Column Subtotal	4
		Total	20

2016 Quino Checkerspot Butterfly Survey Form

Surveyor: GARRETT HUFFMAN

Date: 2/24/16

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

Site Visit No: 1 EE/P

Acres Surveyed 43

Survey Time: 0930 - 1800
8.5 hours

Acres per Hour: EE-4 ; P-6.5

Other Surveyors Present: NONE

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0930	70	2-5	10
End	1315	82	0-4	20
Start	1345	82	0-4	20
End	1600 1800	74	2-5	40

Vegetation Communities Surveyed (inc. dominant spp.)

CHAMISE CHAPARRAL, COASTAL SAGE SCRUB, NON-NATIVE
GRASSLAND

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

Species updated (list)

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

Column Subtotal 120

Column Subtotal 143

TOTAL 143

23

2016 Quino Checkerspot Butterfly Survey Form

Surveyor: Eric Lacoste Date: 2/25/16
 Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch F Site Visit No: 1
 Acres Surveyed 34 Survey Time: 3.5 hrs Acres per Hour: 9.7
 Other Surveyors Present: none

Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	12:00	87	1.0 avg 2.3 max	0
End	3:30	82	2.7 avg 5.4 max	0
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

CSS, mix chaparral

Host Plants	Obs.	Nectar Plants	Obs.
dwarf plantain (<i>Plantago erecta</i>)	1	popcorn flower (<i>Cryptantha/Plagiobothrys</i> spp.)	4
purple owl's clover (<i>Castilleja exserta</i>)	1	goldfields (<i>Lasthenia</i> spp.)	5
snapdragon (<i>Antirrhinum coulterianum</i>)	1	goldenstar (<i>Mulla</i> spp.)	5
birds-beak (<i>Cordylanthus rigidus</i>)	1	fiddleneck (<i>Amsinckia menziesii</i> var. <i>intermedia</i>)	5
woolly plantain (<i>Plantago patagonica</i>)	1	onion (<i>Allium</i> spp.)	5
Chinese houses (<i>Collinsia</i> spp.)	1	buckwheat (<i>Eriogonum fasciculatum</i>)	5
		ground pink (<i>Linanthus dianthiflorus</i>)	2
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 (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcid checkerspot (<i>E. chalcidona chalcidona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Myliatta crescent (<i>Phyciodes myliatta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	2
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	6	painted lady (<i>V. cardui</i>)	4
Edward's blue (<i>Hemiargus ceraunus gyas</i>)		American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)		unidentified lady (<i>Vanessa</i> sp.)	
marine blue (<i>Leptotes marina</i>)	1	Swallowtails	
unidentified blue		pale swallowtail (<i>Papilio eurymedon</i>)	2
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	21	anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)		monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	1
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (<i>Erynnis funeralis</i>)	1
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	1	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	1
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)	3	CA ringlet	1
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur			
Column Subtotal	32	Column Subtotal	12
		Total	44

Surveyor

2016 Quino Checkerspot Butterfly Survey Form

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

Date: 2/27/16

Acres Surveyed FF - 58 acres

Site Visit No: 1

Other Surveyors Present: /

Survey Time: 8hr 15min

Acres per Hour: 7

		Field Conditions		
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0830	60.4	0-1	10%
End	1645	77.6	0-3	0%
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)

NNG (Bromus, Avena), native bunch grassland (Stipa sp. blue dicks, Salicornia sp., Mirabilis), buckwheat scrub, disturbed (Erigeron sp.)

Host Plants	Obs.	Nectar Plants	Obs.
dwarf plantain (<i>Plantago erecta</i>)	flwr	popcorn flower (<i>Cryptantha/Plagiobothrys</i> spp.)	flwr
purple owl's clover (<i>Castilleja exserta</i>)		goldfields (<i>Lasthenia</i> spp.)	
snapdragon (<i>Antirrhinum coulterianum</i>)	flwr	goldenstar (<i>Muilla</i> spp.)	flwr
birds-beak (<i>Cordylanthus rigidus</i>)		fiddleneck (<i>Amsinckia menziesii</i> var. <i>intermedia</i>)	flwr
woolly plantain (<i>Plantago patagonica</i>)	flwr	onion (<i>Allium</i> spp.)	flwr
Chinese houses (<i>Collinsia</i> spp.)		buckwheat (<i>Eriogonum fasciculatum</i>)	flwr
		ground pink (<i>Linanthus dianthiflorus</i>)	
Host Plant Mapping Updated (circle)	Yes <input checked="" type="checkbox"/> No	New Area or Existing Area (circle)	New Existing Both
Species updated (list)	need to check maps		

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (<i>Chlosyne californica</i>)		great purple hairstreak (<i>Atlides halesus corcorani</i>)	
Gabb's checkerspot (<i>C. gabbii</i>)		brown elfin (<i>Callophrys augustinus</i>)	
Quino checkerspot (<i>Euphydryas editha quino</i>)		bramble (perplexing) hairstreak (<i>C. dumetorum affinis</i>)	
chalcid checkerspot (<i>E. chalcidona chalcidona</i>)		gray hairstreak (<i>Strymon melinus pudica</i>)	
Leanira checkerspot (<i>Thessalia leanira wrighti</i>)		Ladies/Admirals	
Mylitta crescent (<i>Phyciodes mylitta</i>)		California sister (<i>Adelpha bredowii californica</i>)	
Blues		Lorquin's admiral (<i>Limenitis lorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (<i>Vanessa annabella</i>)	
western tailed blue (<i>Everes amyntula</i>)		red admiral (<i>V. atalanta rubria</i>)	
southern blue (<i>Glaucopsyche lygdamus australis</i>)	11	painted lady (<i>V. cardui</i>)	
Edward's blue (<i>Hemiargus ceraunus gyas</i>)	11	American (Virginia) lady (<i>V. virginensis</i>)	
Acmon blue (<i>Icaricia acmon acmon</i>)	11	unidentified lady (<i>Vanessa</i> sp.)	
marine blue (<i>Leptotes marina</i>)		Swallowtails	
unidentified blue	HT	pale swallowtail (<i>Papilio eurymedon</i>)	
Whites		western tiger swallowtail (<i>P. rutulus</i>)	
Sara orangetip (<i>Anthocharis sara sara</i>)	HT HT 11	anise swallowtail (<i>P. zelicaon</i>)	
desert (Felder's) orangetip (<i>A. cethura</i>)		Miscellaneous	
common California ringlet (<i>Coenonympha californica</i>)	HT HT	monarch (<i>Danaus plexippus</i>)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (<i>Junonia coenia grisea</i>)	
checkered (common) white (<i>Pontia protodice</i>)		mourning cloak (<i>Nymphalis antiopa</i>)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white	11	funereal duskywing (<i>Erynnis funeralis</i>)	11
Metalmarks		mournful duskywing (<i>Erynnis tristis</i>)	
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	HT HT HT	fiery skipper (<i>Hylephila phyleus</i>)	
Wright's metalmark (<i>Calephelis wrighti</i>)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	11
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)	1	Northern white skipper	1
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur	111		
Column Subtotal	51	Column Subtotal	6
		Total	57