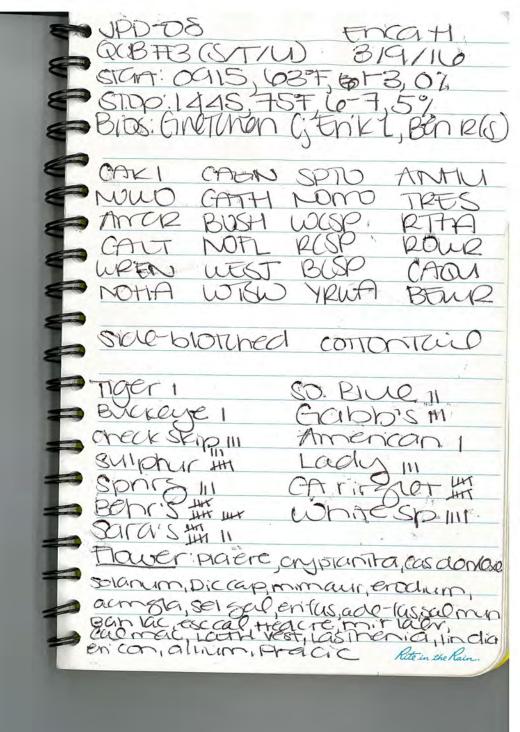
2016 Quino Checkerspot Butterfly Survey Form Surveyor: Eriklaloste, Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch Site Visit No: Area Surveyed 5, T, U Acres Surveyed 152 Survey Time: 16,5 hrs. Acres per Hour: 9,4 Other Surveyors Present: Prica Harris, Gretchen Cumminss, BENR. **Field Conditions** Time (24 hr) Temperature (°F) Wind Speed (mph) Cloud Cover 0-1 Start 63,5 0 7.45 End 5-7 Start End Vegetation Communities Surveyed (inc. dominant spp.) Obs. **Host Plants** Obs. **Nectar Plants** dwarf plantain (Plantago erecta) popcorn flower (Cryptantha/Plagiobothrys spp.) purple owl's clover (Castilleia exserta) goldfields (Lasthenia spp.) N snapdragon (Antirrhinum coulterianum) goldenstar (Muilla spp.) N fiddleneck (Amsinckia menziesii var. intermedia) birds-beak (Cordylanthus rigidus) N N M woolly plantain (Plantago patagonica) onion (Allium spp.) N Chinese houses (Collinsia spp.) buckwheat (Eriogonum fasciculatum) ground pink (Linanthus dianthiflorus) Host Plant Mapping Updated (circle) New Area or Existing Area (circle) Existing Both Yes New Species updated (list) **Butterfly Species** No. **Butterfly Species** No. Hairstreaks Checkerspots great purple hairstreak (Atlides halesus corcorani) California patch (Chlosyne californica) Gabb's checkerspot (C. gabbii) brown elfin (Callophrys augustinus) Quino checkerspot (Euphydryas editha quino) bramble (perplexing) hairstreak (C. dumetorum affinis) chalcedon checkerspot (E. chalcedona chalcedona) gray hairstreak (Strymon melinus pudica) Leanira checkerspot (Thessalia leanira wrighti) Ladies/Admirals Mylitta crescent (Phyciodes mylitta) California sister (Adelpha bredowii californica) Blues Lorquin's admiral (Limenitis lorquini) west coast lady (Vanessa annabella) western pygmy-blue (Brephidium exila) western tailed blue (Everes amyntula) red admiral (V. atalanta rubria) southern blue (Glaucopsyche lygdamus australis) 电影 4 painted lady (V. cardui) Edward's blue (Hemiargus ceraunus gyas) American (Virginia) lady (V. virginiensis) unidentified lady (Vanessa sp.) Acmon blue (Icaricia acmon acmon) RU **Swallowtails** marine blue (Leptotes marina) pale swallowtail (Papilio eurymedon) unidentified blue 2 western tiger swallowtail (P. rutulus) Whites anise swallowtail (P. zelicaon) Sara orangetip (Anthocharis sara sara) 43 Miscellaneous desert (Felder's) orangetip (A. cethura) monarch (Danaus plexippus) common California ringlet (Coenonympha californica) 30 dl 26 common buckeye (Junonia coenia grisea) cabbage white (Pieris rapae) checkered (common) white (Pontia protodice) mourning cloak (Nymphalis antiopa) 碗 2 Skippers spring white (P. sisymbrii) funereal duskywing (Erynnis funeralis) unidentified white 40 Metalmarks mournful duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus) Behr's metalmark (Apodemia mormo virgulti) white (common) checkered-skipper (Pyrgus albescens) 两多号 15 Wright's metalmark (Calephelis wrighti) ther Eryanis W/D white Pyrous Alrescens Sulphurs orange sulphur (Colias eurytheme) Erynnis W/ sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina) unidentified sulphur

Column Subtotal

170 173

Column Subtotal

Total



Pieris protodice - checkers JPD-08 Pieria signment a puttined 03/09/18 Buino Survey #3 Arens S,I, U Benf., Ericatt., Erikl., Gretchen (. Start's DOUS End: 1495 Temp: 63.5 F Tenp. 75% wine: 1-4 men winds & Tuph Sky: Clear 5Ky:5% Wildlite Suca orangers HHI! Phrylet:1 White 40:111 Danie intome: 11 Behry metal work: 417 the there skipper: 11 Pite of probabile: 1 Funereal dritty way Grants Checkenger: 1111-PATA SOTO, LAKE, CAGON, CACUAN MAND Flauring Plants WEME, LOPA, WREN Eritas, Blucdicks, Aungla, & Minimus Complantha , willinum, tolanum 12. Escal , Erodium , Castellega, Hirshaulia Allum p. Gilgal, Cal mac Bahlas Grandplat Malfos, Helse , losthers Annan Rite in the Rain

2016 Quino Checkerspot Butterfly Survey Form Surveyor Date: _3/13/16 Over Bryngaber Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch Site Visit No: 3 Area Surveyed AA CC perhol Acres Surveyed 43 Survey Time: 5 hrs Omen Acres per Hour: 8.6 Other Surveyors Present: Criffin Brugater (superised) **Field Conditions** Time (24 hr) Cloud Cover Temperature ('F) Wind Speed (mph) Start 130 63,2 30 % 630 End 62.8 35% Start End Vegetation Communities Surveyed (inc. dominant spp.) Chamise Chap (chamise, Malama), native bunch grassland (stipa sp., blue dicks, art cal, buckwheat, Emodum sp. **Host Plants** Obs. **Nectar Plants** Obs. dwarf plantain (Plantago erecta) FLUR popcorn flower (Cryptantha/Plagiobothrys spp.) FLWR purple owl's clover (Castilleja exserta) goldfields (Lasthenia spp.) WIS snapdragon (Antirrhinum coulterianum) goldenstar (Muilla spp.) birds-beak (Cordylanthus rigidus) fiddleneck (Amsinckia menziesii var. intermedia) woolly plantain (Plantago patagonica) onion (Allium spp.) FLWR Chinese houses (Collinsia spp.) buckwheat (Eriogonum fasciculatum) FLWR ground pink (Linanthus dianthiflorus) Host Plant Mapping Updated (circle) FLUSK (Yes) No New Area or Existing Area (circle) New Existing Species updated (list) P. erecta Both **Butterfly Species Butterfly Species** No. No. Checkerspots Hairstreaks California patch (Chlosyne californica) great purple hairstreak (Atlides halesus corcorani) Gabb's checkerspot (C. gabbii) brown elfin (Callophrys augustinus) Quino checkerspot (Euphydryas editha quino) bramble (perplexing) hairstreak (C. dumetorum affinis) chalcedon checkerspot (E. chalcedona chalcedona) gray hairstreak (Strymon melinus pudica) Leanira checkerspot (Thessalia leanira wrighti) Ladies/Admirals Mylitta crescent (Phyciodes mylitta) California sister (Adelpha bredowii californica) Blues Lorquin's admiral (Limenitis lorquini) western pygmy-blue (Brephidium exila) west coast lady (Vanessa annabella) western tailed blue (Everes amyntula) red admiral (V. atalanta rubria) southern blue (Glaucopsyche lygdamus australis) painted lady (V. cardui) Edward's blue (Hemiargus ceraunus gyas) American (Virginia) lady (V. virginiensis) Acmon blue (Icaricia acmon acmon) unidentified lady (Vanessa sp.) marine blue (Leptotes marina) **Swallowtails** unidentified blue pale swallowtail (Papilio eurymedon) Whites western tiger swallowtail (P. rutulus) Sara orangetip (Anthocharis sara sara) II THINKING anise swallowtail (P. zelicaon) desert (Felder's) orangetip (A. cethura) Miscellaneous common California ringlet (Coenonympha californica) monarch (Danaus plexippus) cabbage white (Pieris rapae) common buckeye (Junonia coenia grisea) checkered (common) white (Pontia protodice) mourning cloak (Nymphalis antiopa) spring white (P. sisymbrii) Skippers unidentified white funereal duskywing (Erynnis funeralis) Metalmarks mournful duskywing (Erynnis tristis) Behr's metalmark (Apodemia mormo virgulti) MIM fiery skipper (Hylephila phyleus) Wright's metalmark (Calephelis wrighti) white (common) checkered-skipper (Pyrgus albescens) III THE PR Sulphurs Other orange sulphur (Colias eurytheme) 11 sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina) unidentified sulphur

Column Subtotal 23

Column Subtotal 5

2016 Quino Checkerspot Butterfly Survey Form Surveyor Alicia Hil Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch Site Visit No: 2.42 (x2 persons)Acres per Hour: Survey Time: **Acres Surveyed** Other Surveyors Present: **Field Conditions** Time (24 hr) Temperature ('F) Wind Speed (mph) **Cloud Cover** 1420 7-1 Start 25 1045 70 End 60 Start End Vegetation Communities Surveyed (inc. dominant spp.) Chamis (ADS FAS, ELI FAS) CSS 9H SAS ACM GLAD, nature grassland **Nectar Plants Host Plants** Obs. Obs. popcorn flower (Cryptantha/Plagiobothrys spp.) dwarf plantain (Plantago erecta) purple owl's clover (Castilleja exserta) goldfields (Lasthenia spp.) snapdragon (Antirrhinum coulterianum) goldenstar (Muilla spp.) birds-beak (Cordylanthus rigidus) fiddleneck (Amsinckia menziesii var. intermedia) woolly plantain (Plantago patagonica) onion (Allium spp.) Chinese houses (Collinsia spp.) buckwheat (Eriogonum fasciculatum) ground pink (Linanthus dianthiflorus) Host Plant Mapping Updated (circle) Yes No) New Area or Existing Area (circle) New Existing) Both Species updated (list) **Butterfly Species Butterfly Species** No. Checkerspots Hairstreaks California patch (Chlosyne californica) great purple hairstreak (Atlides halesus corcorani) Gabb's checkerspot (C. gabbii) brown elfin (Callophrys augustinus) Quino checkerspot (Euphydryas editha quino) bramble (perplexing) hairstreak (C. dumetorum affinis) chalcedon checkerspot (E. chalcedona chalcedona) gray hairstreak (Strymon melinus pudica) Leanira checkerspot (Thessalia leanira wrighti) Ladies/Admirals Mylitta crescent (Phyciodes mylitta) California sister (Adelpha bredowii californica) Blues Lorquin's admiral (Limenitis lorquini) western pygmy-blue (Brephidium exila) west coast lady (Vanessa annabella) western tailed blue (Everes amyntula) red admiral (V. atalanta rubria) painted lady (V. cardui) southern blue (Glaucopsyche lygdamus australis) American (Virginia) lady (V. virginiensis) Edward's blue (Hemiargus ceraunus gyas) unidentified lady (Vanessa sp.) Acmon blue (Icaricia acmon acmon) marine blue (Leptotes marina) **Swallowtails** unidentified blue pale swallowtail (Papilio eurymedon) Whites western tiger swallowtail (P. rutulus) 13 anise swallowtail (P. zelicaon) Sara orangetip (Anthocharis sara sara) Miscellaneous desert (Felder's) orangetip (A. cethura) monarch (Danaus plexippus) common California ringlet (Coenonympha californica) cabbage white (Pieris rapae) common buckeye (Junonia coenia grisea) checkered (common) white (Pontia protodice) mourning cloak (Nymphalis antiopa) spring white (P. sisymbrii) Skippers funereal duskywing (Erynnis funeralis) unidentified white Metalmarks mournful duskywing (Erynnis tristis) Behr's metalmark (Apodemia mormo virgulti) fiery skipper (Hylephila phyleus)

Other

CA

Ringles

Wright's metalmark (Calephelis wrighti)

cloudless sulfur (Phoebus sennae marcellina)

Column Subtotal

orange sulphur (Colias eurytheme)

sleepy orange (Eurema nicippe)

unidentified sulphur

Sulphurs

white (common) checkered-skipper (Pyrgus albescens)

4

Column Subtotal

		LUIU WUIII	Olicchelap	or Duttering ou	ivey i oiiii		
Surveyor:	MELISS	A BUSBY			Date:	3/15/16	
Site Name:	JPD-08 Proctor Val	ley - Village 14 of O	tay Ranch		Site Visit No:		
Area Surveye	d W, X	Acres Surveyed	±60	Survey Time:	6.5	_ Acres per Hour:	± 9.25
Other Surveyo	ors Present:	MELANI	E RUCK	LS.			
			Field C	onditions			

		Field Co	nditions	
	Time (24 hr)	Temperature ('F)	Wind Speed (mph)	Cloud Cover
Start	0930	63	0-2	0
End	1600	78	4-7	0
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)	

Host Plants	Obs.	Nectar Plants	Obs.
dwarf plantain (Plantago erecta)	/	popcorn flower (Cryptantha/Plagiobothrys spp.)	/
purple owl's clover (Castilleja exserta)		goldfields (Lasthenia spp.)	/
snapdragon (Antirrhinum coulterianum)		goldenstar (Muilla spp.)	
birds-beak (Cordylanthus rigidus)		fiddleneck (Amsinckia menziesii var. intermedia)	
woolly plantain (Plantago patagonica)		onion (Allium spp.)	/
Chinese houses (Collinsia spp.)		buckwheat (Eriogonum fasciculatum)	V
		ground pink (Linanthus dianthiflorus)	/
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 (Chlosyne californica)		great purple hairstreak (Atlides halesus corcorani)	
Gabb's checkerspot (C. gabbii)		brown elfin (Callophrys augustinus)	
Quino checkerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	
chalcedon checkerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica)	
Leanira checkerspot (Thessalia leanira wrighti)		Ladies/Admirals	
Mylitta crescent (Phyciodes mylitta)		California sister (Adelpha bredowii californica)	
Blues		Lorquin's admiral (Limenitis Iorquini)	
western pygmy-blue (Brephidium exila)		west coast lady (Vanessa annabella)	
western tailed blue (Everes amyntula)		red admiral (V. atalanta rubria)	
southern blue (Glaucopsyche lygdamus australis)		painted lady (V. cardui)	
Edward's blue (Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis)	12
Acmon blue (Icaricia acmon acmon)		unidentified lady (Vanessa sp.)	3
marine blue (Leptotes marina)	7	Swallowtails	
unidentified blue		pale swallowtail (Papilio eurymedon)	
Whites		western tiger swallowtail (P. rutulus)	
Sara orangetip (Anthocharis sara sara)		anise swallowtail (P. zelicaon)	
desert (Felder's) orangetip (A. cethura)		Miscellaneous	
common California ringlet (Coenonympha californica)		monarch (Danaus plexippus)	
cabbage white (Pieris rapae)		common buckeye (Junonia coenia grisea)	
checkered (common) white (Pontia protodice)	3	mourning cloak (Nymphalis antiopa)	
spring white (P. sisymbrii)	- 2	Skippers	
unidentified white	3	funereal duskywing (Erynnis funeralis)	8
Metalmarks		mournful duskywing (Erynnis tristis)	
Behr's metalmark (Apodemia mormo virgulti)	24	fiery skipper (Hylephila phyleus)	
Wright's metalmark (Calephelis wrighti)	1	white (common) checkered-skipper (Pyrgus albescens)	8
Sulphurs		Other	
orange sulphur (Colias eurytheme)			
sleepy orange (Eurema nicippe)			
cloudless sulfur (Phoebus sennae marcellina)			
unidentified sulphur	3		
Column Subtotal	53	Column Subtotal	31
		Total	84

Surveyo	r: Melanie Rocks		Date: 3/15/2016	9
	ne: _JPD-08 Proctor Valley – Village 14 of O		/ / /	
	rveyed W + X Acres Surveyed			092
	- N. P. B.	116	Survey Time: 13 Acres per Hour:	0.17
Other Su	urveyors Present: M. Busby			
	J	Fie	eld Conditions	
	Time (24 hr) Temper	ature (°F)	Wind Speed (mph) Cloud Cov	er
Start	0930 62	2	0-2 Clear 18	2-19)
End	1600	<u>c</u> /	1/2	160
	1,600	y	4-1 acer (0 - (6
Start				
End				
Vegetation	on Communities Surveyed (inc. dominant	spp.)		
Dece			Lande	
pess	6 (Malogona lawring Bah	. 68.2	(aciniate, etc)	
Cham	ic Charactal (Adeno	Stome	fasc)	
Host Pla	nts	Oho	Nectar Plants	Obs
	ntain (Plantago erecta)	Obs.	popcorn flower (Cryptantha/Plagiobothrys spp.)	Obs.
	vl's clover (Castilleja exserta)	•	goldfields (<i>Lasthenia</i> spp.)	<u></u>
	ion (Antirrhinum coulterianum)		goldenstar (Muilla spp.)	V
	ak (Cordylanthus rigidus)		fiddleneck (Amsinckia menziesii var. intermedia)	
	antain (Plantago patagonica)		onion (Allium spp.)	
Chinese	houses (Collinsia spp.)		buckwheat (Eriogonum fasciculatum)	V
		0	ground pink (Linanthus dianthiflorus)	V
Host Pla	nt Mapping Updated (circle) Yes	(No)	New Area or Existing Area (circle) New Existing	Both
Species	updated (list)			
Butterfly	Species	No.	Butterfly Species	No.
Checkerspots		110.	Hairstreaks	NO.
California patch (Chlosyne californica)			great purple hairstreak (Atlides halesus corcorani)	
Gabb's checkerspot (C. gabbii)			brown elfin (Callophrys augustinus)	
Quino checkerspot (Euphydryas editha quino)			bramble (perplexing) hairstreak (C. dumetorum affinis)	
chalcedon checkerspot (E. chalcedona chalcedona)			gray hairstreak (Strymon melinus pudica)	
Leanira ch	neckerspot (Thessalia leanira wrighti)		Ladies/Admirals	
Mylitta cre	escent (Phyciodes mylitta)		California sister (Adelpha bredowii californica)	
Blues			Lorquin's admiral (Limenitis lorquini)	
	ygmy-blue (<i>Brephidium exila</i>)		west coast lady (Vanessa annabella)	
	ailed blue (Everes amyntula)		red admiral (V. atalanta rubria)	
	blue (Glaucopsyche lygdamus australis)		painted lady (V. cardui)	
	blue (Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis)	- [
	ue (Icaricia acmon acmon) ue (Leptotes marina) [-	unidentified lady (Vanessa sp.)	3
unidentifie			pale swallowtail (Papilio eurymedon)	
Whites	30 5.00		western tiger swallowtail (<i>P. rutulus</i>)	
	getip (Anthocharis sara sara)	19	anise swallowtail (P. zelicaon)	
	elder's) orangetip (A. cethura)	(-)	Miscellaneous	
	California ringlet (Coenonympha californica)		monarch (Danaus plexippus)	
	white (Pieris rapae)		common buckeye (Junonia coenia grisea)	
checkered	d (common) white (Pontia protodice)	7	mourning cloak (Nymphalis antiopa)	
	ite (P. sisymbrii)	1	Skippers	
	ed white UK UK UK	15	funereal duskywing (Erynnis funeralis)	3
Metalmar	ks		mournful duskywing (Erynnis tristis)	
	etalmark (Apodemia mormo virgulti)	18	fiery skipper (Hylephila phyleus)	
	netalmark (Calephelis wrighti)		white (common) checkered-skipper (Pyrgus albescens)	
Sulphurs	Jahara (Oalian and W		Other	
	Iphur (Colias eurytheme)			
	ange (Eurema nicippe)			
cioudiess	sulfur (Phoebus sennae marcellina)	11		
unidentific	d culphur / 1 1 1			
unidentifie	Column Subtotal	4	Column Subtotal	7

2016 Quino Checkerspot Butterfly Survey Form 4 BORGHER Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch Site Visit No: Acres per Hour: 7.5ac/hr Area Surveyed 7 8hrs Acres Surveyed Survey Time: Other Surveyors Present: **Field Conditions** Time (24 hr) Temperature (°F) Wind Speed (mph) Cloud Cover Start 0900 End 40 Start End Vegetation Communities Surveyed (inc. dominant spp.) CSS (Erifus, Vig lac, lot Sco) **Host Plants** Obs. **Nectar Plants** Obs. dwarf plantain (Plantago erecta) popcorn flower (Cryptantha/Plagiobothrys spp.) + X purple owl's clover (Castilleja exserta) goldfields (Lasthenia spp.) × snapdragon (Antirrhinum coulterianum) goldenstar (Muilla spp.) birds-beak (Cordylanthus rigidus) fiddleneck (Amsinckia menziesii var. intermedia) woolly plantain (Plantago patagonica) onion (Allium spp.) X Chinese houses (Collinsia spp.) buckwheat (Eriogonum fasciculatum) ground pink (Linanthus dianthiflorus) Host Plant Mapping Updated (circle) Yes No New Area or Existing Area (circle) New Existing Both Species updated (list) **Butterfly Species** No. **Butterfly Species** No. Checkerspots Hairstreaks California patch (Chlosyne californica) great purple hairstreak (Atlides halesus corcorani) Gabb's checkerspot (C. gabbii) IM 1 brown elfin (Callophrys augustinus) Quino checkerspot (Euphydryas editha quino) bramble (perplexing) hairstreak (C. dumetorum affinis) chalcedon checkerspot (E. chalcedona chalcedona) gray hairstreak (Strymon melinus pudica) Leanira checkerspot (Thessalia leanira wrighti) Ladies/Admirals Mylitta crescent (Phyciodes mylitta) California sister (Adelpha bredowii californica) Blues Lorquin's admiral (Limenitis Iorquini) western pygmy-blue (Brephidium exila) west coast lady (Vanessa annabella) western tailed blue (Everes amyntula) red admiral (V. atalanta rubria) southern blue (Glaucopsyche lygdamus australis) 4 painted lady (V. cardui) 111 Edward's blue (Hemiargus ceraunus gyas) American (Virginia) lady (V. virginiensis) Acmon blue (Icaricia acmon acmon) unidentified lady (Vanessa sp.) 111 marine blue (Leptotes marina) **Swallowtails** unidentified blue 111 pale swallowtail (Papilio eurymedon) Whites western tiger swallowtail (P. rutulus) Ly win Sara orangetip (Anthocharis sara sara) LAT LACE anise swallowtail (P. zelicaon) desert (Felder's) orangetip (A. cethura) Miscellaneous m un us common California ringlet (Coenonympha californica) WH LAT UP monarch (Danaus plexippus) cabbage white (Pieris rapae) common buckeye (Junonia coenia grisea) HH 111 checkered (common) white (Pontia protodice) mourning cloak (Nymphalis antiopa) spring white (P. sisvmbrii) Skippers unidentified white funereal duskywing (Erynnis funeralis) 1414111 Metalmarks mournful duskywing (Erynnis tristis) Behr's metalmark (Apodemia mormo virgulti) 4H XIII fiery skipper (Hylephila phyleus) Wright's metalmark (Calephelis wrighti) white (common) checkered-skipper (Pyrgus albescens) 11 111 Sulphurs Other orange sulphur (Colias eurytheme) sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina) unidentified sulphur Column Subtotal 86 Column Subtotal 35 Total 121

Area_ A, B, E

to Nam	IDD OO Deedee Valley Ville	ago 14 of Otav	Ranch	oste, Erica Ham & Date: 3/16 Site Visit No:	量 4	
	urveyed 144	Survey Time	. 5,-	Acres per Hour:	7.62	
her Su	irveyors Present:	90,				
	- Di-		Field	Conditions	Claud Cours	
	Time (24 hr)	Temperat	ure (°F)	Wind Speed (mph)	Cloud Cover	
Start	0.815	lat		0-1	7	
End	1400	07		U - T	-6)-	
	19 00					
Start						
End			_			
	ion Communities Surveyed (inc	dominant st	(.a.			
egetati	ion communities our reyor (mo	, dominario - [1.7			
1			Obs.	Nectar Plants		Obs.
Host Pla	ants antain (Plantago erecta)		Y	popcorn flower (Cryptantha/Plagiobothrys sp	p.)	7,
	wi's clover (Castilleja exserta)		Y	goldfields (Lasthenia spp.)		Y
	gon (Antirrhinum coulterianum)		N	goldenstar (Muilla spp.)	office)	N
	eak (Cordylanthus rigidus)		N	fiddleneck (Amsinckia menziesii var. interme	ioia)	N
	plantain (Plantago patagonica)		N	onion (Allium spp.)		13
	e houses (Collinsia spp.)		N.	buckwheat (Eriogonum fasciculatum) ground pink (Linanthus dianthiflorus)		N
				New Area or Existing Area (circle) New	v Existing	Both
	ant Mapping Updated (circle)	Yes	No	New Area or Existing Area (0.000)		
Species	s updated (list)					
Sutterfly	y Species		No.	Butterfly Species		No.
Checker				Hairstreaks .		
	ia patch (Chlosyne californica)			great purple hairstreak (Atlides halesus corco	orani)	
Gabb's checkerspot (C. gabbii)		24	brown elfin (Callophrys augustinus)	um offinio)	7	
	heckerspot (Euphydryas editha qu	uino)		bramble (perplexing) hairstreak (C. dumetoru	IIII aniilis)	24
chalced	on checkerspot (E. chalcedona cl	halcedona)		gray hairstreak (Strymon melinus pudica)		01
Leanira	checkerspot (Thessalia leanira w	righti)		Ladies/Admirals California sister (Adelpha bredowii californica)	a)	
Mylitta c	crescent (Phyciodes mylitta)			Lorquin's admiral (Limenitis Iorquini)	2	
Blues				west coast lady (Vanessa annabella)		+2
western	pygmy-blue (Brephidium exila)			red admiral (V. atalanta rubria)		
western	n tailed blue (Everes amyntula) n blue (Glaucopsyche lygdamus a	auetralis)	XU	painted lady (V. cardui)		1
Souther	's blue (Hemiargus ceraunus gya	s)	110	American (Virginia) lady (V. virginiensis)		10 11
Acmon	blue (Icaricia acmon acmon)		x 2	unidentified lady (Vanessa sp.)		7 4
	blue (Leptotes marina)			Swallowtails		7
	ified blue		1	pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus)		-
Whites			12/11	anise swallowtail (P. ruturus)		7
Sara or	rangetip (Anthocharis sara sara)		100	Miscellaneous		
	(Felder's) orangetip (A. cethura)		7	monarch (Danaus plexippus)		
	n California ringlet (Coenonymph	a californica)	7	common buckeye (Junonia coenia grisea)		
cabbag	ge white (Pieris rapae)	ndica)	1	mourning cloak (Nymphalis antiopa)		
	ered (common) white (Pontia proto	Juice)	1	Skippers		(4 1)
	white (P. sisymbril)		2	funereal duskywing (Erynnis funeralis)		\$ 16
unideni Metalm	tified white			mournful duskywing (Erynnis tristis)		
	metalmark (Apodemia mormo vir	gulti) 4%	122	Lifiery skipper (Hylephila phyleus)		
Wright	's metalmark (Calephelis wrighti)			white (common) checkered-skipper (Pyrgus	albescens)	
				Other		2
Summi	sulphur (Colias eurytheme)		13	STRIATED QUEEN		1
Sulphu				I CT. LEA GIDERN		1
orange	orange (Eurema nicippe)			STRINTED GOODS		
orange		ellina)	# 3			

ncatt 3/10/10 BALLAIBIE Ciretu HOLA ANTONZ LEU MAIL AHA RA PCSP TIOH CAUT CATH Men GALIC 202 Hair 1 Sprig weral #11 west coast Sara's ### 7 hirset will Behr's Mill sulphyrill Quen 1 Flaver end um en fas, tur gla Beil lac, Calmac, selapil, mimaur, sorens wild pea, quiteriza, dic ap, cryptantoa esc cal, mir laly, thir irespectal straphalium Headrepracie, allium, solanum, vio ped smonia, Adetas cas att, ant nut formesyde

2016 Quino Checkerspot Butterfly Survey Form Surveyor Chez Bringrabe Date: 3/21/16 Site Name: _JPD-08 Proctor Valley - Village 14 of Otay Ranch Site Visit No: 4 Area Surveyed AAA, Ce Acres Surveyed 93 Survey Time: 7 Y YSmily Acres per Hour. 13 4 6 6 Other Surveyors Present: Nicole kimball Field Conditions Time (24 hr) Cloud Cover Temperature ("F) Start Wind Speed (mph) 0930 End 60 0-1 715 69 Start 5-10 End Vegetation Communities Surveyed (inc. dominant spp.) notive bunch grassland Stipa. Jahra apiana, cherriel Codien Malama **Host Plants** Nectar Plants Obs. popcorn flower (Cryptantha/Plagiobothrys spp.) dwarf plantain (Plantago erecta) flur goldfields (Lasthenia spp.) purple owl's clover (Castilleja exserta) aw goldenstar (Muilla spp.) snapdragon (Antirrhinum coulterianum) fiddleneck (Amsinckia menziesii var. intermedia) birds-beak (Cordylanthus rigidus) onion (Allium spp.) woolly plantain (Plantago patagonica) buckwheat (Eriogonum fasciculatum) 8h Chinese houses (Collinsia spp.) ground pink (Linarithus dianthifficrus) Bath New Area or Existing Area (circle) New Existing Host Plant Mapping Updated (circle) No Yes 10015 is a golypa in a circle 20= 20" Species updated (list) Castileia, colkinsh 7 No. **Butterfly Species** No. **Butterfly Species** Hairstreaks Checkerspots great purple hairstreak (Atlides halesus corporan) California patch (Chlosyne californica) brown elfin (Callophrys augustinus) Gabb's checkerspot (C. gabbii) bramble (perplexing) hairstreak (C. dumatorum affinis) Quino checkerspot (Euphydryas editha quino) gray hairstreak (Strymon melinus pudica) chalcedon checkerspot (E. chalcedona chalcedona) Ladies/Admirals Leanira checkerspot (Thessalia leanira wrighti) California sister (Adelpha bredowii californica) Mylitta crescent (Phyciodes mylitta) Lorquin's admiral (Limenitis lorquini) Blues west coast lady (Vanessa annabella) western pygmy-blue (Brephidium exila) red admiral (V. atalanta rubria) western tailed blue (Everes amyntula) painted lady (V. cardul) southern blue (Glaucopsyche lygdamus australis) American (Virginia) lady (V. virginiansis) Edward's blue (Hemiargus ceraunus gyas) unidentified lady (Vanessa sp.) Acmon blue (Icaricia acmon acmon) Swallowtails marine blue (Leptotes marina) pale swallowtail (Papilio eurymedon) unidentified blue western tiger swallowtail (P. rutulus) Whites anise swallowtail (P. zeliceon) THE THE WILL Sara orangetip (Anthocharis sara sara) Miscellaneous desert (Felder's) orangetip (A. cethura) monarch (Danaus plexippus) common California ringlet (Coenonympha californica) common buckeye (Junonia coenia grisea) cabbage white (Pieris rapae) mourning cloak (Nymphalis antiopa) checkered (common) white (Pontia protodice) Skippers spring white (P. sisymbrii) funereal duskywing (Erynnis funeralis) III unidentified white mournful duskywing (Erynnis tristis) Metalmarks fiery skipper (Hylephila phyleus) Behr's metalmark (Apodemia mormo virgulti) LIGHT BHY SHIT HA white (common) checkered-skipper (Pyrgus albessens) Wright's metalmark (Calephelis wrighti) Other Sulphurs Harfords sulphur orange sulphur (Colias eurytheme) Whenown skipper sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina) Column Subtotal unidentified sulphur Column Subtotal Total

2016 Quino Checkerspot Butterfly Survey Form Surveyor Chez Bringogber Acres per Hour: 8.36 Site Visit No: Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch Survey Time: 5.5 kg Area Surveyed Acres Surveyed Cloud Cover Other Surveyors Present: Field Conditions Wind Speed (mph) Temperature ('F) Time (24 hr) Start 1115 76.1 1645 End Start End Vegetation Communities Surveyed (inc. dominant spp.) Avera sp. Bromus sp. Endium, Chambe, Maluma, Enogrum, Act call Obs. sur popcorn flower (Cryptantha/Plagiobothrys spp.) Sw Show dwarf plantain (Plantago erecta) goldfields (Lasthenia spp.) purple owl's clover (Castilleja exserta) Ew goldenstar (Muilla spp.) fiddleneck (Amsinckia menziesii var. intermedia) snapdragon (Antirrhinum coulterianum) SW birds-beak (Cordylanthus rigidus) onion (Allium spp.) buckwheat (Eriogonum fasciculatum) woolly plantain (Plantago patagonica) ground pink (Linanthus dianthiflorus) Both Chinese houses (Collinsia spp.) Existing New Area or Existing Area (circle) New Host Plant Mapping Updated (circle) No Yes No. P. orecto Species updated (list) **Butterfly Species** No. Hairstreaks **Butterfly Species** great purple hairstreak (Atlides halesus corcorani) Checkerspots California patch (Chlosyne californica) brown elfin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dumetorum affinis) Gabb's checkerspot (C. gabbii) gray hairstreak (Strymon melinus pudica) Quino checkerspot (Euphydryas editha quino) chalcedon checkerspot (E. chalcedona chalcedona) Ladies/Admirals Leanira checkerspot (Thessalia leanira wrighti) California sister (Adelpha bredowii californica) Mylitta crescent (Phyciodes mylitta) Lorquin's admiral (Limenitis lorquini) west coast lady (Vanessa annabella) Blues western pygmy-blue (Brephidium exila) red admiral (V. atalanta rubria) western tailed blue (Everes amyntula) painted lady (V. cardui) southern blue (Glaucopsyche lygdamus australis) American (Virginia) lady (V. virginiensis) Edward's blue (Hemiargus ceraunus gyas) unidentified lady (Vanessa sp.) Acmon blue (Icaricia acmon acmon) **Swallowtails** marine blue (Leptotes marina) pale swallowtail (Papilio eurymedon) unidentified blue western tiger swallowtail (P. rutulus) Whites anise swallowtail (P. zelicaon) 11 44 Sara orangetip (Anthocharis sara sara) Miscellaneous desert (Felder's) orangetip (A. cethura) monarch (Danaus plexippus) common California ringlet (Coenonympha californica) TH common buckeye (Junonia coenia grisea) cabbage white (Pieris rapae) mourning cloak (Nymphalis antiopa) checkered (common) white (Pontia protodice) Skippers spring white (P. sisymbrii) funereal duskywing (Erynnis funeralis) 114 unidentified white mournful duskywing (Erynnis tristis) Metalmarks fiery skipper (Hylephila phyleus) RH-MIN Behr's metalmark (Apodemia mormo virgulti) white (common) checkered-skipper (Pyrgus albescens) Wright's metalmark (Calephelis wrighti) Other Sulphurs orange sulphur (Colias eurytheme) sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina) unidentified sulphur 20 Column Subtotal Column Subtotal Total

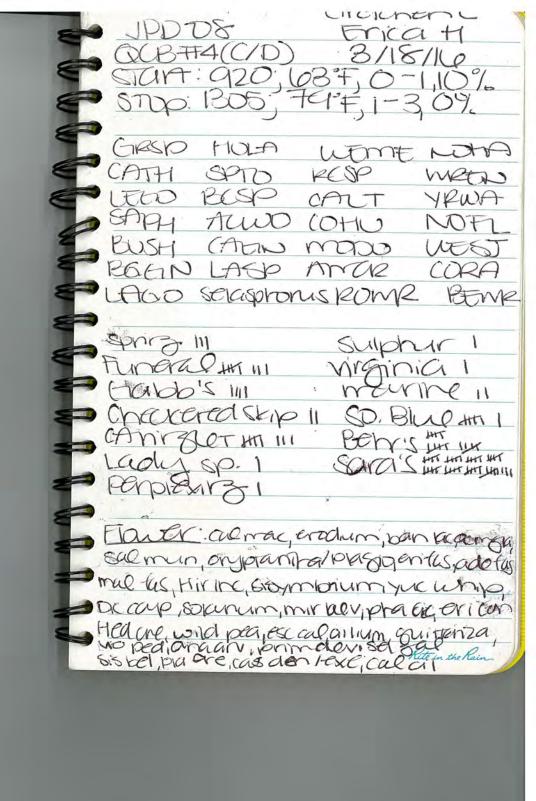
Surveyor: Gretchen Cummings + Erica Ho	arris Date: 3/18/10
Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch	Site Visit No:
Area Surveyed C+D Acres Surveyed 75	Survey Time: 0920 - 1305 Acres per Hour: 10
Other Surveyors Present: Aone	(3 hrs 45 min)

		Field Co	nditions	
	Time (24 hr)	` Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0920	G3°F	0-1 mph	10%
End	1305	79°F	1-3 meh	clear
Start		*		
End				

Vegetation Communities Surveyed (inc. dominant spp.)	
Chaparral (Chamise)	

Obs.	Nectar Plants	Obs.
X	popcorn flower (Cryptantha/Plagiobothrys spp.)	×
×	goldfields (Lasthenia spp.)	
	goldenstar (Muilla spp.)	
	fiddleneck (Amsinckia menziesii var. intermedia)	
	onion (Allium spp.)	×
	buckwheat (Eriogonum fasciculatum)	×
	ground pink (Linanthus dianthiflorus)	
No	New Area or Existing Area (circle) New Existing	(Both)
	X	popcorn flower (Cryptantha/Plagiobothrys spp.) X goldfields (Lasthenia spp.) goldenstar (Muilla spp.) fiddleneck (Amsinckia menziesii var. intermedia) onion (Allium spp.) buckwheat (Eriogonum fasciculatum) ground pink (Linanthus dianthiflorus)

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (Chlosyne californica)		great purple hairstreak (Atlides halesus corcorani)	
Gabb's checkerspot (C. gabbii)	4	brown elfin (Callophrys augustinus)	
Quino checkerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	1
chalcedon checkerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica)	
Leanira checkerspot (Thessalia leanira wrighti)		Ladies/Admirals	
Mylitta crescent (Phyciodes mylitta)		California sister (Adelpha bredowii californica)	
Blues		Lorquin's admiral (Limenitis lorquini)	
western pygmy-blue (Brephidium exila)		west coast lady (Vanessa annabella)	
western tailed blue (Everes amyntula)		red admiral (V. atalanta rubria)	
southern blue (Glaucopsyche lygdamus australis)	7	painted lady (V. cardui)	
Edward's blue (Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis)	à
Acmon blue (Icaricia acmon acmon)		unidentified lady (Vanessa sp.)	1
marine blue (Leptotes marina)	3	Swallowtails	1787
unidentified blue	- 417	pale swallowtail (Papilio eurymedon)	1
Whites		western tiger swallowtail (P. rutulus)	
Sara orangetip (Anthocharis sara sara)	75	anise swallowtail (P. zelicaon)	
desert (Felder's) orangetip (A. cethura)	- 17-8 -	Miscellaneous	
common California ringlet (Coenonympha californica)	9	monarch (Danaus plexippus)	
cabbage white (Pieris rapae)		common buckeye (Junonia coenia grisea)	
checkered (common) white (Pontia protodice)		mourning cloak (Nymphalis antiopa)	
spring white (P. sisymbrii)	3	Skippers	
unidentified white		funereal duskywing (Erynnis funeralis)	13
Metalmarks		mournful duskywing (Erynnis tristis)	
Behr's metalmark (Apodemia mormo virgulti)	27	fiery skipper (Hylephila phyleus)	
Wright's metalmark (Calephelis wrighti)		white (common) checkered-skipper (Pyrgus albescens)	4
Sulphurs		Other	
orange sulphur (Colias eurytheme)			
sleepy orange (Eurema nicippe)			
cloudless sulfur (Phoebus sennae marcellina)			
unidentified sulphur			
Column Subtotal	129	Column Subtotál	24
	13 Specie	Total	153



- Ital	Chez Bringrabe			Date:	11/1/06	
Area Su	rveyed DD Acres	lage 14 of Ota	y Ranch	Site Visit No:	_4	_
	urveyors Present:	Surveyed	30	Survey Time: 3h 45mh	Acres per Hour:	8
	Time (24 hr)		Field	Conditions		
Start	1300	Tempera		Wind Speed (mph)	Cloud Cove	er
End		78.2		2-5	0%	
Start	1645	73.4		0-3	0.6	
End				0-0	07.	
Vegetati	ion Communities Surveyed (in					
22.1	And a surveyed (in	c. dominant s	pp.)			
1.	, native grassland, cha	muse ch	al			
Crumi	se, alleron ber., Malos	ma, Enlog	noun,	Art cal, popular fluxs, sti	pa sp.	
Host Pla	ants		Obs.	Nectar Plants		Obs.
owart pla	antain (Plantago erecta)		Awr	popcorn flower (Cryptantha/Plagiobot	hrys spp.)	Aur
purple o	wi's clover (Castilleja exserta)		flw	goldfields (Lasthenia spp.)		Show.
	igon (Antirrhinum coulterianum)			goldenstar (Muilla spp.)	intermedial	elw elw
	eak (Cordylanthus rigidus)			fiddleneck (Amsinckia menziesii var.	intermedia)	Sur
	e houses (Collinsia spp.)			onion (Allium spp.) buckwheat (Eriogonum fasciculatum)		Sim
	(Commisia Spp.)			ground pink (Linanthus dianthiflorus)		8 W
Host Pla	ant Mapping Updated (circle)	Yes	No	New Area or Existing Area (circle)	New Existing	Both
Species	s updated (list) Castileja					
Butterfly	Species		No.	Butterfly Species		No.
Checker	spots			Hairstreaks		-
California	a patch (Chlosyne californica)			great purple hairstreak (Atlides hales)	us corcorani)	
Gabb's c	checkerspot (C. gabbii)		WI.	brown elfin (Callophrys augustinus)	- 10	
Quino ch	neckerspot (Euphydryas editha qu	uino)		bramble (perplexing) hairstreak (C. di		-
	on checkerspot (E. chalcedona ch			gray hairstreak (Strymon melinus pud	fica)	
	checkerspot (Thessalia leanira w	righti)		Ladies/Admirals	Df (a.a)	-
	rescent (Phyciodes mylitta)			California sister (Adelpha bredowii ca	unornica)	1
Blues				Lorquin's admiral (Limenitis lorquini)	1	
	pygmy-blue (Brephidium exila)	1-11-11-11		west coast lady (Vanessa annabella) red admiral (V. atalanta rubria)		
	tailed blue (Everes amyntula)	untrolio)	ls.	painted lady (V. cardui)		
	blue (Glaucopsyche lygdamus a		(1)	American (Virginia) lady (V. virginien	sis)	
	blue (Hemiargus ceraunus gyas	3)		unidentified lady (Vanessa sp.)		1/1
	lue (Icaricia acmon acmon) lue (Leptotes marina)		1	Swallowtails		
unidentifi			1	pale swallowtail (Papilio eurymedon)		
Whites	ieu Diue			western tiger swallowtail (P. rutulus)		
	ngetip (Anthocharis sara sara)	ZHHRMAT	WHITHE	anise swallowtail (P. zelicaon)		
	elder's) orangetip (A. cethura)		7.7	Miscellaneous		
common	California ringlet (Coenonympha	californica)	MI	monarch (Danaus plexippus)		
	white (Pieris rapae)			common buckeye (Junonia coenia g		-
checkere	d (common) white (Pontia protoc	dice)		mourning cloak (Nymphalis antiopa))	
	nite (P. sisymbrii)			Skippers		eth
nidentifie			\	funereal duskywing (Erynnis funera		141
Metalmar				mournful duskywing (Erynnis tristis)		-
Behr's me	etalmark (Apodemia mormo virg	ultipa the	THE BY	fiery skipper (Hylephila phyleus)	-	allo es
Vright's m	netalmark (Calephelis wrighti)		71	white (common) checkered-skipper	(Pyrgus albescens)	1411
THISING II	, , , , , , , , , , , , , , , , , , , ,			Other		
ulphure	Inhan (Colins auntheme)			4		
	Inniif (Collas eurvirellie)					
	Iphur (Colias eurytheme)					
ange sul	nge (Eurema nicippe) sulfur (Phoebus sennae marcell	lina)				

10+

141	JPD-08 Proctor Valley - V		-		- H	
Ther Sur	Popular Proctor Valley - V Veyors Present: NOA	mage 14 of Ota	y Ranch	parcic the site v	isit No:	
	Jors Present: NOA	Survey Tim	e:3	Hours Acres per Hou	ır:	-
	JUNE	<u> </u>				
Start	Time (24 hr)		Field	d Conditions		
End	1200	Tempera		Wind Speed (mph)	Cloud Cove	<u>ir </u>
Start	1500	_ 80	***************************************	4-8	Ø	
		78		4-8	Ø	
End						
lenet		-				
Secatio	n Communities Surveyed (in					
COAS	The sourceyed (in	ic. dominant s	spp.)	NATIVE CARASSLA		
	SUR SUR	LUB. A	121 -	· ATUR CLASSIA	MO	
004.5		-	0010	Dariot Carys		
urnie -	ntain (Plantago erecta)		Obs.	Nectar Plants		Obs.
Dandr-	's clover (Castilleja exserta)			popcorn flower (Cryptantha/Plagic	obothrys spp.)	X
irds-har	on (Antirrhinum coulterianum)			goldfields (Lasthenia spp.)		× ×
Colly 51	(Cordylanthus rigidus)			goldenstar (Muilla spp.)	var intermedia)	
				fiddleneck (Amsinckia menziesii v onion (Allium spp.)	rai. Intermedia)	N
ese h	nouses (Collinsia spp.)			buckwheat (Eriogonum fasciculat	tum)	$\frac{\sim}{\kappa}$
				ground pink (<i>Linanthus dianthifloi</i>		\sqrt{\sqrt{D}}
Decine	nt Mapping Updated (circle) updated (list)	Yes (No	New Area or Existing Area (circ		Both
utterfly s	Species		Ale	Dutterfly Consider		T
heckers	pots		No.	Butterfly Species Hairstreaks		No.
alifornia	patch (Chlosyne californica)		1 (great purple hairstreak (Atlides ha	alogue corcorani)	+
ann a che	eckerspot (C. gabbii)			brown elfin (Callophrys augustinu		+
uino che	ckerspot (Euphydryas editha d	quino)		bramble (perplexing) hairstreak (12
laicedon	checkerspot (E. chalcedona c	chalcedona)		gray hairstreak (Strymon melinus		+-
eanira ch	eckerspot (Thessalia leanira v	vrighti)		Ladies/Admirals	padiod	1
ylitta cres	scent (Phyciodes mylitta)			California sister (Adelpha bredow	vii californica)	
lues				Lorquin's admiral (Limenitis lorqui		
	gmy-blue (<i>Brephidium exila</i>)			west coast lady (Vanessa annab		
	led blue (Everes amyntula)			red admiral (V. atalanta rubria)		
outhern b	lue (Glaucopsyche lygdamus	australis)	2	painted lady (V. cardui)		
oward's b	olue (Hemiargus ceraunus gya	as)		American (Virginia) lady (V. virgi	niensis)	
	e (Icaricia acmon acmon)			unidentified lady (Vanessa sp.)		
	e (Leptotes marina)		1	Swallowtails		
nidentified	Diue		E 10	pale swallowtail (Papilio euryme		2 5
hites	untin (Anthor-t		20	western tiger swallowtail (P. rutu	ılus)	5
	etip (Anthocharis sara sara)		25	anise swallowtail (P. zelicaon)		2
	der's) orangetip (A. cethura)	a californias	20	Miscellaneous		
	alifornia ringlet (Coenonymph	a CalifOrnica)	20	monarch (Danaus plexippus)		
	hite (<i>Pieris rapae</i>) (common) white (<i>Pontia prote</i>	ndice)	4	common buckeye (Junonia coel		
	(common) white (Pontia proto	Juice)	7	mourning cloak (Nymphalis anti	iopa)	
	e (P. sisymbrii)			Skippers	novelie)	
identified		-		funereal duskywing (Erynnis fun		5
etalmark		aulti)	8	mournful duskywing (Erynnis tr		
	almark (Apodemia mormo virg	yuiu)	0	fiery skipper (Hylephila phyleus		
	etalmark (Calephelis wrighti)		-	white (common) checkered-ski	pper (Fyrgus albescens)	
lphurs	how (Calian aum thama)		+	Other		
	hur (Colias eurytheme)		+			
epy oran	ge (Eurema nicippe)	ıllin a\	+			
-:-						1
udless su dentified	ulfur (Phoebus sennae marce	illiita)	 			

63

TOTAL 8379

Surveyor: 13RIAN T	Parker, CRYSTA ?	DICKSON		Date:	5/20/16	
	ctor Valley - Village 14 of C			Site Visit No:	3/20/16	
Area Surveyed	Acres Surveyed	74	Survey Time	5	Acres per Hour	1. 8
Other Surveyors Presen	t: Andy Smisek	(000	nucer)		_ Noreo per riour.	0,0
	- Alby Smilyan	,				
			ld Conditions			
Time (2	4 nr) Tempe	rature (°F)	Wind Spec	ed (mph)	Cloud Co	over
Start 0945	62		1-3		5%	
End 1215	75		1-3		5 %	
Start						
End						
Vegetation Communities	Surveyed (inc. dominant	spp.)				
	8					
Host Plants		Obs.	Nectar Plants			Obs
dwarf plantain (Plantago e			popcorn flower (Cryp		arys spp.)	X
purple owl's clover (Castill		X	goldfields (Lasthenia			
snapdragon (Antirrhinum o			goldenstar (Muilla sp			
birds-beak (Cordylanthus			fiddleneck (Amsinckia	a menziesii var. ir	ntermedia)	
woolly plantain (<i>Plantago</i> ,			onion (Allium spp.)			K
Chinese houses (Collinsia	spp.)		buckwheat (Eriogonu ground pink (Linanthu	The state of the s		K
Host Plant Mapping Upd	ated (circle) Yes	No	New Area or Existin		New Existing	Botl
Species updated (list)	100	110	NOW AIGU OF EXISTIN	g Area (circle)	INEW LAISTING	DOU
Butterfly Species		No.	Butterfly Species			No.
Checkerspots			Hairstreaks			
California patch (Chlosyne			great purple hairstreak	(Atlides halesus	corcorani)	
Gabb's checkerspot (C. ga		4	brown elfin (Callophrys			
Quino checkerspot (Euphyo			bramble (perplexing) h			
chalcedon checkerspot (E.			gray hairstreak (Strym	on melinus pudic	a)	
eanira checkerspot (Thes			Ladies/Admirals		7.1	
Mylitta crescent (Phyciodes Blues	s mylitta)		California sister (Adelp		ornica)	
vestern pygmy-blue (<i>Brept</i>	hidium avila)		Lorquin's admiral (Lime			
western tailed blue (Everes			west coast lady (Vanes red admiral (V. atalant			
southern blue (Glaucopsych		5	painted lady (V. cardui			1
Edward's blue (Hemiargus		7	American (Virginia) lac		1	1
Acmon blue (Icaricia acmor			unidentified lady (Vane		/	1
narine blue (<i>Leptotes mari</i>		3	Swallowtails	33a 3p.j		
inidentified blue		7	pale swallowtail (Papili	o eurymedon)		
Whites			western tiger swallowta			
Sara orangetip (Anthochari	s sara sara)	56	anise swallowtail (P. ze			
lesert (Felder's) orangetip			Miscellaneous			
ommon California ringlet (8	monarch (Danaus plex			
abbage white (Pieris rapae		1	common buckeye (Jun		ea)	
checkered (common) white	(Pontia protodice)		mourning cloak (Nymp	halis antiopa)		
pring white (P. sisymbrii)			Skippers			
inidentified white			funereal duskywing (Ei			6
Metalmarks			mournful duskywing (E			
Behr's metalmark (Apodem		8	fiery skipper (Hylephila			
Vright's metalmark (Calept	helis wrighti)		white (common) check	ered-skipper (Pyr	rgus albescens)	1
Sulphurs			Other			

10

Column Subtotal

Total

orange sulphur (Colias eurytheme)
sleepy orange (Eurema nicippe)
cloudless sulfur (Phoebus sennae marcellina)

Column Subtotal

unidentified sulphur

Site Name:	Chez Brungraber JPD-08 Proctor Valley - Village	14 -10		Date: 3/23/16	
Area Survey	ad total	14 of Ota	y Ranch	Site Visit No: 4	
Other Survey	ors Present: Nicole k	eyed	58	Site Visit No: 4 Survey Time: 3h/ 15m/a Acres per Hour: 1	7.3(8.9a
	TOTAL TOTAL TO	amba	11_		
	Time (24 hr)	T	Fiel	d Conditions	
Start	1400	Tempera	ture ('F)	Wind Speed (mph) Cloud Cov	er
End		81		3-5 07.	
Start	1715	81		4-7 0%	
End					
Vegetation C	Communities Surveyed (inc. do	minant s	pp.)		
Host Plants					
dwarf plantai	n (Plantago erecta)		Obs.	Nectar Plants	Obs.
purple owl's	clover (Castilleja exserta)		1	popcorn flower (Cryptantha/Plagiobothrys spp.)	-9w
snapdragon	(Antirrhinum coulterianum)		-	goldfields (<i>Lasthenia</i> spp.) goldenstar (<i>Muilla</i> spp.)	
birds-beak (C	Cordylanthus rigidus)		1	fiddleneck (Amsinckia menziesii var. intermedia)	flux
Phinasa have	in (Plantago patagonica)			onion (Allium spp.)	
crimese nous	ses (Collinsia spp.)		1	buckwheat (Eriogonum fasciculatum)	
Host Plant N	lapping Updated (circle) Ye			ground pink (Linanthus dianthiflorus)	Flor
Species upd	ated (list)	es	No	New Area or Existing Area (circle) New Existing	Both
utterfly Spe	cion				
heckerspots			No.	Butterfly Species	1 11
	h (Chlosyne californica)			Hairstreaks	No.
abb's checke	erspot (C. gabbii)			great purple hairstreak (Atlides halesus corcorani)	
luino checke	rspot (Euphydryas editha quino)			brown eifin (Callophrys augustinus)	
halcedon che	eckerspot (E. chalcedona chalced	dona)		bramble (perplexing) hairstreak (C. dumetorum affinis)	
eanira check	erspot (Thessalia leanira wrighti)			gray hairstreak (Strymon melinus pudica) Ladies/Admirals	
Blues	ent (Phyciodes mylitta)			California sister (Adelpha bredowii californica)	
	ny-blue (Brephidium exila)			Lorquin's admiral (Limenitis Iorquini)	
western tailed	d blue (Everes amyntula)			west coast lady (Vanessa annabella)	
southern blue	e (Glaucopsyche lygdamus austra	olin)		red admiral (V. atalanta rubria)	
Edward's blu	e (Hemiargus ceraunus avas)	alls)		painted lady (V. cardui)	
Acmon blue	(Icaricia acmon acmon)			American (Virginia) lady (V. virginiensis)	
marine blue	(Leptotes marina)			unidentified lady (Vanessa sp.)	
unidentified I	blue		111	Swallowtails	
Whites	tin (Anthonic			Pale swallowtail (Papilio eurymedon) Western tiger swallowtail (P. rutulus)	
Sara Orange	tip (Anthocharis sara sara) er's) orangetip (A. cethura)		(111)	anise swallowtail (P. zelicaon)	
common Cal	lifornia ringlet (Coenonympha cali			Miscellaneous	
cappage wh	ite (Pieris rapae)	fornica)		monarch (Danaus plexippus)	
checkered (common) white (Pontia protodice))		common buckeye (Junonia coenia grisea)	
enring white	(P. sisymbrii)			mourning cloak (Nymphalis antiopa)	
unidentified	white		1	Skippers	
· I-ork	C			funereal duskywing (Erynnis funeralis)	1111
- 1	AMORK (MUUGIIIIA IIIOIIIIO VIITAIIIII)		141	mournful duskywing (Erynnis tristis)	
Wright's m	etalmark (Calephelis wrighti)			fiery skipper (Hylephila phyleus) White (common) checkered-skipper (Pyrgus albescens)	1
Sulphurs	- Les guntheme)			Other	HHTI
-range Sul	phur (Colias eurytheme)		-		1
aleeny ora	inge (Eurema nicippe) sulfur (Phoebus sennae marcellina)	-	Then skipper	-
Hann	Silliui)	-		-
	. 1				1
unidentifie	ed sulphul Column	Subtota	114	_	

	BriAn PARKET, CRYSTA I	DICKSO	O Date:	3/20/16	
Site Nam	e: JPD-08 Proctor Valley - Village 14 of Ota	y Ranch	Site Visit No:	4	
Area Sur	veyed 6 Acres Surveyed	57	Survey Time: 4,/	Acres per Hour:	9,3
741 C.	rveyors Present: Andy Smiser	/ SUNPA	UCEA)		
otner Su	irveyors Present. Anny 3 misere				
			d Conditions	Cloud Cov	/Or
	Time (24 hr) Tempera	ture (°F)	Wind Speed (mph)		761
Start	1215 75		1-3	5%	
End	1520 75		4-7	5 70	
Start	. 3 - 0				
End					
/ogototi	on Communities Surveyed (inc. dominant s	app.)			
regetati	on communices carveyed (mer deministra	1.1.7			
		Obs	Nectar Plants		Obs
Host Pla		Obs.	popcorn flower (Cryptantha/Plagiobott	rvs spp.)	×
	antain (Plantago erecta)	×	goldfields (Lasthenia spp.)	пус орр.,	×
	wl's clover (Castilleja exserta)	4	goldenstar (Muilla spp.)		X
	gon (Antirrhinum coulterianum)		fiddleneck (Amsinckia menziesii var. ii	ntermedia)	
	ak (Cordylanthus rigidus) lantain (Plantago patagonica)		onion (Allium spp.)		X
	houses (Collinsia spp.)		buckwheat (Eriogonum fasciculatum)		
Chinese	Houses (Commisia spp.)		ground pink (Linanthus dianthiflorus)		
Host Pla	ant Mapping Updated (circle)	No	New Area or Existing Area (circle)	New Existing	Bo
	s updated (list)				
0,000.00					No
Butterfly	Species	No.	Butterfly Species		140
Checker			Hairstreaks great purple hairstreak (Atlides halesus	s corcorani)	
	a patch (Chlosyne californica)	-	brown elfin (Callophrys augustinus)	3 corocram)	
	checkerspot (C. gabbii)	3	bramble (perplexing) hairstreak (C. du	metorum affinis)	
Quino ch	neckerspot (Euphydryas editha quino)		gray hairstreak (Strymon melinus pudi		
	on checkerspot (E. chalcedona chalcedona)		Ladies/Admirals		
	checkerspot (Thessalia leanira wrighti)	-	California sister (Adelpha bredowii cali	iforniça)	
_	rescent (Phyciodes mylitta)		Lorquin's admiral (Limenitis Iorquini)		
		1	zordani z zarrani (
Blues	nuamy blue (Brenhidium evila)		west coast lady (Vanessa annabella)		
western	pygmy-blue (Brephidium exila)		7-14-14-1 BG2 - CU1 II		
western western	tailed blue (Everes amyntula)	1	west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) painted lady (V. cardui)		
western western southerr	tailed blue (Everes amyntula) n blue (Glaucopsyche lygdamus australis)	1	red admiral (V. atalanta rubria)	is)	
western western southern Edward	tailed blue (Everes amyntula) n blue (Glaucopsyche lygdamus australis) s blue (Hemiargus ceraunus gyas)	1	red admiral (<i>V. atalanta rubria</i>) painted lady (<i>V. cardui</i>)	is)	
western western southern Edward' Acmon t	tailed blue (Everes amyntula) n blue (Glaucopsyche lygdamus australis) s blue (Hemiargus ceraunus gyas) blue (Icaricia acmon acmon)	1	red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiens unidentified lady (Vanessa sp.) Swallowtails	is)	
western western southern Edward' Acmon I marine I	tailed blue (Everes amyntula) n blue (Glaucopsyche lygdamus australis) s blue (Hemiargus ceraunus gyas)	1	red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiens unidentified lady (Vanessa sp.) Swallowtails pale swallowtail (Papilio eurymedon)	is)	
western western southern Edward' Acmon t marine t unidenti Whites	tailed blue (Everes amyntula) n blue (Glaucopsyche lygdamus australis) s blue (Hemiargus ceraunus gyas) blue (Icaricia acmon acmon) blue (Leptotes marina) fied blue	1	red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiens unidentified lady (Vanessa sp.) Swallowtails pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus)	is)	
western western southern Edward' Acmon t marine t unidenti Whites Sara ora	tailed blue (Everes amyntula) n blue (Glaucopsyche lygdamus australis) is blue (Hemiargus ceraunus gyas) blue (Icaricia acmon acmon) blue (Leptotes marina) ffied blue angetip (Anthocharis sara sara)	1 1 38	red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiens unidentified lady (Vanessa sp.) Swallowtails pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon)	is)	
western western southern Edward' Acmon t marine t unidenti Whites Sara ora desert (tailed blue (Everes amyntula) n blue (Glaucopsyche lygdamus australis) s blue (Hemiargus ceraunus gyas) blue (Icaricia acmon acmon) blue (Leptotes marina) fied blue angetip (Anthocharis sara sara) Felder's) orangetip (A. cethura)		red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiens unidentified lady (Vanessa sp.) Swallowtails pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Miscellaneous	is)	
western western southerr Edward' Acmon t marine t unidenti Whites Sara ora desert (t common	tailed blue (Everes amyntula) In blue (Glaucopsyche lygdamus australis) Is blue (Hemiargus ceraunus gyas) Iblue (Icaricia acmon acmon) Iblue (Leptotes marina) Iffied blue In angetip (Anthocharis sara sara) Iffielder's) orangetip (A. cethura) In California ringlet (Coenonympha californica)	14	red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiens unidentified lady (Vanessa sp.) Swallowtails pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Miscellaneous monarch (Danaus plexippus)		
western western southerr Edward' Acmon I marine I unidenti Whites Sara ora desert (I commor	tailed blue (Everes amyntula) In blue (Glaucopsyche lygdamus australis) Is blue (Hemiargus ceraunus gyas) Iblue (Icaricia acmon acmon) Iblue (Leptotes marina) Iffied blue Interest (Anthocharis sara sara) Iffied blue Interest (Anthocharis certura) Interest (Coenonympha californica) Interest rapae)		red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiens unidentified lady (Vanessa sp.) Swallowtails pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Miscellaneous monarch (Danaus plexippus) common buckeye (Junonia coenia gri		
western western southerr Edward' Acmon I marine I unidenti Whites Sara ora desert (I common cabbage checker	tailed blue (Everes amyntula) In blue (Glaucopsyche lygdamus australis) Is blue (Hemiargus ceraunus gyas) Iblue (Icaricia acmon acmon) Iblue (Leptotes marina) Iffied blue In angetip (Anthocharis sara sara) IFelder's) orangetip (A. cethura) In California ringlet (Coenonympha californica) Ired (common) white (Pontia protodice)	14	red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiens unidentified lady (Vanessa sp.) Swallowtails pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Miscellaneous monarch (Danaus plexippus) common buckeye (Junonia coenia gri mourning cloak (Nymphalis antiopa)		
western western southerr Edward' Acmon t marine t unidenti Whites Sara ora desert (I commor cabbaga checker spring v	tailed blue (Everes amyntula) In blue (Glaucopsyche lygdamus australis) Is blue (Hemiargus ceraunus gyas) Iblue (Icaricia acmon acmon) Iblue (Leptotes marina) Iffied blue Imagetip (Anthocharis sara sara) Felder's) orangetip (A. cethura) In California ringlet (Coenonympha californica) Ired (common) white (Pontia protodice) In White (P. sisymbrii)	14	red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiens unidentified lady (Vanessa sp.) Swallowtails pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Miscellaneous monarch (Danaus plexippus) common buckeye (Junonia coenia gri mourning cloak (Nymphalis antiopa) Skippers	sea)	7
western western southerr Edward' Acmon I marine I unidenti Whites Sara ora desert (i commor cabbaga checker spring v unidenti	tailed blue (Everes amyntula) In blue (Glaucopsyche lygdamus australis) In blue (Hemiargus ceraunus gyas) In blue (Icaricia acmon acmon) In blue (Leptotes marina) In Glaucopsyche lygdamus australis) In California ringlet (Anthocharis sara sara) In California ringlet (Coenonympha californica) In California ringlet (Coenonympha californica) In California ringlet (Pontia protodice)	14	red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiens unidentified lady (Vanessa sp.) Swallowtails pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Miscellaneous monarch (Danaus plexippus) common buckeye (Junonia coenia gri mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis	sea)	7
western western southerr Edward' Acmon b marine b unidenti Whites Sara ora desert ((common cabbaga checker spring v unidenti Metalm	tailed blue (Everes amyntula) In blue (Glaucopsyche lygdamus australis) In blue (Hemiargus ceraunus gyas) In blue (Icaricia acmon acmon) In blue (Leptotes marina) In Glaucopsyche lygdamus australis) In California ringlet (Anthocharis sara sara) In California ringlet (Coenonympha californica) In California ringlet (Coenonympha californica) In California ringlet (Pontia protodice)	14 2	red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiens unidentified lady (Vanessa sp.) Swallowtails pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Miscellaneous monarch (Danaus plexippus) common buckeye (Junonia coenia gri mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis mournful duskywing (Erynnis tristis)	sea)	
western western southerr Edward' Acmon I marine I unidenti Whites Sara ora desert (i commor cabbaga checker spring v unidenti Metalm Behr's r	tailed blue (Everes amyntula) In blue (Glaucopsyche lygdamus australis) In blue (Hemiargus ceraunus gyas) In blue (Icaricia acmon acmon) In blue (Leptotes marina) In Glaucopsyche lygdamus australis) In California ringlet (Anthocharis sara sara) In California ringlet (Coenonympha californica) In California ringlet (Coenonympha californica) In California ringlet (Pontia protodice)	14	red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiens unidentified lady (Vanessa sp.) Swallowtails pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Miscellaneous monarch (Danaus plexippus) common buckeye (Junonia coenia gri mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis mournful duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus)	Sea)	7
western western southerr Edward' Acmon I marine I unidenti Whites Sara ora desert (I common cabbage checker spring v unidenti Metalm Behr's r Wright's	tailed blue (Everes amyntula) In blue (Glaucopsyche lygdamus australis) In blue (Hemiargus ceraunus gyas) In blue (Leptotes acmon acmon) In blue (Leptotes marina) In blue (Leptotes marina) In California ringlet (Coenonympha californica) In California ringlet (Coenonympha californica) In coen marina my letter (Pieris rapae) In coen my letter (Pieris rapae) In co	14 2	red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiens unidentified lady (Vanessa sp.) Swallowtails pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Miscellaneous monarch (Danaus plexippus) common buckeye (Junonia coenia gri mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis mournful duskywing (Erynnis tristis)	Sea)	
western western southerr Edward' Acmon I marine I unidenti Whites Sara ora desert (I commor cabbaga checker spring v unidenti Metalm Behr's r Wright's Sulphu	tailed blue (Everes amyntula) In blue (Glaucopsyche lygdamus australis) In blue (Hemiargus ceraunus gyas) In blue (Leptotes acmon acmon) In blue (Leptotes marina) In blue (Leptotes marina) In California ringlet (Coenonympha californica) In California ringlet (Coenonympha californica) In coen marina my letter (Pieris rapae) In coen my letter (Pieris rapae) In co	14 2	red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiens unidentified lady (Vanessa sp.) Swallowtails pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Miscellaneous monarch (Danaus plexippus) common buckeye (Junonia coenia gri mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis mournful duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus) white (common) checkered-skipper (Hylephila)	Sea)	

Column Subtotal

Total

cloudless sulfur (Phoebus sennae marcellina)

Column Subtotal

unidentified sulphur

2016 Quino Checkerspot Butterfly Survey Form Surveyor: Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch Site Visit No: Acres Surveyed Survey Time: Acres per Hour: Area Surveyed Other Surveyors Present: **Field Conditions** Time (24 hr) Temperature (°F) Wind Speed (mph) Cloud Cover 0-1 Start End Start End Vegetation Communities Surveyed (inc. dominant spp.) **Host Plants** Obs. **Nectar Plants** Obs dwarf plantain (Plantago erecta) popcorn flower (Cryptantha/Plagiobothrys spp.) V purple owl's clover (Castilleja exserta) goldfields (Lasthenia spp.) snapdragon (Antirrhinum coulterianum) goldenstar (Muilla spp.) birds-beak (Cordylanthus rigidus) fiddleneck (Amsinckia menziesii var. intermedia) onion (Allium spp.) woolly plantain (Plantago patagonica) Chinese houses (Collinsia spp.) buckwheat (Eriogonum fasciculatum) ground pink (Linanthus dianthiflorus) Host Plant Mapping Updated (circle) Yes No New Area or Existing Area (circle) New Existing Both Species updated (list) **Butterfly Species** No. **Butterfly Species** No. Checkerspots Hairstreaks California patch (Chlosyne californica) great purple hairstreak (Atlides halesus corcorani) Gabb's checkerspot (C. gabbii) brown elfin (Callophrys augustinus) Quino checkerspot (Euphydryas editha quino) bramble (perplexing) hairstreak (C. dumetorum affinis) chalcedon checkerspot (E. chalcedona chalcedona) gray hairstreak (Strymon melinus pudica) Leanira checkerspot (Thessalia leanira wrighti) Ladies/Admirals Mylitta crescent (Phyciodes mylitta) California sister (Adelpha bredowii californica) Blues Lorquin's admiral (Limenitis lorquini) western pygmy-blue (Brephidium exila) west coast lady (Vanessa annabella) western tailed blue (Everes amyntula) red admiral (V. atalanta rubria) southern blue (Glaucopsyche lygdamus australis) painted lady (V. cardui) Edward's blue (Hemiargus ceraunus gyas) American (Virginia) lady (V. virginiensis) Acmon blue (Icaricia acmon acmon) unidentified lady (Vanessa sp.) marine blue (Leptotes marina) **Swallowtails** unidentified blue pale swallowtail (Papilio eurymedon) Whites western tiger swallowtail (P. rutulus) Sara orangetip (Anthocharis sara sara) anise swallowtail (P. zelicaon) 1111 in the phrust desert (Felder's) orangetip (A. cethura) Miscellaneous common California ringlet (Coenonympha californica) monarch (Danaus plexippus) cabbage white (Pieris rapae) common buckeye (Junonia coenia grisea) checkered (common) white (Pontia protodice) mourning cloak (Nymphalis antiopa) spring white (P. sisymbrii) Skippers unidentified white funereal duskywing (Erynnis funeralis) Metalmarks mournful duskywing (Erynnis tristis) Behr's metalmark (Apodemia mormo virgulti) fiery skipper (Hylephila phyleus) LVIT LATERAT Wright's metalmark (Calephelis wrighti) white (common) checkered-skipper (Pyrgus albescens) Sulphurs Other orange sulphur (Colias eurytheme) robinty sulphur sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina) unidentified sulphur Column Subtotal Column Subtotal

Total

QB4 3/16/16 160-08 Mir lae Eno bot Hed cre Diccap Bani 8 Aemigla - Evi fas Son de Bala lact Ero cic = Cryptathe sp Hypyla Silgel Ana arv Acros por sp Calma Esc Cal Med pol Solanum de prode Mel in hallyrus Sisymbrium Guthorya * Spergularia Lup bic Salapi Oxa cal Phaeelia disorzia Sistel No ped - Alpium sp. Mal fig - Muella Min aur Plaere Silmun Ant mut Cas af En con

1 2

Any M Freat

Surveyo	r: Amy Mo	dsm_			Date:		
Site Nam	ne: JPD-08 Proctor Valley – \		ay Ranch		Site Visit No:		*
	veyed — Acres		42	Survey Time:	4:20 (4.3)	Acres per Hour: _	9.8
	rveyors Present:	_					
Other 30	ii veyors rieseiii.						
1				Conditions		Cloud Cov	
	Time (24 hr)	Temper	ature (°F)	Wind Spe	eed (mph)	Cloud Cov	rer
Start	1025	19	1/2	0-1	mph	<u> </u>	
End	1445	74	°F	0-1	trock	<u> </u>	
Start	,						
End							
[
Vegetati	on Communities Surveyed (i	nc. dominant	spp.)				
NI	JG (383						
r			Ob-	Nester Diente			Obs.
Host Pla			Obs.	Nectar Plants popcorn flower (Cry	ntantha/Plagiohoth	nys snn)	V
	ntain (<i>Plantago erecta</i>) vl's clover (<i>Castilleja exserta</i>)		- V	goldfields (<i>Lastheni</i>		· ,	. v
	gon (Antirrhinum coulterianum)			goldenstar (Muilla s			./
	ak (Cordylanthus rigidus)			fiddleneck (Amsinch		termedia)	N.
	antain (<i>Plantago patagonica</i>)			onion (Allium spp.)			V
	houses (Collinsia spp.)			buckwheat (Eriogor			V
				ground pink (Linant		Name – Eviatina	Doth
	nt Mapping Updated (circle)	Yes (No)	New Area or Existi	ing Area (circie)	New Existing	Both
Species	updated (list)						····
Butterfly	Species		No.	Butterfly Species			No.
Checkers				Hairstreaks			
California	patch (Chlosyne californica)			great purple hairstre	ak (<i>Atlides halesus</i>	corcorani)	
	neckerspot (<i>C. gabbii</i>)			brown elfin (Callophi			
	eckerspot (<i>Euphydryas editha</i>			bramble (perplexing)			
L	n checkerspot (<i>E. chalcedona</i>)			gray hairstreak (Stry	mon melinus pudic	a)	
	heckerspot (Thessalia leanira	wrignti)		Ladies/Admirals California sister (Ade	alpha brodowii calife	ornica)	
Blues	escent (<i>Phyciodes mylitta</i>)			Lorquin's admiral (Li		nnouj	
	oygmy-blue (<i>Brephidium exila</i>)			west coast lady (Var			,
	ailed blue (Everes amyntula)			red admiral (V. atala			
	blue (Glaucopsyche lygdamus	australis)		painted lady (V. card			
Edward's	blue (Hemiargus ceraunus gy	as)		American (Virginia) I		;	
Acmon b	lue (Icaricia acmon acmon)			unidentified lady (Va	nessa sp.)		
	ue (<i>Leptotes marina</i>)	(3)	11	Swallowtails	nilia aumomadan)		
unidentifi	ed blue	\L		pale swallowtail (Papwestern tiger swallow			
Whites	ngetip (<i>Anthocharis sara sara</i>)	(4)	Ut 184 UI				
	elder's) orangetip (A. cethura)	(307)	401 tett VI	Miscellaneous			
	California ringlet (Coenonympl	na californica)	1	monarch (Danaus pi	lexippus)		
	white (Pieris rapae)	(3)	till	common buckeye (J		ea) (5)	Uth.
checkere	d (common) white (Pontia prot	odice)		mourning cloak (Nyr	nphalis antiopa)		
	nite (<i>P. sisymbrii</i>)			Skippers			
unidentifi		(6)	Ht	funereal duskywing			1
Metalma		23)	156 10	mournful duskywing fiery skipper (Hyleph			
	etalmark (<i>Apodemia mormo vii</i>	guiti) III JA	MMM	white (common) che		raus albescens)	
Sulphurs	metalmark (<i>Calephelis wrighti</i>)			Other	onorod empper (r y	. 300 (100000)	<u> </u>
	ulphur (<i>Colias eurytheme</i>)						
	ange (Eurema nicippe)						
	sulfur (<i>Phoebus sennae marc</i>	ellina)					
	ed sulphur	(6)	41				,
	Co	lumn Subtota	64			Column Subtotal Total	42
1						iotai	1 (10/1)

3.17.16 JPD 08 Areat . OCB 4 Pla ere where mapped Ero Get. Aemfa, Die Cap. Hypola . Vio ped . Hedore. Sisbel. Sil gal. Guficrezia. Bra n'is Symbolium - Allium - Erific. Sporgularia Bahlact En cic - Cryptauther Medpol temispon se Lathym Cal mac. Mirlae Gellum . 4 lowes - Muilla Sinicula re (al ci)

Ams int along KdiNE corner.

Sanniz cone Sanicula yellow Hef arb Oxa cal

Salapi

	, 2016 Quino	Checke	rspot Butterfly Survey Form	12/16	
Surveyor: (PARRETT	HUGFMAN		Date:	1131	
Site Name: JPD-08 Proctor Valle	Willage 14 of Ot	av Ranch	- PARIGI N Site Visit No	o: <u> </u>	
Site Name: JPD-08 Proctor Valle	Survey Tin	na: B	HOURS Acres per Hour:	8	
Acres Surveyed (25	Survey in	ile. <u>U</u>	()00,00		
Other Surveyors Present:	NONE				
		Fie	ld Conditions	Cloud C	over
Time (24 hr)	Temper	ature ('F)	Wind Speed (mph)	Cloud C	UVCI
	101		2-4	<u> </u>	
Start 06-30	(83)		11-9	Ø	
End 1630	60		90		
Start					
End					
Vegetation Communities Survey	PRARITY	SPP.) COAST	A SAEVE SCRUB, NOW-	~Anui ()	RASSLA
Heat Blants		Obs.	Nectar Plants		Obs.
Host Plants dwarf plantain (Plantago erecta)		X	popcorn flower (Cryptantha/Plagiobothrys	spp.)	-
purple owl's clover (Castilleja exse	erta)	¥	goldfields (Lasthenia spp.)		
snapdragon (Antirrhinum coulteria			goldenstar (Muilla spp.)		
birds-beak (Cordylanthus rigidus)			fiddleneck (Amsinckia menziesii var. interr	nedia)	-
woolly plantain (Plantago patagon	ica)		onion (Allium spp.)		
Chinese houses (Collinsia spp.)			buckwheat (Eriogonum fasciculatum)		
		N	ground pink (<i>Linanthus dianthiflorus</i>) New Area or Existing Area (<i>circle</i>)	ew Existing	Both
Host Plant Mapping Updated (ci		No	New Area of Existing Area (Circle)	LAISTING	
Species updated (list)	musta SP				
Butterfly Species		No.	Butterfly Species		No.
Checkerspots			Hairstreaks		
California patch (Chlosyne californ	rica)		great purple hairstreak (Atlides halesus cord	corani)	
Gabb's checkerspot (C. gabbii)			brown elfin (Callophrys augustinus)		
Quino checkerspot (Euphydryas e			bramble (perplexing) hairstreak (C. dumetor	rum affinis)	
chalcedon checkerspot (E. chalcedon checkers			gray hairstreak (Strymon melinus pudica) Ladies/Admirals		
Leanira checkerspot (Thessalia lea Mylitta crescent (Phyciodes mylitta			California sister (Adelpha bredowii californic	:a)	
Blues	")		Lorquin's admiral (Limenitis lorquini)		
western pygmy-blue (Brephidium	exila)	<u> </u>	west coast lady (Vanessa annabella)		2 ·
western tailed blue (Everes amynt		-	red admiral (V. atalanta rubria)		1
southern blue (Glaucopsyche lygd			painted lady (V. carduí)		1
Edward's blue (Hemiargus ceraun			American (Virginia) lady (V. virginiensis)	1	1
Acmon blue (Icaricia acmon acmo	n)		unidentified lady (Vanessa sp.)		
marine blue (Leptotes marina)			Swallowtails		
unidentified blue			pale swallowtail (<i>Papilio eurymedon</i>) western tiger swallowtail (<i>P. rutulus</i>)		
Whites Sara orangetip (Anthocharis sara :	cara)	70	anise swallowtail (P. zelicaon)		
desert (Felder's) orangetip (A. ceti	hura)	72	Miscellaneous		
common California ringlet (Coenor	nympha californica)		monarch (Danaus plexippus)		
cabbage white (Pieris rapae)		i	common buckeye (Junonia coenia grisea)		8
checkered (common) white (Pontic	a protodice)	5	mourning cloak (Nymphalis antiopa)		
spring white (P. sisymbrii)			Skippers		
unidentified white			funereal duskywing (Erynnis funeralis)		5
Metalmarks	mo viraulti)	99	mournful duskywing (Erynnis tristis)		
Behr's metalmark (Apodemia mori	riahti)		fiery skipper (Hylephila phyleus) white (common) checkered-skipper (Pyrgus	albascans\	2
Wright's metalmark (Calephelis wi	igiia)		Other	aivascaiis)	
Sulphurs orange sulphur (Colias eurytheme))	8			
cloopy orange (Eurema nicippe)				-	
cloudless sulfur (Phoebus sennae	marcellina)				
unidentified sulphur					
	Column Subtotal	132	C	olumn Subtotal	2)

10 Mu 153

Surveyor	ITAVIS CO	ooper			Date:	3/20/16	
Site Name:	JPD-08 Proctor	Valley – Village 14 of Ota	ay Ranch		Site Visit No:	4	
Area Survey	red O	Acres Surveyed	63	Survey Time:	6.3	Acres per Hour:	10
Other Surve	yors Present:						

	Field Conditions								
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover					
Start	1000	61	1-3	25%					
End	1620	78	4-7	5%					
Start									
End									

Vegetation Communities Surveyed (inc. dominant spp.)	chaparral	(ADE	FAS,	ERI	FAS,	MAL	LAU,	ACM	GLA)	
non-native grassland, annual grassland										

Host Plants O		Nectar Plants	Obs.
dwarf plantain (<i>Plantago erecta</i>) X		popcorn flower (Cryptantha/Plagiobothrys spp.)	X
purple owl's clover (Castilleja exserta)densiflora X		goldfields (Lasthenia spp.)	Х
snapdragon (Antirrhinum coulterianum)		goldenstar (Muilla spp.)	
birds-beak (Cordylanthus rigidus)		fiddleneck (Amsinckia menziesii var. intermedia)	Х
woolly plantain (Plantago patagonica)		onion (Allium spp.)	Х
Chinese houses (Collinsia spp.)		buckwheat (Eriogonum fasciculatum)	X
		ground pink (Linanthus dianthiflorus)	Χ
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 (Chlosyne californica)		great purple hairstreak (Atlides halesus corcorani)	
Gabb's checkerspot (C. gabbii)		brown elfin (Callophrys augustinus)	
Quino checkerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	
chalcedon checkerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica)	
Leanira checkerspot (Thessalia leanira wrighti)		Ladies/Admirals	
Mylitta crescent (Phyciodes mylitta)		California sister (Adelpha bredowii californica)	
Blues		Lorquin's admiral (Limenitis lorquini)	
western pygmy-blue (Brephidium exila)		west coast lady (Vanessa annabella)	
western tailed blue (Everes amyntula)		red admiral (V. atalanta rubria)	
southern blue (Glaucopsyche lygdamus australis)		painted lady (V. cardui)	
Edward's blue (Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis)	
Acmon blue (Icaricia acmon acmon)		unidentified lady (Vanessa sp.)	2
marine blue (Leptotes marina)		Swallowtails	
unidentified blue		pale swallowtail (Papilio eurymedon)	
Whites		western tiger swallowtail (P. rutulus)	
Sara orangetip (Anthocharis sara sara)	36	anise swallowtail (P. zelicaon)	
desert (Felder's) orangetip (A. cethura)		Miscellaneous	
common California ringlet (Coenonympha californica)		monarch (Danaus plexippus)	
cabbage white (Pieris rapae)		common buckeye (Junonia coenia grisea)	13
checkered (common) white (Pontia protodice)	18	mourning cloak (Nymphalis antiopa)	
spring white (P. sisymbrii)		Skippers	
unidentified white		funereal duskywing (Erynnis funeralis)	4
Metalmarks		mournful duskywing (Erynnis tristis)	
Behr's metalmark (Apodemia mormo virgulti)	23	fiery skipper (Hylephila phyleus)	
Wright's metalmark (Calephelis wrighti)		white (common) checkered-skipper (Pyrgus albescens)	2
Sulphurs		Other	
orange sulphur (Colias eurytheme)	8	Harford's Sulfer	3
sleepy orange (Eurema nicippe)			
cloudless sulfur (Phoebus sennae marcellina)			
unidentified sulphur			
Column Subtotal	85	Column Subtotal	.24
		Total	109

•					pot Butterfly Su	rvey Form Date:	3/22/16	
Surveyo						Site Visit No:	4	
Site Nan	ne: JPD-08 Proctor Valley - Vill	age 14 of Ota	y Ran	<u>ch</u>		J.1.0	Acres per Hour:	10
Area Su	rveyed P Q Acres S	Surveyed _	35.	2	Survey Time:	8.5	_ Acres per nour	1
Other Su	urveyors Present: M							
				Field	Conditions			
	Time (24 hr)	Tempera	ture ('F)	Wind Spe	ed (mph)	Cloud Cov	er
Start	OGO	60			2-8		45	
End	1000	111			2-6		15	
	1730	6-1			20		1	
Start							-	
End							<u></u>	
Vegetat	ion Communities Surveyed (inc	. dominant s	pp.)					
CAK	10015C CHA090	001	0	2005	or SALVE	SIOIB.	LON MATIVE	_
~	mise chame	470		742	HC GIOIC	scars)	CO/O TOFFICE	
<u></u>	RASSLANO							
Host Pla	ants	1	Ob	s.	Nectar Plants			Obs.
dwarf pl	antain (Plantago erecta)		Y		popcorn flower (Cry)	otantha/Plagiobot	thrys spp.)	×
	wi's clover (Castilleja exserta)		9		goldfields (Lasthenia			×
	gon (Antirrhinum coulterianum)				goldenstar (Muilla sp	pp.)		-
birds-be	ak (Cordylanthus rigidus)				fiddleneck (Amsinck	ia menziesii var. i	intermedia)	x
	lantain (Plantago patagonica)				onion (Allium spp.)			X
Chinese	houses (Collinsia spp.)				buckwheat (Eriogon			´⊁
					ground pink (Linanth			×
	ant Mapping Updated (circle)	(Yes)	No	1	New Area or Existing	ng Area (circle)	(New Existing	Both 'Both
Species	s updated (list) CASTL	LESA	SP.			 -		
Butterfly	y Species		No	D.	Butterfly Species			No.
Checker					Hairstreaks			
	a patch (Chlosyne californica)				great purple hairstrea		s corcorani)	
	checkerspot (C. gabbii)				brown elfin (Callophr)			
	neckerspot (Euphydryas editha qu				bramble (perplexing)			
	on checkerspot (E. chalcedona ch				gray hairstreak (Stryr	non melinus pudi	ca)	
	checkerspot (Thessalia leenira wr rescent (Phyciodes mylitta)	igriu)			Ladies/Admirals			
Blues	rescent (i fryclodes frymta)				California sister (Ade Lorquin's admiral (Lir		romica)	
	pygmy-blue (Brephidium exita)				west coast lady (Van			
	tailed blue (Everes amyntula)				red admiral (V. atalar			
	blue (Glaucopsyche lygdamus a	ustralis)			painted lady (V. card			
	s blue (Hemiargus ceraunus gyas				American (Virginia) la		ie)	
Acmon b	olue (Icaricia acmon acmon)				unidentified lady (Vai		-,	•
marine b	lue (Leptotes marina)		2		Swallowtails			•
unidentif	ied blue				pale swallowtail (Pap			2
Whites					western tiger swallow			
	ngetip (Anthocharis sara sara)		5		anise swallowtail (P.	zelicaon)		1
	California singlet (Connorumpha	colife miss			Miscellaneous			
	California ringlet (Coeriornympha white (Pieris rapae)	Caurornica)			monarch (Danaus pl	exippus)		
	write (Pieris rapae) ed (common) white (Pontia protod	lice)	21		common buckeye (Ja	unonia coenia gri	998)	
	hite (P. sisymbrii)		4		mourning cloak (Nym	nphalis antiopa)		
	ied white				Skippers funereal duelouing	En-mi-		
Metalma					funereal duskywing (mournful duskywing	Erynnis funeralis)	_5
	etalmark (Apodemia mormo virgu	Mt)	2		fiery skipper (Hyleph	(ELYTINS INSES)		
	metalmark (Calephelis wrighti)	- 1	->		white (common) che	ma proyecus)		
Sulphur					Other		yrgus albescens)	
	ulphur (Colias eurytheme)							
	ange (Eureme nicippe)							
	sulfur (Phoebus sennae marcell	ina)						
	ed sulphur							
	Colu	mn Subtotal	4				Column Subtotal	1/1
							T	
							TOTAL	75

rveyor:		Quino Cr		pot Butterfly Survey Form Date: 3 20 16	
9 7 .0	- TIV			Site Visit No:	
	e: JPD-08 Proctor Valley - Village	14 of Otay	Ranch	Survey Time: \$ 5 Acres per Hour:	10
a Sur	veyed R P Acres Sun	veyed 85	.5	Survey time:	•
her Su	rveyors Present: \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	UE			
			Field	Conditions	
	Time (24 hm)	Temperatu		Wind Speed (mph) Cloud Cov	er
Start	Time (24 hr)	A		40 N-1 40	
	0980	60		70 2 25	
End	1720	72		0-2	
Start					
End					
egetati	ion Communities Surveyed (inc. d	lominant sp	p.)		
CH	AMISE CHAPARA	ac, ce	osm	C SAGE SCRUB, NON NATIVE	GRAS
					Obs.
Host Pla	ants		Obs.	Nectar Plants	Vis.
warf pla	lantain (<i>Plantago erecta</i>)		X	popcorn flower (Cryptantha/Plagiobothrys spp.)	×
	owl's clover (Castilleja exserta)		*	goldfields (Lasthenia spp.)	
	agon (Antirrhinum coulterianum)			goldenstar (Muilla spp.)	
	eak (Cordylanthus rigidus)			fiddleneck (Amsinckia menziesii var. intermedia)	V.
	olantain (Plantago patagonica)			onion (Allium spp.) buckwheat (Eriogonum fasciculatum)	Ž
Chinese	e houses (Collinsia spp.)			ground pink (<i>Linanthus dianthifiorus</i>)	
Hoet Di	lant Mapping Updated (circle)	Yes) N	No.	New Area or Existing Area (circle) New) Existing	Both
	tatte mapping operator (among)	USA	SP		
Butterfl	ly Species		No.	Butterfly Species	No.
Checke	erspots			Hairstreaks	
	nia patch (Chlosyne californica)			great purple hairstreak (Atlides halesus corcorani)	
	checkerspot (C. gabbii)			brown elfin (Callophrys augustinus)	
	checkerspot (Euphydryas editha quin			bramble (perplexing) hairstreak (C. dumetorum affinis)	
	don checkerspot (E. chalcedona chal checkerspot (Thessalia leanira wrig			gray hairstreak (Strymon melinus pudica) Ladies/Admirals	
	creckerspot (Thessalla leanita wrigi crescent (Phyciodes mylitta)	(10)		California sister (Adelpha bredowii californica)	
Mylitta o	crescent (Phyclodes mynta)			Lorquin's admiral (Limenitis lorquini)	
100000000000000000000000000000000000000	n pygmy-blue (Brephidium exila)			west coast lady (Vanessa annabella)	<u> </u>
	n tailed blue (Everes amyntula)			red admiral (V. atalanta rubria)	<u> </u>
	m blue (Glaucopsyche lygdamus aus	stralis)		painted lady (V. cardui)	1
	d's blue (Hemiargus ceraunus gyas)			American (Virginia) lady (V. virginiensis)	i
	blue (Icaricia acmon acmon)		A	unidentified lady (Vanessa sp.)	<u> </u>
	blue (Leptotes marina)		3	Swallowtails	
unident	tified blue			pale swallowtail (Papilio eurymedon)	
Whites				western tiger swallowtail (P. rutulus)	1.
	rangetip (Anthocharis sara sara)		105	anise swallowtail (P. zelicaon)	
desert ((Felder's) orangetip (A. cethura)	- 116 1' 1	ч	Miscellaneous	
	on California ringlet (Coenonympha c	californica)		monarch (Danaus plexippus)	-
	ge white (Pieris rapae)	(00)	7.	common buckeye (Junonia coenia grisea)	5
cabbag	d (samman) white (Dantie and adi	ν σ)	<u> </u>	mourning cloak (Nymphalis antiopa)	
cabbag checke	red (common) white (Pontia protodic			Skidderk	1
cabbag checke spring v	ered (common) white (Pontia protodio white (P. sisymbrii)			Skippers funereal duskywing (Erynnis funeralis)	-
cabbag checke spring v unident	ered (common) white (Pontia protodio white (P. sisymbrii) tified white			funereal duskywing (Erynnis funeralis)	5
cabbag checke spring v unident Metalm	ered (common) white (Pontia protodio white (P. sisymbrii) tified white narks		55	funereal duskywing (Erynnis funeralis) mournful duskywing (Erynnis tristis)	5
cabbag checker spring v unident Metalm Behr's	ered (common) white (<i>Pontia protodic</i> white (<i>P. sisymbrii</i>) tified white narks metalmark (<i>Apodemia mormo virgul</i>		55	funereal duskywing (Erynnis funeralis) mournful duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus)	
cabbag checke spring v unident Metalm Behr's Wright's	ered (common) white (<i>Pontia protodic</i> white (<i>P. sisymbrii</i>) tified white narks metalmark (<i>Apodemia mormo virgul</i> 's metalmark (<i>Calephelis wrighti</i>)		55	funereal duskywing (Erynnis funeralis) mournful duskywing (Erynnis tristis)	5
cabbag checke spring v unident Metalm Behr's Wright's Sulphu	ered (common) white (Pontia protodic white (P. sisymbrii) tified white narks metalmark (Apodemia mormo virgul 's metalmark (Calephelis wrighti)		55	funereal duskywing (Erynnis funeralis) mournful duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus) white (common) checkered-skipper (Pyrgus albescens)	
cabbag checke spring v unident Metalm Behr's Wright's Sulphu orange	ered (common) white (Pontia protodic white (P. sisymbrii) tified white narks metalmark (Apodemia mormo virgul 's metalmark (Calephelis wrighti) urs sulphur (Colias eurytheme)		55	funereal duskywing (Erynnis funeralis) mournful duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus) white (common) checkered-skipper (Pyrgus albescens)	
cabbag checke spring v unident Metalm Behr's Wright's Sulphu orange sleepy	ered (common) white (Pontia protodic white (P. sisymbrii) tified white narks metalmark (Apodemia mormo virgul 's metalmark (Calephelis wrighti) urs sulphur (Colias eurytheme) orange (Eurema nicippe)	iti)	55	funereal duskywing (Erynnis funeralis) mournful duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus) white (common) checkered-skipper (Pyrgus albescens)	
cabbag checker spring v unident Metalm Behr's Wright's Sulphu orange sleepy cloudles	ered (common) white (Pontia protodic white (P. sisymbrii) tified white narks metalmark (Apodemia mormo virgul 's metalmark (Calephelis wrighti) ure sulphur (Colias eurytheme) orange (Eurema nicippe) ess sulfur (Phoebus sennae marcellii tified sulphur	iti)		funereal duskywing (Erynnis funeralis) mournful duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus) white (common) checkered-skipper (Pyrgus albescens)	

Surveyor: JOHN DICV	S, MELAME AL	WS		Date: 0	3-21-2016	
Site Name: JPD-08 Proctor				Site Visit No:	4	
Area Surveyed JM	Acres Surveyed	93	Survey Time:	THRS	Acres per Hour:	6.6/ENCH BIO
Other Surveyors Present:	_					

Field Conditions						
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover		
Start	0930	60	1.2	10%		
End	1630	70	5.6	15%		
Start						
End						

Vegetation Communities Surveyed (inc. dominant spp.)

RNAENL/NNG, CHAMISE CHAMANALY SAME DOMINANT SPP. AS PREVIOUS WILLS

DISTURGED CSS, NERDILLAMSS GASSUND

Host Plants		Nectar Plants	Obs.
dwarf plantain (Plantago erecta)	×	popcorn flower (Cryptantha/Plagiobothrys spp.)	X
purple owl's clover (Castilleja exserta) DENSIFICILA	×	goldfields (Lasthenia spp.)	
snapdragon (Antirrhinum coulterianum)		goldenstar (Muilla spp.)	X
birds-beak (Cordylanthus rigidus)		fiddleneck (Amsinckia menziesii var. intermedia)	
woolly plantain (Plantago patagonica)		onion (Allium spp.)	×
Chinese houses (Collinsia spp.)		buckwheat (Eriogonum fasciculatum)	×
		ground pink (Linanthus dianthiflorus)	
Host Plant Mapping Updated (circle) (Yes)	No	New Area or Existing Area (circle) New Existing	Both
Species updated (list) C. NEWS IRDRA - PUN	7.5.3		

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (Chlosyne californica)		great purple hairstreak (Atlides halesus corcorani)	
Gabb's checkerspot (C. gabbii)		brown elfin (Callophrys augustinus)	
Quino checkerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	
chalcedon checkerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica)	
Leanira checkerspot (Thessalia leanira wrighti)		Ladies/Admirals	
Mylitta crescent (Phyciodes mylitta)		California sister (Adelpha bredowii californica)	
Blues	-	Lorquin's admiral (Limenitis lorquini)	
western pygmy-blue (Brephidium exila)	/	west coast lady (Vanessa annabella)	
western tailed blue (Everes amyntula)		red admiral (V. atalanta rubria)	
southern blue (Glaucopsyche lygdamus australis)	/	painted lady (V. cardui)	Contra
Edward's blue (Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis)	6
Acmon blue (Icaricia acmon acmon)		unidentified lady (Vanessa sp.)	
marine blue (Leptotes marina)	1	Swallowtails	
unidentified blue		pale swallowtail (Papilio eurymedon)	
Whites		western tiger swallowtail (P. rutulus)	
Sara orangetip (Anthocharis sara sara)	103	anise swallowtail (P. zelicaon)	
desert (Felder's) orangetip (A. cethura)		Miscellaneous	
common California ringlet (Coenonympha californica)	2	monarch (Danaus plexippus)	
cabbage white (Pieris rapae)		common buckeye (Junonia coenia grisea)	5
checkered (common) white (Pontia protodice)	11	mourning cloak (Nymphalis antiopa)	
spring white (P. sisymbrii)		Skippers	
unidentified white		funereal duskywing (Erynnis funeralis)	25
Metalmarks		mournful duskywing (Erynnis tristis)	
Behr's metalmark (Apodemia mormo virgulti)	63	fiery skipper (Hylephila phyleus)	1
Wright's metalmark (Calephelis wrighti)		white (common) checkered-skipper (Pyrgus albescens)	4
Sulphurs		Other	
orange sulphur (Colias eurytheme)	6	COUAS HARFORDII	3
sleepy orange (Eurema nicippe)		COUAS HARFORDII	2
cloudless sulfur (Phoebus sennae marcellina)			
unidentified sulphur			
Column Subtotal	188	Column Subtotal	46
		Total	234

Surveyor: ME	LANIED	icus, JOHN DI	LCVS		Date: 0	3-20-2016	
		/alley – Village 14 of O			Site Visit No:	4	
Area Surveyed	K, L	Acres Surveyed	108	Survey Time:	7.5 HOURS	Acres per Hour:	7. 2/ ENCH BU
Other Surveyore	Drocont.	_					

	Field Conditions						
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover			
Start	0920	60	0-1	25%			
End	1650	72	0-2	20%			
Start			11				
End							

Vegetation Communities Surveyed (inc. dominar	nt spp.)	
DISTURBED CONSTAL GALAGE SCH	RUB SAME	
NONTMITNE GRUSSLAND	AS PREVIOUS WEEKS	

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (Chlosyne californica)		great purple hairstreak (Atlides halesus corcorani)	
Gabb's checkerspot (C. gabbii)		brown elfin (Callophrys augustinus)	
Quino checkerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	
chalcedon checkerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica)	
Leanira checkerspot (Thessalia leanira wrighti)		Ladies/Admirals	
Mylitta crescent (Phyciodes mylitta)		California sister (Adelpha bredowii californica)	
Blues		Lorquin's admiral (Limenitis lorquini)	
western pygmy-blue (Brephidium exila)	1	west coast lady (Vanessa annabella)	
western tailed blue (Everes amyntula)		red admiral (V. atalanta rubria)	1
southern blue (Glaucopsyche lygdamus australis)		painted lady (V. cardui)	
Edward's blue (Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis)	2
Acmon blue (Icaricia acmon acmon)	3	unidentified lady (Vanessa sp.)	
marine blue (Leptotes marina)		Swallowtails	
unidentified blue		pale swallowtail (Papilio eurymedon)	
Whites		western tiger swallowtail (P. rutulus)	
Sara orangetip (Anthocharis sara sara)	92	anise swallowtail (P. zelicaon)	
desert (Felder's) orangetip (A. cethura)		Miscellaneous	
common California ringlet (Coenonympha californica)		monarch (Danaus plexippus)	
cabbage white (Pieris rapae)		common buckeye (Junonia coenia grisea)	11
checkered (common) white (Pontia protodice)	9	mourning cloak (Nymphalis antiopa)	
spring white (P. sisymbrii)		Skippers	
unidentified white		funereal duskywing (Erynnis funeralis)	10
Metalmarks		mournful duskywing (Erynnis tristis)	
Behr's metalmark (Apodemia mormo virgulti)	32	fiery skipper (Hylephila phyleus)	3
Wright's metalmark (Calephelis wrighti)		white (common) checkered-skipper (Pyrgus albescens)	24
Sulphurs		Other	-
orange sulphur (Colias eurytheme)	11	COLLAS HARBORDU	16
sleepy orange (Eurema nicippe)		HELIOPETES ERICETORUM	2
cloudless sulfur (Phoebus sennae marcellina)		PAPILIO CLESINONIES	1
unidentified sulphur		LERODEA EVEALA	5
Column Subtotal	148	Column Subtotal	75
		Total	223

Surveyor:	Brian Lohstrol	h	Date: 18 March 2016				
Site Name: JPD-08 Proctor Valley – Village 14 of Otay Ranch					Site Visit No:	4	
Area Surve	yed S	Acres Surveyed	47 acres	Survey Time:	5.3 hrs	_ Acres per Hour:	8.9
Other Surve	vore Present						

		Field	Conditions	
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	09:10	64 air, 67 at ground	0-3	Clear
End	14:30	78	2-7	Clear
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)
scrub (B. laciniata, M. laurina); chaparral (A. fasciculatum, M. laurina, R. crocea, C. tomentosus);
NNG (Avena spp, Bromus spp.)

Host Plants	Obs.	Nectar Plants	Obs.
dwarf plantain (Plantago erecta)	X	popcorn flower (Cryptantha/Plagiobothrys spp.)	X
purple owl's clover (Castilleja exserta)	X	goldfields (Lasthenia spp.)	X
snapdragon (Antirrhinum coulterianum)		goldenstar (Muilla spp.)	
birds-beak (Cordylanthus rigidus)		fiddleneck (Amsinckia menziesii var. intermedia)	
woolly plantain (Plantago patagonica)		onion (Allium spp.)	X
Chinese houses (Collinsia spp.)		buckwheat (Eriogonum fasciculatum)	X
		ground pink (Linanthus dianthiflorus)	X
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 (Chlosyne californica)		great purple hairstreak (Atlides halesus corcorani)	
Gabb's checkerspot (C. gabbii)	4	brown elfin (Callophrys augustinus)	
Quino checkerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	
chalcedon checkerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica)	
Leanira checkerspot (Thessalia leanira wrighti)		Ladies/Admirals	
Mylitta crescent (Phyciodes mylitta)		California sister (Adelpha bredowii californica)	
Blues		Lorquin's admiral (Limenitis lorquini)	
western pygmy-blue (Brephidium exila)		west coast lady (Vanessa annabella)	1
western tailed blue (Everes amyntula)		red admiral (V. atalanta rubria)	
southern blue (Glaucopsyche lygdamus australis)	2	painted lady (V. cardui)	2
Edward's blue (Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis)	3
Acmon blue (Icaricia acmon acmon)		unidentified lady (Vanessa sp.)	1
marine blue (Leptotes marina)	2	Swallowtails	
Spring azure (Celastrina ladon echo)		pale swallowtail (Papilio eurymedon)	
Whites		western tiger swallowtail (P. rutulus)	
Sara orangetip (Anthocharis sara sara)	23	anise swallowtail (P. zelicaon)	
desert (Felder's) orangetip (A. cethura)		Miscellaneous	
common California ringlet (Coenonympha californica)	5	monarch (Danaus plexippus)	
cabbage white (Pieris rapae)		common buckeye (Junonia coenia grisea)	1
checkered (common) white (Pontia protodice)	4	mourning cloak (Nymphalis antiopa)	
spring white (P. sisymbrii)		Skippers	
unidentified white		funereal duskywing (Erynnis funeralis)	7
Metalmarks	1.3	mournful duskywing (Erynnis tristis)	
Behr's metalmark (Apodemia mormo virgulti)	23	fiery skipper (Hylephila phyleus)	
Wright's metalmark (Calephelis wrighti)		white (common) checkered-skipper (Pyrgus albescens)	2
Sulphurs		Other	
orange sulphur (Colias eurytheme)	2	Lupine blue (Plebejus lupines)	
sleepy orange (Eurema nicippe)		Erynnis sp.	
cloudless sulfur (Phoebus sennae marcellina)			
dainty sulphur (Nathalis iole)	1		
Column Subtotal	66	Column Subtotal	17
		Total	83

Surveyor :	Manica Alfaro			Date:	3/21/16	
Site Nam	e: JPD-08 Proctor Valley - Villa	ae 14 of Ota	ay Ranch	Site Visit No:	U	
Area Sur	-	urveyed _		Survey Time: 6 hr 10 min	Acres per Hour:	9.25
	70		Field	Conditions		
	Time (24 hr)	Tempera	ture (°F)	Wind Speed (mph)	Claud Ca	
Start					Cloud Co	ver
End			66 quad		30 "	
	3:36	76 gir	84 grow	6-8	ha haty (c 50%
Start					U	
End						
Vegetatio	on Communities Surveyed (inc.	dominant s	spp.)			
-	css, Rd.					
Host Pla	nts	1	Obs.	Nectar Plants		Obs.
	ntain (Plantago erecta)		2001	gopcorn flower (Cryptantha/Plagioboth	rvs spp.)	UDS.
	l's clover (Castilleja exserta)		n-	goldfields (Lasthenia spp.)	усторы,	1
snapdrag	on (Antirrhinum coulterianum)			goldenstar (Muilla spp.)		
birds-bea	k (Cordylanthus rigidus)			fiddleneck (Amsinckia menziesii var. in	termedia)	
	intain (Plantago patagonica)			onion (Allium spp.)		
Chinese h	nouses (Collinsia spp.)			buckwheat (Eriogonum fasciculatum)		2
Hoot Dies	of Managiner Handatand (aireda)	Van /	No.	ground pink (Linanthus dianthiflorus)	Now Eviation	Both
	nt Mapping Updated (circle) updated (list)	Yes (No.	New Area or Existing Area (circle)	New Existing	DOLL
utterfly S	`nanina	T	No.	Dutterfly Consiss		No.
heckersp	Tryu		NO.	Butterfly Species Hairstreaks		No.
	patch (Chlosyne californica)			great purple hairstreak (Attides halesus	corcorani)	
	eckerspot (C. gabbii)			brown elfin (Callophrys augustinus)		
luino chec	ckerspot (Euphydryas editha quin	0)		bramble (perplexing) hairstreak (C. dum		- 6
halcedon	checkerspot (E. chalcedona chal	cedona)		gray hairstreak (Strymon melinus pudica	9)	
	eckerspot (Thessalia leanira wrig	hti)		Ladies/Admirals		-
	scent (Phyciodes mylitta)			California sister (Adelpha bredowii califo	ornica)	-
Blues				Lorquin's admiral (Limenitis lorquini) west coast lady (Vanessa annabella)		
vestern py	ygmy-blue (Brephidium exila)			red admiral (V. atalanta rubria)		
vestern ta	iled blue (Everes amyntula) blue (Glaucopsyche lygdamus aus	etralie)		painted lady (V. cardul)		1+3
	blue (Hemiargus ceraunus gyas)	sa ana)		American (Virginia) lady (V. virginiensis)		
Acmon blu	ue (Icaricia acmon acmon)		1	unidentified lady (Vanessa sp.)		
narine blu	ie (Leptotes marina)		1+3	Swallowtails		-
unidentifie				pale swallowtail (Papilio eurymedon)		
Whites			1.00	western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon)		
Sara oran	getip (Anthocharis sara sara)		1002S	Miscellaneous		la contra
desert (Fe	elder's) orangetip (A. cethura) California ringlet (Coenonympha c	alifomica\	114+3	monarch (Danaus plexippus)		
ommon (California ringiet (Coerionympha o	dillollilod)	1,1,7	common buckeye (Junonia coenia grise	a)	
cabbage	white (<i>Pieris rapae</i>) d (common) white (<i>Pontia protodic</i>	ce)		mourning cloak (Nymphalis antiopa)		
checkered	ite (P. sisymbrii)			Skippers		2+10
spring with	ed white			funereal duskywing (Erynnis funeralis)		ATIO
		40	1+3+15	mournful duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus)		
		u)	113113	white (common) checkered-skipper (Pyr	rous albescens)	116
Aright's	netalmark (Calephelis wrighti)			Other	940 4111 3000 1121	
range SU	Iphur (Collas earyana)					
leepy ora	ange (Eurema nicippe) (Dhoebus sennae marcellir	na)				
loudless	ange (Eurema nicippe) sulfur (Phoebus sennae marcellin	- cubtotal			Column Subtotal	23
	1 - John III	- 11.5-1	17		LAMBELL SUDOWAL	

Column Subtotal 5 4

unidentified sulphur

Column Subtotal Total

Surveyor:	John Lovio	Date: 3-1	8-16	
Site Name:	JPD-08 Proctor Valley – Village 14 of Otay Ranch	Site Visit No:		
Area Surve	yed Polygon U Acres Surveyed 48	Survey Time: 5.2 hours	Acres per Hour:	9
Other Surve	avors Present: None			

	Field Conditions					
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover		
Start	10:55	70	0	0		
End	16:05	85	5-8, SW	0		
Start						
End						

Vegetation Communities Surveyed (inc. dominant spp.)

Chaparral: Adenostema fasciculatum, Ceanothus tomentosus, Quercus berberidifolia, Xylococcus bicolor > Heteromeles arbutifolia, Mimulus aurantiacus, Rhus integrifolia, Malsoma laurina, Salvia munzii, Yucca schidigera

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (Chlosyne californica)		great purple hairstreak (Atlides halesus corcorani)	
Gabb's checkerspot (C. gabbii)		brown elfin (Callophrys augustinus)	
Quino checkerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	
chalcedon checkerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica)	
Leanira checkerspot (Thessalia leanira wrighti)		Ladies/Admirals	
Mylitta crescent (Phyciodes mylitta)		California sister (Adelpha bredowii californica)	
Blues		Lorquin's admiral (Limenitis Iorquini)	
western pygmy-blue (Brephidium exila)		west coast lady (Vanessa annabella)	1
western tailed blue (Everes amyntula)		red admiral (V. atalanta rubria)	
southern blue (Glaucopsyche lygdamus australis)		painted lady (V. cardui)	
Edward's blue (Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis)	2
Acmon blue (Icaricia acmon acmon)		unidentified lady (Vanessa sp.)	2
marine blue (Leptotes marina)	1	Swallowtails	
Spring azure (Celastrina ladon echo)		pale swallowtail (Papilio eurymedon)	1
Whites		western tiger swallowtail (P. rutulus)	
Sara orangetip (Anthocharis sara sara)	21	anise swallowtail (P. zelicaon)	
desert (Felder's) orangetip (A. cethura)		Miscellaneous	
common California ringlet (Coenonympha californica)		monarch (Danaus plexippus)	
cabbage white (Pieris rapae)		common buckeye (Junonia coenia grisea)	
checkered (common) white (Pontia protodice)	3	mourning cloak (Nymphalis antiopa)	
spring white (P. sisymbrii)		Skippers	
unidentified white		funereal duskywing (Erynnis funeralis)	
Metalmarks		mournful duskywing (Erynnis tristis)	
Behr's metalmark (Apodemia mormo virgulti)	4	fiery skipper (Hylephila phyleus)	
Wright's metalmark (Calephelis wrighti)	_	white (common) checkered-skipper (Pyrgus albescens)	
Sulphurs		Other	
orange sulphur (Colias eurytheme)		Lupine blue (<i>Plebejus lupines</i>)	
sleepy orange (<i>Eurema nicippe</i>)		Erynnis sp.	
cloudless sulfur (Phoebus sennae marcellina)			
unidentified sulphur	2		
Column Subtotal	31	Column Subtotal	6
		Total	37

Surveyor	Alicia Hill	Date: 3/1	17/16
Site Name:	JPD-08 Proctor Valley – Village 14 of Otay Ranch	Site Visit No:	4
Area Survey	red V Acres Surveyed 44	Survey Time: 5.0	Acres per Hour: 8.8
Other Surve	yors Present:		

	Field Conditions				
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover	
Start	0930	68	0-1	0%	
End	1430	88	1-4	0%	
Start					
End					

Vegetation Communities Surveyed (inc. dominant spp.) chamise chaparral (ADE FAS, ERI FAS, ACM GLA) non-native grassland (Avena sp)

Host Plants	Obs.	Nectar Plants	Obs.
dwarf plantain (Plantago erecta)	Х	popcorn flower (Cryptantha/Plagiobothrys spp.)	х
purple owl's clover (Castilleja densiflora	Х	goldfields (Lasthenia spp.)	х
snapdragon (Antirrhinum coulterianum)		goldenstar (Muilla spp.)	
irds-beak (Cordylanthus rigidus) fiddleneck (Amsinckia menziesii var. intermedia)		х	
woolly plantain (Plantago patagonica)		onion (Allium spp.)	х
Chinese houses (Collinsia spp.)		buckwheat (Eriogonum fasciculatum)	х
		ground pink (Linanthus dianthiflorus)	х
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 (Chlosyne californica)		great purple hairstreak (Atlides halesus corcorani)	
Gabb's checkerspot (C. gabbii)		brown elfin (Callophrys augustinus)	
Quino checkerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	
chalcedon checkerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica)	
Leanira checkerspot (Thessalia leanira wrighti)		Ladies/Admirals	
Mylitta crescent (Phyciodes mylitta)		California sister (Adelpha bredowii californica)	
Blues		Lorquin's admiral (Limenitis Iorquini)	
western pygmy-blue (Brephidium exila)		west coast lady (Vanessa annabella)	
western tailed blue (Everes amyntula)		red admiral (V. atalanta rubria)	
southern blue (Glaucopsyche lygdamus australis)	4	painted lady (V. cardui)	
Edward's blue (Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis)	2
Acmon blue (Icaricia acmon acmon)	1	unidentified lady (Vanessa sp.)	5
marine blue (Leptotes marina)		Swallowtails	
unidentified blue		pale swallowtail (Papilio eurymedon)	
Whites		western tiger swallowtail (P. rutulus)	
Sara orangetip (Anthocharis sara sara)	120	anise swallowtail (P. zelicaon)	
desert (Felder's) orangetip (A. cethura)		Miscellaneous	
common California ringlet (Coenonympha californica)	5	monarch (Danaus plexippus)	
cabbage white (Pieris rapae)		common buckeye (Junonia coenia grisea)	6
checkered (common) white (Pontia protodice)	4	mourning cloak (Nymphalis antiopa)	
spring white (P. sisymbrii)		Skippers	
unidentified white		funereal duskywing (Erynnis funeralis)	3
Metalmarks		mournful duskywing (Erynnis tristis)	
Behr's metalmark (Apodemia mormo virgulti)	58	fiery skipper (Hylephila phyleus)	
Wright's metalmark (Calephelis wrighti)		white (common) checkered-skipper (Pyrgus albescens)	9
Sulphurs		Other	
orange sulphur (Colias eurytheme)	3	Duskywing sp.	1
sleepy orange (<i>Eurema nicippe</i>)			
cloudless sulfur (Phoebus sennae marcellina)			
unidentified sulphur	7		
Column Subtotal	202	Column Subtotal	26
		Total	228

DIC CAP; VIO PED; Crypt.; ERO CIC; HER INC; Plagio.; MAL DEN; CAM BIS; LUP BIC; NUT TEX; MIR LAE; SOL PAR; SIS ORI; SAL MUN; SID SPA; BRA NIG; MIM AUR; ERO BOT; ADE FAS; SAN BIP; CEA TOM; SIL GAL; CLA PUR; BAH LAN; CAL MAC; COT

	Village 14 of C	tay Ranch	Site Visit No:	4	
	es Surveyed		Survey Time: 0920-1450		9.82
Other Surveyors Present:no	ne		5his 30 min		1111
		Fiel	d Conditions	-10	
Time (24 hr)	Tempe	rature (°F)	Wind Speed (mph)	Cloud Co	ver
Start 0920	61.7°F		< 3.1 meh	none	0%
End 1450		1.1°F			- 0
Start		• • • • • • • • • • • • • • • • • • • •	3.2-6.1mph w/ gusts 10.1	none	0%
6.55					
End					
Vegetation Communities Surveyed (inc dominant	enn l			
			•		
Sage Scrub (Salvia n					
Chaparral (Chamise of	Scriboa	K) N	on-Native Grassland (Enod	um 500.+Aug	eng sp.
lost Plants				There	
1,		Obs.	Nectar Plants		Obs.
warf plantain (Plantago erecta)		X	popcorn flower (Cryptantha/Plagiobothrys spp.)		X
purple owl's clover (Castilleja exserta)		X	goldfields (Lasthenia spp.)		×
snapdragon (Antirrhinum coulterianum)			goldenstar (Muilla spp.)		
birds-beak (Cordylanthus rigidus) woolly plantain (Plantago patagonica)			fiddleneck (Amsinckia menziesii var. intermedia)		1 202
Chinese houses (Collinsia spp.)			onion (Allium spp.)		X
Crimose nouses (Commisia spp.)			buckwheat (<i>Eriogonum fasciculatum</i>) ground pink (<i>Linanthus dianthiflorus</i>)		X
Host Plant Mapping Updated (circle) Yes		No	New Area or Existing Area (circle) New Existing		Both
pecies updated (list)	193	///	The state of the s	ZAIOUIII) 50011
utterfly Species		No.	Butterfly Species		No.
neckerspots			Hairstreaks		
California patch (Chlosyne californica)			great purple hairstreak (Atlides halesus corcorani)		
Sabb's checkerspot (C. gabbii)			brown elfin (Callophrys augustinus)		
uino checkerspot (Euphydryas editha quino)			bramble (perplexing) hairstreak (C. dumetorum affinis)		
chalcedon checkerspot (E. chalcedona chalcedona)			gray hairstreak (Strymon melinus pudica)		a
Leanira checkerspot (Thessalia leanira wrighti)			Ladies/Admirals		
Mylitta crescent (Phyciodes mylitta)			California sister (Adelpha bredowii califor	nica)	
			Lorquin's admiral (Limenitis lorquini)		
vestern pygmy-blue (Brephidium exila)			west coast lady (Vanessa annabella)		
estern tailed blue (Everes amyntula)			red admiral (V. atalanta rubria)		
outhern blue (Glaucopsyche lygdamus australis)			painted lady (V. cardui)		
word's blue / Hamisson services			American (Virginia) lady (V. virginiensis)		1
			unidentified lady (Vanessa sp.)		6
emon blue (Icaricia acmon acmon)		2			
emon blue (Icaricia acmon acmon) arine blue (Leptotes marina)		. 3	Swallowtails		
dward's blue (Hemiargus ceraunus gya cmon blue (Icaricia acmon acmon) arine blue (Leptotes marina) nidentified blue Ihites	•	. 3	Swallowtails pale swallowtail (Papilio eurymedon)		
emon blue (Icaricia acmon acmon) arine blue (Leptotes marina) hidentified blue hites			Swallowtails pale swallowtail (<i>Papilio eurymedon</i>) western tiger swallowtail (<i>P. rutulus</i>)		
cmon blue (Icaricia acmon acmon) arine blue (Leptotes marina) nidentified blue (hites ara orangetip (Anthocharis sara sara)	•	. 3	Swallowtails pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon)		
cmon blue (Icaricia acmon acmon) arine blue (Leptotes marina) nidentified blue (hites ara orangetip (Anthocharis sara sara) esert (Felder's) orangetip (A. cethura)	a californica)		Swallowtails pale swallowtail (<i>Papilio eurymedon</i>) western tiger swallowtail (<i>P. rutulus</i>) anise swallowtail (<i>P. zelicaon</i>) Miscellaneous		
cmon blue (Icaricia acmon acmon) arine blue (Leptotes marina) hidentified blue hites ara orangetip (Anthocharis sara sara) esert (Felder's) orangetip (A. cethura) mmon California ringlet (Coenonymph	a californica)		Swallowtails pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Miscellaneous monarch (Danaus plexippus)		
emon blue (Icaricia acmon acmon) arine blue (Leptotes marina) identified blue hites ara orangetip (Anthocharis sara sara) sert (Felder's) orangetip (A. cethura) mmon California ringlet (Coenonymph bbage white (Pieris rapae)			Swallowtails pale swallowtail (<i>Papilio eurymedon</i>) western tiger swallowtail (<i>P. rutulus</i>) anise swallowtail (<i>P. zelicaon</i>) Miscellaneous)	.3
amon blue (Icaricia acmon acmon) arine blue (Leptotes marina) identified blue hites ara orangetip (Anthocharis sara sara) sert (Felder's) orangetip (A. cethura) ammon California ringlet (Coenonymph bbage white (Pieris rapae) eckered (common) white (Pontia prote			Swallowtails pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Miscellaneous monarch (Danaus plexippus) common buckeye (Junonia coenia grisea		
rmon blue (Icaricia acmon acmon) arine blue (Leptotes marina) identified blue inites ra orangetip (Anthocharis sara sara) sert (Felder's) orangetip (A. cethura) mmon California ringlet (Coenonymph bbage white (Pieris rapae) eckered (common) white (Pontia prote ring white (P. sisymbrii)		18	Swallowtails pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Miscellaneous monarch (Danaus plexippus) common buckeye (Junonia coenia grisea mourning cloak (Nymphalis antiopa)		
armon blue (Icaricia acmon acmon) arine blue (Leptotes marina) identified blue hites ra orangetip (Anthocharis sara sara) sert (Felder's) orangetip (A. cethura) mmon California ringlet (Coenonymph bbage white (Pieris rapae) eckered (common) white (Pontia proto ring white (P. sisymbrii) identified white			Swallowtails pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Miscellaneous monarch (Danaus plexippus) common buckeye (Junonia coenia grisea mourning cloak (Nymphalis antiopa) Skippers		
amon blue (Icaricia acmon acmon) arine blue (Leptotes marina) identified blue hites ara orangetip (Anthocharis sara sara) sert (Felder's) orangetip (A. cethura) mmon California ringlet (Coenonymph bbage white (Pieris rapae) eckered (common) white (Pontia prote ring white (P. sisymbrii) identified white etalmarks thr's metalmark (Apodemia mormo viri	odice)	18	Swallowtails pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Miscellaneous monarch (Danaus plexippus) common buckeye (Junonia coenia grisea mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis))	
cmon blue (Icaricia acmon acmon) arine blue (Leptotes marina) identified blue hites ara orangetip (Anthocharis sara sara) isert (Felder's) orangetip (A. cethura) mmon California ringlet (Coenonymph bbage white (Pieris rapae) eckered (common) white (Pontia prote ring white (P. sisymbrii) identified white etalmarks ehr's metalmark (Apodemia mormo vin right's metalmark (Calephelis wrighti)	odice)	18	Swallowtails pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Miscellaneous monarch (Danaus plexippus) common buckeye (Junonia coenia grisea mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis) mournful duskywing (Erynnis tristis)		
cmon blue (Icaricia acmon acmon) arine blue (Leptotes marina) inidentified blue litites ara orangetip (Anthocharis sara sara) asert (Felder's) orangetip (A. cethura) ammon California ringlet (Coenonymph abbage white (Pieris rapae) ackered (common) white (Pontia prote aring white (P. sisymbrii) aidentified white etalmarks ehr's metalmark (Apodemia mormo viri aright's metalmark (Calephelis wrighti) allphurs	odice)	18	Swallowtails pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Miscellaneous monarch (Danaus plexippus) common buckeye (Junonia coenia grisea mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis) mournful duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus)		
cmon blue (Icaricia acmon acmon) arine blue (Leptotes marina) identified blue hites ara orangetip (Anthocharis sara sara) issert (Felder's) orangetip (A. cethura) mmon California ringlet (Coenonymph bbage white (Pieris rapae) eckered (common) white (Pontia prote ring white (P. sisymbrii) identified white etalmarks ehr's metalmark (Apodemia mormo vin right's metalmark (Calephelis wrighti) ilphurs ange sulphur (Colias eurytheme)	odice)	18	Swallowtails pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Miscellaneous monarch (Danaus plexippus) common buckeye (Junonia coenia grisea mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis) mournful duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus) white (common) checkered-skipper (Pyrg		
cmon blue (Icaricia acmon acmon) arine blue (Leptotes marina) identified blue hites ara orangetip (Anthocharis sara sara) esert (Felder's) orangetip (A. cethura) mmon California ringlet (Coenonymph bbage white (Pieris rapae) eckered (common) white (Pontia proto ring white (P. sisymbrii) identified white etalmarks ehr's metalmark (Apodemia mormo vin right's metalmark (Calephelis wrighti) ilphurs ange sulphur (Colias eurytheme) eepy orange (Eurema nicippe)	odice) gulti)	18	Swallowtails pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Miscellaneous monarch (Danaus plexippus) common buckeye (Junonia coenia grisea mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis) mournful duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus) white (common) checkered-skipper (Pyrg		
cmon blue (Icaricia acmon acmon) arine blue (Leptotes marina) identified blue hites ara orangetip (Anthocharis sara sara) issert (Felder's) orangetip (A. cethura) mmon California ringlet (Coenonymph bbage white (Pieris rapae) eckered (common) white (Pontia proto ring white (P. sisymbrii) identified white etalmarks ehr's metalmark (Apodemia mormo vin right's metalmark (Calephelis wrighti) ilphurs ange sulphur (Colias eurytheme) inepy orange (Eurema nicippe) indless sulfur (Phoebus sennae marce	odice) gulti)	18	Swallowtails pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Miscellaneous monarch (Danaus plexippus) common buckeye (Junonia coenia grisea mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis) mournful duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus) white (common) checkered-skipper (Pyrg		
cmon blue (Icaricia acmon acmon) arine blue (Leptotes marina) didentified blue hites ara orangetip (Anthocharis sara sara) esert (Felder's) orangetip (A. cethura) mmon California ringlet (Coenonymph bbage white (Pieris rapae) eckered (common) white (Pontia prote ring white (P. sisymbrii) didentified white etalmarks ehr's metalmark (Apodemia mormo vin right's metalmark (Calephelis wrighti) diphurs ange sulphur (Colias eurytheme) epy orange (Eurema nicippe) udless sulfur (Phoebus sennae marce didentified sulphur	odice) gulti)	18 1 3 45	Swallowtails pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Miscellaneous monarch (Danaus plexippus) common buckeye (Junonia coenia grisea mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis) mournful duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus) white (common) checkered-skipper (Pyrg		
armon blue (Icaricia acmon acmon) arine blue (Leptotes marina) identified blue hites ara orangetip (Anthocharis sara sara) sert (Felder's) orangetip (A. cethura) mmon California ringlet (Coenonymph bbage white (Pieris rapae) eckered (common) white (Pontia prote ring white (P. sisymbrii) identified white etalmarks hr's metalmark (Apodemia mormo vin ight's metalmark (Calephelis wrighti) liphurs laps sulphur (Colias eurytheme) epy orange (Eurema nicippe) udless sulfur (Phoebus sennae marce dentified sulphur	odice) gulti)	18	Swallowtails pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Miscellaneous monarch (Danaus plexippus) common buckeye (Junonia coenia grisea mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis) mournful duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus) white (common) checkered-skipper (Pyrg		

2016 Quino Checkerspot Butterfly Survey Form D. BUSHY Site Visit No: Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch Acres Surveyed 62 acres Survey Time: 6.75 hr. Acres per Hour: ~9 Area Surveyed Other Surveyors Present: Field Conditions Cloud Cover Time (24 hr) Wind Speed (mph) Temperature (°F) 0 % 1000 Start 1645 End Start End Vegetation Communities Surveyed (inc. dominant spp.) Sagre Servb, disturbud Monnative gratified Cheneral Constal LAC CEA TOM MAL LAU Obs Host Plants Obs. popcorn flower (Cryptantha/Plagiobothrys spp.) dwarf plantain (Plantago erecta) purple owl's clover (Castilleja exserta) goldfields (Lasthenia spp.) goldenstar (Muilla spp.) snapdragon (Antirrhinum coulterianum) fiddleneck (Amsinckia menziesii var. intermedia) birds-beak (Cordylanthus rigidus) woolly plantain (Plantago patagonica) onion (Allium spp.) buckwheat (Eriogonum fasciculatum) Chinese houses (Collinsia spp.) ground pink (Linanthus dianthiflorus) Both No. New Area or Existing Area (circle) New Existing Host Plant Mapping Updated (circle) Yes CLE, RAH LAC. ACM 641 EFN HEL SC Species updated (list) 5-9 L MIR CAL Mos **Butterfly Species Butterfly Species** No. Hairstreaks Checkerspots great purple hairstreak (Atlides halesus corcorani) California palch (Chlosyne californica) brown elfin (Callophrys augustinus) Gabb's checkerspot (C. gabbii) bramble (perplexing) hairstreak (C. dumetorum affinis) Quino checkerspot (Euphydryes editha quino) gray hairstreak (Strymon melinus pudica) chalcedon checkerspot (E. chalcedona chalcedona) Ladies/Admirals Leanira checkerspot (Thessalia leanira wrighti) California sister (Adelpha bredowii californica) Mylitta crescent (Phyciodes mylitta) Lorquin's admiral (Limenttis lorquini) western pygmy-blue (Brephidium exila) west coast lady (Vanessa annabella) western tailed blue (Everes amyntula) red admiral (V. atalanta rubria) southern blue (Glaucopsyche lygdamus australis) painted lady (V. cardui) Edward's blue (Hemiargus ceraunus gyas) American (Virginia) lady (V. virginiensis) Acmon blue (Icaricia acmon acmon) unidentified lady (Vanessa sp.) marine blue (Leptotes marina) Swallowtails unidentified blue pale swallowtail (Papilio eurymedon) Whites western tiger swallowtail (P. rutulus) aruse swallowtail (P. zelicaon) Sara orangetip (Anthocharis sara sara) desert (Felder's) orangetip (A. cethura) Miscellaneous common California ringlet (Coenonympha californica) monarch (Danaus plexippus) cabbage white (Pieris rapae) common buckeye (Junonia coenia grisea) checkered (common) white (Pontia protodice) mourning cloak (Nymphalis antiopa) spring white (P. sisymbril) Skippers funereal duskywing (Erynnis funeralis) unidentified white mournful duskywing (Erynnis tristis) Metalmarks 20 fiery skipper (Hylephila phyleus) Behr's metalmark (Apodemia mormo virgulti) Wright's metalmark (Calephelis wright) white (common) checkered-skipper (Pyrgus albescens) Sulphurs Other orange sulphur (Collas eurytheme) sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina) unidentified sulphur 24 64 Column Subtatal Column Subtotal

Total

2016 Quino Checkerspot Butterfly Survey Form Surveyor Site Name: _JPD-08 Proctor Valley - Village 14 of Otay Ranch Site Visit No: Area Surveyed 1, Z (Tahai) Acres Surveyed 78 Acres per Hour: 10 Survey Time: 8hx Brungraber (superised) **Field Conditions** Cloud Cover Time (24 hr) Wind Speed (mph) Temperature ('F) 1000 Start 5 % 67.5 0-3 20% End 1800 65.3 0-3 Start End Vegetation Communities Surveyed (inc. dominant spp.) bunch grass land Chamise chap Salvia apiana, chamise Malosma Envanum Obs. **Nectar Plants Host Plants** Obs. popcorn flower (Cryptantha/Plagiobothrys spp.) dwarf plantain (Plantago erecta) FLUR ELWR goldfields (Lasthenia spp.) purple owl's clover (Castilleja exserta) FLWR goldenstar (Muilla spp.) snapdragon (Antirrhinum coulterianum) fiddleneck (Amsinckia menziesii yar. intermedia) birds-beak (Cordylanthus rigidus) FLWR onion (Allium spp.) FLWR woolly plantain (Plantago patagonica) buckwheat (Eriogonum fasciculatum) FLUR LWK Chinese houses (Collinsia spp.) ground pink (Linanthus dianthiflorus) Both Existing New Area or Existing Area (circle) New Host Plant Mapping Updated (circle) (Yes) No Species updated (list) Cestillega Collingia No. **Butterfly Species** No. **Butterfly Species** Hairstreaks Checkerspots great purple hairstreak (Attides halesus corcorani) California patch (Chlosyne californica) brown elfin (Callophrys augustinus) Gabb's checkerspot (C. gabbii) bramble (perplexing) hairstreak (C. dumetorum affinis) Quino checkerspot (Euphydryas editha quino) gray hairstreak (Strymon melinus pudica) chalcedon checkerspot (E. chalcedona chalcedona) Ladies/Admirals Leanira checkerspot (Thessalia leanira wrighti) California sister (Adelpha bredowii californica) Mylitta crescent (Phyciodes mylitta) Lorquin's admiral (Limenitis lorquini) Blues west coast lady (Vanessa annabella) western pygmy-blue (Brephidium exila) red admiral (V. atalanta rubria) western tailed blue (Everes amyntula) painted lady (V. cardui) southern blue (Glaucopsyche lygdamus australis) American (Virginia) lady (V. virginiensis) Edward's blue (Hemiargus ceraunus gyas) unidentified lady (Vanessa sp.) Acmon blue (Icaricia acmon acmon) Swallowtails marine blue (Leptotes marina) pale swallowtail (Papilio eurymedon) unidentified blue western tiger swallowtail (P. rutulus) Whites Sara orangetip (Anthocharis sara sara) With M. M. M. anise swallowtail (P. zelicaon) Miscellaneous desert (Felder's) orangetip (A. cethura) monarch (Danaus plexippus) common California ringlet (Coenonympha californica) common buckeye (Junonia coenia grisea) cabbage white (Pieris rapae) mourning cloak (Nymphalis antiopa) checkered (common) white (Pontia protodice) Skippers spring white (P. sisymbrii) funereal duskywing (Erynnis funeralis) unidentified white mournful duskywing (Erynnis tristis) Metalmarks fiery skipper (Hylephila phyleus) Behr's metalmark (Apodemia mormo virgulti) 1111 white (common) checkered-skipper (Pyrgus albescens) Wright's metalmark (Calephelis wrighti) Other Sulphurs orange sulphur (Colias eurytheme) sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina) unidentified sulphur Column Subtotal Column Subtotal

Total

440

Area Survey	JPD-08 Proctor Valley – Village 14 of red Z parkal Acres Surveyed yors Present: Time (24 hr) Temp	40	Survey Time: 6 hrs Ac	res per Hour: 6	67
Start End	yors Present:	40	Survey Time: 6 hrs Ac	res per Hour:	
Start End					
End	Time (24 ba)				
End		Field	Conditions	01-10-01	_
End		perature ('F)	Wind Speed (mph)	Cloud Cover	
		7.1	0-2	0	
Start	★ 1500	9.9	2-5	0	
End					
Vanatation					
	Communities Surveyed (inc. dominar				
CSS, CK	anux chap, native bunch	grassland,)	buckaheat somb		
Chamise	Salvia numzii. Malounia. b	melentreat	Bahropils, Selaghella, Stipa,	(Erodium)	
			Nectar Plants		Obs.
Host Plants		Obs.	popcorn flower (Cryptenthe/Plegiobothrys s	pp.)	tur
	in (Plantago erecta)	Hw	goldfields (Lasthenia spp.)		
	clover (Castilleja exserta) (Antirrhinum coulterianum)	Aur	goldenstar (Muilla spp.)		
the state of the state of the state of	Cordylanthus rigidus)		fiddleneck (Amsinckia menziesii var. interm	redia)	
	ain (Plantago patagonica)		onion (Allium spp.)		w
	ises (Collinsia spp.)		buckwheat (Eriogonum fasciculatum)		que
			ground pink (<i>Linanthus dianthiflorus</i>) New Area or Existing Area (<i>circle</i>) New	ew Existing	Both
	Mapping Updated (circle) Yes	No	New Area of Existing Area (circle)		
Species up	dated (list) Castilleja sp.				62-
Butterfly Sp	ecles	No.	Butterfly Species		No.
Checkerspo			Hairstreaks	Αστοπί	-
	tch (Chlosyne californica)		great purple hairstreak (Atlides halesus con	corani)	
Gabb's check	kerspot (C. gabbii)		brown elfin (Callophrys augustinus)	rum affinis)	
Quino check	erspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumeto	Tuni annis)	
chalcedon ch	neckerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica)		
Leanira chec	kerspot (Thessalia leanira wrighti)		Ladies/Admirals California sister (Adelpha bredowii california	ca)	
Mylitta cresc	ent (Phyciodes mylitta)		Lorquin's admiral (Limenitis lorquini)		
Blues			west coast lady (Vanessa annabella)		
western pygr	ny-blue (Brephidium exila)	-	red admiral (V. atalanta rubria)		
western taile	d blue (Everes amyntula)		painted lady (V. cardui)		
southern blue	e (Glaucopsyche lygdamus australis)		American (Virginia) lady (V. virginiensis)		
Asman blue	e (Hemiargus ceraunus gyas) (Icaricia acmon acmon)		unidentified lady (Vanessa sp.)	1	
marina blue	Leptotes marina)		Swallowtails		
unidentified b		0	pale swallowtail (Papilio eurymedon)		
Whites			western tiger swallowtail (P. rutulus)		
Sara oranget	ip (Anthocharis sara sara) (2,	HHITHTOUTH	anise swallowtail (P. zelicaon)		
desert (Felde	r's) orangetip (A. cethura)		Miscellaneous		
common Cali	fornia ringlet (Coenonympha californica	a) / [7] Ht HEHT	monarch (Danaus plexippus) common buckeye (Junonia coenia grisea)		II.
abbage whit	e (Pieris rapae)		mourning cloak (Nymphalis antiopa)		
heckered (co	ommon) white (Pontia protodice)		Skippers		
pring white (P. sisymbrii)	LANDER OF	funereal duskywing (Erynnis funeralis)		ML
nidentified w	hite	14th 14th	mournful duskywing (Erynnis tristis)		
lotalmarks		ale in ment	- 11 (11) destribute abudance		
ehr's metalm	nark (Apodemia mormo virgulti) kr ۱۱۱۱	THE SALTHE METHOD	white (common) checkered-skipper (Pyrgi	us albescens)	HTI
hight's mata	lmark (Calephelis wrighti)		Other		
rigit s meta		1			
ulphurs					1
ulphurs ange sulphu	r (Colias eurytheme)	-			-
ange sulphu	(Eurema nicippe)				
ange sulphu	r (Colias eurytheme) (Eurema nicippe) r (Phoebus sennae marcellina)	///			

Surveyor:	Natalie Z	rodie & Brenna Or	00 (TE-135948-21 1343	38-3 Date: 26	Mar 2016
Site Name:	JPD-08 Procto	or Valley – Village 14 of Otay R	anch - Poly A	Site Visit No	:
Acres Surve	yed <u>55</u>	Survey Time:	6h 10 min	_ Acres per Hour:	8.9
Other Surve	yors Present:	Andy Smisek (u)	nder supervision	.)	

Field Conditions							
	Time (24 hr)	Temperature (*F)	Wind Speed (mph)	Cloud Cover			
Start	1230/1240	69	2-6	0			
End	1540	80	2-9	0			
Start							
End							

Vegetation Communities Surveyed (inc. dominant spp.)	
CSS (Enfos, Mallau, Artcal, Bahlac) grassland	
add'l plant in flower: Diccap, Bahlac, Endium, Phacic, Ericon, Mimaur, Acongla	

Host Plants	Obs.	Nectar Plants	Obs.
dwarf plantain (Plantago erecta)		popcorn flower (Cryptantha/Plagiobothrys spp.)	
purple owl's clover (Castilleja exserta)		goldfields (Lasthenia spp.)	
snapdragon (Antirrhinum coulterianum)		goldenstar (Muilla spp.)	1
birds-beak (Cordylanthus rigidus)		fiddleneck (Amsinckia menziesii var. intermedia)	
woolly plantain (Plantago patagonica)		onion (Allium spp.)	
Chinese houses (Collinsia spp.)		buckwheat (Eriogonum fasciculatum)	
		ground pink (Linanthus dianthiflorus)	
Host Plant Mapping Updated (circle) Yes	No	New Area or Existing Area (circle) New Existing	Both
Species undated (list) Di sere : 32 1/803/-	111. 27962	50-100 (vin/m²), 72 /9/83 -116 87/21 500-10	00/10-100/

Species updated (list) Place: 32.68976-116.87962, 50-100 (~10/m²).32.69683, -116.87631, 500-1000 (10-100/m²)

32.69703, নার্ড.৪নে	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (Chlosyne californica)		great purple hairstreak (Atlides halesus corcorani)	
Gabb's checkerspot (C. gabbii)	1	brown eifin (Callophrys augustinus)	1
Quino checkerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	
chalcedon checkerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica)	
Leanira checkerspot (Thessalia leanira wrighti)		Ladies/Admirals	
Mylitta crescent (Phyciodes mylitta)		California sister (Adelpha bredowii californica)	
Blues		Lorquin's admiral (Limenitis lorquini)	
westem pygmy-blue (Brephidium exila)		west coast lady (Vanessa annabella)	
western tailed blue (Everes amyntula)		red admiral (V. atalanta rubria)	
southern blue (Glaucopsyche lygdamus australis)		painted lady (V. cardui)	
Edward's blue (Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis) +	1
Acmon blue (Icaricia acmon acmon)		unidentified lady (Vanessa sp.)	
marine blue (Leptotes marina)		Swallowtails	
unidentified blue		pale swallowtail (Papilio eurymedon)	
Whites		western tiger swallowtail (P. rutulus)	
Sara orangetip (Anthocharis sara sara) 29 + 27	56	anise swallowtail (P. zelicaon) +	2
desert (Felder's) orangetip (A. cethura)		Miscellaneous	
common California ringlet (Coenonympha californica)	!	monarch (Danaus plexippus)	
cabbage white (Pieris rapae)	5	common buckeye (Junonia coenia grisea)	
checkered (common) white (Pontia protodice)		mourning cloak (Nymphalis antiopa)	l l
spring white (P. sisymbrii)		Skippers	
unidentified white		funereal duskywing (Erynnis funeralis) (+7	8
Metalmarks		mournful duskywing (Erynnis tristis)	
Behr's metalmark (Apodemia mormo virgulti) 28 + (2	40	fiery skipper (Hylephila phyleus)	
Wright's metalmark (Calephelis wrighti)		white (common) checkered-skipper (Pyrgus albescens) +	<u> </u>
Sulphurs		Other	
orange sulphur (Colias eurytheme)		Erynnic sp.	1
sleepy orange (<i>Eurema nicippe</i>)		0	
cloudless sulfur (Phoebus sennae marcellina)			
unidentified sulphur			
Column Subtotal	106	Column Subtotal	15
		Total	12-1

Casexs: 32.69010, -116.87818, 1 indiv; 32.68985, -116.87836, 9; 32.68983, -116.87835, 1; 32.68990, -116.87836, 17; 32.68983, -116.87836, 6

2000	Chez Bringrabe				27/16	
	: JPD-08 Proctor Valley - Villa				5	
Area Surv	eyed AA, CC(part) Acres S	urveyed	72	Survey Time: 6.25 hour	Acres per Hour:	5.8
Other Sur	veyors Present: Nicole	Kimball	GWF	An Bringraber (superise	4)	
Terrated Con-		T-VP (IA-VI			2)	
	T. (011.)	_		Conditions		
-	Time (24 hr)		ature ('F)	Wind Speed (mph)	Cloud Co	ver
Start	0945	65	, 8	0-1	0.1.	
End	1600	74	.0	0-1 4-7	2%	
Start					6/0	
End						
vegetatio	n Communities Surveyed (inc.	. dominant	spp.)			
Host Plan	ts		Obs.	Nectar Plants		Obs.
dwarf plan	tain (Plantago erecta)		Pur	popcorn flower (Cryptantha/Plagiobothrys	spp.)	flew
purple ow	's clover (Castilleja exserta)		FLWR	goldfields (Lasthenia spp.)	-11.7	this
snapdrago	n (Antirrhinum coulterianum)			goldenstar (Muilla spp.)		FLM
birds-beak	(Cordylanthus rigidus)	-		fiddleneck (Amsinckia menziesii var. inter	media)	
	ntain (Plantago patagonica)	1		onion (Allium spp.)	, round	flur
	ouses (Collinsia spp.)			buckwheat (Eriogonum fasciculatum)		FLWF
	1			ground pink (Linanthus dianthiflorus)		FLWI
Host Plan	t Mapping Updated (circle)	(Yes)	No		lew Existing	Both
	pdated (list) Castilleia e					
Butterfly 8			No.	Butterfly Species		No.
Checkers				Hairstreaks		
	patch (Chlosyne californica)			great purple hairstreak (Atlides halesus co	rcorani)	
	eckerspot (C. gabbii)		11	brown elfin (Callophrys augustinus)		
	ckerspot (Euphydryas editha qui			bramble (perplexing) hairstreak (C. dumet	orum affinis)	
	checkerspot (E. chalcedona cha			gray hairstreak (Strymon melinus pudica)		
Leanira ch	eckerspot (Thessalia leanira wri	ghti)		Ladies/Admirals		
Mylitta cre	scent (Phyciodes mylitta)			California sister (Adelpha bredowii californi	ica)	
Blues				Lorquin's admiral (Limenitis lorquini)		
western py	gmy-blue (Brephidium exila)			west coast lady (Vanessa annabella)		1
western ta	iled blue (Everes amyntula)			red admiral (V. atalanta rubria)		
southern b	lue (Glaucopsyche lygdamus au	ustralis)		painted lady (V. cardui)		MI
Edward's I	olue (Hemiargus ceraunus gyas)			American (Virginia) lady (V. virginiensis)		
Acmon blu	e (Icaricia acmon acmon)			unidentified lady (Vanessa sp.)		1111
marine blu	e (Leptotes marina)		1	Swallowtails		
unidentifie	blue		MI	pale swallowtail (Papilio eurymedon)		
Whites				western tiger swallowtail (P. rutulus)		
Sara orang	getip (Anthocharis sara sara)		MMMM	anise swallowtail (P. zelicaon)		
desert (Fe	der's) orangetip (A. cethura)			Miscellaneous		
common C	alifornia ringlet (Coenonympha	californica)	HUMI	monarch (Danaus plexippus)		
cabbage w	hite (Pieris rapae)			common buckeye (Junonia coenia grisea)		i.
checkered	(common) white (Pontia protodi	ice)	1	mourning cloak (Nymphalis antiopa)		1
	e (P. sisymbrii)			Skippers		
unidentifie	white		NI	funereal duskywing (Erynnis funeralis)		BANKIN
Metalmari	S			mournful duskywing (Erynnis tristis)		The state of
	almark (Apodemia mormo virgui	Iti) NIN	THE MONTHA	fiery skipper (Hylephila phyleus)		1
Behr's me	etalmark (Calephelis wrighti)	taking	- April 114	white (common) checkered-skipper (Pyrgu	us albescens)	H THETHI
				Other		THE REAL PROPERTY.
Wright's m				Northern Checkerd - SKIADE	/	11
Wright's m Sulphurs	hur (Colias eurytheme)					
Wright's m Sulphurs orange sul	ohur (Colias eurytheme)			water checkers - Suiling		1
Wright's m Sulphurs orange sul sleepy oran	nge (Eurema nicippe)	na)		undowtilied 3 hipper		1
Wright's m Sulphurs orange sul sleepy oran	nge (Eurema nicippe) ulfur (Phoebus sennae marcellii	na)	111	undertified skipper Comstack Frittilory		1

Surveyo	r. N. Brodu			8-24 134338-3) Date: 26 Mar 2016	
		Valley - Village 14 of O			
	urveyed 60			Acres per Hour: 0	·
	ırveyors Present:			super visioni)	
	tailed present	their soursele		\	
	3			d Conditions	
	Time (24 hr) Temper	ature (*F)	Wind Speed (mph) Cloud Co	ver
Start	0915	6		0-2	
End	1215	60	7 °	2-6	
Start					
End					
Liiu	<u> </u>				
Vegetati	on Communities Su	rveyed (inc. dominant	spp.)		
				Giberrais and Army Romad	Frod-see
C22 C	Urgas, vaniac	s, manac, rem	a 109/ch	, Gutierrais), grassland (Archa, Bromad Lacer Wed, bluedicks, nutalls snapdvagon, vigue	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
other !	Howering plant	to lemny franch no	Mimerlus	decruced bluedicks nutrills snapdvagon, vique	ra, brodium, N
Host Pla		w y - '	Obs.	Nectar Plants	Obs.
	intain (<i>Plantago erec</i> i	ta)		popcorn flower (Cryptantha/Plagiobothrys spp.)	V
	wi's clover (Castilleja		V	goldfields (Lasthenia spp.)	
	gon (<i>Antirrhinum coul</i>			goldenstar (Muilla spp.)	
birds-bea	ak (Cordylanthus rigio	lus)		fiddleneck (Amsinckia menziesii var. intermedia)	
	antain (<i>Plantago pata</i>			onion (Allium spp.)	V
Chinese	houses (Collinsia sp	0.)		buckwheat (Eriogonum fasciculatum)	V
				ground pink (Linanthus dianthiflorus)	
	nt Mapping Update		No	New Area or Existing Area (circle) New Existing	Both
Species	updated (list) (>>	sexs:32.69221,-	116.8790	04, 1 indiv.	
Butterfly	Species		No.	Butterfly Species	No.
Checker				Hairstreaks	
	patch (Chlosyne cali	ifomica)		great purple hairstreak (Atlides halesus corcorani)	
	heckerspot (C. gabbii		5	brown eifin (Callophrys augustinus)	
Quino ch	eckerspot (Euphydrya	as editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	
chalcedo	n checkerspot (E. cha	alcedona chalcedona)		gray hairstreak (Strymon melinus pudica)	
	heckerspot (Thessalia			Ladies/Admirals	
	escent (Phyciodes m	ylitta)		California sister (Adelpha bredowii californica)	
Blues				Lorquin's admiral (Limenitis lorquini)	
	ygmy-blue (Brephidio			west coast lady (Vanessa annabella)	
	ailed blue (Everes an			red admiral (V. atalanta rubria)	
	blue (Glaucopsyche I blue (Hemiargus cen			painted lady (V. cardui) American (Virginia) lady (V. virginiensis)	
	ue (Icaricia acmon ac			unidentified lady (Vanessa sp.)	
	ue (Leptotes marina)	1	6	Swallowtails	
unidentific		1	Ť	pale swallowtail (Papilio eurymedon)	
Whites				western tiger swallowtail (P. rutulus)	
		ara sara) WY WINNIN	65	anise swallowtail (P. zelicaon)	1
desert (Fe	elder's) orangetip (A.	cethura)		Miscellaneous	
		nonympha califomica)		monarch (Danaus plexippus)	
	white (Pieris rapae)			common buckeye (Junonia coenia grisea)	
	d (common) white (Po	ontia protodice)		mourning cloak (Nymphalis antiopa)	
	ite (P. sisymbrii)			Skippers	2
unidentifie				funereal duskywing (Erynnis funeralis)	3
Metalmar Behr's me		norma uimulia ettesk	01	mournful duskywing (Erynnis tristis)	
	etalmark (<i>Apodemia n</i> netalmark (<i>Calephelis</i>	normo virgulti) 以似	26	fiery skipper (Hylephila phyleus)	5
Sulphurs		s wiignii)		white (common) checkered-skipper (<i>Pyrgus albescens</i>) Other	2
	lphur (Colias eurythe	me)	4	<u> </u>	4
	inge (<i>Eurema nicippe</i>		L	Erynnis sp.	
	sulfur (<i>Phoebus senn</i>		4,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-	
unidentifie		11	3		
		Column Subtotal	110	Column Subtotal	15
					100

Surveyor :	Chez Brungrabe	no Checker	Spot Butterfly Survey Form Date: 3/25/15	
Site Nam	e: JPD-08 Proctor Valley - Village 14 of	Otay Ranch		
			Survey Time: 4.5 hrs Acres per Hour:	10
	rveyors Present: Gnth Brugo			10
Other St	rveyors Present: SYMV DWG	user (supe	visea)	
		Fiel	d Conditions	
	Time (24 hr) Temp	perature (°F)	Wind Speed (mph) Cloud Co	ver
Start	1330	16	2-5 30%	
End	10 00		0-3	
	1000	72	0-3	
Start				
End				
M4-41				
vegetati	on Communities Surveyed (inc. domina	nt spp.)		
Host Pla		Obs.	Nectar Plants	Obs.
	antain (Plantago erecta)	FLUR	popcorn flower (Cryptantha/Plagiobothrys spp.)	FLWB
	wi's clover (Castilleja exserta)		goldfields (Lasthenia spp.)	
	gon (Antirrhinum coulterianum) ak (Cordylanthus rigidus)		goldenstar (Muilla spp.) fiddleneck (Amsinckia menziesii var. intermedia)	
	antain (Plantago patagonica)	-	onion (Allium spp.)	
	houses (Collinsia spp.)		buckwheat (Eriogonum fasciculatum)	FLWR
011111000	nodes (semisia spp.)		ground pink (<i>Linanthus dianthiflorus</i>)	FLUR
Host Pla	int Mapping Updated (circle) Yes	No	New Area or Existing Area (circle) New Existing	Both
Species	updated (list)			
Butterfly		No.	Butterfly Species	No.
California	patch (Chlosyne californica)		Hairstreaks	
	neckerspot (C. gabbii)		great purple hairstreak (Atlides halesus corcorani) brown elfin (Callophrys augustinus)	
	eckerspot (Euphydryas editha quino)	1	bramble (perplexing) hairstreak (C. dumetorum affinis)	
	n checkerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica)	-
	heckerspot (Thessalia leanira wrighti)		Ladies/Admirals	
Mylitta cr	escent (Phyciodes mylitta)		California sister (Adelpha bredowii californica)	
Blues			Lorquin's admiral (Limenitis lorquini)	
	pygmy-blue (Brephidium exila)		west coast lady (Vanessa annabella)	
	ailed blue (Everes amyntula)		red admiral (V. atalanta rubria)	
	blue (Glaucopsyche lygdamus australis)		painted lady (V. cardui)	
-	blue (Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis)	21
	ue (Icaricia acmon acmon)	-	unidentified lady (Vanessa sp.) Swallowtails	il
unidentifie	ue (Leptotes marina)		pale swallowtail (Papilio eurymedon)	
Whites	su blue		western tiger swallowtail (P. rutulus)	
	getip (Anthocharis sara sara)	MII	anise swallowtail (P. zelicaon)	
-	elder's) orangetip (A. cethura)	11.51	Miscellaneous	
	California ringlet (Coenonympha californica)	monarch (Danaus plexippus)	
cabbage	white (Pieris rapae)		common buckeye (Junonia coenia grisea)	1111
checkered	d (common) white (Pontia protodice)		mourning cloak (Nymphalis antiopa)	
spring wh	ite (P. sisymbrii)		Skippers	
unidentifie		11	funereal duskywing (Erynnis funeralis)	1
Metalmar		I. Mad Mil Nico	mournful duskywing (Erynnis tristis)	
		MANIMA	fiery skipper (Hylephila phyleus)	1
	netalmark (Calephelis wrighti)	1	white (common) checkered-skipper (Pyrgus albescens)	1
Sulphurs	L-1		Other	
	phur (Colias eurytheme)		Unidentified Skipper	//
	nge (Eurema nicippe)		unidentitico sui per	11
inidentifie	sulfur (Phoebus sennae marcellina)			
midentine	Column Subtot	al 34	Column Subtotal	11
	Column Subtot	a. 07	Total	15

				spot Butterfly Survey Form		
Surveyo	". N. Brodie & Brea	wa Dao	1 (TE-1359	148-2 + 134338-3) Date: 27	May 20160 .	
Site Nam	ne: JPD-08 Proctor Valley - Villa	ge 14 of O	tav Ranch	Poly C Site Visit !	No: 4₺	
Acres Si	inveved 33	Survey Tir	ne Zlava	50 min Acres per Hour:	2.6	
	 * 	ourvey in	No. Svile			
Other St	irveyors Present:					
			Fiel	d Conditions		
	Time (24 hr)	Temper	ature (°F)	Wind Speed (mph)	Cloud Co	ver
Start	1300	76	o°	4-8 (gust to 14)	10 % W	haze
End	1455	<u>76</u> 78	6 `	2-8	15% w/	haze
Start			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
End						
Vegetatio	on Communities Surveyed (inc.	dominant	spp.)		,	
(50 (1	nallau, Arteal, Bahlac,	Coladi	chan	(Adoler Malley)		
•	•	•				
Tlowerin	of bluedicles, shooting ster	· , allium	, golden ye	errors Morning glong, minutus, Vi	guera	
Host Pla	nts		Obs.	Nectar Plants		Obs.
dwarf pla	ntain (<i>Plantago erecta</i>)		V	popcorn flower (Cryptantha/Plagiobothn	vs spp.)	
<u> </u>	d's clover (Castilleja exserta)			goldfields (Lasthenia spp.)	·	
=	on (Antimhinum coulterianum)			goldenstar (Muilla spp.)		-
	k (Cordylanthus rigidus)			fiddleneck (Amsinckia menziesii var. inte	ermedia)	
	antain (<i>Plantago patagonica</i>)			onion (Allium spp.)		
Chinese I	houses (Collinsia spp.)			buckwheat (Eriogonum fasciculatum) ground pink (Linanthus dianthiflorus)		
Hoet Pla	nt Mapping Updated (circle) (Ŷes)	No	 	New Existing	Both
	updated (list) Casexs, Plan				14CW Existing	Don
Opecies	updated (list) CateXE, Plan	51.6 - P.	ee back			
Butterfly	Species		No.	Butterfly Species		No.
Checkers	pots			Hairstreaks		
California	patch (Chlosyne californica)			great purple hairstreak (Atlides halesus c	orcorani)	
Gabb's ch	eckerspot (C. gabbii)			brown elfin (Callophrys augustinus)		
Quino che	eckerspot (Euphydryas editha quin	0)		bramble (perplexing) hairstreak (C. dume	etorum affinis)	
chalcedon	checkerspot (E. chalcedona chal	cedona)		gray hairstreak (Strymon melinus pudica))	
Leanira ch	neckerspot (Thessalia leanira wrig	hti)		Ladies/Admirals		
Mylitta cre	escent (Phyciodes mylitta)			California sister (Adelpha bredowii califor	nica)	
Blues				Lorquin's admiral (Limenitis lorquini)		
western p	ygmy-blue (<i>Brephidium exila</i>)			west coast lady (Vanessa annabella)		
western ta	ailed blue (Everes amyntula)			red admiral (V. atalanta rubria)		
	olue (Glaucopsyche lygdamus aus	tralis) (3	painted lady (V. cardui)		
Edward's	blue (Hemiargus ceraunus gyas)			American (Virginia) lady (V. virginiensis)		
Acmon blu	ue (Icaricia acmon acmon)			unidentified lady (Vanessa sp.)		
marine blu	ue (Leptotes marina) (3	Swallowtails		
unidentifie	d blue		2	pale swallowtail (Papilio eurymedon)		
Whites				western tiger swallowtail (P. rutulus)		
	getip (Anthocharis sara sara) Wily	ו אענא	46	anise swallowtail (P. zelicaon)		
<u>`</u> _	elder's) orangetip (A. cethura)			Miscellaneous		
	California ringlet (Coenonympha ca	alifornica)		monarch (Danaus plexippus)		
	vhite (<i>Pieris rapae</i>)			common buckeye (Junonia coenia grisea)	<u> </u>
	(common) white (Pontia protodice	9) 1	2	mourning cloak (Nymphalis antiopa)		· · · · · · · · · · · · · · · · · · ·
<u> </u>	te (P. sisymbrii)			Skippers		
unidentifie				funereal duskywing (Erynnis funeralis)		2
Metalmar				mournful duskywing (Erynnis tristis)		<u> </u>
	talmark (<i>Apodemia mormo virgulti</i>) [4	fiery skipper (Hylephila phyleus)		
	netalmark (Calephelis wrighti)		-	white (common) checkered-skipper (Pyrg	us albescens)	
Sulphurs	-			Other		
	phur (Colias eurytheme)		5	Erynnis sp.		2
	nge (Eurema nicippe)			U ,		
വവഥിക്കും	suffur (Phoebus sennae marrellins	n n	2	1		1

Column Subtotal Total

Column Subtotal

unidentified sulphur

Casexs -# (density); coord 1; 32.68987, -116.88189 ~25($25/m^2$); 32.68923, -116.87722 1; 32.68988, -116.87759 $5(25/m^2)$; 32.68922, -116,87704 1; 32.68909, -116,87714 $3(2/m^2)$; 32.68817, -116.87832 $3(2/m^2)$; 32.68817, -116.87856 1; 32.68750, -116.87929 $7(2/m^2)$; 32.68744, -116.87931 10+; 32.68806, -116.87972

Cosexs / Place -# (density); coord 3/75-100 (450/m²); 32.68922,-116,87997

Surveyor :	Chez Bringraber	Date: _3/	/31/16
Site Name:	JPD-08 Proctor Valley - Village 14 of Otay Ranch	Site Visit No:	5
	red CCpart, FFantAcres Surveyed 30	Survey Time: 4h	Acres per Hour: 7.5
Other Surve	yors Present:		

Field Conditions						
	Time (24 hr)	Temperature ('F)	Wind Speed (mph)	Cloud Cover		
Start	1315	74.9	4-7	0		
End	1715	66-8	4-9	2%		
Start						
End						

Vegetation Communities Surveyed (inc. dominant spp.)

Host Plants	Obs.	Nectar Plants	Obs.
dwarf plantain (Plantago erecta) 101. in finit;	driedus	popcorn flower (Cryptantha/Plagiobothrys spp.)	
purple owl's clover (Castilleja exserta)		goldfields (Lasthenia spp.)	
snapdragon (Antirrhinum coulterianum)		goldenstar (Muilla spp.)	
birds-beak (Cordylanthus rigidus)		fiddleneck (Amsinckia menziesii var. intermedia)	
woolly plantain (Plantago patagonica)		onion (Allium spp.)	
Chinese houses (Collinsia spp.)		buckwheat (Eriogonum fasciculatum)	Aur
		ground pink (Linanthus dianthiflorus)	Qur
Host Plant Mapping Updated (circle) Yes	(Ng	New Area or Existing Area (circle) New Existing	Both
Species updated (list)			

Butterfly Species	No.	Butterfly Species	No.
Checkerspots	-	Hairstreaks	
California patch (Chlosyne californica)		great purple hairstreak (Atlides halesus corcorani)	
Gabb's checkerspot (C. gabbii)		brown elfin (Callophrys augustinus)	
Quino checkerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	
chalcedon checkerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica)	1111
Leanira checkerspot (Thessalia leanira wrighti)		Ladies/Admirals	
Mylitta crescent (Phyciodes mylitta)		California sister (Adelpha bredowii californica)	
Blues		Lorquin's admiral (Limenitis lorquini)	
western pygmy-blue (Brephidium exila)		west coast lady (Vanessa annabella)	
western tailed blue (Everes amyntula)		red admiral (V. atalanta rubria)	1
southern blue (Glaucopsyche lygdamus australis)		painted lady (V. cardui)	
Edward's blue (Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis)	
Acmon blue (Icaricia acmon acmon)		unidentified lady (Vanessa sp.)	1
marine blue (Leptotes marina)		Swallowtails	
unidentified blue		pale swallowtail (Papilio eurymedon)	
Whites		western tiger swallowtail (P. rutulus)	
Sara orangetip (Anthocharis sara sara)	1//	anise swallowtail (P. zelicaon)	
desert (Felder's) orangetip (A. cethura)	,	Miscellaneous	
common California ringlet (Coenonympha californica)		monarch (Danaus plexippus)	
cabbage white (Pieris rapae)		common buckeye (Junonia coenia grisea)	
checkered (common) white (Pontia protodice)		mourning cloak (Nymphalis antiopa)	
spring white (P. sisymbril)		Skippers	
unidentified white	111	funereal duskywing (Erynnis funeralis)	1
Metalmarks		mournful duskywing (Erynnis tristis)	1
Behr's metalmark (Apodemia mormo virgulti) M	25	fiery skipper (Hylephila phyleus)	
Wright's metalmark (Calephelis wrighti)		white (common) checkered-skipper (Pyrgus albescens)	
Sulphurs		Other	
orange sulphur (Colias eurytheme)		Constock frittillan	1
sleepy orange (Eurema nicippe)		Buckeye lanae	HT 111
cloudless sulfur (Phoebus sennae marcellina)			
unidentified sulphur	1		
Column Subtotal	43	Column Subto	
		To	tal 54

Surveyor:	Renee Owens				Date:	3-26-2016			
Site Name:	JPD-08 Procto	or Valley – Village 14 of C	Otay Ranch		Site Visit No	o : <u>5</u>			
Area Surve	yed D	Acres Surveyed	42	Survey Time:	6 hrs	Acres	per Hour:	7	
Other Surve	eyors Present:								

		Field Co	onditions	
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0835	62	0	0
End	1425	74	3.0	0
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)					
Mixed chaparral w/ A. fasciculatum, Bahiopsis, S.mellifera and apiana, E. fasciculatum, A. californica, L. scoparius, R. crocea					

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (Chlosyne californica)		great purple hairstreak (Atlides halesus corcorani)	
Gabb's checkerspot (C. gabbii)	3	brown elfin (Callophrys augustinus)	
Quino checkerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	
chalcedon checkerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica)	
Leanira checkerspot (Thessalia leanira wrighti)		Ladies/Admirals	
Mylitta crescent (Phyciodes mylitta)		California sister (Adelpha bredowii californica)	
Blues		Lorquin's admiral (<i>Limenitis Iorquini</i>)	
western pygmy-blue (<i>Brephidium exila</i>)		west coast lady (Vanessa annabella)	
western tailed blue (Everes amyntula)		red admiral (V. atalanta rubria)	
southern blue (Glaucopsyche lygdamus australis)	1	painted lady (V. cardui)	
Edward's blue (Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis)	
Acmon blue (Icaricia acmon acmon)	3	unidentified lady (Vanessa sp.)	
marine blue (Leptotes marina)	4	Swallowtails	
unidentified blue	1	pale swallowtail (Papilio eurymedon)	1
Whites		western tiger swallowtail (P. rutulus)	
Sara orangetip (Anthocharis sara sara)	20	anise swallowtail (P. zelicaon)	
desert (Felder's) orangetip (A. cethura)		Miscellaneous	
common California ringlet (Coenonympha californica)	1	monarch (Danaus plexippus)	
cabbage white (Pieris rapae)		common buckeye (Junonia coenia grisea)	1
checkered (common) white (Pontia protodice)	2	mourning cloak (Nymphalis antiopa)	1
spring white (P. sisymbrii)		Skippers	
unidentified white		funereal duskywing (Erynnis funeralis)	1
Metalmarks		mournful duskywing (Erynnis tristis)	
Behr's metalmark (Apodemia mormo virgulti)	12	fiery skipper (Hylephila phyleus)	1
Wright's metalmark (Calephelis wrighti)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	1
Sulphurs		Other	
orange sulphur (<i>Colias eurytheme</i>)	1		
sleepy orange (Eurema nicippe)			
cloudless sulfur (Phoebus sennae marcellina)	1		
unidentified sulphur	2		
Column Subtotal	21	Column Subtotal	6
		Total	57

Start End 1900 79 0-3 0/- Start End 1900 79 0-3 0/- Start End Vegetation Communities Surveyed (inc. dominant spp.) Wester Plants Covarf plantain (Plantago erecta) Covarf plantain (Plantago erecta) End Sanapdragon (Antrihium coulteranum) Sanapdragon (Antrihium coulteranum) Dirids-beak (Cordynathus rigidus) Sanapdragon (Antrihium coulteranum) Sidelineack (Cordynathus rigidus) Woolly plantain (Plantago patagonica) Chinese houses (Collinsia spp.) Chinese houses (Collinsia spp.) Host Plant Mapping Updated (circle) Woolly plantain (Plantago patagonica) Chinese houses (Collinsia spp.) Host Plant Mapping Updated (circle) Woolly plantain (Plantago patagonica) Chinese houses (Collinsia spp.) Butterfly Species University Species updated (iist) (Cu-hilium 200 A3 - 2 plugan hour of 201 S. Mark 2 leb? Butterfly Species California patch (Chicsyne californica) Gabb's checkerspot (C. gabbii) Quino checkerspot (C. gabbii) Quino checkerspot (C. gabbii) Quino checkerspot (C. gabbii) Learina checkerspot (C. gabbii) Learina checkerspot (C. gabbii) Undian checkerspot (C. gabbii) Learina	Survey Time: Oh Survey Acres per Hour: 12.34 Oh Survey Time: Oh Survey Acres Oh Oh Oh Oh Oh Oh Oh O	014-11	Chez Bringrah		Date: 5	127/16	
Time (24 hr) Temperature (F) Wind Speed (mph) Cloud Cov	Field Conditions Time (24 hr) Temperature (F) Wind Speed (mph) Cloud Cover OFIS 72 0-3 0/1 1900 79 0-3 0/1 Immunities Surveyed (inc. dominant spp.) Plantago erectal Plants Popocorn flower (Crystanthar/Regiobothrys spp.) Gryer (Casillinie exsertal Gryer (Casillinie) Exsertal				Site Visit No:	5	
Field Conditions Time (24 hr) Temperature (F) Wind Speed (mph) Cloud Cov Start Find 1500 77 9 0-3 0 / . Start End 1500 77 9 0-3 0 / . Start End 1500 77 9 0-3 0 / . Start End 1500 77 9 0-3 0 / . Start End 1500 77 9 0-3 0 / . Start End 1500 77 9 0-3 0 / . Start End 1500 77 9 0-3 0 / . Wegetation Communities Surveyed (inc. dominant spp.) Wegetation Communities Sur	Field Conditions Time (24 hr) Temperature (F) Wind Speed (mph) Cloud Cover O915 72 0-3 07 1800 77 0-3 07 0-3 07 07 0-3 07 0-3 07 07 0-3 07 07 0-3 07 07 0-3 07 07 0-3 07 07 0-3 07 07 0-3 07 07 0-3 07 07 0-3 07 07 07 07 07 07 07 07 07 07 07 07 07	Area Sur	reyed Y Z (parhal) Acres Sur	veyed 108	Survey Time: Bhr 45min	Acres per Hour:	12.34(
Field Conditions Time (24 hr) Temperature (F) Wind Speed (mph) Cloud Cov Start Find 1500 77 9 0-3 0 / . Start End 1500 77 9 0-3 0 / . Start End 1500 77 9 0-3 0 / . Start End 1500 77 9 0-3 0 / . Start End 1500 77 9 0-3 0 / . Start End 1500 77 9 0-3 0 / . Start End 1500 77 9 0-3 0 / . Wegetation Communities Surveyed (inc. dominant spp.) Wegetation Communities Sur	Field Conditions Time (24 hr) Temperature (F) Wind Speed (mph) Cloud Cover O915 72 0-3 07 1800 77 0-3 04 04 04 04 04 04 04 04 04 0	Other Sur	veyors Present: Nicole	cimball			
Time (24 hr) Temperature (°F) Wind Speed (mph) Cloud Cov Start 0915 72 0 3 07 Both 1800 79 0 3 07 Wegetation Communities Surveyed (inc. dominant spp.) Dominant Communities Surveyed (inc. dominant spp.) Butterfy Species (Conflicties spp.) Western Wegetation (Plantago erecta) Wegetation (Plantago erecta) No New Area or Existing Area (circle) No New Area or Existing Area (circle) New Existing Butterfly Species Checkerspota (California spp.) Galb's checkerspot (Cabbiti) California path (Chlosyne californica) Galb's checkerspot (Cabbiti) Jorian Checkerspot (Cabbiti) Jorian Checkerspot (Cabbiti) Jorian Checkerspot (Cabbiti) Jorian Checkerspot (Cabbitium exila) western (Physcoles area ministry) Laariar checkerspot (Cabbitium exila) western (Physcoles area ministry) California sister (Adelpha bradowir californica) Laariar checkerspot (Cabbitium exila) western talled blue (Everes armyfulia) Myrita creacoan (Physcoles armyfulia) Western (Physcoles armon armon) unidentified blue Western Spr. (Calephalis wright) Whites Swallowstalis pale swallowstali (Papilia lary (Vareasa) Jorian State (Adelpha bradowir californica) Laariar checkerspot (Prycoles armona californica) Jorian Stat	Time (24 hr) Temperature (F) Wind Speed (mph) Cloud Cover OFIS TO				- C		
Start DGIS TO DO	mmunitiles Surveyed (inc. dominant spp.) Obs. Nectar Plants Plantago erecto) Plantago erecto) Popocorn flower (Crystantha-Plagiobothrys spp.) Popocorn flower (Crystantha-Pla		Time (24 hr)			Claud Ca	
Host Plants	mmunities Surveyed (inc. dominant spp.) Communities Surveyed (inc. dominant spp.) Communities	Ctart		remperature (F)			ver
Nectar Plants Obs. Nectar Plants Obs. Nectar Plants Obs. Nectar Plants Obs. Obs. Nectar Plants Obs.	Obs. Nectar Plants Obs. Nectar Plants Obs. Plantago erecta) Plantago erecta) Plantago erecta Plantago			72	0-9	0.7-	
Vegetation Communities Surveyed (inc. dominant spp.)	Obs. Nectar Plants Obs. New (Castilleja exserta) Flux Support Obs. Ob	End	1800	79	0-3	6%	
Host Plants	Obs. Nectar Plants Obs. New York (Castilleja exserta) Amy Soldifields (Lasthenia spp.) Amy Soldifields (Lasthenia spp.) Soldienstar (Muilla spp.	Start					
Host Plants dwarf plantain (Plantago erecta) purple own's clover (Castilleja exserta) purple own's clover (Castilleja exserta) snapdragon (Anturhirum coulterianum) birds-beak (Cordylanthur piglidus) snapdragon (Anturhirum coulterianum) birds-beak (Cordylanthur piglidus) woolly plantain (Plantago patagonica) Chinese houses (Collinsia spp.) Chinese houses (Collinsia spp.) Host Plant Mapping Updated (circle) Species updated (list) (Cashilirum 200 CAS 200 Mgm Neta (Eroganum fasciculatum) ground pink (Linanthus dienthiflorus) New Area or Existing Area (circle) New Existing Species updated (list) (Cashilirum 200 CAS 200 Mgm Neta (Mix 16) New Area or Existing Area (circle) New Existing Species updated (list) (Cashilirum 200 CAS 200 Mgm Neta (Mix 16) New Area or Existing Area (circle) New Existing Species updated (list) (Cashilirum 200 CAS 200 Mgm Neta (Mix 16) New Area or Existing Area (circle) New Existing Species updated (list) (Cashilirum 200 CAS 200 Mgm Neta (Mix 16) New Area or Existing Area (circle) New Existing Species updated (list) (Cashilirum 200 CAS 200 Mgm Neta (Mix 16) New Area or Existing Area (circle) New Existing Species updated (list) (Cashilirum 200 CAS 200 Mgm Neta (Mix 16) New Area or Existing Area (circle) New Existing Species updated (list) (Cashilirum 200 Mgm Neta (Mix 16) New Area or Existing Area (circle) New Existing Species updated (list) (Cashilirum 200 Mgm Neta (Mix 16) New Area or Existing Area (circle) New Existing Species Updated (list) (Cashilirum 200 Mgm Neta (Mix 16) New Area or Existing Area (circle) New Existing Species updated (list) (Cashilirum 200 Mgm Neta (Mix 16) New Area or Existing Area (circle) New Existing Species (California protein area (list) (Ristination 200 Mgm Neta (Mix 16) New Existing Neta (California sister (Abelpha bredowii californica) Updated (List) (Cashilirum 200 Mgm Neta (Mix 16) New Area or Existing Area (California sister (Abelpha bredowii californica) Updated (List) (Cashilirum 200 Mgm Neta (Mix 16) New Area or Existing Area (California sister (Abelpha	Obs. Nectar Plants Obs. New (Castilleja exserta) Amy Soldifields (Lasthenia spp.) Soldi	End					
Host Plants dwarf plantain (Plantago erecta)	Obs. Nectar Plants Obs. New York (Castilleja exserta) Amy Soldifields (Lasthenia spp.) Amy Soldifields (Lasthenia spp.) Soldienstar (Muilla spp.						
dwarf plantain (Plantago erecta) purple owi's clover (Castilleja exserta) snapdragon (Antirhinum coulterianum) birds-beak (Cordylanthus rigidus) woolly plantain (Plantago patagonica) Chinese houses (Collinsia spp.) Host Plant Mapping Updated (circle) Butterfly Species Checkerspots Checkerspots Checkerspots Checkerspots Checkerspot (C. gabbii) Gabb's checkerspot (C. gabbii) Guino checkerspot (C. gabbii) Jorion checkerspot (C. gabbii) Jorion checkerspot (C. gabbii) Jorion checkerspot (C. phydryas editha quino) Chalicedon checkerspot (C. phydryas editha quino) Gabb's checkerspot (Thessalia leanira wrighti) Myilita crescent (Phyciodes mylitta) Blues Uniquin's admiral (Umanthus loquinin) western pygmy-blue (Brephidium exilia) western pygmy-blue (Brephidium exilia) western lailed blue (Everes amyntula) southern blue (Glaucopsyche hydamus australis) Edward's blue (Harmargus ceranurs gyas) Armon blue (Clariches marina) unidentified blue Whites Behr's metalmark (Apodemia morno virgulti) Wright's metalmark (Calephelis wright) Wright's metalmark (Calephelis wright) Wright's metalmark (Calephelis mrono virgulti) Wright's metalmark (Calephelis wright) Wright's metalmark (Calephelis wright	Plantago erecta	Vegetatio	n Communities Surveyed (inc. do	ominant spp.)			
dwarf plantain (Plantago erecta) purple ow's clover (Castilleja exserta) snapdragon (Antirhinum coulterianum) birds-beak (Cordylanthus rigidus) woolly plantain (Plantago patagonica) Chinese houses (Collina sp.) Host Plant Mapping Updated (circle) Butterfly Species Checkerspots Checkerspots Checkerspots Checkerspots Checkerspot (Castilloia & Castilloia & Californica) Gabb's checkerspot (Cagabili) Guino checkerspot (Chephydryas edilitha quino) chalcedon checkerspot (Chephydryas edilitha quino) dhalcedon checkerspot (Chephydryas edilitha quino) draintair checkerspot (Thessalia leanira winghti) Myilita crescent (Phyclodes mylitta) Blues Lorquin's admiral (Limentitis lorquini) western pygmy-blue (Brephidium exilia) western pygmy-blue (Brephidium exilia) western tailed blue (Everes amyntula) southern blue (Glaucopsyche lygdamus australis) Edward's blue (Herniargus ceraunus gyas) American (Virginia) lady (V. virginiensis) unidentified ablu (Virginiensis) unidentified blue (Lagototes marina) unidentified shue desert (Felderfo's orangetip (A. cethura) common California ringlet (Coenonympha californice) western tiger swallowtail (P. ratiuus) skippers fineral duskywing (Erymnis funeralis) mourning cloak (Nymphalis antiopa) skipp	Plantago erecta						
dwarf plantain (Plantago erecta) purple owl's clover (Castilleja exserte) snapdragon (Antirhinum coulterlanum) birds-beak (Cordylanthus rigidus) woolly plantain (Plantago patagonica) Chinese houses (Collina patagonica) Chinese houses (Collina sp.) Host Plant Mapping Updated (circle) Species updated (list) Castillina ac AS advagon link (Linanthus dianthiforus) No. Butterfly Species No. Butterfly Species Checkerspots California patch (Chiosyne californica) Gabb's checkerspot (C. gabbii) Guino checkerspot (Euphydryas ediliha quino) chaicedon checkerspot (Euphydryas ediliha quino) chaicedon checkerspot (Thessalia leanira wrighti) Mylitta crescent (Phyciodes mylitta) Blues Buttern pygmy-blue (Brephidium exile) western pygmy-blue (Brephidium exile) western pygmy-blue (Brephidium exile) western blue (Glaucopsyche hyddamus australis) Edward s blue (Herniargus ceraurus gyas) Acmon blue (Carica emon acmon) marine blue (Leptotes marina) unidentified blue Whites Behr's metalmark (Apodemia mormo virgutti) Wright's metalmark (Celophelis wrighti) Wright's metalmark (Celophelis wri	Plantago erecta						
dwarf plantain (Plantago erecta) purple ow'ls colover (Castilleja exserte) snapdragon (Antirhinum couterlanum) birds-beak (Cordylanthus rigidus) woolly plantain (Plantago patagonica) Chinese houses (Collinsia spp.) Those Plant Mapping Updated (circle) Chinese houses (Collinsia spp.) Butterfly Species No. New Area or Existing Area (circle) New Existing Species updated (list) Castillum Apping Updated (circle) Species updated (list) Species updated (list) Castillum Apping Updated (circle) Species updated (list) Species updated (list) Castillum Apping Updated (list) Species updated (list) Castillum Apping Updated (list) Species updated (list) Castillum Apping Updated (list) Species updated (list) Spec	Plantago erecta						
Supple owl's clover (Castilleje exserte) Snapfragon (Antihinum coulterlanum) Supple owl's clover (Castilleje exserte) Snapfragon (Antihinum coulterlanum) Supple owl's clover (Castilleje exserte) Snapfragon (Antihinum coulterlanum) Supple owl's clover (Castilleje exserte) Supple owl's clover (Castilleje) Supple owl's clover (Castilleje exserte) Supple owl's clover (Castilleje) Supple owl's clover (Castilleje	goldfelds (Lasthenia spp.) goldfelds (Lasthenia spp.) goldentus rigidus) (Plantago patagonica) s (Collinsia spp.) s (Collinsia spp.) pling Updated (circle) No Now Area or Existing Area (circle) No Now Area or Existing Area (circle) No Now Area or Existing Area (circle) No Now Area or Existing Area (circle) No Now Area or Existing Area (circle) No No Now Area or Existing Area (circle) No	Host Plan	nts	Obs.	Nectar Plants		Obs.
purple owl's clover (Castilleja exserta) snapdragon (Antirrhinum coulterianum) snapdragon (Antirrhinum coulterianum) birds-beak (Cordylanthus rigidus) woolly plantain (Plantago pategonica) Chinese houses (Collinsia sp.) Chinese houses (Collinsia sp.) Chinese houses (Collinsia sp.) Host Plant Mapping Updated (circle) Species updated (list) (a.shijkin	goldfields (Lasthenie spp.) goldenatry (Muilla spp.) foldleneck (Amsinckia menziesii var. intermedia) orion (Allium sp.) s (Collinsia spp.) pring Updated (circle) pring Updated (circle) foldleneck (Amsinckia menziesii var. intermedia) orion (Allium spp.) s (Collinsia spp.) pring Updated (circle) foldleneck (Amsinckia menziesii var. intermedia) orion (Allium spp.) s (Collinsia spp.) pring Updated (circle) foldleneck (Amsinckia menziesii var. intermedia) orion (Allium spp.) foldleneck (Amsinckia menziesii var. intermedia) foldleneck (Aitides halesus voiceles foldlenec	dwarf plan	ntain (Plantago erecta)	Run	popcorn flower (Cryptantha/Plagiobott	hrys spp.)	Aur
snapdragon (Antinhinum coulterianum) birds-beak (Cordylanthus rigidus) woolly plantain (Plantago patagonica) Chinese houses (Collinsia spp.) Host Plant Mapping Updated (circle) Species updated (list) Cashili a 20 CA3 2 chagon had 40 1 6 km 2 sets (Acircle) Butterfly Species Checkerspots California patch (Chiosyne californica) Gabb's checkerspot (C. gabbii) 1 brown effin (Callophnys augustnus) California patch (Chiosyne californica) Gabb's checkerspot (C. gabbii) 1 brown effin (Callophnys augustnus) Chalcedon checkerspot (E. chelcedona chalcedona) Leanira checkerspot (Thessalia leanira wrighti) Mylitta crescent (Phyciodes mylitta) Blues Westerm pygmy-blue (Brephidium exile) western tailed blue (Everes amyntula) southern blue (Calucopsyche lygdamus australis) Edward's blue (Hemiarqus ceraunus gyas) American (Virginia) lady (V. virginiensis) Acmon blue (Icaricia acmon acmon) marine blue (Leptotes marina) unidentified blue Whites Sara orangetip (Anthocharis sara sara) desert (Felder's) orangetip (A. cethura) common California inniglet (Coenonympha californica) western inger swallowtail (P. zelicaon) Mecalinanus Metalmarks Behr's metalmark (Apodemia morno virgulti) Wight's metalmark (Calephelis wright) Unidentified white White (Calucolas eurytheme) Skippers Unidentified (Common) white (Pontia protodice) spring white (P. sisymbri) unidentified (Common) white (Pontia protodice) spring white (P. sisymbri) unidentified white Metalmarks Behr's metalmark (Calephelis wrighti) Charlos & Sugrey Charles & Suffice (Pyrgus albescens) Other	policy pategonics and	purple ow	l's clover (Castilleja exserta)				
woolly plantain (Plantago patagonica) Chinese houses (Collinsia spp.) Duckwheat (Erlogonum fasciculatum) ground pink (Limanthus dianthificrus) No New Area or Existing Area (circle) New Existing Species updated (list) Species updated (list) Cashikus 20CAS - Guigen Incol 46 b New Existing Species updated (list) Cashikus 20CAS - Guigen Incol 46 b New Existing Species updated (list) Checkerspots California patch (Chiosyne californica) Gabb's checkerspot (C. gabbil) Quino checkerspot (E. gabbil) California patch (Chiosyne californica) Gabb's checkerspot (Euphydryas editha quino) Chalcedon checkerspot (Euphydryas editha quino) Chalcedon checkerspot (Euphydryas editha quino) Chalcedon checkerspot (Enghydryas editha quino) Chalcedon checkerspot (Enghydryas editha quino) Chalcedon checkerspot (Finessalia leanira wright) Mylitta crescent (Phyclodes mylitta) California sister (Adelpha bradowii californica) Blues Lorquin's admiral (Limentis lorquini) western pygmy-blue (Brephidium exila) western tailed blue (Everes amyntula) southern blue (Claucopsyche lygdamus australis) Edward's blue (Hemiargus ceranuus gyas) Acmon blue (Claucopsyche lygdamus australis) Edward's blue (Hemiargus ceranuus gyas) Acmon blue (Leptotes marina) unidentified blue Whites Sara orangetip (Anthocharis sera sara) desert (Felder's) orangetip (A. cethura) common California ringlet (Coenonymphe californica) western tiger swallowtail (P. zelicaon) Miscellaneous Swallowtail (Papilio eurymedon) White (Pinis rapae) checkered (common) white (Pontia protodice) spring white (P. sisymbril) unidentified white Metalmarks Behr's metalmark (Apodemia mormo virgult) Wright's metalmark (Calephelis wright) Sulphurs orange sulphur (Colias eurytheme) Sleepy orange (Eurema nicippe) Cloudless sulfur (Phoebus sennae marcelline) Other	Collinsia spp. Duckwheat (Eriogonum fasciculatum) Duckwhaat (Eriogonum fascicul	snapdrage	on (Antirrhinum coulterianum)		goldenstar (Muilla spp.)		
Chinese houses (Collinsia spp.)	buckwheat (Eriogonum fasciculatum) ground pink (Linanthus dianthiflorus) Poping Updated (circle) No Now Area or Existing Area (circle) No Butterfly Species No (Chiosyne californica) spot (C. gabbii) pot (E. gabbii) pot (E. chaicedona chaicedona) spot (C. gabbii) pot (E. chaicedona chaicedona) spot (E. chaicedona chaicedona) gray hairstreak (Atlides halesus corcorani) brown effin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dumetorum affinis) gray hairstreak (St. dumetorum affinis) gray hairstreak (St. dumetorum affinis) prot (Thessalia leanira wright) (Phyclodes mylitta) California sister (Adelpha bredowir californica) Lorquin's admiral (Limenitis lorquin) blue (Erephidium exile) west coast lady (Vanessa annabella) lue (Everes amyntule) red admiral (V. etalanta rubria) painted lady (V. cardur) pale evanuus gyas) American (Virginia) lady (V. virginiensis) unidentified lady (Vanessa sp.) Anthocharis sara sara) Anthocharis sara sara) Anthocharis sara sara) in a ringlet (Coenonympha californica) pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swa	birds-beal	(Cordylanthus rigidus)		fiddleneck (Amsinckia menziesii var. ii	ntermedia)	
Host Plant Mapping Updated (circle) Species updated (list) Species updated (list) Cashilinia 200 A S Polygon Indo Vit V (New 245) Butterfly Species Checkerspots California patch (Chlosyne californice) Gabb's checkerspot (C. gabbii) Quino checkerspot (Euphydryas edithe quino) chalcedon checkerspot (Euphydryas edithe quino) Dramale (Ingere ingere i	ground pink (Linanthus dianthiflorus) New Area or Existing Area (circle) New Area or Existing Area (circle) New Area or Existing Area (circle) No. Merea (Circle) No. Merea (Alides Anlesus corcorant) Depoile in Existing Area (circle) No. Merea (Circle) No. Merea or Existing Area (circle) No. Merea (Ci	woolly pla	ntain (Plantago patagonica)		onion (Allium spp.)		Fruit
New Area or Existing Area (circle) New Existing Species updated (list) Cashilkia DoCAS Solugion India 16 16 16 16 16 16 16 1	pping Updated (circle) Yes No New Area or Existing Area (circle) New Existing Both New (Inst) Cashiku 20 (A.S. Padyon Inva (10' 16', Web 20') No. Butterfly Species No. Hairstreaks (Chiosyne californica) spot (C. gabbii) pot (Euphydryas editha quino) spot (C. gabbii) pot (Euphydryas editha quino) spot (Thessalia leanira wright) (Phyciodes mylitta) California sister (Adelpha bredowin californica) (Phyciodes mylitta) California sister (Adelpha bredowin californica) Lorguin's admiral (Limenitis lorguin) west coast lady (Vanessa annabella) red admiral (V. atlainta rubria) Bale west (V. atlainta rubria) Janied acmon acmon) Janied (Caenonympha californica) Janied (Caenonympha californ	Chinese h	ouses (Collinsia spp.)				
Butterfly Species Checkerspots California patch (Chiosyne californica) Gabb's checkerspot (C. gabbi) Quino checkerspot (C. gabbi) Quino checkerspot (E. chalcedona chalcedona) Leanira checkerspot (E. chalcedona chalcedona) Leanira checkerspot (F. chalcedona chalcedona) Leanira checkerspot (F. chalcedona chalcedona) Leanira checkerspot (E. chalcedona chalcedona) Leanira checkerspot (E. chalcedona chalcedona) Leanira checkerspot (E. chalcedona chalcedona) Leanira checkerspot (Phyciodes mylitta) California sister (Adelpha bredowii californica) Blues Lorguin's admiral (Limenitis lorguini) western pygmy-blue (Brephidium exila) western talled blue (Everes amyntula) southern blue (Glaucopsyche lygdamus australis) Edward's blue (Hemiargus ceraurus gyas) Armon blue (Caricia acmon acmon) marine blue (Leptotes marina) unidentified blue Whites Sara orangetip (Anthocharis sara sara) desert (Felder's) orangetip (A. cethura) cabbage white (Pieris rapae) checkered (common) white (Pontia protodice) spring white (P. sisymbri) unidentified white Metalmarks Metalmarks Metalmarks (Calephelis wrighti) Wright's metalmark (Calephelis wrighti) Wright's metalmark (Calephelis wrighti) Wright's metalmark (Calephelis wrighti) Wright's metalmark (Calephelis wrighti) Winthy Sulphurs Orange sulphur (Colias eurytheme) Selepy orange (Eurema nicippe) Coomstock Arbitracy Control California rilopee) Comstock Arbitracy Color Stock Arbitracy Colo	No. Butterfly Species No. (Chlosyne californica) great purple hairstreak (Atlides halesus corcorani) brown elfin (Callophrys augustinus) pot (Euphydryas editha quino) bramble (perplexing) hairstreak (C. dumetorum affinis) gray hairstreak (Strymon mellinus pudica) properties annual						Shin
Butterfly Species Checkerspots California patch (Chiosyne californica) Gabb's checkerspot (C. gabbii) Quino checkerspot (E. gabbii) Quino checkerspot (E. chalcedona chalcedona) Leanira checkerspot (E. chalcedona chalcedona) Leanira checkerspot (Thessalia leanira wrighti) Blues Wastern pygmy-blue (Brephidium exila) western tailed blue (Everes amyntula) southern blue (Glaucopsyche lygdamus australis) Edward's blue (Hemiargus ceraunus gyas) Acmon blue (Icaricia acmon acmon) marine blue (Leptotes marina) unidentified blue Whites Sara orangetip (Anthocharis sara sara) desert (Felder's) orangetip (A. cethura) common California inglet (Coenonympha californica) spring white (P. sisymbrii) unidentified white Metalmarks Metalmarks Metalmarks Behr's metalmark (Calephelis wrighti) Support Virght's metalmark (Calephelis wrighti) Support Chockerspot (Phoebus sennae marcellina) No. Butterfly Species Hairstreaks grat purple hairstreak (Atildes halesus corcorani) proven effin (Callophrys augustinus) brown effin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dumetorum affinis) pramble (perplexing) hairstreak (Calephelis hairstreak (Calefanis) pramble (perplexing) hairstreak (Calefanis) pramble (perplexing)	No. Butterfly Species No. Hairstreaks great purple hairstreak (Atildes halesus corcorani) spot (C. gabbii) spot (E. gabbii) pot (Euphydryas editha quino) bramble (perplexing) hairstreak (C. dumetorum affinis) kerspot (Thesalia leanira wright) pot (Eheloedona chalcedona) spot (Thesalia leanira wright) (Phyciodes mylitta) California sister (Adelpha bredowii californica) Lorquin's admiral (Limentitis lorquini) blue (Everes amyntula) Glaucopsyche lygdamus australis) Hemiargus ceraunus gyas) American (Virginia) Jady (V. virginiensis) arcia acmon acmon) potoles marina) Anthocharis sara sara) Orangetip (A. cethura) Inia ringlet (Coenonympha californica) Inia ringlet (Coenonympha californica) Skippers Inia ringlet (Coenonympha californica) Inia ringlet (Coenonym					New Existing	Both
Butterfly Species Checkerspots Calfornia patch (Chiosyne californica) Gabb's checkerspot (C. gabbii) Quino checkerspot (E. gabbii) Quino checkerspot (E. chalcedona chalcedona) Leanira checkerspot (E. chalcedona chalcedona) Leanira checkerspot (Thessalia leanira wrighti) Mylitta crescent (Phyciodes mylitta) Blues Calfornia sister (Adelpha bredowii californica) Western pygmy-blue (Brephidium exila) western tailed blue (Everes amyntula) southern blue (Glaucopsyche lygdamus australis) Edward's blue (Hemiargus ceraunus gyas) Acmon blue (Icaricia acmon acmon) marine blue (Leptotes marina) unidentified blue Whites Sara orangetip (Anthocharis sara sara) desert (Felder's) orangetip (A. cethura) common California ringlet (Coenonympha californica) spring white (P. sisymbrii) unidentified white Metalmarks Metalmarks Metalmarks Metalmarks (Calephelis wrighti) Sulphurs Other Other No. Butterfly Species Hairstreaks Grate purple hairstreak (Atildes halesus corcorani) prate purple hairstreak (Atildes halesus corcorani) prate purple hairstreak (Atildes halesus corcorani) prate purple hairstreak (Atildes halesus corcorani) prown effin (Callophrys augustinus) brown effin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dumetorum affinis) pramble (perplexing) hairstreak (C. dumetorum affinis) pray hairstreak (Strymon melinus pudica) Ladies/Admirals California sister (Adelpha bredowii californica) westeron taiges Admirals (Uranenius (Californica) painted lady (Vanessa anabella) westeron taide (Vanessa anabella) painted lady (Vanessa anabella) painted lady (V. cardui) painted la	No. Butterfly Species No. Hairstreaks great purple hairstreak (Atildes halesus corcorani) brown effin (Cellophrys augustinus) pot (E. gabbii) pot (Euphydryas editha quino) bramble (perplexing) hairstreak (C. dumetorum affinis) kerspot (E. chalcedona chalcedona) gray hairstreak (Strymon mellinus pudica) prayot (Thessalia leanira wrighti) (Phyciodes mylitta) California sister (Adelpha bredowii californica) (Phyciodes mylitta) (Phyciodes marina) (Phyciodes mylita) (Phyciodes my	Species u	updated (list) Castilleia 2001	AS > polygon line	or 40'x 6', west > east		
California patch (Chiosyne californica) Gabb's checkerspot (C. gabbii) Quino checkerspot (Euphydryas editha quino) chalcedon checkerspot (Euchydryas editha quino) california sister (Adelpha bredowii californica) california sister (Adelpha bredowii californica) western sadmiral (Limentiis lorquini)	Hairstreaks Great purple hairstreak (Attides halesus corcorani) Spot (C. gabbii) Drown elfin (Callophrys augustinus) Drown elfin (Callophris particula) Drown elfin (Callophris ster (Adelpha bredowii californica) Drown elfin (Callophris sterilia) Drown elfin (Callophris sterilia) Drown elfin (Callophris sterilia) Drown elfin (Callophris virghti) Drown elfin (Callo	-			7		No.
California patch (Chlosyne californica) Gabb's checkerspot (C. gabbii) Quino checkerspot (Euphydryas editha quino) chalcedon checkerspot (Euphydryas editha quino) chalcedon checkerspot (Euchydryas editha quino) bramble (perplexing) haistreak (C. dumentura patica) gray hairstreak (C. dumentura patica) california sister (Adelpha bredowic alifornica) Ladies/Admirals Ladies/Admirals Lorquin's admiral (Liequina) western pygmy-blue (Brephidium exila) weste	brown elfin (Callophrys augustinus) pot (Euphydryas editha quino) bramble (perplexing) hairstreak (C. dumetorum affinis) derspot (E. chalcedona chalcedona) rspot (E. chalcedona chalcedona) rspot (Thessalia leanira wrighti) (Phyciodes mylitta) (Phyciodes mylitta) Ladies/Admirals California sister (Adelpha bredowii californica) Lorquin's admiral (Limentitis forquin) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) painted lady (V. cardui) red admiral (V. virginiensis) arcicia acmon acmon) pototes marine) Photos marine) Anthocharis sara sara) Orangetip (A. cethura) nia ringlet (Coenonympha californica) pila ringlet (Coenonympha californica) pila ringlet (Coenonympha californica) pila ringlet (Coenonympha californica) pila ringlet (Pontia protodice) sisymbrii) K. (Apodemia mormo virguiti) Mit (Pila pila pila pila pila pila pila pila p						
Gabb's checkerspot (C. gabbii) Quino checkerspot (Euphydryas editha quino) chalcedon checkerspot (E. chalcedona chalcedona) Leanira checkerspot (Thessalia leanira wright) Mylitta crescent (Phyciodes mylitta) Blues California sister (Adelpha bredowii californica) Western pygmy-blue (Brephidium exila) western tailed blue (Everes amyntula) southern blue (Glaucopsyche lygdamus australis) Edward's blue (Hemiargus ceraunus gyas) Acmon blue (Icaricia acmon acmon) marine blue (Leptotes marina) Whites Sara orangetip (Anthocharis sara sara) desert (Felder's) orangetip (A. cethura) common California ringlet (Coenonympha californica) common California ringlet (Coenonympha californica) spring white (P. sisymbrii) unidentified white Metalmarks Behr's metalmark (Apodemia mormo virguilt) Wright's metalmark (Calephelis wright) Sulphurs cloudless sulfur (Phoebus sennae marcellina) Drawn elfin (Callophys augustinus) bramble (perplexing) hairsteak (C. dumentum affinis) gray hairstreak (C. duelpha bredowii californica) undentified solue (Leptodes mylita) West coast lady (Vanessa annabella) west coast lady (Vanessa annabella) west coast lady (Vanessa annabella) west coast lady (Vanesa annabella) painted lady (V. cardui) American (Virginia) lady (V. virginiensis) unidentified lady (V. cardui) western tiger swallowtail (Papilio eurymedon) western tiger swallowtail (Papilio eurymedon) western tiger swallowtail (P. zelicaon) Miscellaneous common California ringlet (Coenonympha californica) anise swallowtail (P. zelicaon) Miscellaneous common buckeye (Junonia coenia grisea) mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus) white (common) checkered-skipper (Pyrgus albescens) Other Connact (Calloneous) Connact (Calloneous) Connact (Calloneous) Connact (Calloneous) Connact (Calloneous) Connact (Calloneous) Connact (Callo	brown elfin (Callophrys augustinus) pot (Euphydryas editha quino) bramble (perplexing) hairstreak (C. dumetorum affinis) derspot (E. chalcedona chalcedona) prot (Energy (E. chalcedona) prot (Energy				great purple hairstreak (Atlides halesus	corcorani)	
Chalcedon checkerspot (<i>E. chalcedona chalcedona</i>) Leanira checkerspot (<i>Thessalia leanira wrighti</i>) Mylitta crescent (<i>Phyclodes mylitta</i>) Blues California sister (<i>Adelpha bredowii californica</i>) Lorquin's admiral (<i>Limenitis lorquini</i>) western pygmy-blue (<i>Brephidium exila</i>) western tailed blue (<i>Everes amyntula</i>) western tailed blue (<i>Everes amyntula</i>) southern blue (<i>Glaucopsyche lygdamus australis</i>) Edward's blue (<i>Hemiargus ceraunus gyas</i>) Acmon blue (<i>Icaricia acmon acmon</i>) marine blue (<i>Leptotes marina</i>) unidentified blue Whites Sara orangetip (<i>Anthocharis sara sara</i>) desert (Felder's) orangetip (<i>A. cethura</i>) common California ringlet (<i>Coenonympha californica</i>) cabbage white (<i>Pieris rapae</i>) checkered (common) white (<i>Pontia protodice</i>) spring white (<i>P. sisymbrii</i>) unidentified white Metalmarks Behr's metalmark (<i>Apodemia mormo virgulti</i>) white (<i>Sulughus sennae marcellina</i>) Sulphurs Other Comytock for hill are selling and sulphur (<i>Colias eurytheme</i>) sleepy orange (<i>Eurema nicippe</i>) cloudless sulfur (<i>Phoebus sennae marcellina</i>)	respot (E. chalcedona chalcedona) repot (Thessalia leanira wright) Ladies/Admirals California sister (Adelpha bredowii californica) Lorquin's admiral (Limenitis lorquini) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) Slaucopsyche lygdamus australis) Hemiargus ceraunus gyas) American (Virginia) lady (V. virginiensis) pototes marina) Pototes marina) Anthocharis sara sara) oi rangetip (A. cethura) nia ringlet (Coenonympha californica) pieris rapae) mon) white (Pontia protodice) sisymbrii) red admiral (V. atalanta rubria) Swallowtail (P. rutulus) ania sewallowtail (P. rutulus) monarch (Panaus plexippus) conimon buckeye (Junonia coenia grisea) mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis) mournful duskywing (Erynnis funeralis) mournful duskywing (Erynnis funeralis) mournful duskywing (Erynnis funeralis) mournful duskywing (Erynnis funeralis) white (common) checkered-skipper (Pyrgus albescens) Other Colias eurytheme) Conystock forth lacy Othery Column Subtotal 251 Column Subtotal	-		1			
Leanira checkerspot (Thessalia leanira wrighti) Mylitta crescent (Phyclodes mylitta) Blues California sister (Adelpha bredowii californica) Lorquin's admiral (Limenitis lorquini) western pygmy-blue (Brephidium exila) western tailed blue (Everes amyntula) southern blue (Glaucopsyche lygdamus australis) Edward's blue (Hemiargus ceraunus gyas) Acmon blue (Icaricia acmon acmon) marine blue (Leptotes marina) unidentified blue Whites Sara orangetip (Anthocharis sara sara) desert (Felder's) orangetip (A. cethura) common California ringlet (Coenonympha californica) western tailed blue (Leptotes marina) U	Ladies/Admirals California sister (Adelpha bredowii californica) California sister (Adelpha bredowii californica) Lorquin's admiral (Limentiis lorquini) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) painted lady (V. cardui) Painted lady (V. cardui) Painted lady (V. cardui) Painted lady (V. virginiensis) Painted lady	Quino che	ckerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dun	metorum affinis)	
Mylitta crescent (Phyciodes mylitta) Blues Lorquin's admiral (Limenitis lorquini) western pygmy-blue (Brephidium exila) western tailed blue (Everes amyntula) southern blue (Glaucopsyche lygdamus australis) Edward's blue (Hemiargus ceraunus gyas) Acmon blue (Icaricia acmon acmon) marine blue (Leptotes marina) unidentified blue Whites Sara orangetip (Anthocharis sara sara) desert (Felder's) orangetip (A. cethura) common California ringlet (Coenonympha californica) cabbage white (Pieris rapae) checkered (common) white (Pontia protodice) spring white (P. sisymbrii) unidentified white Metalmarks Behr's metalmark (Apodemia mormo virgulti) Wirth's metalmark (Calephelis wrighti) Sulphurs Other Comstock first lady (V. cardui) western tiger swallowtail (P. rutulus) anise swallowtail (P. rutulus) anise swallowtail (P. rutulus) monarch (Danaus plexippus) common buckeye (Junonia coenia grisea) mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis) mournful duskywing (Erynnis funeralis) mournful duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus) Wright's metalmark (Calephelis wrighti) Sulphurs orange sulphur (Colias eurytheme) sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina)	California sister (Adelpha bredowii californica) Lorquin's admiral (Limenitis lorquini) west coast lady (Vanessa annabella) lue (Everes amyntula) Glaucopsyche lygdamus australis) Hemiargus ceraunus gyas) American (Virginia) lady (V. virginiensis) aricia acmon acmon) ptotes marina) Anthocharis sara sara) Anthocharis sara sara Anthocharis sara sara Anthocharis sara sara Anthocharis sara s	chalcedon	checkerspot (E. chalcedona chalce	dona)	gray hairstreak (Strymon melinus pudio	ca)	11
Blues Lorquin's admiral (Limenitis lorquini) western pygmy-blue (Brephidium exila) western tailed blue (Everes amyntula) southern blue (Glaucopsyche lygdamus australis) Edward's blue (Hemiargus ceraunus gyas) Acmon blue (Icaricia acmon acmon) marine blue (Leptotes marina) unidentified blue Whites Sara orangetip (Anthocharis sara sara) desert (Felder's) orangetip (A. cethura) common California ringlet (Coenonympha californica) cabbage white (Pieris rapae) checkered (common) white (Pontia protodice) spring white (P. sisymbrii) unidentified white Metalmarks Behr's metalmark (Apodemia mormo virgulti) Wright's metalmark (Calephelis wrighti) Sulphurs Comson (Californis tinglet) Comson (Californis tinglet) Wright's metalmark (Calephelis wrighti) Sulphurs Other Other Other Comstock for hill ary cloudless sulfur (Phoebus sennae marcellina)	Lorquin's admiral (Limenitis lorquini) blue (Brephidium exila) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) Glaucopsyche lygdamus australis) Hemiargus ceraunus gyas) American (Virginia) lady (V. virginiensis) unidentified lady (Vanessa sp.) ptotes marina) ptotes marina) pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. rutulus) anise swallowtail (P. rutulus) anise swallowtail (P. rutulus) anise calianeous monarch (Danaus plexippus) common buckeye (Junonia coenia grisea) mony white (Pontia protodice) sisymbrii) sisymbrii) sk (Apodemia mormo virgulti) ark (Calephelis wrighti) Collias eurytheme) Phoebus sennae marcellina) The Collian Subtotal	Leanira ch	eckerspot (Thessalia leanira wrighti)			
western pygmy-blue (Brephidium exila) western tailed blue (Everes amyntula) southern blue (Glaucopsyche lygdamus australis) Edward's blue (Hemiargus ceraunus gyas) Acmon blue (Icericia acmon acmon) marine blue (Leptotes marina) unidentified blue Whites Sara orangetip (Anthocharis sara sara) desert (Felder's) orangetip (A. cethura) common California ringlet (Coenonympha californica) checkered (common) white (Pontia protodice) spring white (P. sisymbrii) unidentified white Metalmarks Behr's metalmark (Apodemia mormo virgulti) Wright's metalmark (Calephelis wright) Sulphurs orange sulphur (Colias eurytheme) sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina)	blue (Brephidium exila) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) red admiral (V. cardui) American (Virginia) lady (V. virginiansis) unidentified lady (Vanessa sp.) pototes marina) pale swallowtails Pale swallowtail (P. rutulus) aniae swallowtail (P. zelicaon) profesi rapae) mony white (Pontia protodice) sisymbrii) sisymbrii) sk (Apodemia mormo virgulti) ark (Calephelis wrighti) Collias eurytheme) Fure sum and subtotal Collumn Subtotal West coast lady (Vanessa annabella) red admiral (V. atalanta rubria) red admiral (V. atalanta) red admiral (V. gilla) red admiral (V. gilla) red admiral (V. gilla) red admiral (V. gilla) re	Mylitta cre	scent (Phyciodes mylitta)			fornica)	
western tailed blue (Everes amyntula) southern blue (Glaucopsyche lygdamus australis) Edward's blue (Hemiargus ceraunus gyas) Acmon blue (Icaricia acmon acmon) marine blue (Leptotes marina) unidentified blue Whites Sara orangetip (Anthocharis sara sara) desert (Felder's) orangetip (A. cethura) common California ringlet (Coenonympha californica) common California ringlet (Coenonympha californica) spring white (Pieris rapae) checkered (common) white (Pontia protodice) spring white (P. sisymbrii) unidentified white Metalmarks Behr's metalmark (Apodemia mormo virgulti) Wright's metalmark (Calephelis wrighti) Sulphurs Other red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiensis) white lady (V. cardui) American (Virginia) lady (V. virginiensis) white dlady (V. cardui) American (Virginia) lady (V. virginiensis) American (Virginia) lady (V. virginiensis) white sallows as p.) Swallowtail (Papilio eurymedon) western tiger swallowtail (Papilio eurymedon) western tiger swallowtail (Papilio eurymedon) western tiger swallowtail (P. zelicaon) Miscellaneous monarch (Danaus plexippus) common buckeye (Junonia coenia grisea) mourning cloak (Nymphalis antiopa) Skippers unidentified white functional duskywing (Erynnis funcralis) mournful duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus) white (common) checkered-skipper (Pyrgus albescens) Sulphurs Other orange sulphur (Colias eurytheme) sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina)	The Everes amyntula) Figure (Everes amyntula) Figure (Everes amyntula) Figure (Everes amyntula) Figure (Folian australis) Fi						
southern blue (Glaucopsyche Iygdamus australis) Edward's blue (Hemiargus ceraunus gyas) Acmon blue (Icaricia acmon acmon) Marine blue (Leptotes marina) Unidentified blue Whites Sara orangetip (Anthocharis sara sara) desert (Felder's) orangetip (A. cethura) common California ringlet (Coenonympha californica) cabbage white (Pieris rapae) checkered (common) white (Pontia protodice) spring white (P. sisymbrii) unidentified white Metalmarks Behr's metalmark (Apodemia mormo virgulti) Wright's metalmark (Calephelis wrighti) Sulphurs orange sulphur (Colias eurytheme) sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina)	Painted lady (V. cardui) Painted lady (V. cardui) Painted lady (V. cardui) Painted lady (V. virginiansis) Painted lady (V. cardui) Painted lady (V. cardui) Painted lady (V. virginiansis) Painted lady (V. virginiansi	western py	gmy-blue (Brephidium exila)				
American (Virginia) lady (V. virginiensis) Acmon blue (Icaricia acmon acmon) marine blue (Leptotes marina) unidentified lady (Vanessa sp.) marine blue (Leptotes marina) unidentified blue whites Sara orangetip (Anthocharis sara sara) desert (Felder's) orangetip (A. cethura) common California ringlet (Coenonympha californica) cabbage white (Pieris rapae) checkered (common) white (Pontia protodice) spring white (P. sisymbrii) unidentified lady (Vanessa sp.) western tiger swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. rutulus) mis cellaneous fronarch (Danaus plexippus) common buckeye (Junonia coenia grisea) mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis) mournful duskywing (Erynnis funeralis) mournful duskywing (Erynnis tristis) Behr's metalmark (Apodemia mormo virgulti) Wright's metalmark (Calephelis wrighti) Sulphurs Other Comstock for hill cru cloudless sulfur (Phoebus sennae marcellina)	American (Virginia) lady (V. virginiensis) unidentified lady (Vanessa sp.) ptotes marina) protes marina) pro						
Acmon blue (Icaricia acmon acmon) marine blue (Leptotes marina) unidentified blue Whites Sara orangetip (Anthocharis sara sara) desert (Felder's) orangetip (A. cethura) common California ringlet (Coenonympha californica) cabbage white (Pieris rapae) checkered (common) white (Pontia protodice) spring white (P. sisymbrii) unidentified white Metalmarks Behr's metalmark (Apodemia mormo virgulti) Wright's metalmark (Calephelis wrighti) Sulphurs orange sulphur (Colias eurytheme) sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina)	unidentified lady (Vanessa sp.) ptotes marina) pale swallowtails pale swallowtail (Papillo eurymedon) western tiger swallowtail (P. rutulus) anise swallo			alis)		,	13
marine blue (Leptotes marina) unidentified blue Whites Sara orangetip (Anthocharis sara sara) desert (Felder's) orangetip (A. cethura) common California ringlet (Coenonympha californica) cabbage white (Pieris rapae) checkered (common) white (Pontia protodice) spring white (P. sisymbrii) unidentified white Metalmarks Behr's metalmark (Apodemia mormo virgulti) Wright's metalmark (Calephelis wrighti) Sulphurs orange sulphur (Colias eurytheme) sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina) Salphurs Swallowtails pale swallowtail (Papillo eurymedon) western tiger swallowtail (P. zelicaon) Miscellaneous common Dalcifornia right (P. zelicaon) Miscellaneous common buckeye (Junonia coenia grisea) common buckeye (Junonia coenia grisea) mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis) mournful duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus) white (common) checkered-skipper (Pyrgus albescens) Other Orange Sulphur (Colias eurytheme) sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina)	Swallowtails pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. rutulus) mia ringlet (Coenonympha californica) mia ringlet (Coenonympha californica) min ringlet (Coenonympha californica) mourning cloak (Nymphalis antiopa) mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis) mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis) mourning duskywing (Erynnis funeralis) mourning duskywing (Erynnis funeralis) mourning cloak (Nymphalis antiopa) Miscellaneous mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis) mourning cloak (Nymphalis antiopa) Mill mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis) mourning cloak (Nymphalis antiopa) Mill mourning cloak (Nymphalis antiopa) Mill mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis) mourning cloak (Nymphalis antiopa) Mill mourning cloak (Nymphalis antiopa) Mil	-				3)	100 - 10
unidentified blue Whites Sara orangetip (Anthocharis sara sara) desert (Felder's) orangetip (A. cethura) common California ringlet (Coenonympha californica) cabbage white (Pieris rapae) checkered (common) white (Pontia protodice) spring white (P. sisymbrii) unidentified white Metalmarks Behr's metalmark (Apodemia mormo virgulti) Wright's metalmark (Calephelis wrighti) Sulphurs orange sulphur (Colias eurytheme) sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina)	pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (Parise swallowtail) anise swallowtail (Parise surjecture) anise swallowtail (Parise surjecture) anise swallowtail (Parise surjecture) anise swal	-		11.5			111 7/2
Whites Sara orangetip (Anthocharis sara sara) desert (Felder's) orangetip (A. cethura) common California ringlet (Coenonympha californica) cabbage white (Pieris rapae) checkered (common) white (Pontia protodice) spring white (P. sisymbrii) unidentified white Metalmarks Behr's metalmark (Apodemia mormo virgulti) Wright's metalmark (Calephelis wrighti) Sulphurs orange sulphur (Colias eurytheme) sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina) western tiger swallowtail (P. rutulus) anise swallowatail (P. rutulus) anise swallowatail (P. rutulus) anise swallowatie anise suglines anise suglines	western tiger swallowtail (P. rutulus) anise swallowtail (P. r			1173			
Sara orangetip (Anthocharis sara sara) desert (Felder's) orangetip (A. cethura) common California ringlet (Coenonympha californica) cabbage white (Pieris rapae) checkered (common) white (Pontia protodice) spring white (P. sisymbrii) unidentified white Metalmarks Behr's metalmark (Apodemia mormo virgulti) Wright's metalmark (Calephelis wrighti) Sulphurs Other Orange sulphur (Colias eurytheme) sleepy orange (Eurema nicippe) common buckeye (Junonia coenia grisea) mourning cloak (Nymphalis antiopa) Skippers mourning cloak (Nymphalis antiopa) Skippers mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis) mournful duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus) white (common) checkered-skipper (Pyrgus albescens) Other Ocanada Skipper Comstock forth love cloudless sulfur (Phoebus sennae marcellina)	Anthocharis sara sara) Orangetip (A. cethura) Miscellaneous Miscellaneous Monarch (Danaus plexippus) common buckeye (Junonia coenia grisea) mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis) mournful duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus) white (common) checkered-skipper (Pyrgus albescens) Other Colias eurytheme) Colias sennae marcellina) Phoebus sennae marcellina) Ocularty Sulphus Column Subtotal 251 Column Subtotal Antiocharis sara sara) anise swallowtail (P. zelicaon) Miscellaneous monarch (Danaus plexippus) common buckeye (Junonia coenia grisea) mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis) mournful duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus) white (common) checkered-skipper (Pyrgus albescens) Other Column Subtotal 35		1 Dide				1
desert (Felder's) orangetip (A. cethura) common California ringlet (Coenonympha californica) cabbage white (Pieris rapae) checkered (common) white (Pontia protodice) spring white (P. sisymbrii) unidentified white Metalmarks Behr's metalmark (Apodemia mormo virgulti) Wright's metalmark (Calephelis wrighti) Sulphurs orange sulphur (Colias eurytheme) sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina) Miscellaneous monarch (Danaus plexippus) monarch (Danaus plexippus) common buckeye (Junonia coenia grisea) mourning cloak (Nymphalis antiopa) skippers funereal duskywing (Erynnis funeralis) mournful duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus) white (common) checkered-skipper (Pyrgus albescens) Other Ocanhy Sulphur	Miscellaneous Miscellaneou		etin (Anthocharis sara sara)	W SHE			-
common California ringlet (Coenonympha californica) cabbage white (Pieris rapae) checkered (common) white (Pontia protodice) spring white (P. sisymbrii) unidentified white Metalmarks Behr's metalmark (Apodemia mormo virgulti) Wright's metalmark (Calephelis wrighti) Sulphurs Other Common buckeye (Junonia coenia grisea) mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis) mournful duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus) white (common) checkered-skipper (Pyrgus albescens) Other orange sulphur (Colias eurytheme) sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina)	mila ringlet (Coenonympha californica) Pieris rapae) mon) white (Pontia protodice) sisymbrii) mourming cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis) mournful duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus) ark (Calephelis wrighti) Colias eurytheme) furema nicippe) Phoebus sennae marcellina) nur Column Subtotal Column Subtotal Column Subtotal Column Subtotal The part of Column Subtotal			Table III			
cabbage white (Pieris rapae) checkered (common) white (Pontia protodice) spring white (P. sisymbrii) unidentified white Metalmarks Behr's metalmark (Apodemia mormo virgulti) Wright's metalmark (Calephelis wrighti) Sulphurs orange sulphur (Colias eurytheme) sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina) common buckeye (Junonia coenia grisea) mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis) mourning cloak (Nymphalis antiopa) skippers funereal duskywing (Erynnis funeralis) mourning cloak (Nymphalis antiopa) skippers funereal duskywing (Erynnis funeralis) mourning cloak (Nymphalis antiopa) skippers funereal duskywing (Erynnis funeralis) mourning cloak (Nymphalis antiopa) skippers funereal duskywing (Erynnis funeralis) mourning cloak (Nymphalis antiopa) skippers funereal duskywing (Erynnis funeralis) mourning cloak (Nymphalis antiopa) skippers funereal duskywing (Erynnis funeralis) mourning cloak (Nymphalis antiopa) skippers funereal duskywing (Erynnis funeralis) mourning cloak (Nymphalis antiopa) skippers funereal duskywing (Erynnis funeralis) mourning cloak (Nymphalis antiopa) skippers funereal duskywing (Erynnis funeralis) mourning cloak (Nymphalis antiopa) skippers funereal duskywing (Erynnis funeralis) mourning cloak (Nymphalis antiopa)	Pieris rapae) mon) white (Pontia protodice) sisymbrii) skippers funereal duskywing (Erynnis funeralis) mournful duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus) ark (Calephelis wrighti) Colias eurytheme) Un - En & Staper Constock for till ary Phoebus sennae marcellina) nur Column Subtotal 251 Constock Column Subtotal Column Subtotal Column Subtotal Column Subtotal			ornica) ILL ILL IN			
checkered (common) white (Pontia protodice) spring white (P. sisymbrii) unidentified white Metalmarks Behr's metalmark (Apodemia mormo virgulti) Wright's metalmark (Calephelis wrighti) Sulphurs Other Orange sulphur (Colias eurytheme) sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina) mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis) mournful duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus) white (common) checkered-skipper (Pyrgus albescens) Other Constock for hill any cloudless sulfur (Phoebus sennae marcellina)	mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis) mournful duskywing (Erynnis tristis) ik (Apodemia mormo virgulti) ark (Calephelis wrighti) Colias eurytheme) Colias eurytheme) Comstock fortill ary Phoebus sennae marcellina) Outher Column Subtotal Column Subtotal Column Subtotal Column Subtotal A skippers funereal duskywing (Erynnis funeralis) mournful duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus) white (common) checkered-skipper (Pyrgus albescens) Other Comstock fortill ary III Column Subtotal 35			10 10 110		9a)	MILI
spring white (P. sisymbrii) unidentified white Metalmarks Behr's metalmark (Apodemia mormo virgulti) Wright's metalmark (Calephelis wrighti) Sulphurs orange sulphur (Colias eurytheme) sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina) Skippers funcreal duskywing (Erynnis funeralis) mournful duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus) white (common) checkered-skipper (Pyrgus albescens) Other Comstock for hill any cloudless sulfur (Phoebus sennae marcellina)	Skippers funereal duskywing (Erynnis funeralis) mournful duskywing (Erynnis tristis) fur (Apodemia mormo virgulti) wk (Apodemia mormo virgulti) wk (Apodemia mormo virgulti) wk (Apodemia mormo virgulti) wk (Apodemia mormo virgulti) white (common) checkered-skipper (Pyrgus albescens) Other Colias eurytheme) Un - In ed Skipper Un - In e			N			
unidentified white Metalmarks Behr's metalmark (Apodemia mormo virgulti) Wright's metalmark (Calephelis wrighti) Sulphurs orange sulphur (Colias eurytheme) sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina) funereal duskywing (Erynnis funeralis) mournful duskywing (Erynnis funeralis) white (common) checkered-skipper (Pyrgus albescens) Other Constack for full and sulphur Sulphur	funereal duskywing (Erynnis funeralis) mournful duskywing (Erynnis tristis) k (Apodemia mormo virgulti) k (Apodemia mormo virgulti) ark (Calephelis wrighti) white (common) checkered-skipper (Pyrgus albescens) Other Colias eurytheme) Un - 10 20 Stager Constock fortill ary Phoebus sennae marcellina) nur Column Subtotal 251 Column Subtotal 35				Skippers		+1=1
Metalmarks Behr's metalmark (Apodemia mormo virgulti) Wright's metalmark (Calephelis wrighti) Sulphurs Orange sulphur (Colias eurytheme) sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina) mournful duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus) white (common) checkered-skipper (Pyrgus albescens) Other Comstock for hill any County Sulphur	mournful duskywing (Erynnis tristis) k (Apodemia mormo virgulti) many fiery skipper (Hylephila phyleus) white (common) checkered-skipper (Pyrgus albescens) Other Colias eurytheme) Un TO 20 Skipper Comstock fortill any Phoebus sennae marcellina) Octions Subtotal Column Subtotal 251 Column Subtotal Till	1		WH.	funereal duskywing (Erynnis funeralis)		111+3=
Wright's metalmark (Calephelis wrighti) Sulphurs Other orange sulphur (Colias eurytheme) sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina) white (common) checkered-skipper (Pyrgus albescens) Un - 10 ed Skipper Constock for fill any cloudless sulfur (Phoebus sennae marcellina)	white (common) checkered-skipper (Pyrgus albescens) Other Colias eurytheme) Furema nicippe) Phoebus sennae marcellina) Outhry Sulphur Column Subtotal 251 White (common) checkered-skipper (Pyrgus albescens) (A - 20 ed Skipper Comstock fortill any I - 20 ed Skipper Comstock fortill any Column Subtotal 35		S				1
Wright's metalmark (Calephelis wrighti) Sulphurs Other orange sulphur (Colias eurytheme) sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina) white (common) checkered-skipper (Pyrgus albescens) Un - 10 ed Skipper Constock for fill any cloudless sulfur (Phoebus sennae marcellina)	white (common) checkered-skipper (Pyrgus albescens) Other Colias eurytheme) Furema nicippe) Phoebus sennae marcellina) Outhry Column Subtotal Column Subtotal Other Column Subtotal	Behr's meta	almark (Apodemia mormo virgulti)	H H W H H H B K	fiery skipper (Hylephila phyleus)		
Sulphurs orange sulphur (Colias eurytheme) sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina) Oxforty Sulphur	Colias eurytheme) Curema nicippe) Phoebus sennae marcellina) Outhry Sulphur Column Subtotal 251 Other Un - 20 ed Skipper Comstock fortillary It 3 - 9 Column Subtotal 35		etalmark (Calephelis wrighti)		white (common) checkered-skipper (Py	rgus albescens)	1+6=
orange sulphur (Colias eurytheme) sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina) Oxinty Sulphur	Phoebus sennae marcellina) Column Subtotal 251 Comstock factiliary Column Subtotal 35	Sulphurs			Other		
sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina) Comstock factiliany cloudless sulfur (Phoebus sennae marcellina)	Phoebus sennae marcellina) Column Subtotal 251 Comstock fintillary Comstock fintillary Column Subtotal 35	orange sulp	hur (Colias eurytheme)		un-soled skipper	and the second	1
cloudless sulfur (Phoebus sennae marcellina) Oathly Sulphur	Phoebus sennae marcellina) Oathly Sulphur Column Subtotal 251 Column Subtotal 35	sleepy oran	ge (Eurema nicippe)				1+3=0
unidentified sulphur	Column Subtotal 251 Column Subtotal 35	cloudless su	ılfur (Phoebus sennae marcellina)				1
dilidentinos seipris.	Column Subtotal 251 Column Subtotal 35	unidentified			0 11"		

				spot Butterfly Survey Form		
				134388-3) Date: <u>2</u>		
Site Nan	ne: <u>JPD-08 Proctor Valley – Vill</u> äge	14 of O	tay Ranch	Poly E Site Visit	No: 4	
Acres S	urveyed <u>51</u> Su	arvey Tir	ne: 6 h	Acres per Hour:	8.5	
Other S	urveyors Present:					
			Field ature (*F)	1 Conditions	Cloud Cox	and the second s
	1	- C	ature (F)			
Start	0945	62	<u></u>	1-3	5% cover	
End	1245	76)	4-8 (gust to 14)	10% cover	(w/ haze
Start						
End						
Vanatati	on Communition Surroyad line de	minont	con)			
	on Communities Surveyed (inc. do			255 (Agt al Hallan 5 d agi	7-110- Esta	
chap	(Adefar, Xylac, Mallau, C	ed 10m	, knacro)	CSS (Artcal, Mallau, Salapi,	Dahlac, balm	vn)
flower	ng: chamise, munz sage, dren	weed 1	olundicles.	, viquer, to poppy toodium opp.,	Ericon, Salcol	
Host Pla	ints		Obs.	Nectar Plants		Obs.
dwarf pla	intain (<i>Plantago erecta</i>)		V	popcorn flower (Cryptantha/Plagiobothr	ys spp.)	V
	wl's clover (Castilleja exserta)			goldfields (Lasthenia spp.)		
	gon (Antirrhinum coulterianum) ြာ	ul rorette	conly /	goldenstar (Muilla spp.)		
	ak (Cordylanthus rigidus)			fiddleneck (Amsinckia menziesii var. int	rermedia)	V
	antain (<i>Plantago patagonica</i>) houses (<i>Collinsia</i> spp.)		<u> </u>	onion (<i>Allium</i> spp.) buckwheat (<i>Eriogonum fasciculatum</i>)		V
Chinese	nouses (Comnisia spp.)			ground pink (Linanthus dianthiflorus)		
Host Pla	ent Mapping Updated (circle) Ye	es)	No	New Area or Existing Area (circle)	New Existing	Both
	updated (list) Place Carex	5, An	rtcov - 5	ee back		
Butterfly	Species	<u>'</u>	No.	Butterfly Species		
	-P					NO.
Checker	spots			Hairstreaks		No.
	patch (Chlosyne californica)				corcorani)	No.
California	<u> </u>		1	Hairstreaks	corcorani)	No.
California Gabb's cl Quino che	patch (Chlosyne californica) neckerspot (C. gabbii) eckerspot (Euphydryas editha quino)		1	Hairstreaks great purple hairstreak (Atlides halesus of brown elfin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dume	etorum affinis)	No.
California Gabb's ch Quino che chalcedor	patch (Chlosyne californica) neckerspot (C. gabbii) eckerspot (Euphydryas editha quino) n checkerspot (E. chalcedona chalced			Hairstreaks great purple hairstreak (Atlides halesus of brown elfin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dume gray hairstreak (Strymon melinus pudica	etorum affinis)	No.
California Gabb's ch Quino ch chalcedor Leanira c	patch (Chlosyne californica) neckerspot (C. gabbii) eckerspot (Euphydryas editha quino) n checkerspot (E. chalcedona chalcecheckerspot (Thessalia leanira wrighti)			Hairstreaks great purple hairstreak (Atlides halesus of brown eifin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dume gray hairstreak (Strymon melinus pudica Ladies/Admirals	etorum affinis))	NO.
California Gabb's ch Quino che chalcedor Leanira ch Mylitta cre	patch (Chlosyne californica) neckerspot (C. gabbii) eckerspot (Euphydryas editha quino) n checkerspot (E. chalcedona chalced			Hairstreaks great purple hairstreak (Atlides halesus of brown eifin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dume gray hairstreak (Strymon melinus pudica Ladies/Admirals California sister (Adelpha bredowii califor	etorum affinis))	NO.
California Gabb's cl Quino che chalcedor Leanira cl Mylitta cre Blues	patch (Chlosyne californica) neckerspot (C. gabbii) eckerspot (Euphydryas editha quino) n checkerspot (E. chalcedona chalced heckerspot (Thessalia leanira wrighti) escent (Phyciodes mylitta)		1	Hairstreaks great purple hairstreak (Atlides halesus of brown eifin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dume gray hairstreak (Strymon melinus pudica Ladies/Admirals California sister (Adelpha bredowii califor Lorquin's admiral (Limenitis lorquini)	etorum affinis))	NO.
California Gabb's cl Quino che chalcedor Leanira cl Mylitta cre Blues western p	patch (Chlosyne californica) neckerspot (C. gabbii) eckerspot (Euphydryas editha quino) n checkerspot (E. chalcedona chalced neckerspot (Thessalia leanira wrighti) escent (Phyciodes mylitta) rygmy-blue (Brephidium exila)			Hairstreaks great purple hairstreak (Atlides halesus of brown eifin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dume gray hairstreak (Strymon melinus pudica Ladies/Admirals California sister (Adelpha bredowii califortuini's admiral (Limenitis Iorquini') west coast lady (Vanessa annabella)	etorum affinis))	No.
California Gabb's ch Quino che chalcedon Leanira ch Mylitta cre Blues westem p	patch (Chlosyne californica) neckerspot (C. gabbii) eckerspot (Euphydryas editha quino) n checkerspot (E. chalcedona chalced heckerspot (Thessalia leanira wrighti) escent (Phyciodes mylitta) nygmy-blue (Brephidium exila) ailed blue (Everes amyntula)	3		Hairstreaks great purple hairstreak (Atlides halesus of brown eifin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dume gray hairstreak (Strymon melinus pudica Ladies/Admirals California sister (Adelpha bredowii califortuini's admiral (Limenitis lorquini) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria)	etorum affinis))	No.
California Gabb's cl Quino che chalcedor Leanira cl Mylitta cre Blues western p western ts	patch (Chlosyne californica) neckerspot (C. gabbii) eckerspot (Euphydryas editha quino) n checkerspot (E. chalcedona chalced neckerspot (Thessalia leanira wrighti) escent (Phyciodes mylitta) rygmy-blue (Brephidium exila)	3		Hairstreaks great purple hairstreak (Atlides halesus of brown eifin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dume gray hairstreak (Strymon melinus pudica Ladies/Admirals California sister (Adelpha bredowii califortuini's admiral (Limenitis Iorquini') west coast lady (Vanessa annabella)	etorum affinis))	No.
California Gabb's cl Quino che chalcedon Leanira cl Mylitta cre Blues western p western to southern Edward's Acmon bl	patch (Chlosyne californica) neckerspot (C. gabbii) neckerspot (Euphydryas editha quino) n checkerspot (E. chalcedona chalcedone chalcedone chalcedone chalcedone chalcedone chalcedone (Phyciodes mylitta) nygmy-blue (Brephidium exila) niled blue (Everes amyntula) blue (Glaucopsyche lygdamus austra blue (Hemiargus ceraunus gyas) ue (Icaricia acmon acmon)	3		Hairstreaks great purple hairstreak (Atlides halesus of brown elfin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dume gray hairstreak (Strymon melinus pudica Ladies/Admirals California sister (Adelpha bredowii califorthorquin's admiral (Limenitis lorquini) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiensis) unidentified lady (Vanessa sp.)	etorum affinis))	No.
California Gabb's cl Quino che chalcedon Leanira cl Mylitta cre Blues western p western ts southern Edward's Acmon bl marine bli	patch (Chlosyne californica) neckerspot (C. gabbii) neckerspot (Euphydryas editha quino) neckerspot (E. chalcedona chalce	3		Hairstreaks great purple hairstreak (Atlides halesus of brown elfin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dume gray hairstreak (Strymon melinus pudica Ladies/Admirals California sister (Adelpha bredowii califorthorquin's admiral (Limenitis lorquini) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiensis) unidentified lady (Vanessa sp.) Swallowtails	etorum affinis))	No.
California Gabb's cl Quino che chalcedor Leanira cl Mylitta cre Blues western p western ts southern Edward's Acmon bl marine bli unidentifie	patch (Chlosyne californica) neckerspot (C. gabbii) neckerspot (Euphydryas editha quino) neckerspot (E. chalcedona chalce	3		Hairstreaks great purple hairstreak (Atlides halesus of brown elfin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dume gray hairstreak (Strymon melinus pudica Ladies/Admirals California sister (Adelpha bredowii califorthoria sister (Adelpha bredowii califorthoria sister (Amenitis lorquini) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiensis) unidentified lady (Vanessa sp.) Swallowtalls pale swallowtail (Papilio eurymedon)	etorum affinis))	No.
California Gabb's cl Quino che chalcedon Leanira cl Mylitta cre Blues western p western ts southern Edward's Acmon bl marine bl unidentifie Whites	patch (Chlosyne californica) neckerspot (C. gabbii) neckerspot (Euphydryas editha quino) neckerspot (E. chalcedona chalce) atis)		Hairstreaks great purple hairstreak (Atlides halesus of brown eifin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dume gray hairstreak (Strymon melinus pudica Ladies/Admirals California sister (Adelpha bredowii califorthoria sister (Adelpha bredowii califorthoria sister (Amenitis lorquini) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiensis) unidentified lady (Vanessa sp.) Swallowtalls pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rufulus)	etorum affinis))	No.
California Gabb's cl Quino che chalcedon Leanira cl Mylitta cre Blues western p western ts southern Edward's Acmon bl marine bl unidentifie Whites Sara oran	patch (Chlosyne californica) neckerspot (C. gabbii) neckerspot (Euphydryas editha quino) n checkerspot (E. chalcedona cha) atis)	72_	Hairstreaks great purple hairstreak (Atlides halesus of brown eifin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dume gray hairstreak (Strymon melinus pudica Ladies/Admirals California sister (Adelpha bredowii califorthoria sister (Adelpha bredowii califorthoria) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiensis) unidentified lady (Vanessa sp.) Swallowtalls pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rufulus) anise swallowtail (P. zelicaon)	etorum affinis))	No.
California Gabb's cl Quino che chalcedon Leanira cl Mylitta cre Blues western p western ts southern Edward's Acmon bl marine bl unidentifie Whites Sara oran desert (Fe	patch (Chlosyne californica) neckerspot (C. gabbii) neckerspot (Euphydryas editha quino) n checkerspot (E. chalcedona cha	idis)	72_	Hairstreaks great purple hairstreak (Atlides halesus of brown eifin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dume gray hairstreak (Strymon melinus pudica Ladies/Admirals California sister (Adelpha bredowii califorthoria sister (Adelpha bredowii califorthoria sister (Amenitis lorquini) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiensis) unidentified lady (Vanessa sp.) Swallowtalls pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rufulus)	etorum affinis))	No.
California Gabb's cl Quino che chalcedon Leanira cl Mylitta cre Blues western p western tr southern Edward's Acron bl marine bli unidentifie Whites Sara oran desert (Fe common of	patch (Chlosyne californica) neckerspot (C. gabbii) neckerspot (Euphydryas editha quino) n checkerspot (E. chalcedona cha	idis)		Hairstreaks great purple hairstreak (Atlides halesus of brown eifin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dume gray hairstreak (Strymon melinus pudica Ladies/Admirals California sister (Adelpha bredowii califor Lorquin's admiral (Limenitis lorquini) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiensis) unidentified lady (Vanessa sp.) Swallowtalls pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Miscellaneous monarch (Danaus plexippus) common buckeye (Junonia coenia grisea	etorum affinis))) mica)	No.
California Gabb's cl Quino che chalcedon Leanira cl Mylitta cre Blues western p western tr southern Edward's Acron bl marine bli unidentifie Whites Sara oran desert (Fe common cl	patch (Chlosyne californica) neckerspot (C. gabbii) neckerspot (Euphydryas editha quino) n checkerspot (E. chalcedona cha	idis)	72_	Hairstreaks great purple hairstreak (Atlides halesus of brown eifin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dume gray hairstreak (Strymon melinus pudica Ladies/Admirals California sister (Adelpha bredowii califortheau in the california sister (Adelpha bredowii california in the california sister (Adelpha bredowii california in the california sister (Adelpha bredowii california in the california	etorum affinis))) mica)	No.
California Gabb's cl Quino che chalcedol Leanira cl Mylitta cre Blues western p western t southern Edward's Acmon bl marine bli unidentifie Whites Sara oran desert (Fe common c cabbage o checkered spring wh	patch (Chlosyne californica) neckerspot (C. gabbii) neckerspot (Euphydryas editha quino) neckerspot (E. chalcedona chalce	idis)	72_	Hairstreaks great purple hairstreak (Atlides halesus of brown elfin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dume gray hairstreak (Strymon melinus pudica Ladies/Admirals California sister (Adelpha bredowii califorthe Lorquin's admiral (Limenitis lorquini) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiensis) unidentified lady (Vanessa sp.) Swallowtails pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Miscellaneous monarch (Danaus plexippus) common buckeye (Junonia coenia grises mourning cloak (Nymphalis antiopa) Skippers	etorum affinis))) mica)	No.
California Gabb's cl Quino che chalcedol Leanira cl Mylitta cre Blues western p western to southern Edward's Acmon bl marine bli unidentifie Whites Sara oran desert (Fe common cl cabbage of checkeree spring wh unidentifie	patch (Chlosyne californica) neckerspot (C. gabbii) neckerspot (Euphydryas editha quino) neckerspot (Euchydryas editha quino) neckerspot (E. chalcedona ch	idis)	72_	Hairstreaks great purple hairstreak (Atlides halesus of brown eifin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dume gray hairstreak (Strymon melinus pudica Ladies/Admirals California sister (Adelpha bredowii califor Lorquin's admiral (Limenitis lorquini) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiensis) unidentified lady (Vanessa sp.) Swallowtalls pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Miscellaneous monarch (Danaus plexippus) common buckeye (Junonia coenia grisea mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis)	etorum affinis))) mica)	No.
California Gabb's cl Quino che chalcedon Leanira cl Mylitta cre Blues western p western te southern Edward's Acmon bl marine bli unidentifie Whites Sara oran desert (Fe common cl cabbage of checkered spring wh unidentifie Metalmar	patch (Chlosyne californica) neckerspot (C. gabbii) neckerspot (Euphydryas editha quino) n checkerspot (E. chalcedona cha	lis)	72_	Hairstreaks great purple hairstreak (Atlides halesus of brown eifin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dume gray hairstreak (Strymon melinus pudica Ladies/Admirals California sister (Adelpha bredowii califor Lorquin's admiral (Limenitis lorquini) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiensis) unidentified lady (Vanessa sp.) Swallowtalls pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Miscellaneous monarch (Danaus plexippus) common buckeye (Junonia coenia grisea mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis) mournful duskywing (Erynnis tristis)	etorum affinis))) mica)	No.
California Gabb's cl Quino che chalcedon Leanira cl Mylitta cre Blues western p western th southern Edward's Acmon bl marine bl unidentifie Whites Sara oran desert (Fe common cl cabbage of checkeree spring wh unidentifie Metalmar Behr's me	patch (Chlosyne californica) neckerspot (C. gabbii) neckerspot (Euphydryas editha quino) neckerspot (Euchydryas editha quino) neckerspot (Thessalia leanira wrighti) neckerspo	lis)	72_	Hairstreaks great purple hairstreak (Atlides halesus of brown eifin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dume gray hairstreak (Strymon melinus pudica Ladies/Admirals California sister (Adelpha bredowii califor Lorquin's admiral (Limenitis lorquini) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiensis) unidentified lady (Vanessa sp.) Swallowtalls pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Miscellaneous monarch (Danaus plexippus) common buckeye (Junonia coenia grisea mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis) ifery skipper (Hylephila phyleus)	etorum affinis) mica)	No.
California Gabb's cl Quino che chalcedon Leanira cl Mylitta cre Blues western p western to southern Edward's Acmon bl marine blu unidentifie Whites Sara oran desert (Fe common cl cabbage of checkered spring wh unidentifie Metalmar Behr's me Wright's ne	patch (Chlosyne californica) neckerspot (C. gabbii) neckerspot (Euphydryas editha quino) neckerspot (Euchydryas editha quino) neckerspot (Thessalia leanira wrighti)	lis)	72_	Hairstreaks great purple hairstreak (Atlides halesus of brown eifin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dume gray hairstreak (Strymon melinus pudica Ladies/Admirals California sister (Adelpha bredowii califor Lorquin's admiral (Limenitis lorquini) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiensis) unidentified lady (Vanessa sp.) Swallowtalls pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Miscellaneous monarch (Danaus plexippus) common buckeye (Junonia coenia grisea mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis) mournful duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus) white (common) checkered-skipper (Pyrg	etorum affinis) mica)	1
California Gabb's cl Quino che chalcedon Leanira cl Mylitta cre Blues western p western th southern Edward's Acmon bl marine bl unidentifie Whites Sara oran desert (Fe common cl cabbage of checkered spring wh unidentifie Metalmar Behr's me Wright's ne	patch (Chlosyne californica) neckerspot (C. gabbii) neckerspot (Euphydryas editha quino) neckerspot (Euchydryas editha quino) neckerspot (Thessalia leanira wrighti)	lis)	72_	Hairstreaks great purple hairstreak (Atlides halesus of brown eifin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dume gray hairstreak (Strymon melinus pudica Ladies/Admirals California sister (Adelpha bredowii califor Lorquin's admiral (Limenitis lorquini) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiensis) unidentified lady (Vanessa sp.) Swallowtalls pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Miscellaneous monarch (Danaus plexippus) common buckeye (Junonia coenia grisea mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis) ifery skipper (Hylephila phyleus)	etorum affinis) mica)	1
California Gabb's cl Quino che chalcedon Leanira cl Mylitta cre Blues western p western th southern Edward's Acmon bl marine bl unidentifie Whites Sara oran desert (Fe common cl cabbage of checkered spring wh unidentifie Metalmar Behr's me Wright's ne Sulphurs orange su	patch (Chlosyne californica) neckerspot (C. gabbii) neckerspot (Euphydryas editha quino) neckerspot (Euchydryas editha quino) neckerspot (Thessalia leanira wrighti)	lis)	72_	Hairstreaks great purple hairstreak (Atlides halesus of brown eifin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dume gray hairstreak (Strymon melinus pudica Ladies/Admirals California sister (Adelpha bredowii califor Lorquin's admiral (Limenitis lorquini) west coast lady (Vanessa annabella) red admiral (V. atalanta rubria) painted lady (V. cardui) American (Virginia) lady (V. virginiensis) unidentified lady (Vanessa sp.) Swallowtalls pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon) Miscellaneous monarch (Danaus plexippus) common buckeye (Junonia coenia grisea mourning cloak (Nymphalis antiopa) Skippers funereal duskywing (Erynnis funeralis) mournful duskywing (Erynnis tristis) fiery skipper (Hylephila phyleus) white (common) checkered-skipper (Pyrg	etorum affinis) mica)	1

Column Subtotal Total

(00)

unidentified sulphur

Column Subtotal

98

Plaerc - # (denaily); coord 100-500 (100/m²); 32.63731,-116.87396

Casexs - # (density); coord ~50 (~15-20/m²); 32.68741, -116.87862 ~10 (5/m²); 32.68736, -116.87796 ~25 ($\pm 20/m²$); 32.68733, -116.87778 4 (2/m²); 32.68731, -116.87778 4 (2/m²); 32.68731, -116.87778 3 (3/m²); 32.68723, -116.87759 3 ($\pm 2/m²$); 32.68723, -116.87759 3 ($\pm 2/m²$); 32.68716, -116.87714 30 (5-10/m²); 32.68794, -116.87714 30 (5-10/m²); 32.68782, -116.87710 3 (3/m²); 32.68777, -116.87708 1; 32.68745, -116.87730 3 (3/m²); 32.68698, -116.87701

Antrou

possible Antrou, baral vorette - 32.63569, -116.88131 (some indiv obr 11 Mar 2016)

ırveyor	/)	FFMAN)	spot Butterfly Survey Form Date: 03 24 16	
100	e: JPD-08 Proctor Valley - V			Site Visit No: 5	4 2
	veyed EQ R Acres	Surveyed	20	Survey Time: & Hours Acres per Hour:	
			-		
ner Su	rveyors Present: NOM	<u></u>			
				d Conditions Wind Speed (mph) Cloud Co	/er
	Time (24 hr)	Tempera			
tart	0830	63		0-2	
nd	1330	હ ા	A 1981 W 12 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1-4	
tart	1400	82		2-4 Ø	
End	1700	76		2-6	
	1 170-	7 4			
egetati	ion Communities Surveyed (ir	nc. dominant s	pp.)		
	Cuary C Culara	2001-	IDASO	al saur surus, Mon nanvelle	SSCANS
	CHAM'SE CHAPA	w	<u> </u>		
					Obs.
ost Pla	ants		Obs.	Nectar Plants	×
	antain (<i>Plantago erecta</i>)		_ \Z _	popcorn flower (Cryptantha/Plagiobothrys spp.)	×
urple o	wi's clover (Castilleja exserta)		φ	goldfields (<i>Lasthenia</i> spp.) goldenstar (<i>Muilla</i> spp.)	
	gon (Antirrhinum coulterianum)			fiddleneck (Amsinckia menziesii var. intermedia)	
	ak (Cordylanthus rigidus)			onion (Allium spp.)	X
	olantain (Plantago patagonica)			buckwheat (Eriogonum fasciculatum)	X
hinese	houses (Collinsia spp.)			ground pink (Linanthus dianthiflorus)	¥
loet DI	ant Mapping Updated (circle)	Yes	No	New Area or Existing Area (circle) New Existing	Both
	s updated (list)				
pecie	s upuateu (list)				No.
utterfly	y Species		No.	Butterfly Species	140.
	rspots			Hairstreaks	+
	ia patch (Chlosyne californica)		1	great purple hairstreak (Atlides halesus corcorani)	
	checkerspot (C. gabbii)		2	brown elfin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dumetorum affinis)	+
uino cl	heckerspot (Euphydryas editha	quino)		gray hairstreak (Strymon melinus pudica)	
	on checkerspot (E. chalcedona			Ladies/Admirals	
	checkerspot (Thessalia leanira crescent (Phyciodes mylitta)	wrigitu)	<u> </u>	California sister (Adelpha bredowii californica)	1
lues	rescent (Frigorodes irigina)			Lorquin's admiral (Limenitis Iorquini)	
	pygmy-blue (Brephidium exila)			west coast lady (Vanessa annabella)	1
	tailed blue (Everes amyntula)			red admiral (V. atalanta rubria)	1
outher	n blue (Glaucopsyche lygdamus	australis)		painted lady (V. cardui)	
	's blue (Hemiargus ceraunus gy			American (Virginia) lady (V. virginiensis)	
	blue (Icaricia acmon acmon)			unidentified lady (Vanessa sp.)	
	blue (Leptotes marina)		1	Swallowtails	-
	ified blue		ļ	pale swallowtail (Papilio eurymedon)	1 2
Vhites			65	western tiger swallowtail (P. rutulus) anise swallowtail (P. zelicaon)	+
	angetip (Anthocharis sara sara) Felder's) orangetip (A. cethura)		97	Miscellaneous	+
	n California ringlet (Coenonympi	ha californica)	14	monarch (Danaus plexippus)	
	e white (Pieris rapae)	valiotillou)	1,,	common buckeye (Junonia coenia grisea)	12
	red (common) white (Pontia proj	todice)	8	mourning cloak (Nymphalis antiopa)	+
	vhite (P. sisymbrii)		1	Skippers	1
	ified white			funereal duskywing (Erynnis funeralis)	2
Aetalm	arks		\sim	mournful duskywing (Erynnis tristis)	1-
	metalmark (<i>Apodemia mormo vi</i>		49	fiery skipper (Hylephila phyleus)	
	s metalmark (Calephelis wrighti)			white (common) checkered-skipper (Pyrgus albescens)	
ulphu				Other	
	sulphur (Colias eurytheme)			(SEGYERIA CALLYPE)	3
ееру с	orange (Eurema nicippe)	vollina\	 	(SPEYELIA CAUIVEE)	
	ss sulfur (<i>Phoebus sennae marc</i> ified sulphur	omid)	ļ		
	nicu Sulphui		1		

3

В

TOTAL

159

Surveyor Chez Brungraber	Date: 3/29/16
Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch	Site Visit No: 5
Area Surveyed EF part Acres Surveyed 30	Survey Time: 3hr 15mh Acres per Hour: 9.2
Other Surveyors Present:	

		Field	Conditions	
	Time (24 hr)	Temperature ('F)	Wind Speed (mph)	Cloud Cover
Start	1100	60.1	4-9	35 %
End	1415	63	4-9, gusts to 17	40%
Start			1, 9,000	
End				

Vegetation Communities Surveyed (inc. dominant spp.)

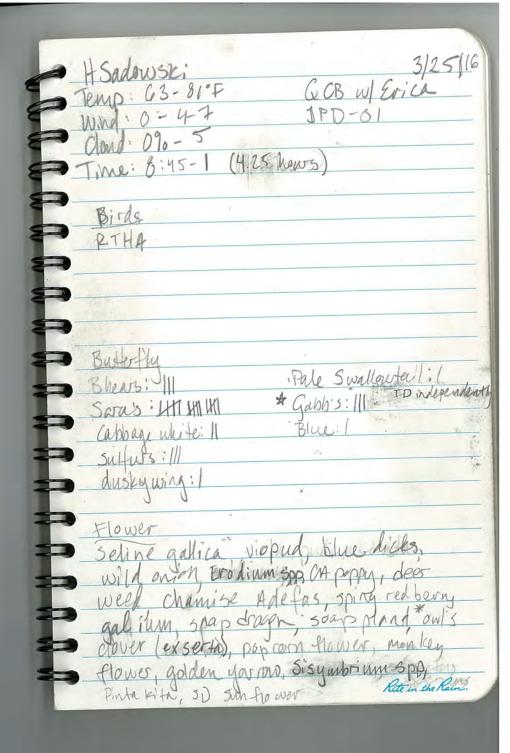
Host Plants	Obs.	Nectar Plants	Obs.
dwarf plantain (Plantago erecta)		popcorn flower (Cryptantha/Plagiobothrys spp.)	9ur
purple owl's clover (Castilleja exserta)		goldfields (Lasthenia spp.)	
snapdragon (Antirrhinum coulterianum)		goldenstar (Muilla spp.)	Pur
birds-beak (Cordylanthus rigidus)		fiddleneck (Amsinckia menziesii var. intermedia)	
woolly plantain (Plantago patagonica)		onion (Allium spp.)	
Chinese houses (Collinsia spp.)		buckwheat (Eriogonum fasciculatum)	Plur
		ground pink (Linanthus dianthiflorus)	
Host Plant Mapping Updated (circle) Yes No	0)	New Area or Existing Area (circle) New Existing	Both
Species updated (list)			

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

	2016 Quin	o Checkers	spot Butterfly Survey Form		
Surveyor	: EVIK LA COSTE		Date:	3/25/16	
Site Nam	e: JPD-08 Proctor Valley - Village 14 of			. 5	
	veyed 5, F Acres Surveyed			Acres per Hour:	9.9
Other Su	rveyors Present: ERICA HAMIS	Hin	anda Sarauski Lucas	m. 2401)	1.0
Other ou	resolution and a second	- 1	V V	nincoj	
			Conditions		
		erature (°F)	Wind Speed (mph)	Cloud Cov	rer
Start	0830 Am 63		0-1	0	
End	1: 60 pm 32	_	4-7	0	
Start					
End					
M					
	on Communities Surveyed (inc. dominar		<i>y</i> -		
Cha	parral, CSS, NNG,	NG, C	chamise chaparral		
H		1 01-			01-
Host Plan	eox .	Obs.	Nectar Plants	avo con)	Obs.
	ntain (Plantago erecta) I's clover (Castilleja exserta)	1./	popcorn flower (Cryptantha/Plagiobothi	ys spp.)	
	on (Antirrhinum coulterianum)	-	goldfields (<i>Lasthenia</i> spp.) goldenstar (<i>Muilla</i> spp.)		
	k (Cordylanthus rigidus)	-	fiddleneck (Amsinckia menziesii var. int	termedia)	
	antain (Plantago patagonica)	+	onion (Allium spp.)	ermediaj	
-	nouses (Collinsia spp.)		buckwheat (Eriogonum fasciculatum)		
0111110001	iodoce (comincia opp.)		ground pink (<i>Linanthus dianthiflorus</i>)		/
Host Plan	nt Mapping Updated (circle) Yes	No	New Area or Existing Area (circle)	New Existing	Both
Species	updated (list)				
		1			
Butterfly :	··	No.	Butterfly Species		No.
Checkers	•		Hairstreaks		
	patch (Chlosyne californica)		great purple hairstreak (Atlides halesus	corcorani)	-
	eckerspot (C. gabbii)	11	brown elfin (Callophrys augustinus)	atanum official	
	ckerspot (Euphydryas editha quino) checkerspot (E. chalcedona chalcedona)		bramble (perplexing) hairstreak (C. dumi		
	neckerspot (Thessalia leanira wrighti)		Ladies/Admirals)	
	escent (Phyciodes mylitta)		California sister (Adelpha bredowii califo	mica)	1
Blues	ocent (i nyolease mymta)		Lorquin's admiral (Limenitis lorquini)	nnou)	1
western p	ygmy-blue (Brephidium exila)		west coast lady (Vanessa annabella)		
	illed blue (Everes amyntula)		red admiral (V. atalanta rubria)		
	olue (Glaucopsyche lygdamus australis)	. 1	painted lady (V. cardui)		
Edward's	blue (Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis)		
Acmon blu	ue (Icaricia acmon acmon)		unidentified lady (Vanessa sp.)		4
marine blu	ne (Leptotes marina)	1	Swallowtails		,
unidentifie	ed blue	5	pale swallowtail (Papilio eurymedon)	龙	1
Whites			western tiger swallowtail (P. rutulus)		
	getip (Anthocharis sara sara)	83	anise swallowtail (P. zelicaon)	8	2
	elder's) orangetip (A. cethura)		Miscellaneous		
	California ringlet (Coenonympha californica)	1	monarch (Danaus plexippus)	a)	
	white (Pieris rapae)		common buckeye (Junonia coenia grise	a)	
	I (common) white (Pontia protodice) 1 (P. sisymbrii)	11	mourning cloak (Nymphalis antiopa) Skippers		
unidentifie		4	funereal duskywing (Erynnis funeralis)	R.	7
Metalmar			mournful duskywing (<i>Erynnis tunerais</i>)	N	T
	talmark (Apodemia mormo virgulti)	100 27			
	netalmark (Calephelis wrighti)	1 000 L+	white (common) checkered-skipper (<i>Pyr</i>	gus albescens) 7	1
Sulphurs			Other	3-2 2.23000110)	
	lphur (Colias eurytheme)				
	nge (Eurema nicippe)			-112.11-2.	
	sulfur (Phoebus sennae marcellina)				
unidentifie	d sulphur	8			1.

Column Subtotal

Column Subtotal Total JPD DS EncaH 3123/10 QCB #5 (G/F) Start: 830, 63°F,0-1,0°6 STOP 1300, 81°F, 4-7 Bibs: Erik Littanrah Stsuper ANHIU MOMO CATH UtmE 1201 13 NST CORA mono. CATT RITHA RICO WREN COHU ANCIR LEUO PESP selasponia BIJR granite sany 1.2 MESTERNITER COMPTICUO Anise 1 Spring III reral 11 Blue IIII CASISTER 1 BEN'S HTIII et in hi Sabbis Hr III Sulphur III 1111 HIT HIT HIT HIT AHT COLD THE ME THE THE III ull'olarvia pur, sis bel, calspl, Sul munipent ceurea cas aff, Lir did yuc whipper whim, this inc. si Lir did allium, son chus, Dic cap, en con es cal cale fus cal mac, yuc whip escal cale fus cal mac, yuc whip eryptant rappasols as acricise, ara any Ant nut, that repsolanum Pracie, Enocras s Pracic, Enocrass



Site Name:	JPD-08 Proctor Valley - Village 14 of	Otay Ranch	Site Visit No:	5	
Area Survey	11	100	Survey Time: 5.35 (5.6)	Acres per Hour:	9.8
	yors Present: Talay		nele (supervised in	diviolial)	
Other Surve	yors Present.	a rac	Super visce II	MILIT GOLD)	
			d Conditions		
	Time (24 hr) Temp	erature (°F)	Wind Speed (mph)	Cloud Cov	er
Start	915	71	0		
End	1450	701	0-3	50	
Start	1-130		V		
7.00					
End					
Venetation (Communities Surveyed (inc. dominal	at enn)			
	ACT WANTED TO A CONTROL OF THE PARTY OF THE	it spp.)			
(5), 34	C NNG-				
	,				
			Tw By .		01
Host Plants	(Plantage avents)	Obs.	Nectar Plants	we enn \	01
	n (Plantago erecta)	V	popcorn flower (<i>Cryptantha/Plagiobothr</i> goldfields (<i>Lasthenia</i> spp.)	yo opp.)	V
	clover (Castilleja exserta) Antirrhinum coulterianum)		goldenstar (<i>Muilla</i> spp.)		10.
	Cordylanthus rigidus)		fiddleneck (<i>Amsinckia menziesii</i> var. <i>int</i>	ermedia)	
	in (<i>Plantago patagonica</i>)			most all dim	V
	ses (<i>Collinsia</i> spp.)		buckwheat (Eriogonum fasciculatum)	100	V
			ground pink (Linanthus dianthiflorus)	-	
Host Plant N	lapping Updated (circle) Yes	No	New Area or Existing Area (circle)	New Existing	E
Species upo	ated (list)				
			D. W. M. Caralas		N
Butterfly Spe		No.	Butterfly Species Hairstreaks		- 14
California pat	ch (Chlosyne californica)		great purple hairstreak (Atlides halesus of	corcorani	
	erspot (C. gabbii)	-	brown elfin (Callophrys augustinus)	corcorariij	
	rspot (<i>E. gabbii</i>)		bramble (perplexing) hairstreak (C. dume	etorum affinis)	
	eckerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica		
	kerspot (Thessalia leanira wrighti)		Ladies/Admirals		
	nt (Phyciodes mylitta)		California sister (Adelpha bredowii califo	rnica)	
Blues			Lorquin's admiral (Limenitis lorquini)		
western pygm	y-blue (Brephidium exila)	1	west coast lady (Vanessa annabella)		1
western tailed	blue (Everes amyntula)		red admiral (V. atalanta rubria)		
	(Glaucopsyche lygdamus australis)		painted lady (V. cardui)		4
	(Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis)	1	1
	Icaricia acmon acmon)		unidentified lady (Vanessa sp.)		1
The second second second	Leptotes marina)	12.1	Swallowtails		
unidentified b	lue	li l	pale swallowtail (<i>Papilio eurymedon</i>) western tiger swallowtail (<i>P. rutulus</i>)		
Whites Sara orangeti	n (Anthocharis cara cara) 134	as the also aid	anise swallowtail (<i>P. ratialus</i>)		-
	p (Anthocharis sara sara)	44 411-111 ##	Miscellaneous		
	ornia ringlet (Coenonympha californica)	monarch (Danaus plexippus)		
	e (Pieris rapae)	iu	common buckeye (Junonia coenia grisea	a)	
	ommon) white (Pontia protodice)	- 14	mourning cloak (Nymphalis antiopa)		
spring white (Skippers		
unidentified w		HHATTI	funereal duskywing (Erynnis funeralis)		
Metalmarks			mournful duskywing (Erynnis tristis)		li
	nark (Apodemia mormo virgulti)	AT LATHER LA	fiery skipper (Hylephila phyleus)		
	ılmark (<i>Calephelis wrighti</i>)	. d. lie.	white (common) checkered-skipper (Pyr	gus albescens)	t
Sulphurs			Other		1
	ur (Colias eurytheme)		in hy Sill cher		1
	e (Eurema nicippe)				
	ur (Phoebús sennae marcellina)	19.			
unidentified s		M		Caluma Cubtatal	77
	Column Subto	tal 106		Column Subtotal	17

3/25/16 JPD08 QB5 Areatt -Erifag Eno bot cic Mel ind Mirlae Sonole Acmala Cal mac Bra nig Bah lact Hed cre Cryptantha. Sil gal Eri con Hyp gla Dic Cap Ana and Guhereja Glysmadia placre Spirgularia Phacelia At parts (almost all) from mic Vio ped Galium - 4 petal Salapi Lup bic Acmispon sp Selman Solanum de purple. Laslynis Dei fas - Muilla Mar Ant nut Camisson uns s Esc cal Beertongholiu Mae fre Oxacal Dan pus Sis bel

Sid mal

	11014		spot Butterfly Survey Form	
Surveyor:	1 1		Date:	-
	: JPD-08 Proctor Valley – Village 14 of C		Site Visit No:	91
Area Surv	eyed Acres Surveyed	42	Survey Time: 4:25(4,4) Acres per Hour:	1,5
Other Sur	veyors Present:			
12.		Field	I Conditions	
	Time (24 hr) Tempe	erature (°F)	Wind Speed (mph) Cloud Co	ver
Ctost	11.20 7	C	0-1 /016	
Start	11:20	7	0-1	
End	15:45	2_	0-6	
Start	0			
End				
Vegetatio	n Communities Surveyed (inc. dominan	t spp.)		
NNG	- (85			-
1 1.00	(3)			
Host Plan	ts	Obs.	Nectar Plants	Obs.
27747474	tain (Plantago erecta)	V	popcorn flower (Cryptantha/Plagiobothrys spp.)	V
	's clover (Castilleja exserta)		goldfields (<i>Lasthenia</i> spp.)	
1200	on (Antirrhinum coulterianum)		goldenstar (Muilla spp.)	
	(Cordylanthus rigidus)		fiddleneck (Amsinckia menziesii var. intermedia)	
	ntain (<i>Plantago patagonica</i>)		onion (Allium spp.) almost all dry	1
	ouses (Collinsia spp.)		buckwheat (Eriogonum fasciculatum)	V
	11-7		ground pink (Linanthus dianthiflorus)	
Host Plan	t Mapping Updated (circle) Yes	(No)	New Area or Existing Area (circle) New Existing	Both
Species u	pdated (list)			
Butterfly S	Species	No.	Butterfly Species	No.
Checkers			Hairstreaks	
	oatch (Chlosyne californica)		great purple hairstreak (Atlides halesus corcorani)	
	eckerspot (C. gabbii)		brown elfin (Callophrys augustinus)	
	ckerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	
	checkerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica)	
	eckerspot (Thessalia leanira wrighti)		Ladies/Admirals California sister (Adelpha bredowii californica)	
	scent (Phyciodes mylitta)	-		
Blues	blice (Brankidicus avila)	-	Lorquin's admiral (<i>Limenitis lorquini</i>)	~
	gmy-blue (Brephidium exila)	-	west coast lady (Vanessa annabella) red admiral (V. atalanta rubria)	
	iled blue (Everes amyntula) lue (Glaucopsyche lygdamus australis)	-	painted lady (<i>V. cardui</i>)	
	olue (Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis)	
	e (Icaricia acmon acmon)		unidentified lady (<i>Vanessa</i> sp.)	0
	e (Leptotes marina)	_	Swallowtails	
unidentifie			pale swallowtail (Papilio eurymedon)	
Whites	a blue		western tiger swallowtail (P. rutulus)	
	getip (Anthocharis sara sara) (13)	strut in	anise swallowtail (P. zelicaon)	
	der's) orangetip (A. cethura)	Salved 111	Miscellaneous	
	alifornia ringlet (Coenonympha californica)		monarch (Danaus plexippus)	
	hite (Pieris rapae)		common buckeye (Junonia coenia grisea) (2)	1)
	(common) white (Pontia protodice)	1	mourning cloak (Nymphalis antiopa)	
	te (P. sisymbrii)		Skippers	14-
unidentifie	171	Lit	funereal duskywing (Erynnis funeralis) (3)	in
Metalmari	(S	-	mournful duskywing (Erynnis tristis)	SI CONTRACTOR OF THE PARTY OF T
Behr's me	talmark (Apodemia mormo virguiti)	मामा भा भा	fiery skipper (Hylephila phyleus)	1
Wright's m	etalmark (Calephelis wrighti)	1	white (common) checkered-skipper (Pyrgus albescens)	1
Sulphurs			Other	
	phur (Colias eurytheme)			
	nge (Eurema nicippe)			
	sulfur (Phoebus sennae marcellina)			
unidentifie	7.1	intant	- H	
	Column Subtots		Column Subtotal	7

Total

10008 3.24.10 Melina (GyH) Plaere Dic cap For Cic/but Acm ga Federe Bahlaet Silgal Photolia Smoole Mir lae Macar Amispm &. Branis Convolutions Conference Acus 5006 - Erifes Tso men - Cryphutha Cal mac Erican Dei Fig -(Allium is cry) Wo ped Dupinus sp Calspl caldi Sis bel Salapi Sandala Solanum de purple

Surveyor: MELANIE DICUS, JOHN DICUS	Date: 03-29-2016
Site Name: JPD-08 Proctor Valley – Village 14 of Otay Ranch	Site Visit No: 5
Area Surveyed T, m(42) Acres Surveyed 168	Survey Time: 4.25 ALS Acres per Hour: 8/CKA BU

	Field Conditions					
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover		
Start	1200	60	2 104	30%		
End	1615	60	7-9 mp H	40%		
Start						
End						

Vegetation Communities Surveyed (inc. dominant spp.) CHANGE CHAPANCAL; NNG NDECAL: AROM SSPP.

DCSS: ERODIN SPP. ARTEMISIA CA, E. FACCICULTUM, M. LAURWA
NEWLEGALSS (AUSSUM) LOISTURDED): STIPALIFIDA, BRONUS SPP, ELDDIN SPP

Host Plants	Obs.	Nectar Plants	Obs.
dwarf plantain (Plantago erecta)	×	popcorn flower (Cryptantha/Plagiobothrys spp.)	x
purple owl's clover (Castilleja exserta) / 0 ws for	×	goldfields (Lasthenia spp.)	
snapdragon (Antirrhinum coulterianum)		goldenstar (Muilla spp.)	4
birds-beak (Cordylanthus rigidus)		fiddleneck (Amsinckia menziesii var. intermedia)	
woolly plantain (Plantago patagonica)		onion (Allium spp.)	7
Chinese houses (Collinsia spp.)		buckwheat (Eriogonum fasciculatum)	×
		ground pink (Linanthus dianthiflorus)	
Host Plant Mapping Updated (circle) (Yes	No	New Area or Existing Area (circle) (New) Existing	Both
Species updated (list) C.DENS, FRORA			

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (Chlosyne californica)		great purple hairstreak (Atlides halesus corcorani)	
Gabb's checkerspot (C. gabbii)		brown elfin (Callophrys augustinus)	
Quino checkerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	
chalcedon checkerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica)	
Leanira checkerspot (Thessalia leanira wrighti)		Ladies/Admirals	
Mylitta crescent (Phyciodes mylitta)		California sister (Adelpha bredowii californica)	
Blues		Lorquin's admiral (Limenitis lorquini)	
western pygmy-blue (Brephidium exila)	1	west coast lady (Vanessa annabella)	
western tailed blue (Everes amyntula)		red admiral (V. atalanta rubria)	
southern blue (Glaucopsyche lygdamus australis)		painted lady (V. cardui)	3
Edward's blue (Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis)	.3
Acmon blue (Icaricia acmon acmon)	2	unidentified lady (Vanessa sp.)	
marine blue (Leptotes marina)	/	Swallowtails	
unidentified blue		pale swallowtail (Papilio eurymedon)	
Whites		western tiger swallowtail (P. rutulus)	
Sara orangetip (Anthocharis sara sara)	27	anise swallowtail (P. zelicaon)	
desert (Felder's) orangetip (A. cethura)		Miscellaneous	
common California ringlet (Coenonympha californica)		monarch (Danaus plexippus)	
cabbage white (Pieris rapae)		common buckeye (Junonia coenia grisea)	6
checkered (common) white (Pontia protodice)	7	mourning cloak (Nymphalis antiopa)	
spring white (P. sisymbrii)		Skippers	
unidentified white		funereal duskywing (Erynnis funeralis)	4
Metalmarks		mournful duskywing (Erynnis tristis)	
Behr's metalmark (Apodemia mormo virgulti)	43	fiery skipper (Hylephila phyleus)	
Wright's metalmark (Calephelis wrighti)		white (common) checkered-skipper (Pyrgus albescens)	1
Sulphurs		Other	
orange sulphur (Colias eurytheme)	6	LERODEA ENFALA	1
sleepy orange (Eurema nicippe)			
cloudless sulfur (Phoebus sennae marcellina)			
unidentified sulphur			
Column Subtotal	87	Column Subtotal	18
		Total	105

Surveyor: MELANIE DICUS, JOHN DICUS	Date: 03-27-2016
Site Name: JPD-08 Proctor Valley – Village 14 of Otay Ranch	Site Visit No:
	Survey Time: 8 HAS Acres per Hour: 8.3 / EACH B
Other Surveyors Present:	

Field Conditions					
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover	
Start	0845	63	1 mp it	Ø	
End	1645	72	4.7 mx	12	
Start					
End					

Vegetation Communities Surveyed (inc. dominant spp.) NN (77: BROWLE DIANDRUS, B. HORDERCEUS, AVENT FRIVA, HO EDEUM (DCS: KRORUM SPP: ARTENISIA CA, E. FASCICULARINA, M. LAURINA, BHANISE CHAP SPP.) EUC WOODLAND WI CGS UNDERSTORY: EUCHUPINS SP, ARTENISIA CA, E. FASCICULARINA.

Host Plants	Obs.	Nectar Plants	Obs.
dwarf plantain (Plantago erecta)	×	popcorn flower (Cryptantha/Plagiobothrys spp.)	×
purple owl's clover (Castilleja exserta)		goldfields (Lasthenia spp.)	×
snapdragon (Antirrhinum coulterianum)		goldenstar (Muilla spp.)	X
birds-beak (Cordylanthus rigidus)		fiddleneck (Amsinckia menziesii var. intermedia)	X
woolly plantain (Plantago patagonica)		onion (Allium spp.)	×
Chinese houses (Collinsia spp.)		buckwheat (Eriogonum fasciculatum)	×
		ground pink (Linanthus dianthiflorus)	X
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 (Chlosyne californica)		great purple hairstreak (Atlides halesus corcorani)	
Gabb's checkerspot (C. gabbii)		brown elfin (Callophrys augustinus)	
Quino checkerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	
chalcedon checkerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica)	1
Leanira checkerspot (Thessalia leanira wrighti)		Ladies/Admirals	
Mylitta crescent (Phyciodes mylitta)		California sister (Adelpha bredowii californica)	
Blues		Lorquin's admiral (Limenitis lorquini)	
western pygmy-blue (Brephidium exila)	1	west coast lady (Vanessa annabella)	
western tailed blue (Everes amyntula)		red admiral (V. atalanta rubria)	3
southern blue (Glaucopsyche lygdamus australis)		painted lady (V. cardui)	1
Edward's blue (Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis)	3
Acmon blue (Icaricia acmon acmon)		unidentified lady (Vanessa sp.)	-
marine blue (Leptotes marina)	3	Swallowtails	
unidentified blue		pale swallowtail (Papilio eurymedon)	1
Whites		western tiger swallowtail (P. rutulus)	
Sara orangetip (Anthocharis sara sara)	133	anise swallowtail (P. zelicaon)	
desert (Felder's) orangetip (A. cethura)		Miscellaneous	
common California ringlet (Coenonympha californica)	2	monarch (Danaus plexippus)	
cabbage white (Pieris rapae)		common buckeye (Junonia coenia grisea)	15
checkered (common) white (Pontia protodice)	13	mourning cloak (Nymphalis antiopa)	
spring white (P. sisymbrii)		Skippers	
unidentified white		funereal duskywing (Erynnis funeralis)	7
Metalmarks		mournful duskywing (Erynnis tristis)	
Behr's metalmark (Apodemia mormo virgulti)	47	fiery skipper (Hylephila phyleus)	1
Wright's metalmark (Calephelis wrighti)		white (common) checkered-skipper (Pyrgus albescens)	15
Sulphurs		Other	
orange sulphur (Colias eurytheme)	8	COLLAS HARFOLDII	7
sleepy orange (Eurema nicippe)		COLLAS HARFORDII HELOPESES ELICETORUR	2
cloudless sulfur (Phoebus sennae marcellina)			
unidentified sulphur			
Column Subtotal	207	Column Subtotal	263
		Total	26:

A	e: JPD-08 Proctor Valley-	VEEMAI	U		tterfly Survey Form Date: Site Visit No:	'5	12
Trea Sun	Veyed A	- Village 14 of C	tay Ranch		Site Visit No.	Acres per Hour:	1.13
Other Su	Nevom Aci	res Surveyed	65	Su.	rvey Time: 8 Hours		
	rveyors Present:		-				
				ld Conditio	NOS	Cloud Cov	er
Start	Time (24 hr)			d Condition	Wind Speed (mph)	100	
End	0830		rature (°F)	-	7-5	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
-	1630	60			3-8		
Start	1630	63					
End							
V							
vegetatio	n Communities Surveyed	Una daminant				1.03	-116
CHAR	ARROL CHANS	(inc. dominant	spp.)	0.000	STAL SALVE SCRU	B NON-NA	10.0
		e Chapt	ARRAL,	Cer	STAL SHULL DE		
							Obs.
1108t Plan	te		Obs.	Nectar	Plants	thate son)	K
owarf plan	tain (Plantago erecta)		X	popcorr	flower (Cryptantha/Plagiobo	milys shh-)	V
	3 Cilovar / Castillain avanuals		X	goldfield	ds (Lasthenia spp.)		
	"I (Antimbinum coultorionum)		goldens	star (Muilla spp.) ck (Amsinckia menziesii var.	intermedia)	
- Deak	(Cordylanthus rigidus)			fiddlene	Allium spp.)		2
- Plar	Main (Plantago natagonica)			huckwh	eat (Friogonum fasciculatum)		1
nicse ne	Ouses (Collinsia spp.)		-	ground	pink (<i>Linanthus dianthiflorus</i>)		Both
Host Plan	t Mapping Updated (circle)	Yes	No	New Ar	rea or Existing Area (circle)	New Existing	Don
Species u	pdated (list)						
							No.
Butterfly S			No.		Species		
Checkersp			ļ	Hairstre	rple hairstreak (Atlides halest	ıs corcorani)	
	atch (Chlosyne californica)		 	brown of	fin (Callonhrys augustinus)		
	ckerspot (C. gabbii)	muino)	 	bramble	(perplexing) hairstreak (C. de	umetorum affinis)	
chalcodon o	kerspot (Euphydryas editha checkerspot (E. chalcedona	chelcedona)	 	gray hair	rstreak (Strymon melinus puo	lica)	
	ckerspot (Thessalia leanira		 	Ladies/	Admirals		
	cent (Phyciodes mylitta)	g,		Californi	a sister (Adelpha bredowii ca	lifomica)	
Blues	com (r rry drouged my man)			Lorquin's	s admiral (<i>Limenitis lorquini</i>)		-
	my-blue (Brephidium exila)		Ty.	west coa	ast lady (Vanessa annabella)		-
vestern taile	ed blue (Everes amyntula)				iral (V. atalanta rubria)		
outhern blu	e (Glaucopsyche lygdamus			painted	lady (<i>V. cardui</i>) n (Virginia) lady (<i>V. virgini</i> en	eis)	2
	ue (Hemiargus ceraunus gy	as)	100		n (Virginia) lady (V. Virginieri fied lady (Vanessa sp.)	313)	
	(Icaricia acmon acmon)		2	Swallow			
	(Leptotes marina)				allowtail (<i>Papilio eurymedon</i>)		
nidentified l	blue			western	tiger swallowtail (P. rutulus)		
Vhites	u (Authorhodia acca sara)		72		vallowtail (P. zelicaon)		1
ara oranget	tip (Anthocharis sara sara)		12	Miscella			
esert (Felde	er's) orangetip (<i>A. cethura</i>) fornia ringlet (<i>Coenonymph</i>	a californica)	1904 90		n (Danaus plexippus)		
mmon Call	re (<i>Pieris rapae</i>)			commor	buckeye (Junonia coenia g		10
appage whit	ommon) white (Pontia proto	odice)	4	mournin	g cloak (<i>Nymphalis antiopa</i>)		
ring white	P. sisymbrii)			Skipper			
identified w	hite			funereal	duskywing (Erynnis funeral	is)	
etalmarks	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	22	4		l duskywing (Erynnis tristis)		
hr'e metala	nark (<i>Apodemia mormo vir</i> g	gulti)	42	fiery skip	oper (Hylephila phyleus)	/B	
right's meta	lmark (<i>Calephelis wrighti</i>)	H			ommon) checkered-skipper	(Pyrgus albescens)	
	arrain (Galopinous mg-4)			Other			
Iphurs	r (Colias eurytheme)					19	
nge sulpriu	(Eurema nicippe)						
shy orange	ır (<i>Phoebus sennae marce</i>	llina)					
Juless Suitu			· ·			Column Subto	otal 13
dentified su						Column to Culture	

Surveyor	Alicia Hill			Date: 3/27/16				
Site Name:	JPD-08 Proctor Valley – Village 14 of Otay Ranch			Site Visit No: 5				
Area Surve	eyed O, V	Acres Surveyed	137	Survey Time:	5.5	Acres per Hour:	10	
Other Surv	evors Present	Travis Cooper						

		Field Co	nditions	
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover
Start	0850	68	0-1	0
End	1420	78	2-5	0
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.) chamise chaparral (ADE FAS, ERI FAS, ACM GLA),
native/non-native grassland (Stipa sp., BRO MAD, Avena sp.)
coastal sage scrub (ART CAL, ERI FAS, ACM GLA)

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (Chlosyne californica)		great purple hairstreak (Atlides halesus corcorani)	
Gabb's checkerspot (C. gabbii)		brown elfin (Callophrys augustinus)	
Quino checkerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	
chalcedon checkerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica)	
Leanira checkerspot (Thessalia leanira wrighti)		Ladies/Admirals	
Mylitta crescent (Phyciodes mylitta)		California sister (Adelpha bredowii californica)	
Blues		Lorquin's admiral (Limenitis Iorquini)	
western pygmy-blue (Brephidium exila)		west coast lady (Vanessa annabella)	
western tailed blue (Everes amyntula)		red admiral (V. atalanta rubria)	
southern blue (Glaucopsyche lygdamus australis)		painted lady (V. cardui)	2
Edward's blue (Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis)	3
Acmon blue (Icaricia acmon acmon)		unidentified lady (Vanessa sp.)	
marine blue (Leptotes marina)	5	Swallowtails	
unidentified blue	2	pale swallowtail (Papilio eurymedon)	
Whites		western tiger swallowtail (P. rutulus)	
Sara orangetip (Anthocharis sara sara)	118	anise swallowtail (P. zelicaon)	
desert (Felder's) orangetip (A. cethura)		Miscellaneous	
common California ringlet (Coenonympha californica)		monarch (Danaus plexippus)	
cabbage white (Pieris rapae)		common buckeye (Junonia coenia grisea)	19
checkered (common) white (Pontia protodice)	29	mourning cloak (Nymphalis antiopa)	
spring white (P. sisymbrii)		Skippers	
unidentified white	1	funereal duskywing (Erynnis funeralis)	1
Metalmarks		mournful duskywing (Erynnis tristis)	
Behr's metalmark (Apodemia mormo virgulti)	87	fiery skipper (Hylephila phyleus)	
Wright's metalmark (Calephelis wrighti)		white (common) checkered-skipper (Pyrgus albescens)	4
Sulphurs		Other	
orange sulphur (Colias eurytheme)	10	Harford's sulphur	5
sleepy orange (<i>Eurema nicippe</i>)		Dainty sulphur	1
cloudless sulfur (<i>Phoebus sennae marcellina</i>)			
unidentified sulphur			
Column Subtotal	252	Column Subtotal	35
		Total	287

Area Su	JPD-08 Prost	Fman	Checke	rspot Butterfly Si	Date: _3	127/16	
Other 8	Present: AU	Village			Site Visit No:	5	
	Acr	98 SUDMIN	Otay Ranch			Acres per Hour: 3	_عا_
	Alon	JG.	-61	Survey Time:			
Start	The						
End	Time (24 hr)		Fie	ld Conditions		Cloud Cover	
	20 30	1	erature (°F)		eed (mph)	Ø	
Start	1630	6		2-	4	Ø	
End		70		3-8		-	
Van		+					
agetatic	On Communities Surveyed (<u> </u>	
Cip	CHACAPPA	inc. dominan	· \				
C.	CHACAGO	Golfman	t spp.)			/	~
_		- Loc	soon s	ALGR SCRUB	, war a	ATIVE GUISSUA	
Host Plan	its			1 - Vandarda (1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1			
Durate plan	Itain (Plantago erecta)		Obs.	Nectar Plants			Obs.
Snand-	rtain (Plantago erecta) 's clover (Castilleja exserta) on (Antimhinum courtering		X	popcorn flower (Cr)	ptantha/Plagioboti	hrys spp.)	&
birds-hoot	S Clover (Castilleja exserta) On (Antirrhinum coulterianum)		4	goldfields (Lastheni			\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
Woolly place	on (Antirrhinum coulterianum) (Cordylanthus rigidus)			goldenstar (Muilla s			<u>v</u>
Chinese h	ntain (Plantago patagonica) Ouses (Collinsia array)		 	fiddleneck (Amsinc	kia menziesii var. i	ntermedia)	Ø
_	(Tominala Spp.)		 	onion (Allium spp.) buckwheat (Eriogor	num fassiculatum)		\$
Host Plan	Manut.		 	ground pink (Linant			
Species u	pdated (list)	Yes	No	New Area or Exist		New Existing	Both
Russ.	puated (list) Punn	my of	eaun	CASTILLED	ASP		
Butterfly S	pecies		No.				No.
Checkersp	ots		NO.	Butterfly Species Hairstreaks			140.
Gabb's cha	atch (Chlosyne californica)			great purple hairstre	ak (Atlides halesu:	s corcorani)	
			1	brown elfin (Callophi		5 65,6674,	
chalcedon c	kerspot (E. gabbii)	quino)		bramble (perplexing)		metorum affinis)	
	theckerspot (E. chalcedona deckerspot (Thessalia leanira v			gray hairstreak (Stry	mon melinus pudi	ca)	
Mylitta creso	cent (Phyciodes mylitta)	vrighti)		Ladies/Admirals			
Blues	(Tryclodes Tryllitta)	····		California sister (Ade	V	fornica)	
western pyg	my-blue (Brephidium exila)			Lorquin's admiral (Li			
western taile	ed blue (Everes amvntula)			west coast lady (Var red admiral (V. atala			
southern blu	e (Glaucopsyche lygdamus a	australis)		painted lady (V. card		+	2
Edward's blu	le (Hemiargus ceraunus qua	s)		American (Virginia) I		(s)	2
Acmon blue	(Icaricia acmon acmon)			unidentified lady (Va			
narine blue	(Leptotes marina)			Swallowtails			
unidentified b	Diue		14	pale swallowtail (Pap	pilio eurymedon)		
	in / Anthonhoria	- see estate a second	19 10 10 10	western tiger swallov			
	ip (Anthocharis sara sara) r's) orangetip (A. cethura)		9952	anise swallowtail (P.	zelicaon)		
	fornia ringlet (<i>Coenonympha</i>	californica\	1	Miscellaneous	laviani.		
	e (<i>Pieris rapae</i>)	camornica)		monarch (Danaus pl common buckeye (J		200)	
	ommon) white (Pontia protoc	lice)	5	mourning cloak (Nyr		oed)	
oring white (/				Skippers	причина апиора)		
nidentified w				funereal duskywing	(Erynnis funeralis		5
etalmarks				mournful duskywing			
ehr's metalm	ark (Apodemia mormo virgu	ılti)	3012	fiery skipper (Hyleph			
right's metal	mark (Calephelis wrighti)		10.00	white (common) che		Pyrgus albescens)	4
Ilphurs				Other			
	(Colias eurytheme)		5	Hewornes	ER MATORY	m	1
	(Eurema nicippe)						
udless sulfu	r (Phoebus sennae marcellii	na)					
identified sul							

TOTAL BAGO

	2016 Qu	ino Checke	erspot Butterfly Survey Form	1,,
Surveyor	,		Date: 3 30	110
Site Nam	ne: JPD-08 Proctor Valley - Village 14			
Area Sur				er Hour: 9 -16
		a <u>5)</u>	Survey Time. O Flores Acres	
Other St	Irveyors Present: NONE			
		Fic	eld Conditions	
	Time (24 hr) Ten	perature (°F)	Wind Speed (mph)	Cloud Cover
Start	0830	OD	2-4	10
End		58	2-8	70
Start	11100		2-6	50
End		20	2-8	30
	1700	;C	3-0	30
Vegetati	on Communities Surveyed (inc. domin	ant spp.)		(200867
CHO	mise CHAPARRAL,	COAS	TAL SAGR SCRUB, NOW NA	TIVE COM
Hoot Di-	ante	Obs.	Nectar Plants	Obs.
Host Pla	ants antain (<i>Plantago erecta</i>)	UDS.	popcorn flower (Cryptantha/Plagiobothrys spp.)	K
	wl's clover (Castilleja exserta)	15	goldfields (Lasthenia spp.)	X
	gon (Antirrhinum coulterianum)	- -	goldenstar (Muilla spp.)	√
	ak (Cordylanthus rigidus)		fiddleneck (Amsinckia menziesii var. intermedia)	¥
	lantain (<i>Plantago patagonica</i>)		onion (Allium spp.)	7
Chinese	houses (Collinsia spp.)		buckwheat (Eriogonum fasciculatum)	<u> </u>
Mark Die	ant Mapping Updated (circle) Yes	No	ground pink (<i>Linanthus dianthiflorus</i>) New Area or Existing Area (<i>circle</i>) New	Existing Both
			New Area of Existing Area (Circle)	
Species	s updated (list)			
Butterfly	Species	No.	Butterfly Species	No.
Checker			Hairstreaks	
	a patch (Chlosyne californica)		great purple hairstreak (Atlides halesus corcorani)	
	heckerspot (C. gabbii) eckerspot (Euphydryas editha quino)		brown elfin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dumetorum affini	6)
	n checkerspot (<i>Eupryaryas editira quirio</i>) n checkerspot (<i>E. chalcedona chalcedona</i>)		gray hairstreak (Strymon melinus pudica)	" 1
	checkerspot (Thessalia leanira wrighti)		Ladies/Admirals	•
Mylitta cr	escent (Phyciodes mylitta)		California sister (Adelpha bredowii californica)	
Blues			Lorquin's admiral (Limenitis lorquini)	
	bygmy-blue (Brephidium exila)		west coast lady (Vanessa annabella)	
	ailed blue (Everes amyntula) blue (Glaucopsyche lygdamus australis)		red admiral (V. atalanta rubria) painted lady (V. cardui)	2
	blue (Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis)	3
	lue (Icaricia acmon acmon)		unidentified lady (Vanessa sp.)	
	lue (Leptotes marina)	2	Swallowtails	
unidentifi	ed blue		pale swallowtail (Papilio eurymedon)	
Whites		100	western tiger swallowtail (P. rutulus)	
	ngetip (Anthocharis sara sara) elder's) orangetip (A. cethura)	25	anise swallowtail (P. zelicaon) Miscellaneous	
desert (F	elders) orangeup (A. <i>ceulura)</i> California ringlet (<i>Coenonympha californica</i>	<u>, </u>	monarch (Danaus plexippus)	
	white (Pieris rapae)	'	common buckeye (Junonia coenia grisea)	
checkere	d (common) white (Pontia protodice)	3	mourning cloak (Nymphalis antiopa)	
spring wh	ite (P. sisymbrii)		Skippers	
unidentifie			funereal duskywing (Erynnis funeralis)	
Metalma	r ks etalmark (<i>Apodemia mormo virgulti</i>)	12	mournful duskywing (Erynnis tristis)	
Behrs me	netalmark (<i>Calephelis wrighti</i>)	+ '-	fiery skipper (Hylephila phyleus)	
Sulphurs			white (common) checkered-skipper (<i>Pyrgus albescens</i> Other	3)
orange su	lphur (Colias eurytheme)			
sleepy of	ange (Eurema nicippe)			
cloudless	sulfur (Phoebus sennae marcellina)			
unidentifie	d sulphur Column Subtot	al 110		
	John Subtot	1 43	Column St	ubtotal 14

TOTAL 157

Suma				spot Butterfly Survey Form				
Surveyor: GARAGIT HUPEMAN				Date: 3 25 14				
Site Nam	e: JPD-08 Proctor Valley - Vil	lage 14 of Ota	ay Ranch	Site Visit No:				
		Surveyed _	40	Survey Time: 8 Hours Acres per Hour:				
Other Su	rveyors Present: NONE							
			Fiel	d Conditions				
	Time (24 hr)	Tempera	ture (°F)	Wind Speed (mph) Cloud Cove	r			
Start	0830	60		1-4				
End	1630	73		3-8 20				
Start	1000	+7		, ,				
End		****						
Vegetati	on Communities Surveyed (inc	c. dominant s	spp.)					
				SAUC SCRUB, NON NAME CHASSE	ano			
	HAINISE CHOCARA	TL, Co	ASIAC	SACI SURVEY, MORNING CONTROL CONTROL				
Host Pla	ints		Obs.	Nectar Plants	Obs.			
	antain (Plantago erecta)		¥	popcorn flower (Cryptantha/Plagiobothrys spp.)	4			
	wl's clover (Castilleja exserta)		φ	goldfields (Lasthenia spp.)	¥			
	gon (Antirrhinum coulterianum)			goldenstar (Muilla spp.)				
	ak (Cordylanthus rigidus)			fiddleneck (Amsinckia menziesii var. intermedia)	Х			
	antain (Plantago patagonica)			onion (Allium spp.) buckwheat (Eriogonum fasciculatum)	X			
Chinese	houses (Collinsia spp.)			ground pink (<i>Linanthus dianthiflorus</i>)	7			
Host Pla	ant Mapping Updated (circle)	Yes	No	New Area or Existing Area (circle) New Existing	Both			
	updated (list)	CASTI	UCSA	Se.				
Butterfly	Species		No.	Butterfly Species	No.			
Checken				Hairstreaks				
	patch (Chlosyne californica)			great purple hairstreak (Atlides halesus corcorani)				
	heckerspot (C. gabbii)		2	brown elfin (Callophrys augustinus) bramble (perplexing) hairstreak (C. dumetorum affinis)				
	eckerspot (Euphydryas editha qu n checkerspot (E. chalcedona ch			gray hairstreak (Strymon melinus pudica)				
	heckerspot (Thessalia leanira wi			Ladies/Admirals				
	escent (Phyciodes mylitta)	·g··-/		California sister (Adelpha bredowii californica)				
Blues	oocen (Criyeres Syray			Lorquin's admiral (Limenitis lorquini)	,			
western p	oygmy-blue (Brephidium exila)			west coast lady (Vanessa annabella)				
western t	ailed blue (Everes amyntula)			red admiral (V. atalanta rubria)				
	blue (Glaucopsyche lygdamus a			painted lady (V. cardui)				
	blue (Hemiargus ceraunus gyas	3)	1	American (Virginia) lady (V. virginiensis) unidentified lady (Vanessa sp.)				
	ue (Icaricia acmon acmon)		3	Swallowtails				
marine bi	ue (Leptotes marina)			pale swallowtail (Papilio eurymedon)				
Whites	ed blue			western tiger swallowtail (P. rutulus)				
Sara orar	ngetip (Anthocharis sara sara)		70	anise swallowtail (P. zelicaon)				
desert (Fr	elder's) orangetip (A. cethura)			Miscellaneous				
common (California ringlet (Coenonympha	californica)	4	monarch (Danaus plexippus)				
cabbage	white (Pieris rapae)			common buckeye (Junonia coenia grisea)	9			
checkered	d (common) white (Pontia protoc	lice)		mourning cloak (Nymphalis antiopa) Skippers				
spring wh	ite (P. sisymbrii)			funereal duskywing (Erynnis funeralis)				
unidentifie				mournful duskywing (Erynnis tristis)				
Metalma	rks etalmark (<i>Apodemia mormo virg</i> u	ulti)	35	fiery skipper (Hylephila phyleus)				
Behr's me	etalmark (<i>Apodernia mormo virg</i> netalmark (<i>Calephelis wrighti</i>)			white (common) checkered-skipper (Pyrgus albescens)				
				Other				
Sulphurs	lphur (Colias eurytheme)		So					
alaeny ore	nge (Eurema nicippe)							
cloudless	sulfur (Phoebus sennae marcel	lina)						
unidentifie	od eulinhur							
	Colu	mn Subtotal	122	Column Subtotal	10			

TOTAL 132

Surveyor:	Renee Owens				Date: <u>3</u>	3-27-2016			
Site Name:	JPD-08 Proctor Valley – Village 14 of Otay Ranch			Site Visit No: 5					
Area Surve	yed S	Acres Surveyed	47	Survey Time:	5.5 hrs	Acres pe	r Hour:	8.5	
Other Surve	evors Present:	Patrick Hord							

		Field Co	onditions	
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	% Cloud Cover
Start	0810	61	0	10
End	1340	73	3.2	0
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.)
Mixed chaparral w/ A. fasciculatum, Bahiopsis, Salvia mellifera & apiana, E. fasciculatum, A. californica, L. scoparius, R. crocea,

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (Chlosyne californica)		great purple hairstreak (Atlides halesus corcorani)	
Gabb's checkerspot (C. gabbii)		brown elfin (Callophrys augustinus)	1
Quino checkerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	
chalcedon checkerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica)	
Leanira checkerspot (Thessalia leanira wrighti)		Ladies/Admirals	
Mylitta crescent (Phyciodes mylitta)		California sister (Adelpha bredowii californica)	
Blues		Lorquin's admiral (Limenitis Iorquini)	
western pygmy-blue (Brephidium exila)		west coast lady (Vanessa annabella)	
western tailed blue (Everes amyntula)		red admiral (V. atalanta rubria)	
southern blue (Glaucopsyche lygdamus australis)		painted lady (V. cardui)	
Edward's blue (Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis)	
Acmon blue (Icaricia acmon acmon)	2	unidentified lady (Vanessa sp.)	
marine blue (Leptotes marina)	8	Swallowtails	
unidentified blue		pale swallowtail (Papilio eurymedon)	
Whites		western tiger swallowtail (P. rutulus)	
Sara orangetip (Anthocharis sara sara)	16	anise swallowtail (P. zelicaon)	
desert (Felder's) orangetip (A. cethura)		Miscellaneous	
common California ringlet (Coenonympha californica)		monarch (Danaus plexippus)	
cabbage white (Pieris rapae)		common buckeye (Junonia coenia grisea)	3
checkered (common) white (Pontia protodice)	1	mourning cloak (Nymphalis antiopa)	
spring white (P. sisymbrii)		Skippers	
unidentified white	1	funereal duskywing (Erynnis funeralis)	
Metalmarks		mournful duskywing (Erynnis tristis)	
Behr's metalmark (Apodemia mormo virgulti)	16	fiery skipper (Hylephila phyleus)	1
Wright's metalmark (Calephelis wrighti)		white (common) checkered-skipper (Pyrgus albescens)	
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	45	Column Subtotal	5
		Total	50

Surveyor:	Brian Lohstroh					Date: 25 March 2016			
Site Name:	JPD-08 Procto	or Valley – Village 14 of C	Otay Ranch		Site Visit N	lo:			
Area Surve	yed T	Acres Surveyed	57 acres	Survey Time:	6.17 hrs	Acres per Hour:	9.24		
Other Surve	eyors Present:								

	Field Conditions						
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover			
Start	08:40	64 air, 66 at ground	0-1	Clear			
End	14:50	86	0-4	Clear			
Start							
End							

Vegetation Communities Surveyed (inc. dominant spp.)
scrub (B. laciniata, M. laurina); chaparral (A. fasciculatum, M. laurina, R. crocea, C. tomentosus);
NNG (Avena spp., Bromus spp.)

Host Plants	Obs.	Nectar Plants	Obs.			
dwarf plantain (Plantago erecta)		popcorn flower (Cryptantha/Plagiobothrys spp.)	X			
purple owl's clover (Castilleja exserta)	X	goldfields (Lasthenia spp.)				
snapdragon (Antirrhinum coulterianum)		goldenstar (Muilla spp.)				
birds-beak (Cordylanthus rigidus)		fiddleneck (Amsinckia menziesii var. intermedia)				
woolly plantain (Plantago patagonica)		onion (Allium spp.)				
Chinese houses (Collinsia spp.)	Х	buckwheat (Eriogonum fasciculatum)				
		ground pink (Linanthus dianthiflorus)				
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 (Chlosyne californica)		great purple hairstreak (Atlides halesus corcorani)	
Gabb's checkerspot (C. gabbii)	11	brown elfin (Callophrys augustinus)	
Quino checkerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	
chalcedon checkerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica)	
Leanira checkerspot (Thessalia leanira wrighti)		Ladies/Admirals	
Mylitta crescent (Phyciodes mylitta)		California sister (Adelpha bredowii californica)	
Blues		Lorquin's admiral (Limenitis Iorquini)	
western pygmy-blue (Brephidium exila)		west coast lady (Vanessa annabella)	
western tailed blue (Everes amyntula)		red admiral (V. atalanta rubria)	1
southern blue (Glaucopsyche lygdamus australis)		painted lady (V. cardui)	1
Edward's blue (Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis)	2
Acmon blue (Icaricia acmon acmon)		unidentified lady (Vanessa sp.)	1
marine blue (Leptotes marina)	9	Swallowtails	
Spring azure (Celastrina ladon echo)		pale swallowtail (Papilio eurymedon)	
Whites		western tiger swallowtail (P. rutulus)	
Sara orangetip (Anthocharis sara sara)	32	anise swallowtail (P. zelicaon)	
desert (Felder's) orangetip (A. cethura)		Miscellaneous	
common California ringlet (Coenonympha californica)	11	monarch (Danaus plexippus)	
cabbage white (Pieris rapae)		common buckeye (Junonia coenia grisea)	
checkered (common) white (Pontia protodice)	11	mourning cloak (Nymphalis antiopa)	
spring white (P. sisymbrii)		Skippers	
unidentified white		funereal duskywing (Erynnis funeralis)	4
Metalmarks		mournful duskywing (Erynnis tristis)	
Behr's metalmark (Apodemia mormo virgulti)	35	fiery skipper (Hylephila phyleus)	
Wright's metalmark (Calephelis wrighti)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	10
Sulphurs		Other	
orange sulphur (Colias eurytheme)	4	Lupine blue (<i>Plebejus lupines</i>)	
sleepy orange (Eurema nicippe)		Erynnis sp.	
cloudless sulfur (Phoebus sennae marcellina)			
dainty sulphur (Nathalis iole)	2		
Column Subtotal	115	Column Subtotal	19
		Total	134

Surveyor:	John Lovio		Date: 3-2-	4-16		
Site Name:	JPD-08 Proctor Valley – Village 14 of Otay Ranch	Site Visit No: 5				
Area Surve	yed Polygon U Acres Surveyed 48	Survey Time:	5.2 hours	Acres per Hour:	9	
Other Surve	evers Present: None	-				

Field Conditions						
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	Cloud Cover		
Start	10:00	76	2	0		
End	15:00	83	5-10, W	0		
Start						
End						

Vegetation Communities Surveyed (inc. dominant spp.)

Chaparral: Adenostema fasciculatum, Ceanothus tomentosus, Quercus berberidifolia, Xylococcus bicolor > Heteromeles arbutifolia, Mimulus aurantiacus, Rhus integrifolia, Malsoma laurina, Salvia munzii, Yucca schidigera

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (Chlosyne californica)		great purple hairstreak (Atlides halesus corcorani)	
Gabb's checkerspot (C. gabbii)		brown elfin (Callophrys augustinus)	
Quino checkerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	
chalcedon checkerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica)	
Leanira checkerspot (Thessalia leanira wrighti)		Ladies/Admirals	
Mylitta crescent (Phyciodes mylitta)		California sister (Adelpha bredowii californica)	
Blues		Lorquin's admiral (Limenitis Iorquini)	
western pygmy-blue (Brephidium exila)		west coast lady (Vanessa annabella)	
western tailed blue (Everes amyntula)		red admiral (V. atalanta rubria)	
southern blue (Glaucopsyche lygdamus australis)		painted lady (V. cardui)	
Edward's blue (Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis)	
Acmon blue (Icaricia acmon acmon)		unidentified lady (Vanessa sp.)	6
marine blue (Leptotes marina)		Swallowtails	
Spring azure (Celastrina ladon echo)		pale swallowtail (Papilio eurymedon)	
Whites		western tiger swallowtail (P. rutulus)	
Sara orangetip (Anthocharis sara sara)	16	anise swallowtail (P. zelicaon)	
desert (Felder's) orangetip (A. cethura)		Miscellaneous	
common California ringlet (Coenonympha californica)		monarch (Danaus plexippus)	
cabbage white (<i>Pieris rapae</i>)		common buckeye (Junonia coenia grisea)	1
checkered (common) white (Pontia protodice)		mourning cloak (Nymphalis antiopa)	
spring white (P. sisymbrii)		Skippers	
unidentified white	2	funereal duskywing (Erynnis funeralis)	
Metalmarks		mournful duskywing (Erynnis tristis)	
Behr's metalmark (Apodemia mormo virgulti)	9	fiery skipper (Hylephila phyleus)	
Wright's metalmark (Calephelis wrighti)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	1
Sulphurs		Other	
orange sulphur (Colias eurytheme)	1	Lupine blue (<i>Plebejus lupines</i>)	
sleepy orange (<i>Eurema nicippe</i>)		Erynnis sp.	
cloudless sulfur (Phoebus sennae marcellina)			
unidentified sulphur	2		
Column Subtotal	30	Column Subtotal	8
		Total	38

Surveyor:	Renee Owens				Date:3-3 ⁻	1-2016		
Site Name:	JPD-08 Proctor Valley – Village 14 of Otay Ranch				Site Visit No:	5		_
Area Surve	yed W	Acres Surveyed	54	Survey Time:	6.5 hrs	_ Acres per Hour:	8.3	
Other Surve	eyors Present:							

	Field Conditions						
	Time (24 hr)	Temperature (°F)	Wind Speed (mph)	% Cloud Cover			
Start	0805	60	0	10			
End	1420	71	3.6	0			
Start							
End							

Vegetation Communities Surveyed (inc. dominant spp.)

Mixed chaparral w/ A. fasciculatum, Salvia mellifera & apiana, E. fasciculatum, Artemisia, Lutus scoparius, Rhamnus crocea, Quercus spp.

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

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		Hairstreaks	
California patch (Chlosyne californica)		great purple hairstreak (Atlides halesus corcorani)	
Gabb's checkerspot (C. gabbii)		brown elfin (Callophrys augustinus)	
Quino checkerspot (Euphydryas editha quino)		bramble (perplexing) hairstreak (C. dumetorum affinis)	
chalcedon checkerspot (E. chalcedona chalcedona)		gray hairstreak (Strymon melinus pudica)	
Leanira checkerspot (Thessalia leanira wrighti)		Ladies/Admirals	
Mylitta crescent (Phyciodes mylitta)		California sister (Adelpha bredowii californica)	
Blues		Lorquin's admiral (Limenitis lorquini)	
western pygmy-blue (Brephidium exila)		west coast lady (Vanessa annabella)	
western tailed blue (Everes amyntula)		red admiral (V. atalanta rubria)	
southern blue (Glaucopsyche lygdamus australis)		painted lady (V. cardui)	
Edward's blue (Hemiargus ceraunus gyas)		American (Virginia) lady (V. virginiensis)	
Acmon blue (Icaricia acmon acmon)	1	unidentified lady (Vanessa sp.)	
marine blue (Leptotes marina)	14	Swallowtails	
unidentified blue	1	pale swallowtail (Papilio eurymedon)	
Whites		western tiger swallowtail (P. rutulus)	
Sara orangetip (Anthocharis sara sara)	9	anise swallowtail (P. zelicaon)	
desert (Felder's) orangetip (A. cethura)		Miscellaneous	
common California ringlet (Coenonympha californica)	1	monarch (Danaus plexippus)	
cabbage white (Pieris rapae)	1	common buckeye (Junonia coenia grisea)	2
checkered (common) white (Pontia protodice)		mourning cloak (Nymphalis antiopa)	
spring white (<i>P. sisymbrii</i>)		Skippers	
unidentified white		funereal duskywing (Erynnis funeralis)	
Metalmarks		mournful duskywing (Erynnis tristis)	1
Behr's metalmark (<i>Apodemia mormo virgulti</i>)	14	fiery skipper (Hylephila phyleus)	1
Wright's metalmark (Calephelis wrighti)		white (common) checkered-skipper (<i>Pyrgus albescens</i>)	
Sulphurs		Other	
orange sulphur (Colias eurytheme)			
sleepy orange (Eurema nicippe)			
cloudless sulfur (Phoebus sennae marcellina)	1		
unidentified sulphur			
Column Subtotal	42	Column Subtotal	4
<u> </u>		Total	46

2016 Quino Checkerspot Butterfly Survey Form Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch Site Visit No: Survey Time: 6,25h Acres Surveyed 62 Acres per Hour: Area Surveved Other Surveyors Present: NA **Field Conditions** Time (24 hr) Wind Speed (mph) Cloud Cover Temperature ('F) Start 63 3-← 0915 End 74 1530 Start End Vegetation Communities Surveyed (inc. dominant spp.) NUG- BROMAD, AVENA, EROCIC CC- ADE FAS, MAL LAU, SALMUN CSCG~ ADEFAS, ERIFAS, SALMUN **Host Plants** Obs. **Nectar Plants** Obs. dwarf plantain (Plantago erecta) popcorn flower (Cryptantha/Plagiobothrys spp.) X purple owl's clover (Castilleia exserta) goldfields (Lasthenia spp.) snapdragon (Antirrhinum coulterianum) goldenstar (Muilla spp.) birds-beak (Cordylanthus rigidus) fiddleneck (Amsinckia menziesii var. intermedia) woolly plantain (Plantago patagonica) onion (Allium spp.) buckwheat (Eriogonum fasciculatum) Chinese houses (Collinsia spp.) ground pink (Linanthus dianthiflorus) Host Plant Mapping Updated (circle) New Area or Existing Area (circle) **Existing** Both Yes No New Species updated (list) **Butterfly Species** No. **Butterfly Species** No. Checkerspots Hairstreaks California patch (Chlosyne californica) great purple hairstreak (Atlides halesus corcorani) Gabb's checkerspot (C. gabbii) brown elfin (Callophrys augustinus) Quino checkerspot (Euphydryas editha quino) bramble (perplexing) hairstreak (C. dumetorum affinis) chalcedon checkerspot (E. chalcedona chalcedona) gray hairstreak (Strymon melinus pudica) Leanira checkerspot (Thessalia leanira wrighti) Ladies/Admirals Mylitta crescent (Phyciodes mylitta) California sister (Adelpha bredowii californica) Lorquin's admiral (Limenitis lorquini) **Blues** western pygmy-blue (Brephidium exila) west coast lady (Vanessa annabella) western tailed blue (Everes amyntula) red admiral (V. atalanta rubria) southern blue (Glaucopsyche lygdamus australis) painted lady (V. cardui) 2 Edward's blue (Hemiargus ceraunus gyas) American (Virginia) lady (V. virginiensis) Acmon blue (Icaricia acmon acmon) unidentified lady (Vanessa sp.) marine blue (Leptotes marina) **Swallowtails** unidentified blue pale swallowtail (Papilio eurymedon) Whites western tiger swallowtail (P. rutulus) Sara orangetip (Anthocharis sara sara) anise swallowtail (P. zelicaon) 13 desert (Felder's) orangetip (A. cethura) Miscellaneous common California ringlet (Coenonympha californica) monarch (Danaus plexippus) cabbage white (Pieris rapae) common buckeye (Junonia coenia grisea) checkered (common) white (Pontia protodice) mourning cloak (Nymphalis antiopa) spring white (P. sisymbrii) Skippers unidentified white funereal duskywing (Erynnis funeralis) Metalmarks mournful duskywing (Erynnis tristis) Behr's metalmark (Apodemia mormo virgulti) fiery skipper (Hylephila phyleus) 29 Wright's metalmark (Calephelis wrighti) white (common) checkered-skipper (Pyrgus albescens) Sulphurs Other orange sulphur (Colias eurytheme) sleepy orange (Eurema nicippe) cloudless sulfur (Phoebus sennae marcellina) unidentified sulphur Column Subtotal Column Subtotal

	Chez Brungrabe	25		Date: 3/23/16	
Site Name	e: JPD-08 Proctor Valley - Villag	e 14 of Ota	y Ranch		87 5
Area Surveyed Acres Surveyed			50 Survey Time: 5hrs Acres per Hour:		10 (51
	veyors Present: Nicole			durey fille Acres per nou	. 10 (3/
	Toyoto Trootile /VICOTE	KINTO			
	Time (24 hr)	Tempera		d Conditions	0
Start	0900		itule (r)		Cover
		61			
End	1400	81		4-7 0%	
Start					
End					
Vegetatio	n Communities Surveyed (inc. o	lominant s	pp.)		
					-
Host Plan	ts	T	Obs.	Nectar Plants	Obs.
dwarf plan	tain (Plantago erecta)		Fur	popcorn flower (Cryptantha/Plagiobothrys spp.)	Plus
purple owl's clover (Castilleja exserta)			fur	goldfields (Lasthenia spp.)	9m
snapdragon (Antirrhinum coulterianum)				goldenstar (Muilla spp.)	
	(Cordylanthus rigidus)			fiddleneck (Amsinckia menziesii var. intermedia)	
woolly plantain (Plantago patagonica)				onion (Allium spp.)	
Chinese h	ouses (Collinsia spp.)			buckwheat (Eriogonum fasciculatum)	flor
Host Plan	t Mapping Updated (circle)	Yes	No	ground pink (Linanthus dianthiflorus) New Area or Existing Area (circle) New Existing	Doth .
	pdated (list)	163	140	New Area or Existing Area (circle) New Existing	ng Both
	passes (nos)				
Butterfly S			No.	Butterfly Species	No.
Checkersp				Hairstreaks	
	patch (Chlosyne californica)			great purple hairstreak (Atlides halesus corcorani)	
	eckerspot (C. gabbii)			brown elfin (Callophrys augustinus)	
	ckerspot (Euphydryas editha quino checkerspot (E. chalcedona chalce		-	bramble (perplexing) hairstreak (C. dumetorum affinis)	
	construction (miles construction construction)	/		gray hairstreak (Strymon melinus pudica) Ladies/Admirals	
Leanira checkerspot (Thessalia leanira wrighti) Mylitta crescent (Phyciodes mylitta)			California sister (Adelpha bredowii californica)		
Blues			Lorquin's admiral (Limenitis lorquini)		
western pygmy-blue (Brephidium exila)				west coast lady (Vanessa annabella)	
western tailed blue (Everes amyntula)				red admiral (V. atalanta rubria)	
southern blue (Glaucopsyche lygdamus australis)		ralis)		painted lady (V. cardui)	
the second of the	lue (Hemiargus ceraunus gyas)			American (Virginia) lady (V. virginiensis)	
dward's b					
	e (Icaricia acmon acmon)			unidentified lady (Vanessa sp.) Swallowtails	11

pale swallowtail (Papilio eurymedon) western tiger swallowtail (P. rutulus)

common buckeye (Junonia coenia grisea)

mourning cloak (Nymphalis antiopa)

funereal duskywing (Erynnis funeralis)
mournful duskywing (Erynnis tristis)

white (common) checkered-skipper (Pyrgus albescens)

1+1+

13

Column Subtotal

Total

Buckeye toronto larvae

fiery skipper (Hylephila phyleus)

anise swallowtail (P. zelicaon)

monarch (Danaus plexippus)

Miscellaneous

Skippers

Other

11 HH HHY W

Column Subtotal 58

2 parti

unidentified blue

Sara orangetip (Anthocharis sara sara)

desert (Felder's) orangetip (A. cethura)

Wright's metalmark (Calephelis wrighti)

cloudless sulfur (Phoebus sennae marcellina)

orange sulphur (Colias eurytheme)

sleepy orange (Eurema nicippe)

cabbage white (Pieris rapae)

spring white (P. sisymbrii)

unidentified white

unidentified sulphur

Metalmarks

Sulphurs

common California ringlet (Coenonympha californica)

Behr's metalmark (Apodemia mormo virgulti) 山崎 地方

checkered (common) white (Pontia protodice)

Whites

Appendix C BUTTERFLY CHECKLIST

Appendix C BUTTERFLY CHECKLIST

2016 Quino Checkerspot Butterfly Surveys BUTTERFLY CHECKLIST

Site Name: Proctor Valley – Village 14 of Otay Ranch

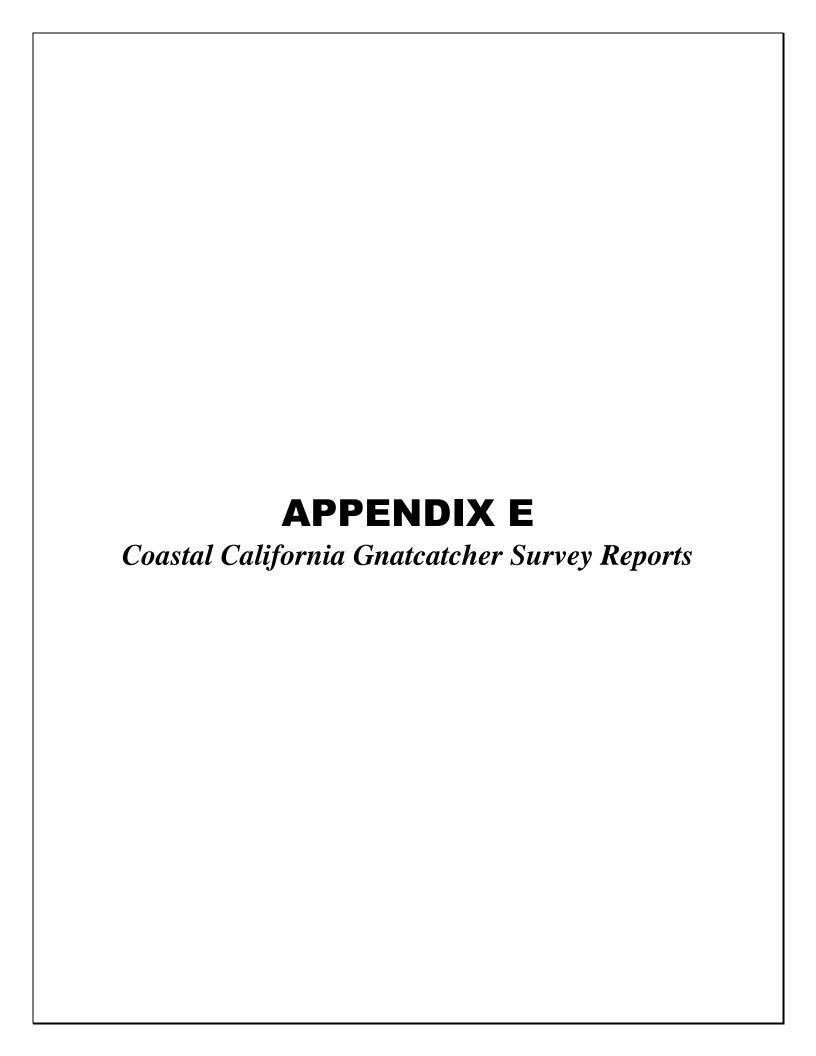
Dates: February 24 – March 31, 2016

Survey Numbers: 1-5

Surveyors: Jasmine Bakker, Erica Harris, Amy Mattson, Melissa Busby, Darin Busby, Melanie Rocks, Brian Lohstroh, Erik LaCoste, Gretchen Cummings, Brenna Ogg, Brian Parker, Crysta Dickson, Diana Saucedo, John Lovio, Monica Alfaro, Natalie Brodie, Renee Owens, Chez Brungraber, Andrew Borcher, Nicole Kimball, Travis Cooper, Alicia Hill, Melanie Dicus, John Dicus, and Garrett Huffman (Ben Rosenbaum, Hannah Sadowski, Talaya Rachels, Griffin Brungraber, Andy Smisek, and Patrick Hord as supervised individuals)

Butterfly Species	No.	Butterfly Species	No.	
Checkerspots		Metalmarks		
California patch (Chlosyne californica)	26	Behr's metalmark (Apodemia mormo virgulti)	2,817	
Gabb's checkerspot (C. gabbii)	180	Wright's metalmark (Calephelis wrighti)	57	
Quino checkerspot (Euphydryas editha quino)		Ladies/Admirals		
chalcedon checkerspot (E. chalcedona chalcedona)		California sister (Adelpha bredowii californica)	2	
Leanira checkerspot (Thessalia leanira 1ulphu)		Lorquin's admiral (Limenitis lorquini)		
Mylitta crescent (Phyciodes mylitta)		west coast lady (Vanessa annabella)	48	
Blues		red admiral (V. atalanta rubria)	102	
western pygmy-blue (Brephidium exila)	20	painted lady (V. cardui)	139	
Bernardino blue (Euphilotes bernardino allyni)	1	American (Virginia) lady (V. virginiensis)	123	
western tailed blue (Everes amyntula)	2	unidentified lady (Vanessa sp.)	154	
southern blue (Glaucopsyche lygdamus australis)	264	Swallowtails		
Edward's blue (Hemiargus ceraunus gyas)	4	Giant swallowtail (Papilio cresphontes)	15	
Acmon blue (Icaricia acmon acmon)	108	pale swallowtail (P. eurymedon)	44	
marine blue (Leptotes marina)	177	western tiger swallowtail (P. rutulus)	16	
unidentified blue	125	anise swallowtail (P. zelicaon)	136	
Whites		Skippers		
Sara orangetip (Anthocharis sara sara)	4,262	Bald duskywing (Erynnis afranius)	2	
desert (Felder's) orangetip (A. cethura)	22	funereal duskywing (E. funeralis)	587	
common California ringlet (Coenonympha californica)	652	Artful duskywing (E. pacuvius)	10	
Common ringlet (Coenonympha tuillia)	2	mournful duskywing (E. tristis)	88	
cabbage white (Pieris rapae)	133	Duskywing sp. (<i>Erynnis</i> sp.)	26	
checkered (common) white (Pontia protodice)	310	Northern white skipper (Heliopetes ericetorum)	89	
spring white (P. sisymbrii)	41	fiery skipper (<i>Hylephila phyleus</i>)	19	
unidentified white	208	Eufala skipper (<i>Lerodea eufala</i>)	11	
Sulphurs		white (common) checkered-skipper (Pyrgus albescens)	403	
orange sulphur (Colias eurytheme)	365	Arizona powdered skipper (Systasea zampa)	2	
Harford's sulphur (C. harfordii)	68	unidentified Skipper	12	
sleepy orange (Eurema nicippe)	8	Miscellaneous		
dainty sulphur (Nathalis iole)	15	Gulf fritillary (Agraulis vanillae incarnata)	24	
cloudless sulfur (Phoebus sennae marcellina)	5	Spring azure (Celastrina ladon)	1	
unidentified sulphur	198	Striated queen (Danaus gilippus)	1	
Hairstreaks		monarch (D. plexippus)	57	
great purple hairstreak (Atlides halesus corcorani)		Pearly marble (Euchloe hyantis)	9	
brown elfin (Callophrys augustinus)	48	common buckeye (Junonia coenia grisea)	233	
bramble (perplexing) hairstreak (C. dumetorum affinis)	30	mourning cloak (Nymphalis antiopa)	15	
gray hairstreak (Strymon melinus pudica)	97	California tortoiseshell (N. californica)	1	
		Callippe fritillary (Speyeria callippe consecra)	3	
_		Comstock's fritillary (Speyeria callippe comstocki)	7	
Column Subtotal	7,371	Column Subtotal	5,253	
		Total Butterflies Observed	12,624	

THIS PAGE INTENTIONALLY LEFT BLANK





MAIN OFFICE 605 THIRD STREET ENCINITAS, CALIFORNIA 92024 T 760,942.5147 T 800.450.1818 F 760.632.0164

January 26, 2015 8207

U.S. Fish and Wildlife Service Attention: Recovery Permit Coordinator 2177 Salk Avenue, Suite 250 Carlsbad, California 92008

Subject: California Gnatcatcher Survey Report for the Proctor Valley Project (Otay Ranch Village 14, Planning Areas 16 and 19) County of San

Diego, Jamul California

Dear Recovery Permit Coordinator:

This report documents the results of protocol-level presence/absence surveys for the coastal California gnatcatcher (*Polioptila californica californica*; CAGN). Focused surveys were conducted throughout all areas of suitable habitat (i.e., coastal sage scrub and sub-associations) for the proposed Proctor Valley Project (project) (Figure 1). The proposed project consists of three Village/Planning Areas (i.e., Village 14 and Planning Areas 16 and 19) within Otay Ranch and a portion of Proctor Valley Road located in the City of San Diego or City of Chula Vista, California (Figure 1). The Village/Planning areas are either owned by the city, privately owned or owned by the California Department of Fish and Wildlife (CDFW). This report focuses on the private- and city-owned portions of the project. Results of the CDFW surveys are provided as a separate survey report. Dudek biologists Thomas Liddicoat, Erin Bergman, Paul Lemons, and Jeff Priest conducted a first round of surveys in June and July 2014. A second round of surveys was conducted in October and November 2014 by Dudek biologists Thomas Liddicoat, Erin Bergman, Paul Lemons, Jeff Priest, Anita Hayworth, Kam Muri, Brock Ortega, and Tricia Wotipka-Priest.

The CAGN is a federally-listed threatened species and a California Department of Fish and Game Species of Special Concern. It is closely associated with coastal sage scrub habitat and typically occurs below 950 feet elevation and on slopes less than 40% (Atwood 1990), but CAGN have been observed at elevations greater than 2,000 feet. The species is threatened primarily by loss, degradation, and fragmentation of coastal sage scrub habitat, and is also impacted by brown-headed cowbird (*Molothrus ater*) nest parasitism.

LOCATION AND EXISTING CONDITIONS

The proposed Proctor Valley project is located in within the community of Jamul in southern San Diego County, California. Specifically, the project site is located on the U.S. Geological

Subject: California Gnatcatcher Survey Report for the Proctor Valley Project (Otay Ranch Village 14, Planning Areas 16 and 19) County of San Diego, Jamul California

Survey 7.5 minute series Jamul Mountains Quadrangle map, Township 17 South, Range 1 East, section 17 (Figure 2). The project site is centered around Proctor Valley Road, which generally runs north to south through the entire site.

The project site supports native vegetation communities and is topographically diverse from steep-rolling hillsides along the east portions of the project to flat areas along Proctor Valley Road. Elevations across the site decrease from north to south; approximately 950 feet above mean sea level (AMSL) along the northern boundary, approximately 630 feet AMSL centrally, and approximately 540 feet ASML along the southern boundary. The highest elevation is slightly above 1,500 feet and found within the most eastern portion of the project site within Village 16 (privately-owned lands).

The entire site, other than Proctor Valley Road, is undeveloped with a number of dirt roads traversing the project site. A transmission line crosses the project site from west to east. Vacant lands surround much of the project site; however, existing residential development is present to the north and south. Upper Otay Lake is also located to the south.

Vegetation Communities

Vegetation types that potentially support gnatcatchers within the privately-owned and city-owned lands focused survey area included coastal sage scrub and disturbed coastal sage scrub, totaling approximately 907 acres. The acreages of suitable habitat surveyed is provided in Table 1 and descriptions of these communities are provided below.

Table 1 Survey Area Acreages

Vegetation Community	Privately-owned Lands (Survey Areas 1, 2, 3, 4, 5)	City-owned Lands (Survey Area 1)	Total
	Round 1		
Coastal Sage Scrub	248	61	309
Disturbed Coastal Sage Scrub	60	99	159
Subtotal	308	160	468
	Round 2		
Coastal Sage Scrub	418	0	418
Disturbed Coastal Sage Scrub	21	0	22
Subtotal	439	0	439
Total	747	160	907

Subject: California Gnatcatcher Survey Report for the Proctor Valley Project (Otay Ranch Village 14, Planning Areas 16 and 19) County of San Diego, Jamul California

Coastal Sage Scrub

Coastal sage scrub is a native plant community composed of a variety of soft, low, aromatic shrubs, characteristically dominated by drought-deciduous species such as California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), and sages (*Salvia* spp.); with scattered evergreen shrubs, including lemonadeberry (*Rhus integrifolia*), laurel sumac (*Malosma laurina*), and toyon (*Heteromeles arbutifolia*). It typically develops on south-facing slopes and other xeric situations (Holland 1986).

Coastal sage scrub habitat occurs throughout the entire project site. Areas of disturbed costal sage scrub generally support a higher percent cover of non-native annual grass species such as wild oat (*Avena barbata*) and ripgut species (*Bromus* spp.). The southern areas of the project have the largest portion of costal sage scrub habitat but most of the acreage comes from the western and eastern boundaries in the northern half of the project site.

METHODS

The City is enrolled in the Natural Community Conservation Planning (NCCP) through its San Diego Multiple Species Conservation Program (MSCP); thus, in accordance with U.S. Fish and Wildlife Service (USFWS) (USFWS 1997) survey protocol, three surveys were conducted for the project site. The project site was surveyed over two rounds of field surveys to cover the entire project site and were conducted under the authorization of permit holders Thomas Liddicoat (TE139634-2), Erin Bergman (TE813545-5), Paul Lemons (TE051248-4), Jeff Priest (TE840619), Anita Hayworth (TE781084-8), Kam Muri (TE051250-3), Brock Ortega (TE813545-5), and Tricia Wotipka-Priest (independent investigator under permit TE840619) according to the schedule provided below in Table 2. The specific areas surveyed during the two rounds of surveys are provided in Figure 3.

Table 2
Survey Details and Conditions

Site	Date	Time	Personnel	Survey Conditions	Survey Area
Round One					
Privately-Owned	6/26/14	0640–1210	TSL	100-70% cc; wind 0–3mph; 65-79°F	4
Lands	6/26/14	0600–1200	EJB	100-0% cc; wind 1-4mph; 62-86°F	1
	6/27/14	0615–1300	EJB	90-0% cc; wind 1-5mph; 63-87°F	3
	7/2/14	0602-1200	EJB	100-0% cc; wind 1-4mph; 62-78°F	1
	7/3/14	0608-1200	EJB	100-0% cc; wind 1-5mph; 64-81°F	3
	7/9/14	0700-1200	JDP	100-0% cc; wind 1-4mph, 67-82°F	4

Subject: California Gnatcatcher Survey Report for the Proctor Valley Project (Otay Ranch Village 14, Planning Areas 16 and 19) County of San Diego, Jamul California

Table 2
Survey Details and Conditions

Site	Date	Time	Personnel	Survey Conditions	Survey Area
	7/9/14	0700-1200	EJB	100-0% cc; wind 1–3mph; 62-84°F	1
	7/10/14	0600-1200	EJB	100-0% cc; wind 1–2mph; 63-82°F	3
	7/16/14	0700-1200	TSL	100-0% cc; wind 0-5mph; 68-81°F	4
City Owned Lands	6/18/14	0700–1205	TSL	0% cc; wind 3–8 mph, 59-73°F	5
	6/26/14	0640–1210	TSL	100-70% cc; wind 0–3 mph; 65-79°F	4
	7/1/14	0608-1200	EJB	100-0% cc; wind 1–5mph, 63-84°F	5
	7/8/14	0700-1200	PML	60-5% cc; wind 4–8mph (9-15 gusts); 67-89°F	5
	7/9/14	0700-1200	JDP	100-0% cc; wind 1-4mph, 67-82°F	4
	7/16/14	0700-1200	TSL	100-0% cc; wind 0-5mph; 68-81°F	4
			Round T	Two	
Privately Owned	10/23/14	0620-1145	EJB	0% cc; wind 1-6 mph; 58-79°F	1
Lands	10/31/14	0615-1200	EJB	0% cc; wind 1-6 mph; 56-81°F	1
	11/7/14	0600-1150	AMH	0% cc; wind 3-5 mph; 64-78°F	1
	10/24/14	0700-1040	TSL	0% cc; wind 0-3 mph; 55-74°F	2
	11/2/14	0700-1200	JDP	50% cc; wind 0-4 mph; 57-68°F	2
	11/11/14	0540-1005	BAO	100% cc; wind 0-3 mph; 50-66°F	2
	10/24/14	0645-1030	JDP	0% cc; wind 0-4 mph; 60-72°F	3
	11/4/14	0700-1045	TWP	50% cc; wind 0-4 mph; 57-68°F	3
	11/11/14	0715-1145	KJM	0% cc; wind 2-3 mph; 51-71°F	3
	10/27/14	0715-1300	KJM	0% cc; wind 0-6 mph; 54-71°F	4
	11/4/14	0700-1200	JDP	0% cc; wind 0-6 mph; 56-74°F	4
	11/16/14	0710-1200	PLM	5-15% cc; wind 0-5 mph; 60-69°F	4
	10/30/14	0700-1030	PLM	40-70% cc; wind 0-2 mph; 60-74°F	5
	11/6/14	0545-0955	BAO	0% cc; wind 0-1 mph; 50-83°F	5
	11/13/14	0615-1030	AMH	0% cc; wind 1-3 mph; 55-69°F	5

Personnel: TSL=Thomas Liddicoat (TE139634-2), EJB=Erin Bergman (TE813545-5), PML=Paul Lemons (TE051248-4), JDP= Jeff Priest (TE840619), AMH=Anita Hayworth (TE781084-8), KJM=Kam Muri (TE051250-3), BAO=Brock Ortega (TE813545-5), and TWP=Tricia Wotipka-Priest (independent investigator under permit TE840619)

Survey Conditions: cc = cloud cover, °F = degrees Fahrenheit, mph = miles per hour



Subject: California Gnatcatcher Survey Report for the Proctor Valley Project (Otay Ranch Village 14, Planning Areas 16 and 19) County of San Diego, Jamul California

In accordance with the protocol, no more than 100-acres of suitable habitat was surveyed by a singe biologist during each visit. The entire project area was covered on-foot during each survey visit for 100% visual and audible coverage of the site; routes of the surveys are illustrated on Figure 3. During each round of surveys the visits were conducted at minimum one-week intervals (i.e., 7-day) and were performed in conformance with the currently accepted protocol of the USFWS *Coastal California Gnatcatcher (Polioptila californica californica) Presence/Absence Survey Protocol* (USFWS 1997).

A topographic map at 100-scale of the site (1 inch = 100 feet) overlain with vegetation polygons and the project boundary was carried during the survey. Additionally, digital mobile maps were utilized during the surveys to assist in navigating each survey area and mapping any gnatcatcher present. Weather conditions during surveys are provided in Table 2. Appropriate binoculars (e.g., 8.5x42 to 10×50 and magnification) were used to aid in detecting and identifying bird species. A tape of recorded gnatcatcher vocalizations was played approximately every 100-150 feet to induce responses from potentially present gnatcatchers. Tape-playback was terminated immediately upon detection of any gnatcatchers to minimize the potential for harassment. Weather conditions, time of day, and season were appropriate for the detection of gnatcatchers.

RESULTS

To Dudek's knowledge, no previous presence/absence survey efforts for California Gnatcatcher have occurred for the project site. Throughout the two rounds of surveys a total of 25 CAGN were observed including nine pairs, four fledglings/juveniles, and two lone males (Figure 4). The survey results according to property ownership are described below.

Privately-Owned Lands

A total of four CAGN pairs and one lone male were detected during the two rounds of surveys within the privately-owned lands incorporated into the proposed project survey area (Figure 4). Although these surveys did not include identifying CAGN territories, three CAGN pairs and the lone male were detected in the proposed Village 14 site, and the other CAGN pair was observed within Village 16. No CAGN were observed within Village 19 site.

City Owned Lands

A total of five CAGN pairs, one lone male, and four juveniles were detected during the two rounds of surveys within the City owned lands incorporated in to the project survey area (Figure 4).



Subject: California Gnatcatcher Survey Report for the Proctor Valley Project (Otay Ranch Village 14, Planning Areas 16 and 19) County of San Diego, Jamul California

I certify that the information in this survey report and attached exhibits fully and accurately represents my work.

Permit # TE051250-3

ermit # TE813545-5

Tricia Wotipka-Priest

permit # TE840619)

Independent investigator under

Sincerely,

Thomas S. Liddicoat Permit # TE139634-2

Erin Bergman

Permit # TE813545-5

Permit # TE840619

Paul Lemons

Permit # TE051248-4

Anita Haywerth

Permit # TE781084-8

Att.: Figure 1, Regional Map

Figure 2, Vicinity Map

Figure 3, CAGN Survey Comparison

Figure 4, Biological Resources and CAGN Survey Routes

Appendix A, Compendium of Wildlife Species Observed or Detected

REFERENCES

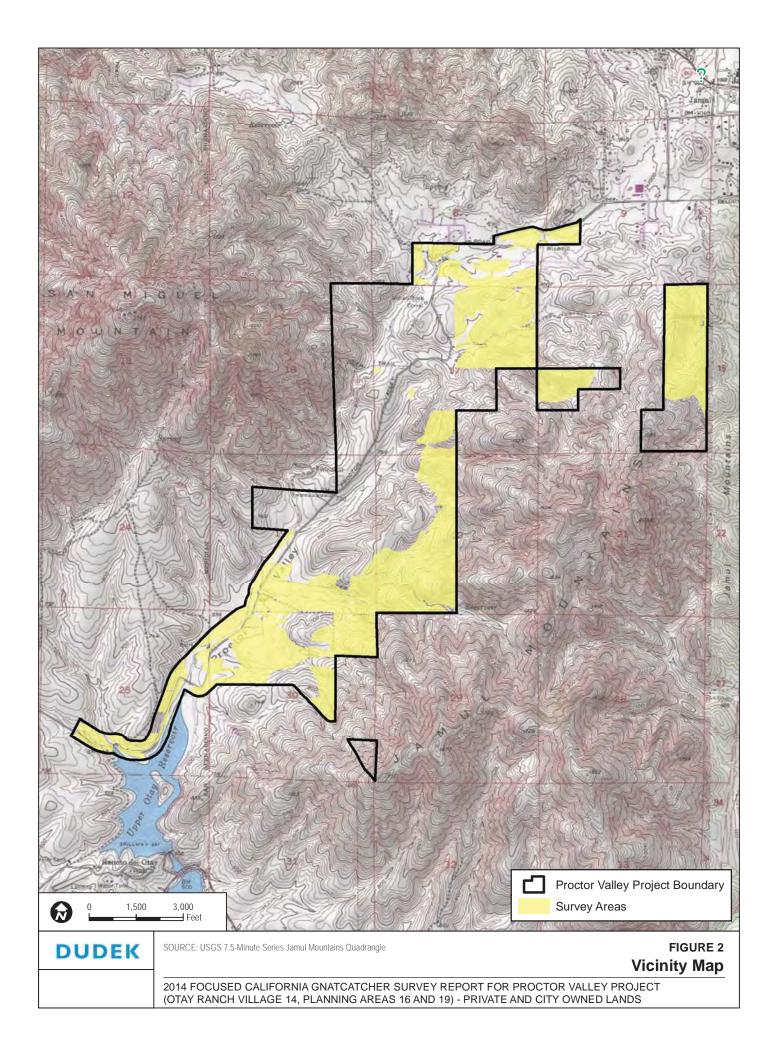
Atwood, J.L. 1990. *Status review of the California gnatcatcher* (Polioptila california). Unpublished technical report, Manomet Bird Observatory, Manomet, Massachusetts. 79 pp.

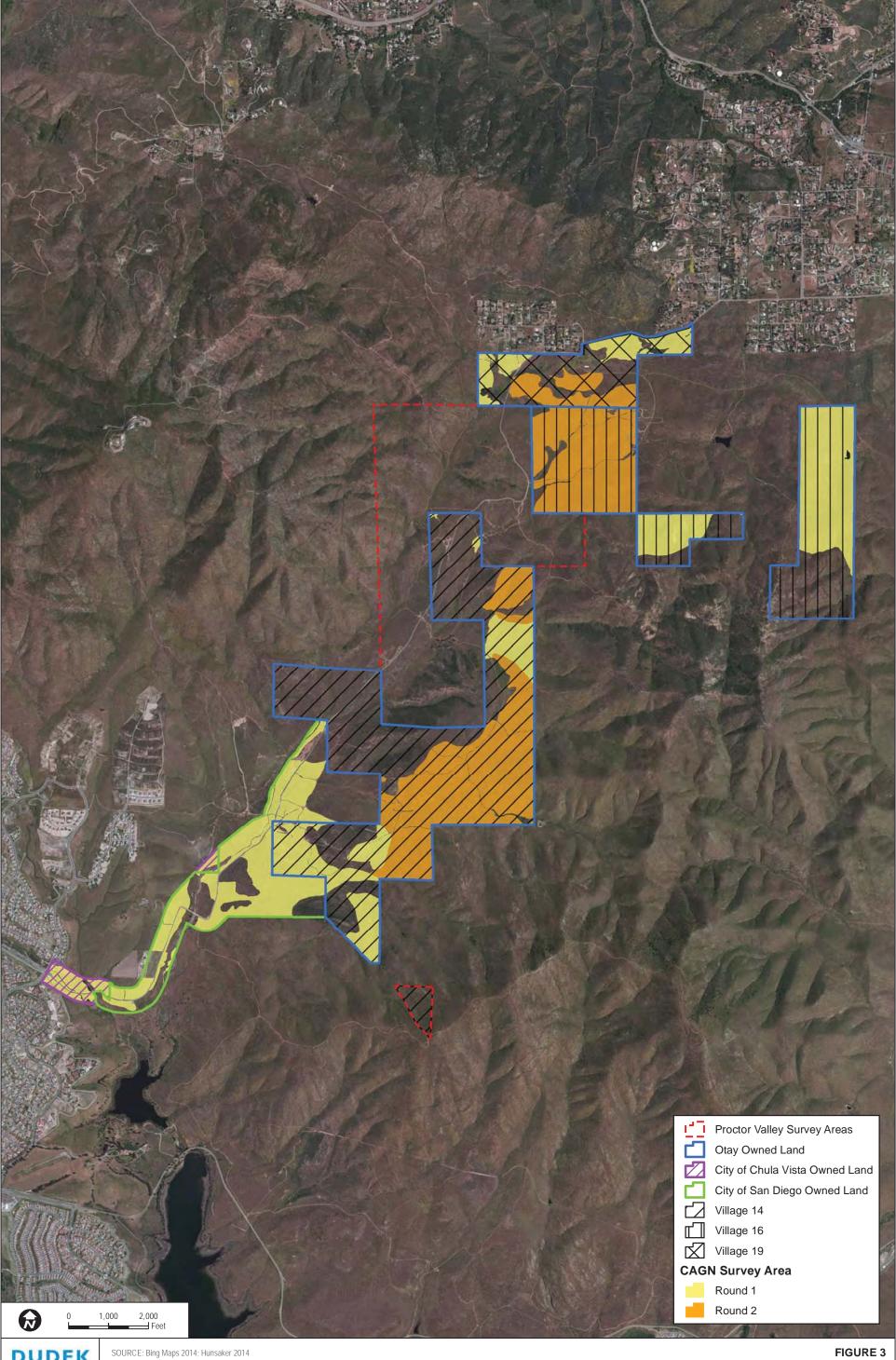
Holland, R.F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. Nongame-Heritage Program, California Department of Fish and Game. October 1986.

USFWS (U.S. Fish and Wildlife Service). 1997. *Coastal California Gnatcatcher* (Polioptila californica californica) *Presence/Absence Survey Guidelines, July* 28, 1997.

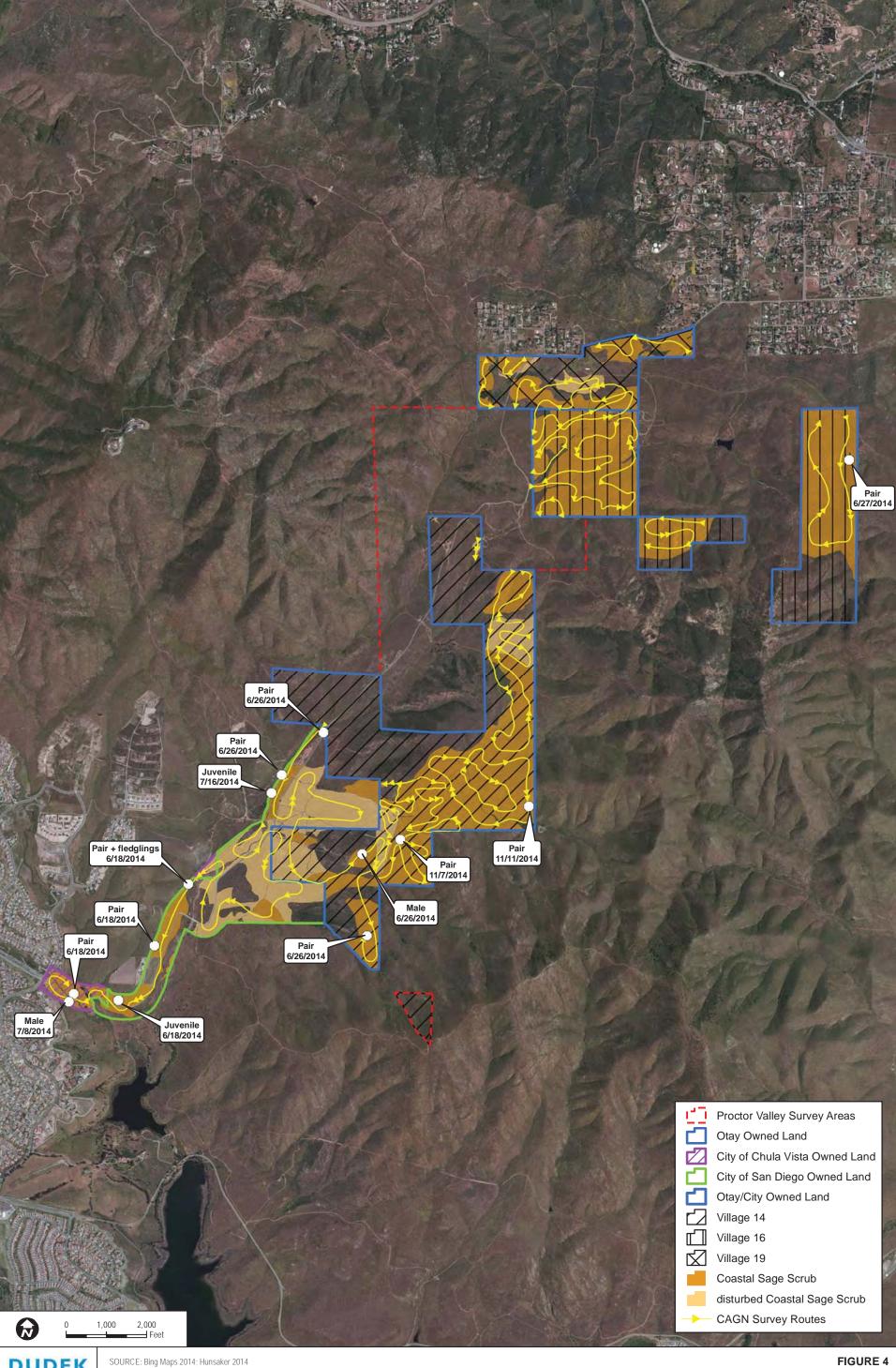


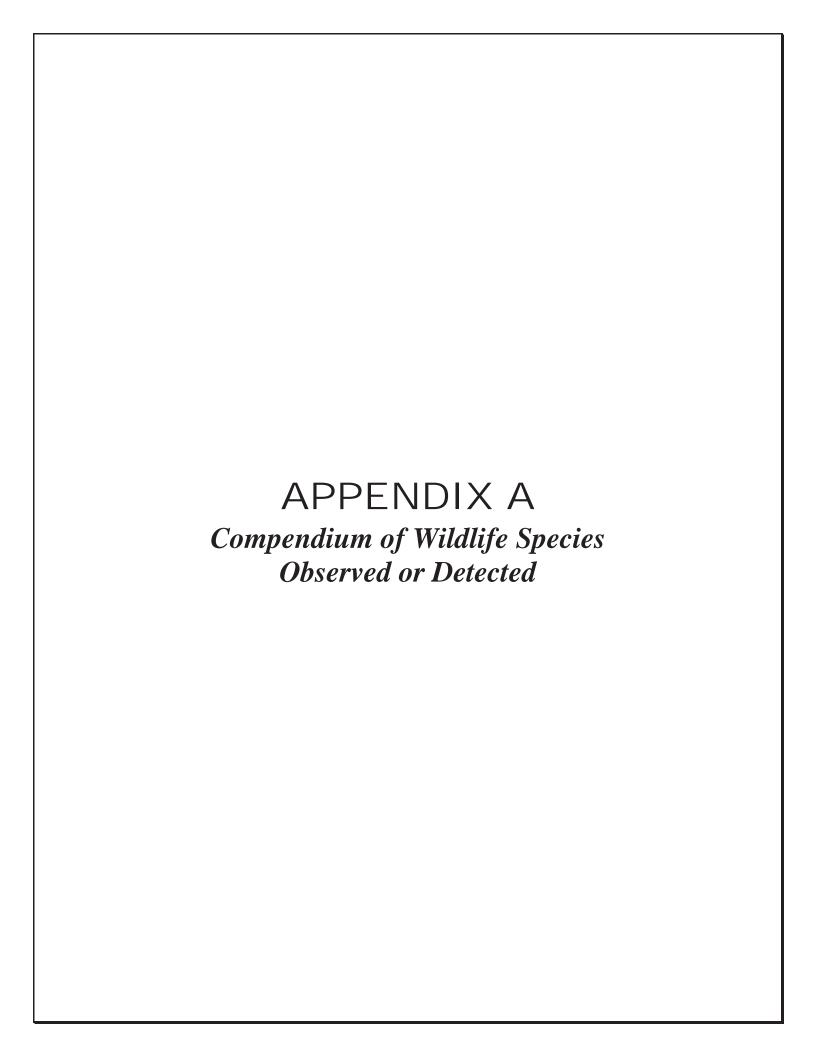
Regional Map





CAGN Survey Comparison





APPENDIX A Compendium of Wildlife Species Observed or Detected

BIRDS

ACCIPITRIDAE – HAWKS

Accipiter cooperii – Cooper's hawk Buteo jamaicensis – red-tailed hawk Buteo lineatus – red-shouldered hawk Circus cyaneus – northern harrier

AEGITHALIDAE – BUSHTITS

Psaltriparus minimus – bushtit

ALAUDIDAE – LARKS

Eremophila alpestris – horned lark

APODIDAE - SWIFTS

Aeronautes saxatalis – white-throated swift

CAPRIMULGIDAE – GOATSUCKERS

Chordeiles acutipennis – lesser nighthawk

CARDINALIDAE - CARDINALS AND ALLIES

Passerina caerulea – blue grosbeak

CATHARTIDAE - NEW WORLD VULTURES

Cathartes aura – turkey vulture

COLUMBIDAE – PIGEONS AND DOVES

* Streptopeplia decaocto – Eurasian collared-dove Zenaida macroura – mourning dove

CORVIDAE - JAYS AND CROWS

Aphelocoma californica – western scrub-jay Corvus brachyrhynchos – American crow Corvus corax – common raven

CUCULIDAE – CUCKOOS, ROADRUNNERS, AND ANIS

Geococcyx californianus – greater roadrunner



EMBERIZIDAE – BUNTINGS AND SPARROWS

Aimophila ruficeps canescens – Southern California rufous-crowned sparrow

Ammodramus savannarum – grasshopper sparrow

Chondestes grammacus – lark sparrow

Melospiza melodia – song sparrow

Passerculus sandwichensis—savannah sparrow

Pipilo crissalis – California towhee

Pipilo maculatus – spotted towhee

Zonotrichia leucophrys—white-crowned sparrow

FALCONIDAE - CARACARAS AND FALCONS

Falco sparverius – American kestrel

FRINGILLIDAE – FINCHES

Carpodacus mexicanus – house finch Carduelis psaltria – lesser goldfinch

HIRUNDINIDAE – SWALLOWS

Petrochelidon pyrrhonota – cliff swallow Tachycineta thalassina – violet-green swallow

ICTERIDAE – BLACKBIRDS

Agelaius phoeniceus – red-winged blackbird Icterus cucullatus – hooded oriole Sturnella neglecta – western meadowlark

MIMIDAE – THRASHERS

Mimus polyglottos – northern mockingbird *Toxostoma redivivum* – California thrasher

ODONTOPHORIDAE—NEW WORLD QUAIL

Callipepla californica—California quail

PARULIDAE – WOOD-WARBLERS

Cardellina pusilla – Wilson's warbler Geothlypis trichas – common yellowthroat Setophaga coronata—yellow-rumped warbler

PASSERIDAE – OLD WORLD SPARROWS

* Passer domesticus – house sparrow



PHASIANIDAE – PHEASANTS AND QUAILS

Callipepla californica - California quail

PICIDAE – WOODPECKERS AND ALLIES

Colaptes auratus – northern flicker

Picoides nuttallii – Nuttall's woodpecker

PTILOGONATIDAE - SILKY FLYCATCHERS

Phainopepla nitens – phainopepla

STURNIDAE – STARLINGS AND ALLIES

* Sturnus vulgaris – European starling

SYL VIIDAE – GNATCATCHERS

Polioptila californica californica – coastal California gnatcatcher

TIMALIIDAE – LAUGHINGTHRUSH AND WRENTIT

Chamaea fasciata – wrentit

TROCHILIDAE – HUMMINGBIRDS

Calypte anna - Anna's hummingbird

Calypte costae – Costa's hummingbird

TROGLODYTIDAE – WRENS

Salpinctes obsoletus—rock wren

Thryomanes bewickii – Bewick's wren

TURDIDAE – THRUSHES

Sialia mexicana – western bluebird

TYRANNIDAE – TYRANT FLYCATCHERS

Myiarchus cinerascens – ash-throated flycatcher

Sayornis nigricans – black phoebe

Sayornis saya – Say's phoebe

Tyrannus verticalis – western kingbird

Tyrannus vociferans – Cassin's kingbird

INVERTEBRATE

BUTTERFLIES

NYMPHALIDAE—BRUSH-FOOTED BUTTERFLIES

Vanessa cardui—painted lady



MAMMAL

CANIDS

CANIDAE—WOLVES AND FOXES

Canis latrans—coyote

HARES AND RABBITS

LEPORIDAE—HARES AND RABBITS

Lepus californicus bennettii—San Diego black-tailed jackrabbit

RATS AND MICE

MURIDAE—RATS & MICE

Neotoma sp—woodrat species

SQUIRRELS

SCIURIDAE—SQUIRRELS

Spermophilus(Otospermophilus) beecheyi—California ground squirrel

UNGULATES

CERVIDAE—DEERS

Odocoileus hemionus—mule deer

REPTILE

PHRYNOSOMATIDAE—IGUANID LIZARDS

Sceloporus occidentalis—western fence lizard

ANGUIDAE—ALLIGATOR LIZARDS

Elgaria multicarinata—southern alligator lizard

SNAKES

BOIDAE—BOAS

Lichanura trivirgata—rosy boa

* signifies introduced (non-native) species





MAIN OFFICE 605 THIRD STREET ENCINITAS, CALIFORNIA 92024 T 760,942.5147 T 800.450.1818 F 760.632.0164

January 26, 2015 8207

U.S. Fish and Wildlife Service Attention: Recovery Permit Coordinator 2177 Salk Avenue, Suite 250 Carlsbad, California 92008

Subject: California Gnatcatcher Survey Report for the Proctor Valley Project (Otay

Ranch Village 14, Planning Areas 16 and 19) State Owned Lands – CDFW,

County of San Diego, Jamul, California

Dear Recovery Permit Coordinator:

This report documents the results of protocol-level presence/absence surveys for the coastal California gnatcatcher (*Polioptila californica californica*; CAGN). Focused surveys were conducted throughout all areas of suitable habitat (i.e., coastal sage scrub and sub-associations) for the proposed Proctor Valley Project (project) (Figure 1). The proposed project consists of three Village/Planning Areas (i.e., Village 14 and Planning Areas 16 and 19) within Otay Ranch and a portion of Proctor Valley Road located in the City of San Diego, California (Figure 1). The Village/Planning areas are either privately owned or owned by the California Department of Fish and Wildlife (CDFW). This report focuses on the state-owned, California Department of Fish and Wildlife (CDFW) portions of the project study area. Results of the surveys within the Private/City owned lands are provided as a separate survey report. Dudek biologists, Erin Bergman and Jeff Priest conducted a first round of surveys in June and July 2014. A second round was conducted in October and November 2014 by Dudek biologists Paul Lemons, Jeff Priest, Anita Hayworth, Kam Muri, Brock Ortega, and Tricia Wotipka-Priest.

The CAGN is a federally-listed threatened species and a California Department of Fish and Game Species of Special Concern. It is closely associated with coastal sage scrub habitat and typically occurs below 950 feet elevation and on slopes less than 40% (Atwood 1990), but CAGN have been observed at elevations greater than 2,000 feet. The species is threatened primarily by loss, degradation, and fragmentation of coastal sage scrub habitat, and is also impacted by brown-headed cowbird (*Molothrus ater*) nest parasitism.

LOCATION AND EXISTING CONDITIONS

The proposed Proctor Valley project is located in the community of Jamul within southern San Diego County, California. Specifically, the project site is located on the U.S. Geological

Subject: California Gnatcatcher Survey Report for the Proctor Valley Project (Otay Ranch Village 14, Planning Areas 16 and 19) State Owned Lands – CDFW, County of San Diego, Jamul, California

Survey 7.5 minute series Jamul Mountains Quadrangle map, Township 17 South, Range 1 East, section 17 (Figure 2). The project site is centered around Proctor Valley Road, which runs north south through the entire site.

The project site supports native vegetation communities and is topographically diverse from steep-rolling hillsides along the east portions of the project to flat areas along Proctor Valley Road. Elevations across the site decrease from north to south; approximately 950 feet above mean sea level (AMSL) along the northern boundary, approximately 630 feet AMSL centrally, and approximately 540 feet ASML along the southern boundary. The highest elevation is slightly above 1,500 feet and found within the most eastern portion of the project site within Village 16 (privately-owned lands).

The entire site, other than Proctor Valley Road, is undeveloped with a number of dirt roads traversing the project site. A transmission line crosses the project site from west to east. Vacant lands surround much of the project site; however, existing residential development is present to the north and south. Upper Otay Lake is also located to the south.

Vegetation Communities

Vegetation types that potentially support gnatcatchers within the state-owned lands focused survey area included coastal sage scrub and disturbed coastal sage scrub, totaling approximately 156 acres. The acreages of suitable habitat surveyed is provided in Table 1 and descriptions of these communities are provided below.

Table 1 Survey Area Acreages

Vegetation Community	State Owned Lands - CDFW
Round 1	
Coastal Sage Scrub	66
Disturbed Coastal Sage Scrub	30
Subtotal	96
Round 2	
Coastal Sage Scrub	60
Disturbed Coastal Sage Scrub	0
Subtotal	60
Total	156

Subject: California Gnatcatcher Survey Report for the Proctor Valley Project (Otay Ranch Village 14, Planning Areas 16 and 19) State Owned Lands – CDFW, County of San Diego, Jamul, California

Coastal Sage Scrub

Coastal sage scrub is a native plant community composed of a variety of soft, low, aromatic shrubs, characteristically dominated by drought-deciduous species such as California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), and sages (*Salvia* spp.); with scattered evergreen shrubs, including lemonadeberry (*Rhus integrifolia*), laurel sumac (*Malosma laurina*), and toyon (*Heteromeles arbutifolia*). It typically develops on south-facing slopes and other xeric situations (Holland 1986).

Coastal sage scrub and disturbed coastal sage scrub habitats occur throughout the entire project site. Areas of disturbed coastal sage scrub generally support a higher percent cover of non-native annual grass species such as wild oat (*Avena barbata*) and ripgut species (*Bromus* spp.). Within the State owned lands, the coastal sage scrub is a continuous swath that covers both slopes on either side of the major drainage that runs southwest through the parcel.

METHODS

Surveys were conducted under the authorization of permit holders Erin Bergman (TE813545-5), Paul Lemons (TE051248-4), Jeff Priest (TE840619), Anita Hayworth (TE781084-8), Kam Muri (TE051250-3), Brock Ortega (TE813545-5), and Tricia Wotipka-Priest (independent investigator under permit TE840619). The project site was surveyed over two rounds of field surveys to cover the entire project site. During each round of surveys suitable habitat within the project site was surveyed three times for CAGN within coastal sage scrub (including disturbed coastal sage scrub) according to the schedule provided below in Table 2. The specific areas surveyed during the two rounds of surveys are provided in Figure 3.

Table 2
Survey Conditions

Site	Date	Time	Personnel	Survey Conditions			
	Round One						
State Owned Lands –	6/26/14	0700–1200	JDP	100-70% cc; wind 1–5mph; 64-78°F			
CDFW	7/11/14	0600–1200	EJB	100-0%cc; wind 1-2mph; 62-81°F			
	7/18/14	0600–1200	EJB	100-95%; wind 1–2mph; 62-86°F			
		F	Round Two				
State Owned Lands –	10/24/14	1030-1145	JDP	0% cc; wind 0-4 mph; 60-72°F			
CDFW	11/4/14	1045-1200	TWP	50% cc; wind 0-4 mph; 57-68°F			
	11/11/14	1145-1315	KJM	0% cc; wind 2-3 mph; 51-71°F			
	10/30/14	1030-1120	PML	40-70% cc; wind 0-2 mph; 60-74°F			

Subject: California Gnatcatcher Survey Report for the Proctor Valley Project (Otay Ranch Village 14, Planning Areas 16 and 19) State Owned Lands – CDFW, County of San Diego, Jamul, California

Table 2
Survey Conditions

Site	Date	Time	Personnel	Survey Conditions
	11/6/14	0955-1115	BAO	0% cc; wind 0-1 mph; 50-83°F
	11/13/14	1030-1150	AMH	0% cc; wind 1-3 mph; 55-69°F

Personnel: EJB=Erin Bergman (TE813545-5), JDP= Jeff Priest (TE840619), PML=Paul Lemons (TE051248-4), AMH=Anita Hayworth (TE781084-8), KJM=Kam Muri (TE051250-3), BAO=Brock Ortega (TE813545-5), and TWP=Tricia Wotipka-Priest (independent investigator under permit TE840619) Survey Conditions: Cc = cloud cover, °F = degrees Fahrenheit, mph = miles per hour

In accordance with the protocol, no more than 100-acres of suitable habitat was surveyed by a singe biologist during each visit. The entire project area was covered on-foot during each survey visit for 100% visual and audible coverage of the site; routes of the surveys are illustrated on Figure 4. During each round of surveys the visits were conducted at minimum one-week intervals (i.e., 7-day) and were performed in conformance with the currently accepted protocol of the USFWS *Coastal California Gnatcatcher (Polioptila californica californica) Presence/Absence Survey Protocol* (USFWS 1997).

A topographic map of the site (scale 1 inch = 100 feet) overlain with vegetation polygons was used for the survey. Additionally, digital mobile maps were utilized during the surveys to assist in navigating each survey area and mapping any gnatcatcher present. Weather conditions during surveys are provided in Table 2. Binoculars (8.5x42 to 10×50 magnification) were used to aid in detecting and identifying bird species. Taped gnatcatcher vocalizations were played frequently in order to elicit a response from the species, if present. The tape was played approximately every 100–150 feet within suitable habitat to induce responses from potentially present gnatcatchers. Tape-playback was terminated immediately upon detection of any gnatcatchers to minimize the potential for harassment. Weather conditions, time of day, and season were appropriate for the detection of gnatcatchers.

RESULTS

State Owned Lands - CDFW

One individual male California gnatcatcher was observed within the State Owned Lands - CDFW of the proposed Proctor Valley project site during one of the first round surveys only (Figure 4). No other California gnatcatchers were detected within State Owned Lands-CDFW during any of other the survey visits



Subject: California Gnatcatcher Survey Report for the Proctor Valley Project (Otay Ranch Village 14, Planning Areas 16 and 19) State Owned Lands – CDFW, County of San Diego, Jamul, California

I certify that the information in this survey report and attached exhibits fully and accurately represents my work.

Sincerely,

Jeff Priest

Permit # TE840619

Erin Bergman

Permit # TE813545-5

Paul Lemons

Permit # TE051248-4

Anita Hayworth

Permit # TE781084-8

Kam Muri

Permit # TE05 1250-3

Brock Ortega

Permit # TE813545-5

Tricia Wotipka-Priest

Independent investigator under

permit # TE840619)

Att: Figure 1, Regional Map

Figure 2, Vicinity Map

Figure 3, CAGN Survey Comparison

Figure 4, Biological Resources and CAGN Survey Routes

Appendix A, Compendium of Wildlife Species Observed or Detected

REFERENCES

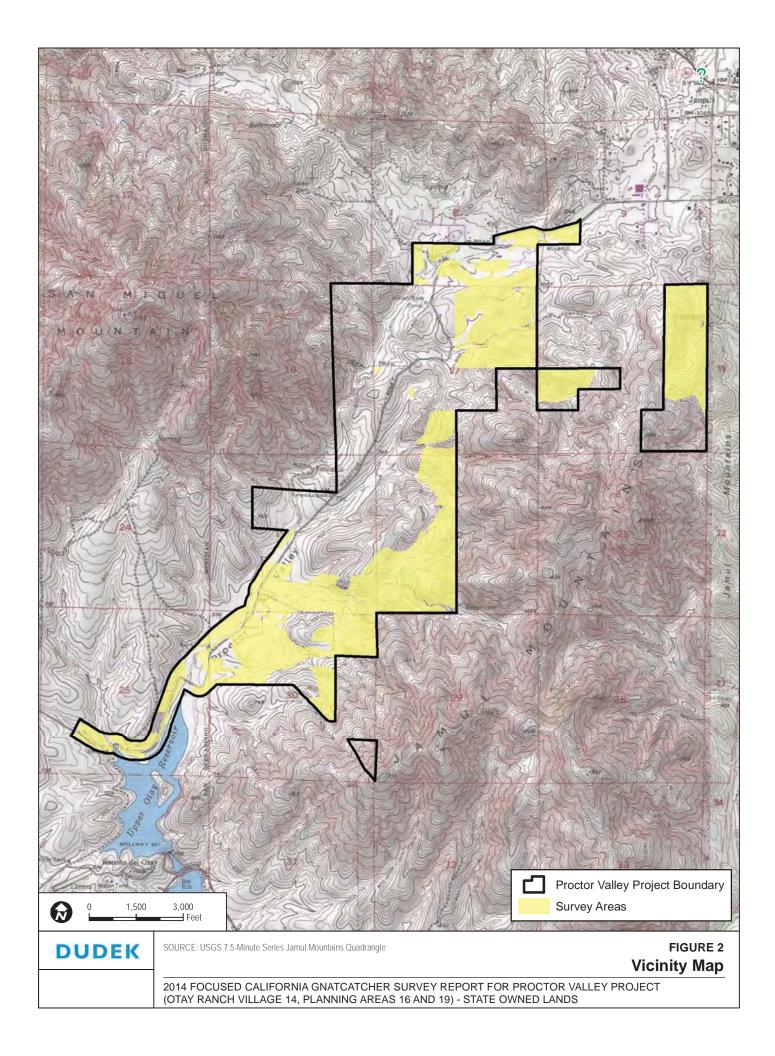
Atwood, J.L. 1990. *Status review of the California gnatcatcher* (Polioptila california). Unpublished technical report, Manomet Bird Observatory, Manomet, Massachusetts. 79 pp.

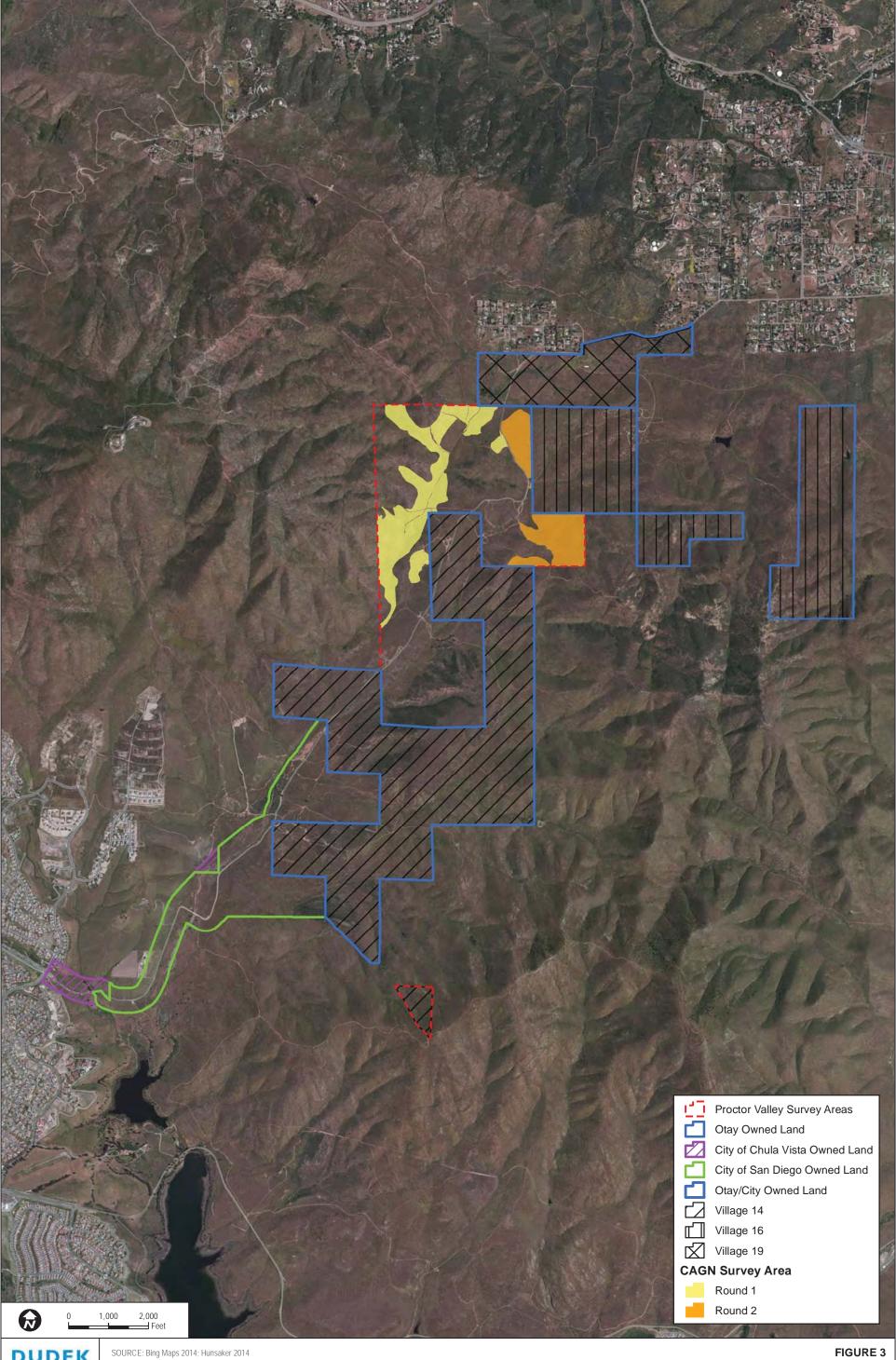
Holland, R.F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. Nongame-Heritage Program, California Department of Fish and Game. October 1986.

USFWS (U.S. Fish and Wildlife Service). 1997. *Coastal California Gnatcatcher* (Polioptila californica californica) *Presence/Absence Survey Guidelines*, *July* 28, 1997.

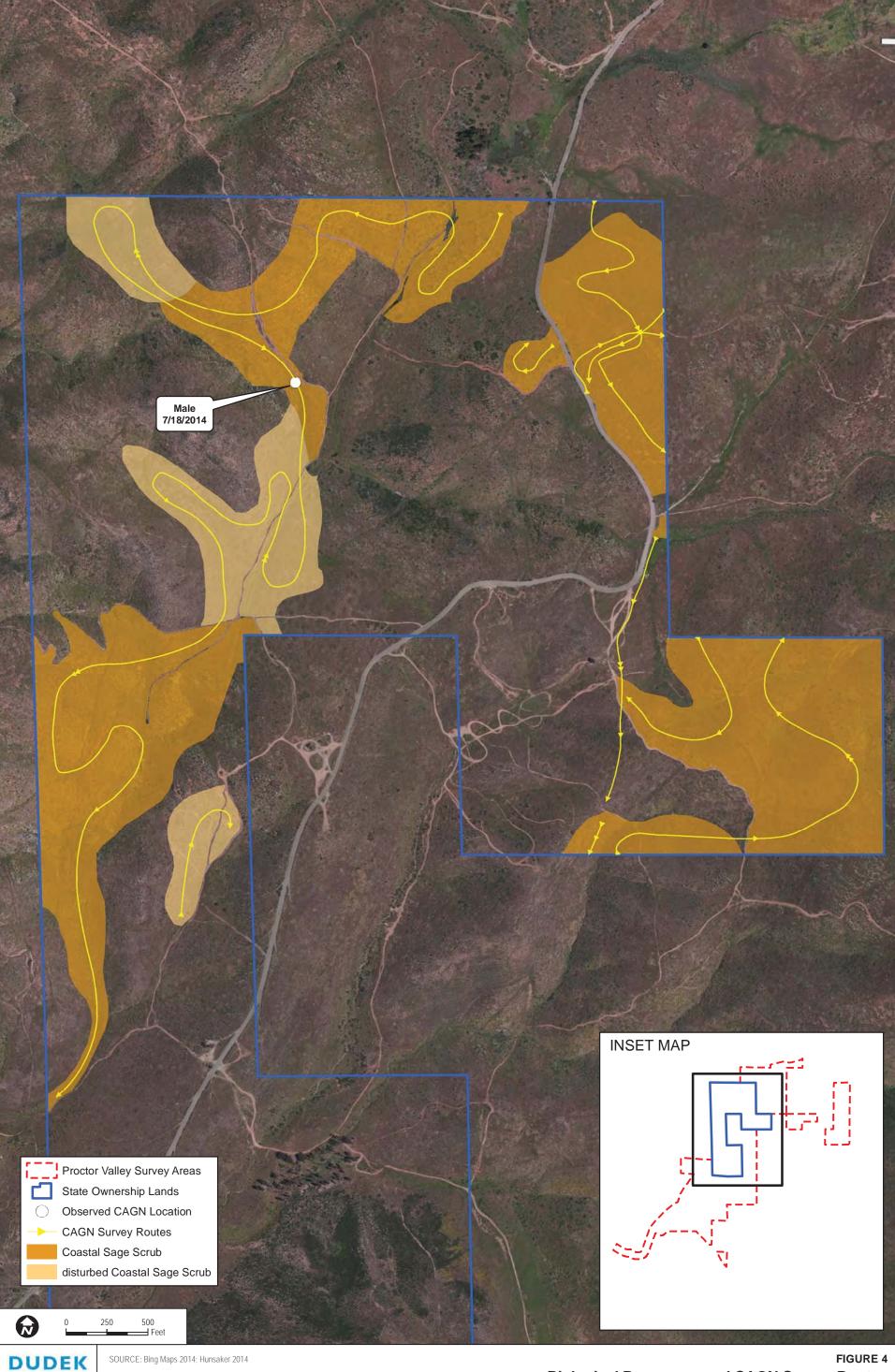


Regional Map

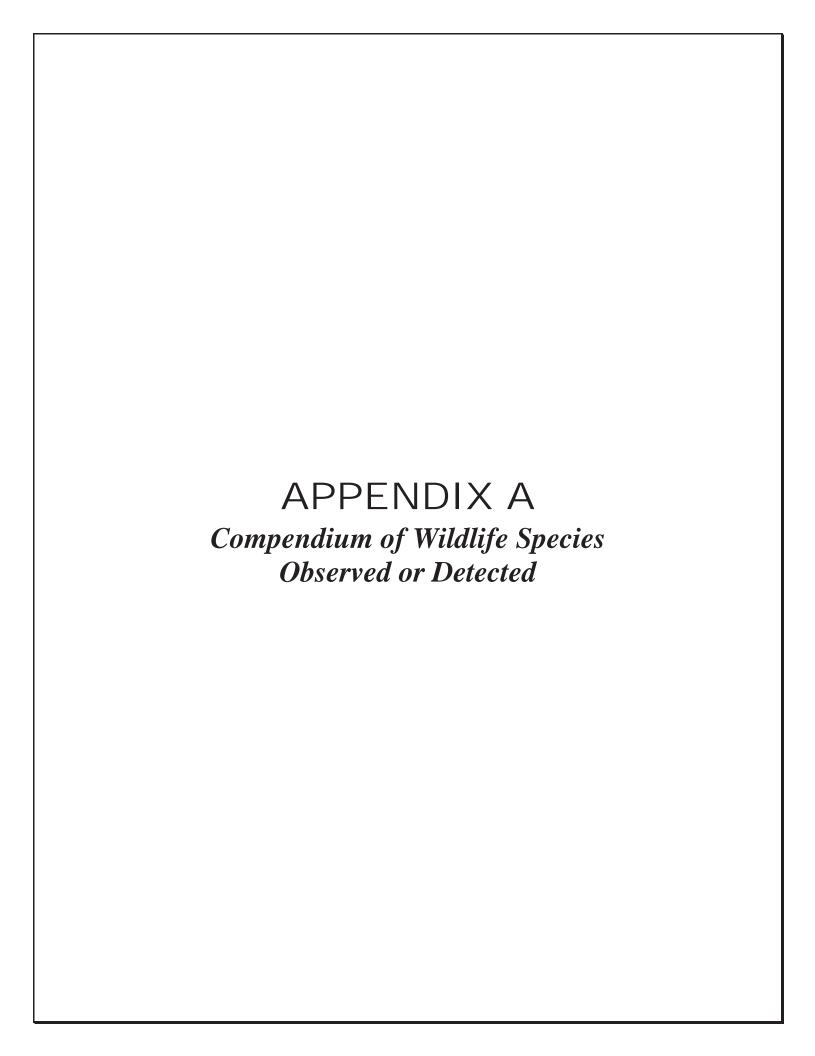




CAGN Survey Comparison



Biological Resources and CAGN Survey Routes



APPENDIX A Compendium of Wildlife Species Observed or Detected

BIRDS

ACCIPITRIDAE – HAWKS

Accipiter cooperii – Cooper 's hawk Buteo jamaicensis – red-tailed hawk Buteo lineatus – red-shouldered hawk

AEGITHALIDAE – BUSHTITS

Psaltriparus minimus – bushtit

ALAUDIDAE – LARKS

Eremophila alpestris – horned lark

APODIDAE – SWIFTS

Aeronautes saxatalis – white-throated swift

CATHARTIDAE – NEW WORLD VULTURES

Cathartes aura – turkey vulture

COLUMBIDAE – PIGEONS AND DOVES

Columbina passerina—common ground-dove Zenaida macroura – mourning dove

CORVIDAE - JAYS AND CROWS

Aphelocoma californica – western scrub-jay Corvus brachyrhynchos – American crow Corvus corax – common raven

CUCULIDAE – CUCKOOS, ROADRUNNERS, AND ANIS

Geococcyx californianus – greater roadrunner

EMBERIZIDAE – BUNTINGS AND SPARROWS

Aimophila ruficeps canescens – Southern California rufous-crowned sparrow

Chondestes grammacus- Lark sparrow

Melospiza melodia – song sparrow

Passerculus sandwichensis- Savannah sparrow

Pipilo crissalis - California towhee

Pipilo maculatus – spotted towhee

Zonotrichia leucophrys- White-crowned sparrow



FALCONIDAE - CARACARAS AND FALCONS

Falco sparverius – American kestrel

FRINGILLIDAE – FINCHES

Carpodacus mexicanus – house finch Carduelis psaltria – lesser goldfinch

HIRUNDINIDAE – SWALLOWS

Petrochelidon pyrrhonota – cliff swallow Tachycineta bicolor – tree swallow

ICTERIDAE – BLACKBIRDS

Icterus cucullatus – hooded oriole *Sturnella neglecta* – western meadowlark

MIMIDAE – THRASHERS

Mimus polyglottos – northern mockingbird *Toxostoma redivivum* – California thrasher

ODONTOPHORIDAE—NEW WORLD QUAIL

Callipepla californica—California quail

PARULIDAE—WOOD-WARBLERS

Setophaga coronata—yellow-rumped warbler

PASSERIDAE – OLD WORLD SPARROWS

* Passer domesticus – house sparrow

PHASIANIDAE – PHEASANTS AND QUAILS

Callipepla californica - California quail

PICIDAE—WOODPECKERS AND ALLIES

Picoides nuttallii—Nuttall's woodpecker

PTILOGONATIDAE – SILKY FLYCATCHERS

Phainopepla nitens – phainopepla

SYL VIIDAE – GNATCATCHERS

Polioptila californica californica – coastal California gnatcatcher

TIMALIIDAE – LAUGHINGTHRUSH AND WRENTIT

Chamaea fasciata - wrentit



TROCHILIDAE – HUMMINGBIRDS

Calypte anna – Anna's hummingbird Calypte costae – Costa's hummingbird

TROGLODYTIDAE—WRENS

Salpinctes obsoletus—rock wren
Thryomanes bewickii—Bewick's wren

TYRANNIDAE - TYRANT FLYCATCHERS

Myiarchus cinerascens – ash-throated flycatcher Sayornis nigricans- black phoebe Sayornis saya- say's phoebe Tyrannus vociferans – Cassin's kingbird

INVERTEBRATES

BUTTERFLIES

NYMPHALIDAE—BRUSH-FOOTED BUTTERFLIES

Vanessa cardui—painted lady

MAMMALS

CANIDS

CANIDAE—WOLVES AND FOXES

Canis latrans—coyote

HARES AND RABBITS

LEPORIDAE—HARES AND RABBITS

Lepus californicus bennettii—San Diego black-tailed jackrabbit Sylvilagus bachmani—Brush rabbit

RATS AND MICE

MURIDAE—RATS AND MICE

Neotoma sp.—Woodrat species



SQUIRRELS

SCIURIDAE—SQUIRRELS

Spermophilus (Otospermophilus) beecheyi—California ground squirrel

UNGULATES

CERVIDAE—DEERS

Odocoileus hemionus-Mule deer

REPTILE

LIZARDS

PHRYNOSOMATIDAE—IGUANID LIZARDS

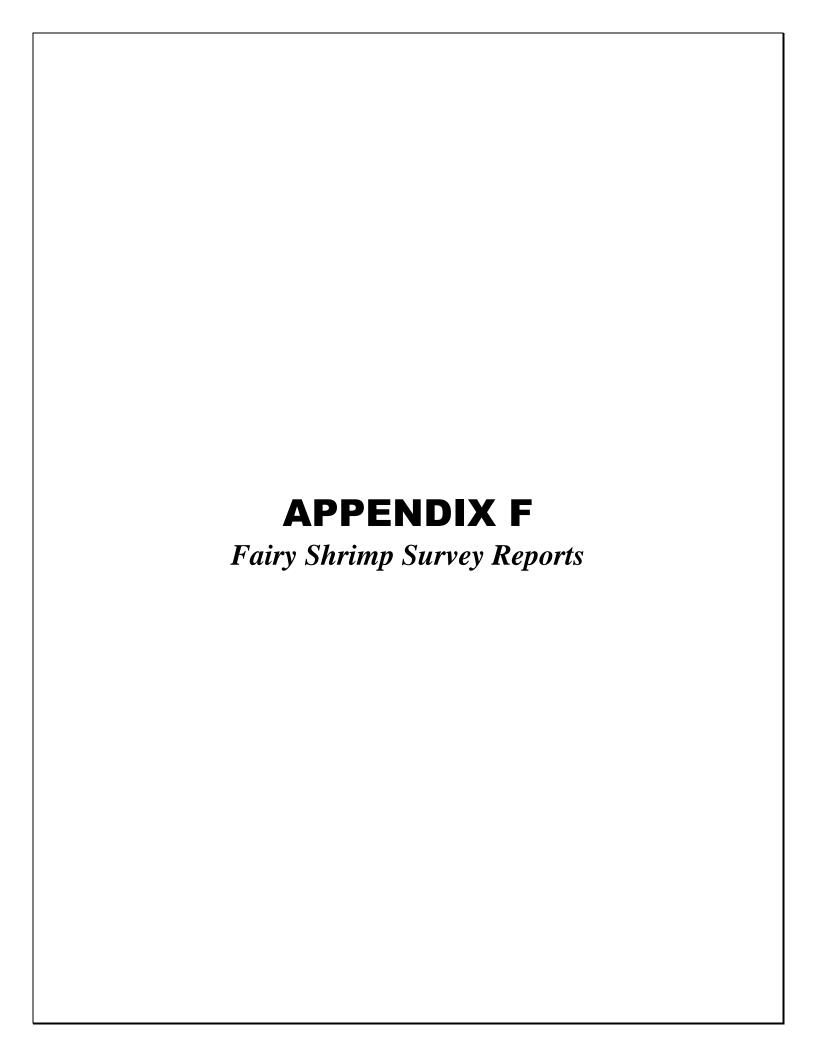
Sceloporus occidentalis—western fence lizard

ANGUIDAE—ALLIGATOR LIZARDS

Elgaria multicarinata—southern alligator lizard

* signifies introduced (non-native) species







MAIN OFFICE 605 THIRD STREET ENCINITAS, CALIFORNIA 92024 T 760.942.5147 T 800.450.1818 F 760.632.0164

August 18, 2015 8207

U.S. Fish and Wildlife Service Attn: Recovery Permit Coordinator 2177 Salk Avenue, Suite 250 Carlsbad, California 92008

Subject: 2014/15 Wet Season Presence/Absence Survey for Vernal Pool Branchiopods, Proctor Valley Project (Otay Ranch Village 14, Planning

Areas 16 and 19), San Diego County, California

Dear Recovery Permit Coordinator:

This report fulfills the reporting requirements in accordance with the Section 10(a)(1)(A) Recovery Permit and documents the results of a wet season presence/absence survey for vernal pool branchiopods conducted for the Proctor Valley project (project), located in the southwestern portion of San Diego County, California. This report documents a wet season survey conducted for the project in 2014/15.

The 2014/15 wet season survey was performed by Dudek biologists Danielle Mullen (Permit No. TE-31221B-0), Thomas Liddicoat (TE-139634) and Paul Lemons (TE-051248) between December 19, 2014, and June 1, 2015. The survey focused on the determination of the presence or absence of two federally listed endangered vernal pool branchiopod species, Riverside fairy shrimp (*Streptocephalus woottoni*) and San Diego fairy shrimp (*Branchinecta sandiegonensis*), and was conducted according to the Interim Survey Guidelines to Permittees for Recovery Permits under Section 10(a)(1)(A) of the Endangered Species Act for the Listed Vernal Pool Branchiopods (Interim Survey Guidelines; USFWS 1996).

A total of 81 features were recorded within the project study area that could potentially support vernal pool branchiopods. Of these 81 features sampled, 7 features (A12, A22, A23, A27, B2, C14, C21) were found to support San Diego fairy shrimp, 4 features (B7, C5, C8, C12) were found occupied with versatile fairy shrimp (*Branchinecta lindahli*), and 7 features (B23, C13, C15, C16, C17, C18, C19) were observed with immature branchiopod individuals that were unidentifiable to species (*Branchinecta* sp.). The survey is discussed in further detail in the following sections.

PROJECT LOCATION AND EXISTING CONDITIONS

The project site is located within Otay Ranch, southwest of Jamul and northeast of Bonita (Figure 1, Regional Map). The Upper and Lower Otay Lakes are located to the south of the

Subject: 2014/15 Wet Season Presence/Absence Survey for Vernal Pool Branchiopods, Proctor Valley Project (Otay Ranch Village 14, Planning Areas 16 and 19), San Diego County, California

project and open space borders the project site to the northwest and southeast. More specifically, the project site is located primarily southeast of Proctor Valley Road, within the Jamul Mountains U.S. Geological Survey 7.5-minute quadrangle, Township 17 South, Ranges 1 East and 1 West, Sections 8, 9, 16, 17, 18, 19, 20, 25 and 30 (Figure 2, Vicinity Map). The approximate center of the project site is located at a latitude and longitude of 32°40′57″ north and 116°54′24″ west.

The majority of the study area is undeveloped, with on-site elevations ranging between 590 feet and 1,200 feet above mean sea level. The study area is diverse in topography and contains a flat valley along Proctor Valley Road and rolling hills in the remainder of the site. The study area is bordered by the San Miguel and Jamul Mountains immediately to the northwest and southeast, with the foothills of these mountains encroaching into the study area. The eastern portion of the project site is located in the Jamul Mountains and contains the highest elevations. The project site is dominated by native upland vegetation (chaparral and sage scrub communities), with substantial areas of native and non-native grasslands. Various wetland plant communities also occur in the site.

Twelve soil series occur in the study area, including Diablo, Escondido, Friant, Linne, Olivenhain, Placentia, Riverwash, San Miguel–Exchequer, Visalia, Vista, Water, and Wyman. Specifically, 20 soil types occur in the study area, including Diablo–Olivenhain complex, 9% to 30% slopes; Diablo clay, 15% to 30% slopes; Diablo clay, 9% to 15% slopes; Escondido very fine sandy loam, 9% to 15% slopes, eroded; Friant rocky fine sandy loam, 30% to 70% slopes; Friant rocky fine sandy loam, 9% to 30% slopes; Olivenhain cobbly loam, 9% to 30% slopes; Olivenhain cobbly loam, 2% to 9% slopes; Placentia sandy loam, 5% to 9% slopes; eroded; Placentia sandy loam, thick surface, 2% to 9% slopes; Riverwash; San Miguel–Exchequer rocky silt loams, 9% to 70% slopes; Visalia gravelly sandy loam, 2% to 5% slopes; Visalia sandy loam, 2% to 5% slopes; Visalia sandy loam, 5% to 9% slopes; Vista rocky coarse sandy loam, 5% to 15% slopes; Water; Wyman loam, 2% to 5% slopes (Bowman 1973). Of those soil types, the Diablo, Olivenhain and San Miguel are known to support special-status plant species. Note that although Water is mapped on site by Bowman as a soil type, this area is located around and extends over 3,000 feet upstream from Upper Otay Lake. This area around the lake is not actually covered by water.

VEGETATION COMMUNITIES, LAND COVERS, AND VERNAL POOL FEATURES

The project site supports 11 vegetation communities and 3 land cover types and was mapped by Dudek biologists in April and May of 2014. Vegetation community classifications used in this report

Subject: 2014/15 Wet Season Presence/Absence Survey for Vernal Pool Branchiopods, Proctor Valley Project (Otay Ranch Village 14, Planning Areas 16 and 19), San Diego County, California

follow Holland (1986) and Oberbauer et al. (2008), where feasible, with modifications to accommodate the lack of conformity of the observed communities to those of Holland (1986) or Oberbauer et al. (2008). Vegetation communities within the study area include granitic chamise chaparral (including disturbed form), southern mixed chaparral, Diegan coastal sage scrub (including disturbed form), Diegan coastal sage scrub: baccharis-dominated (including disturbed form), nonnative grassland, cismontane alkali marsh (including disturbed), mulefat scrub, freshwater marsh, southern coast live oak riparian forest, southern willow scrub, and eucalyptus woodland. Land cover types in the study area include unvegetated channel, disturbed habitat, and urban/developed land.

Potentially suitable habitat (i.e., ephemerally wet/ponded features) for vernal pool branchiopods was identified on site and consists of depressions (natural and man-made) located in the lower-elevation areas of the project site, both east and west of Proctor Valley Road. Clusters/complexes of these features occur in multiple areas in the study area. The majority of the features are road-rut-type depressions, lack vegetation, and are located adjacent to or within frequently traveled access roads. All of the features recorded are considered potentially suitable habitat for vernal pool branchiopods. Within the survey area, the features were found in areas mapped as granitic chamise chaparral, coastal sage scrub: baccharis-dominated, non-native grassland, and disturbed habitat. Descriptions of these vegetation and land cover types are provided in the following paragraphs.

Granitic Chamise Chaparral

Granitic chamise chaparral contains shrubs, overwhelmingly dominated by chamise, from 3 to 10 feet tall with little cover provided by other species. Stump sprouting allows this vegetation to adapt to repeated fires. Chamise chaparral typically occurs on dry slopes and ridges (Holland 1986). On site, granitic chamise chaparral is typically characterized by a relatively monotypic stand of chamise with some diversity of other shrubs and herbaceous cover. Areas where native species were co-dominant with non-native grasses were mapped as disturbed granitic chamise chaparral. Chamise chaparral occurs throughout much of the project site and is the most dominant vegetation community.

Diegan Coastal Sage Scrub: Baccharis-Dominated

Diegan coastal sage scrub: Baccharis-dominated is similar to Diegan coastal sage scrub but dominated by *Baccharis* species (desert broom (*B. sarothroides*) and/or coyote brush (*B. pilularis*)) (Oberbauer et al. 2008). This community typically occurs on disturbed sites or those with nutrient-poor soils and is often found within other forms of Diegan coastal sage scrub and on upper terraces of river valleys. This community is distributed along coastal and foothill areas in San Diego County. On site, areas mapped as Diegan coastal sage scrub: baccharis-dominated are dominated

Subject: 2014/15 Wet Season Presence/Absence Survey for Vernal Pool Branchiopods, Proctor Valley Project (Otay Ranch Village 14, Planning Areas 16 and 19), San Diego County, California

by either coyote brush or desert baccharis but have other coastal sage species, such as Menzies' goldenbush (*Isocoma menziesii*), Eastern Mojave buckwheat (*Eriogonum fasciculatum*), or sage (*Salvia* spp.), present. Areas where native species were co-dominant with non-native grasses were mapped as Diegan coastal sage scrub: baccharis-dominated (disturbed). This community is mapped along Proctor Valley Road in the southern portion of the project site.

Non-Native Grassland

Non-native grassland consists of dense to sparse cover of annual grasses with flowering culms between 0.5 and 3 feet in height (Oberbauer et al. 2008). On site, oats (*Avena* spp.), bromes (*Bromus* spp.), stork's bills (*Erodium* spp.), and mustards (*Brassica* spp.) are the more dominant species in this community. Non-native grassland is mapped in the flatter portions of the Proctor Valley (Valley) throughout the project site.

Disturbed Habitat

Disturbed habitats are areas that have been physically disturbed and are no longer recognizable as native or naturalized vegetation associations (Oberbauer et al. 2008). These areas may continue to retail soil substrate. If vegetation is present, it is almost entirely composed of non-native vegetation, such as ornamentals or ruderal exotic species. Examples of these areas may include graded landscapes or areas, graded firebreaks, graded construction pads, construction staging areas, off-highway vehicle (OHV) trails, areas repeatedly cleared for fuel management, or repeatedly used areas that prevent revegetation (e.g., parking lots, trails that have persisted for years). On site, the dirt roads, dirt trails, and OHV areas are mapped as disturbed habitat.

PREVIOUS BRANCHIOPOD STUDIES

Surveys to identify vernal pools in the Valley (including the project study area) have occurred over the last several decades and were first recorded in 1978 (AECOM and Hogan 2012). Prior to the USFWS 1996 Interim Survey Guidelines, various surveys were conducted, including Dudek surveys in 1992, when multiple vernal pool complexes were identified. During 2010/11 the City of San Diego, the Chaparral Lands Conservancy, and AECOM completed surveys to map any potential vernal pool features in the Valley during preparation of the Proctor Valley Vernal Pool Restoration Plan (Restoration Plan) (AECOM and Hogan 2012). Additionally, Rocks Biological Consulting and the Branchiopod Research Group at San Diego State University completed vernal pool surveys in the Valley to document vernal pool species for the Restoration Plan. For further details on previous branchiopod surveys in the Valley, refer to the Restoration Plan.



Subject: 2014/15 Wet Season Presence/Absence Survey for Vernal Pool Branchiopods, Proctor Valley Project (Otay Ranch Village 14, Planning Areas 16 and 19), San Diego County, California

It is our understanding that no protocol-level surveys for listed branchiopods had been completed for the proposed project prior to this 2014/15 wet season survey. Therefore, this 2014/15 wet season survey will serve as the first-year protocol-level survey for the project.

SURVEY METHODS

This 2014/15 survey methodology included an initial field assessment of the entire project study area during the summer of 2014 to evaluate and map the location of potential vernal pool branchiopod habitat. This summer field survey was conducted by Dudek biologist Thomas Liddicoat (TE 139634) and was performed on foot and by vehicle to provide 100% visual coverage of the site. An aerial orthographic map overlaid with the site topography and the project study area boundary was carried to identify areas with potential to support vernal pool branchiopods. The maps of the Recovery Plan were also carried during the survey to identify known features in the project study area.

Onset significant rain events (i.e., greater than 0.20 inch cumulative) for the 2014/15 wet season at the project site began during the storm between December 2 and December 4, 2014. With continued heavy rainfall accumulation (approximately 2.8 inches recorded), protocol-level sampling commenced on site on December 19, 2014, in accordance with the survey protocol to initiate sampling within 2 weeks of initial inundation. All habitats (features) on site that met the USFWS inundation criteria (i.e., depth of 3 centimeters (1.2 inches) or greater 48 hours post rainfall) to initiate protocol-level surveys were sampled and USFWS survey forms were completed.

After initial inundation (i.e., wet at least 3 centimeters (1.2 inches) deep), all wet features were surveyed at approximately 2-week intervals, according to the survey protocol, until dried up or until 120 days of continuous inundation had elapsed. Features that dried up and then refilled were surveyed within 8 days of refilling and surveys were reinitiated at the 2-week interval. During the 2014/15 wet season survey, the project site was surveyed 11 times. A schedule of the 2014/15 survey season is presented in Table 1.

The surveys were conducted by Dudek biologists holding 10(a)(1)(A) recovery permits for vernal pool branchiopods: Danielle Mullen (Permit No. TE-31221B-0), Paul Lemons (TE-051248) and Thomas Liddicoat (TE-139634). Non-permitted Dudek biologists directly assisted a permit holder when necessary. During each site visit, surveyors evaluated all features to document inundation levels and performed sampling when appropriate. Throughout the 2014/15 season, daily precipitation was monitored from weather station KCACHULA20 in Chula Vista, California (Weather Underground Inc. 2014–2015).

Subject: 2014/15 Wet Season Presence/Absence Survey for Vernal Pool Branchiopods, Proctor Valley Project (Otay Ranch Village 14, Planning Areas 16 and 19), San Diego County, California

Table 1 2014/15 Schedule of Surveys

Survey Number	Biologist	Date
1	DAM, PML, TSL	December 19, 2014
2	DAM, TSL	January 2, 2015
3	DAM	January 13, 2015
4	DAM, TSL	January 16, 2015
5	DAM	January 30, 2015
6	DAM	February 13, 2015
7	DAM, TSL	March 3, 2015
8	DAM	March 16, 2015
9	DAM	March 30, 2015
10	TSL	May 18, 2015
11	TSL	June 1, 2015

DAM = Danielle Mullen; PML = Paul Lemons; TSL = Thomas Liddicoat.

Protocol-level sampling was performed within all features that were deemed suitable for use by vernal pool branchiopods and any depressions meeting the USFWS 3-centimeter (1.2-inch) inundation requirement. The location of each feature sampled was recorded using a Global Positioning System (GPS) unit with sub-meter accuracy. GPS data were downloaded into an ArcGIS file by Dudek geographic information systems (GIS) manager Mark McGinnis.

During each survey, surveyors inspected the individual features for depth, surface area of water, air and water temperature, level of disturbance, and presence of aquatic wildlife. An aquarium net was passed through every feature that met the USFWS inundation requirement. All portions of ponded water were surveyed from the bottom to the surface. Samples were collected, when needed, using the aquarium net and a 40-milliliter (1.4-ounce) glass vial. Specimens were stored in the vial with water collected where the specimen was found. Specimens were taken to the laboratory within 24 hours of collection and placed in a 200 proof ethyl alcohol solution for preservation. Each specimen was inspected thoroughly using a dissecting microscope and soft-tip forceps. Eriksen and Belk (1999) was used to verify the species of each specimen collected. The specimens are currently being prepared for submittal and accessioning according to the specifications in the survey protocol.

All information was recorded in the field on an electronic data sheet as provided in the survey protocol, with the most pertinent information (e.g., inundation, fairy shrimp presence/absence, and species identification) recorded on a spreadsheet survey log (Appendix A). The recorded daily weather monitored for the project area is provided in Appendix B. Survey data sheets

Subject: 2014/15 Wet Season Presence/Absence Survey for Vernal Pool Branchiopods, Proctor Valley Project (Otay Ranch Village 14, Planning Areas 16 and 19), San Diego County, California

were completed for every feature that met the minimum USFWS inundation requirement at the time of sampling (Appendix C). Photographs of the features are included at the end of each data form in Appendix C.

SURVEY RESULTS

Feature Descriptions

A total of 81 features were identified as suitable habitat for vernal pool branchiopods and were sampled during the 2014/2015 wet survey season. The features were distributed randomly throughout the site; however, a few clusters/complexes were observed (see Figure 3 through Figure 11). Most of the features were located alongside or within existing dirt roads on site and are moderately disturbed in character. Many of the features detected show evidence of historical OHV disturbance (i.e., shaped like tire tracks). The features detected on site were either: (1) road ruts: depressions that are typically formed by vehicular traffic within or immediately adjacent to roadways, generally lack aquatic vegetation, and are heavily disturbed by vehicular traffic; (2) ephemeral basins: surface depressions that retain sufficient water level, support aquatic vegetation, and generally lack vehicle disturbance; or (3) vernal pools: depressions that retain sufficient water level, support vernal pool indicator plant species, and likely support vernal pool branchiopods.

Multiple vernal pool indicator species occur on site during the surveys. San Diego button-celery (*Eryngium aristulatum* var. *parishii*) is a federally and state-listed endangered, California Rare Plant Rank 1B.1, Multiple Species Conservation Program covered, and Los Angeles County List A species. It is an annual or perennial herb that is associated with vernal pools in coastal scrub and valley and foothill grassland. San Diego button-celery was found adjacent to Feature B2, which supported San Diego fairy shrimp. Other vernal pool indicator plant species observed on site include common brassbuttons (*Cotula coronopifolia*), slender woollyheads (*Psilocarphus tenellus*), San Diego goldenaster (*Bloomeria clevelandii*), and short woollyheads (*Psilocarphus brevissimus* var. *brevissimus*).

Fairy Shrimp Presence/Absence

During 11 survey sampling visits, seven features (A12, A22, A23, A27, B2, C14, and C21) were found occupied by San Diego fairy shrimp, four features (B7, C5, C8, and C12) were occupied by versatile fairy shrimp, and seven features (B23, C13, and C15–C19) were occupied by immature branchiopods that were unidentifiable to species (*Branchinecta* sp.). A summary of the survey results is provided in Table 2 and the full survey log is included in this report as

Subject: 2014/15 Wet Season Presence/Absence Survey for Vernal Pool Branchiopods, Proctor Valley Project (Otay Ranch Village 14, Planning Areas 16 and 19), San Diego County, California

Appendix A. The distribution of features sampled in the study area is presented in Figures 3 through 11 attached to this report.

Table 2 2014/15 Vernal Pool Branchiopods Survey Results

Feature ID	Branchiopod Species Observed
A1	None
A2	None
A3	None
A4	None
A5	None
A6	None
A7	None
A8	None
A9	None
A10	None
A11	None
A12	Fairy Shrimp Present; San Diego Fairy Shrimp (Branchinecta sandiegonensis)
A13	None
A14	None
A15	None
A16	None
A17	None
A18	None
A19	None
A20	None
A21	None
A22	Fairy Shrimp Present; San Diego Fairy Shrimp (Branchinecta sandiegonensis)
A23	Fairy Shrimp Present; San Diego Fairy Shrimp (Branchinecta sandiegonensis)
A24	None
A25	None
A26	None
A27	Fairy Shrimp Present; San Diego Fairy Shrimp (Branchinecta sandiegonensis)
AA1	None
AA2	None
AA3	None

Subject: 2014/15 Wet Season Presence/Absence Survey for Vernal Pool Branchiopods, Proctor Valley Project (Otay Ranch Village 14, Planning Areas 16 and 19), San Diego County, California

Table 2 2014/15 Vernal Pool Branchiopods Survey Results

Feature ID	Branchiopod Species Observed
AA4	None
B1	None
B2	Fairy Shrimp Present; San Diego Fairy Shrimp (Branchinecta sandiegonensis)
В3	None
B4	None
B5	None
В6	None
В7	Fairy Shrimp Present; Versatile Fairy Shrimp (Branchinecta lindahli)
B8	None
В9	None
B10	None
B11	None
B12	None
B13	None
B14	None
B15	None
B16	None
B17	None
B18	None
B19	None
B20	None
B21	None
B22	None
B23	Fairy Shrimp Present; unknown species (immature <i>Branchinecta</i> sp.)
B24	None
B25	None
C1	None
C2	None
C3	None
C4	None
C5	Fairy Shrimp Present; Versatile Fairy Shrimp (<i>Branchinecta lindahli</i>)
C6	None

Subject: 2014/15 Wet Season Presence/Absence Survey for Vernal Pool Branchiopods, Proctor Valley Project (Otay Ranch Village 14, Planning Areas 16 and 19), San Diego County, California

Table 2 2014/15 Vernal Pool Branchiopods Survey Results

Feature ID	Branchiopod Species Observed
C7	None
C8	Fairy Shrimp Present; Versatile Fairy Shrimp (Branchinecta lindahli)
C9	None
C10	None
C11	None
C12	Fairy Shrimp Present; Versatile Fairy Shrimp (Branchinecta lindahli)
C13	Fairy Shrimp Present; unknown species (immature <i>Branchinecta</i> sp.)
C14	Fairy Shrimp Present; San Diego Fairy Shrimp (Branchinecta sandiegonensis)
C15	Fairy Shrimp Present; unknown species (immature <i>Branchinecta</i> sp.)
C16	Fairy Shrimp Present; unknown species (immature <i>Branchinecta</i> sp.)
C17	Fairy Shrimp Present; unknown species (immature <i>Branchinecta</i> sp.)
C18	Fairy Shrimp Present; unknown species (immature <i>Branchinecta</i> sp.)
C19	Fairy Shrimp Present; unknown species (immature <i>Branchinecta</i> sp.)
C20	None
C21	Fairy Shrimp Present; San Diego Fairy Shrimp (Branchinecta sandiegonensis)
C22	None
C23	None
C24	None
C25	None

All required data collection information per the survey guidelines (USFWS 1996) was recorded and is included as Appendices A through C of this report.

I certify that the information presented in this survey report and attached exhibits fully and accurately represents my work. Please feel free to contact Brock Ortega at bortega@dudek.com, Danielle Mullen at dmullen@dudek.com, Thomas Liddicoat at tliddicoat@dudek.com, or Paul Lemons at plemons@dudek.com if you have any questions regarding the contents of this report.

Sincerely,

Danielle Mullen TE-31221B-0

Paul Lemons TE051248 Thomas Liddicoat TE139634

Subject: 2014/15 Wet Season Presence/Absence Survey for Vernal Pool Branchiopods, Proctor Valley Project (Otay Ranch Village 14, Planning Areas 16 and 19), San Diego County, California

Att: Figure 1, Regional Map
Figure 2, Vicinity Map
Figures 3–11, Feature Locations and Species Observed
Appendix A, Survey Log
Appendix B, Weather Data
Appendix C, Survey Data Forms and Photographs

cc: Brock Ortega, Dudek

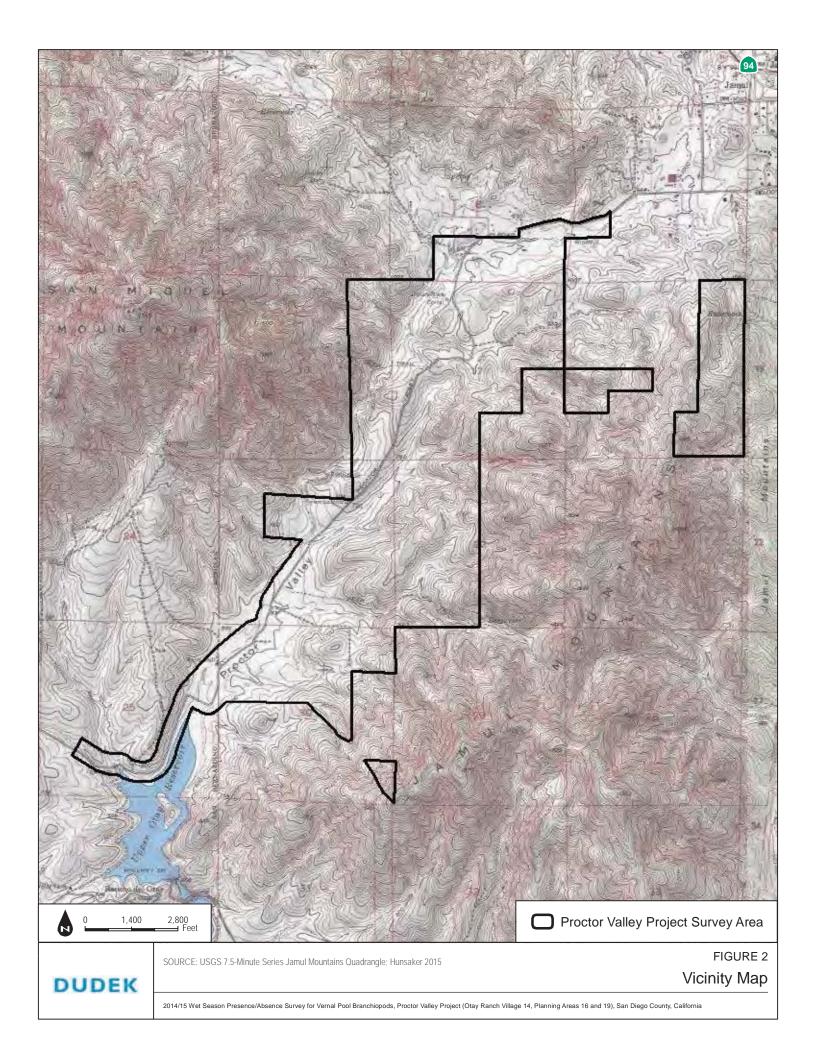
REFERENCES CITED

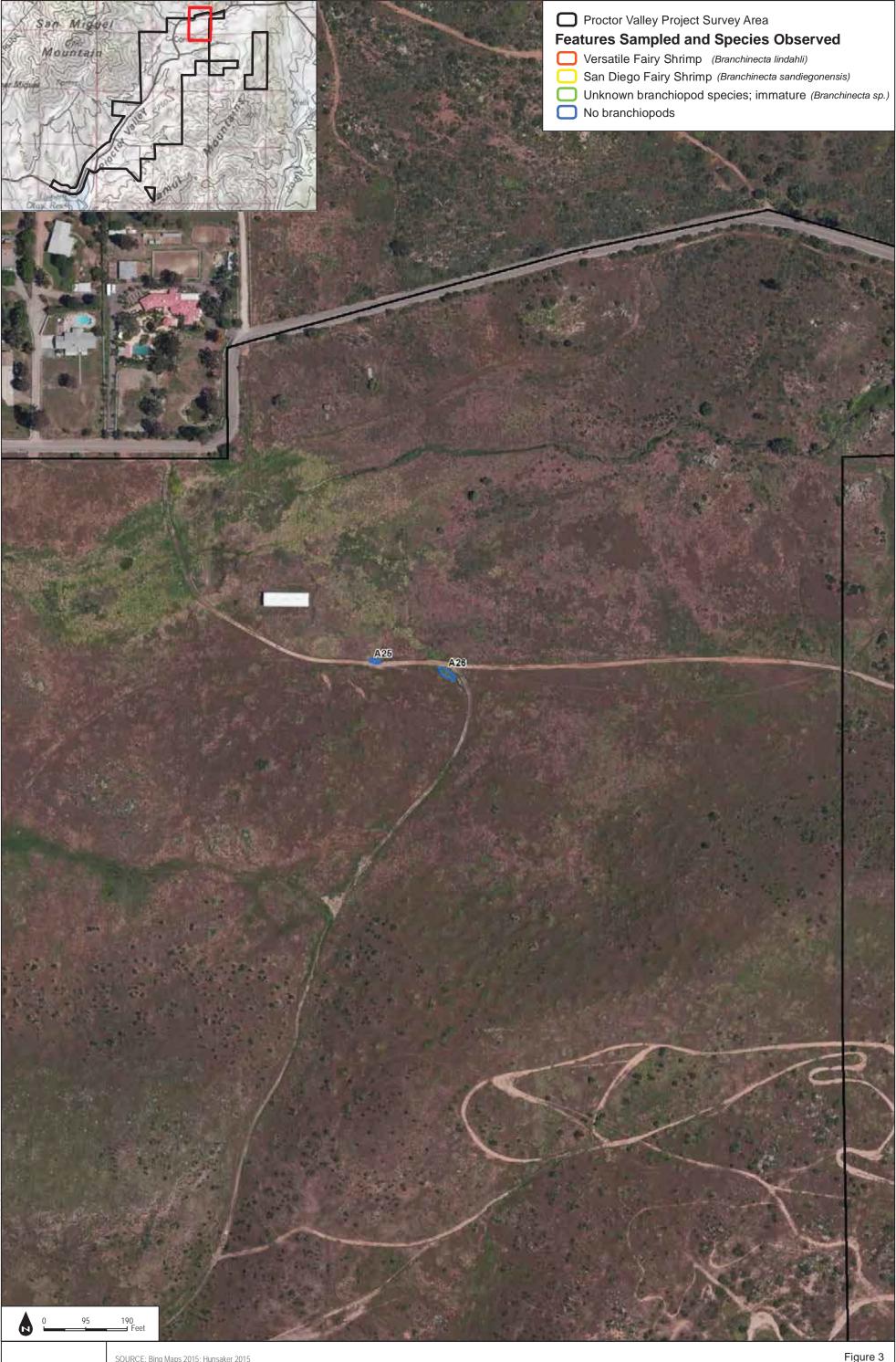
AECOM and D. Hogan. 2012. Proctor Valley Vernal Pool Restoration Plan. September 2012.

- Bowman, R.H. 1973. Soil Survey, San Diego Area, California, Part 1. United States Department of the Agriculture.
- Eriksen, C., and D. Belk. 1999. *Fairy Shrimps of California's Puddles, Pools, and Playas*. Eureka, California: Mad River Press Inc.
- Holland, R.F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. Nongame-Heritage Program. California Department of Fish and Game. October 1986.
- Oberbauer, T., M. Kelley, and J. Buegge. 2008. *Draft Vegetation Communities of San Diego County*. Based on "Preliminary Descriptions of the Terrestrial Natural Communities of California," R.F. Holland, October 1986. March 2008.
- USFWS (U.S. Fish and Wildlife Service). 1996. *Interim Survey Guidelines to Permittees for Recovery Permits under Section* 10(a)(1)(A) of the Endangered Species Act for the Listed Vernal Pool Branchiopods. Sacramento, California: USFWS Sacramento Field Office. April 19, 1996.
- USFWS. 2015. Survey Guidelines for the Listed Large Branchiopods. Sacramento, California: USFWS Pacific Southwest Region. May 31, 2015.
- Weather Underground, Inc. 2014–2015. Weather Station KCACHULA20. Data accessed periodically from November 2014 through June 2015. http://www.wunderground.com/weatherstation/WXDailyHistory.asp?ID=KCACHULA20&graphspan=month&month=11&day=12&year=2014.

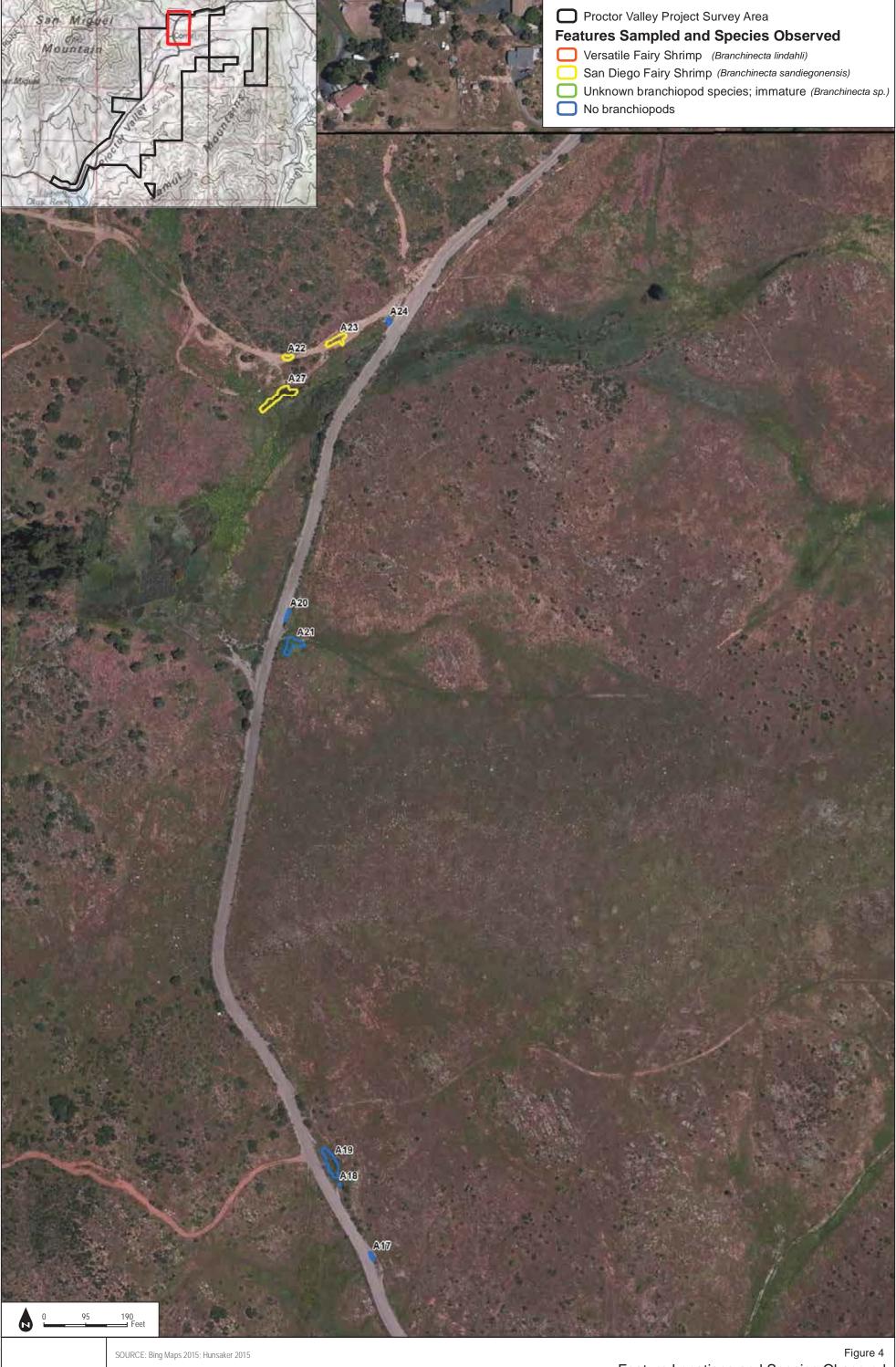


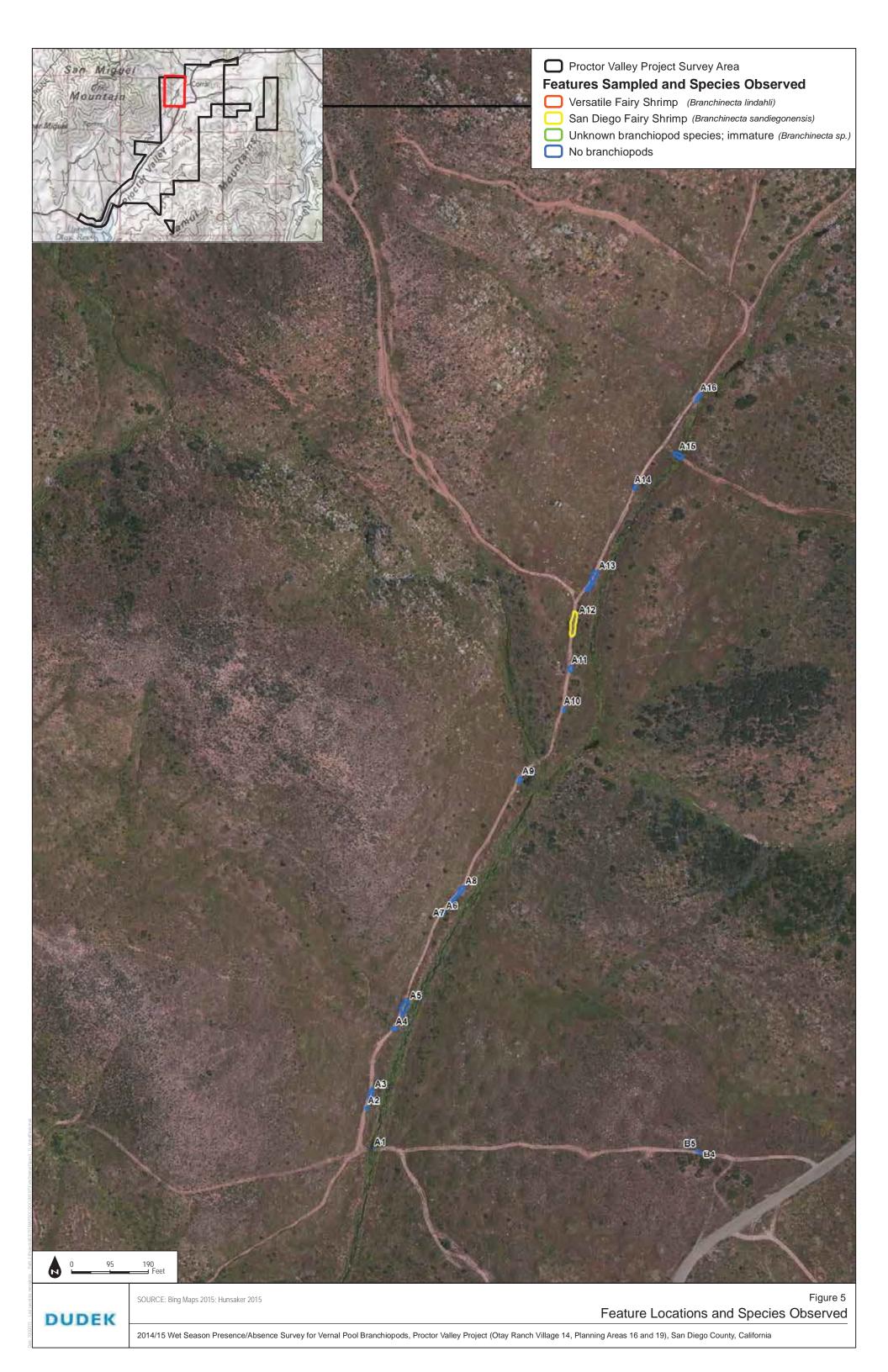
2014/15 Wet Season Presence/Absence Survey for Vernal Pool Branchiopods, Proctor Valley Project (Otay Ranch Village 14, Planning Areas 16 and 19), San Diego County, California

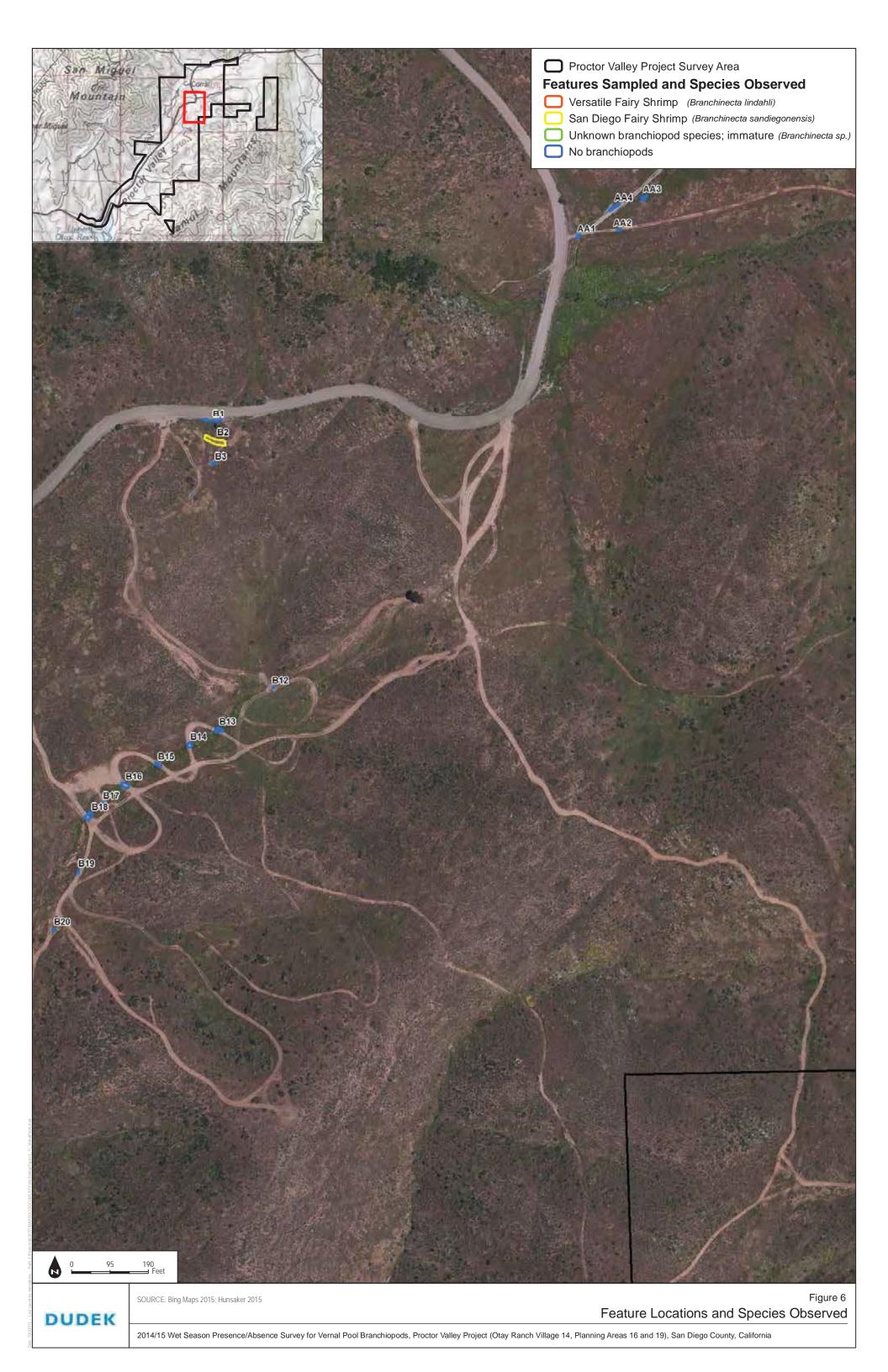




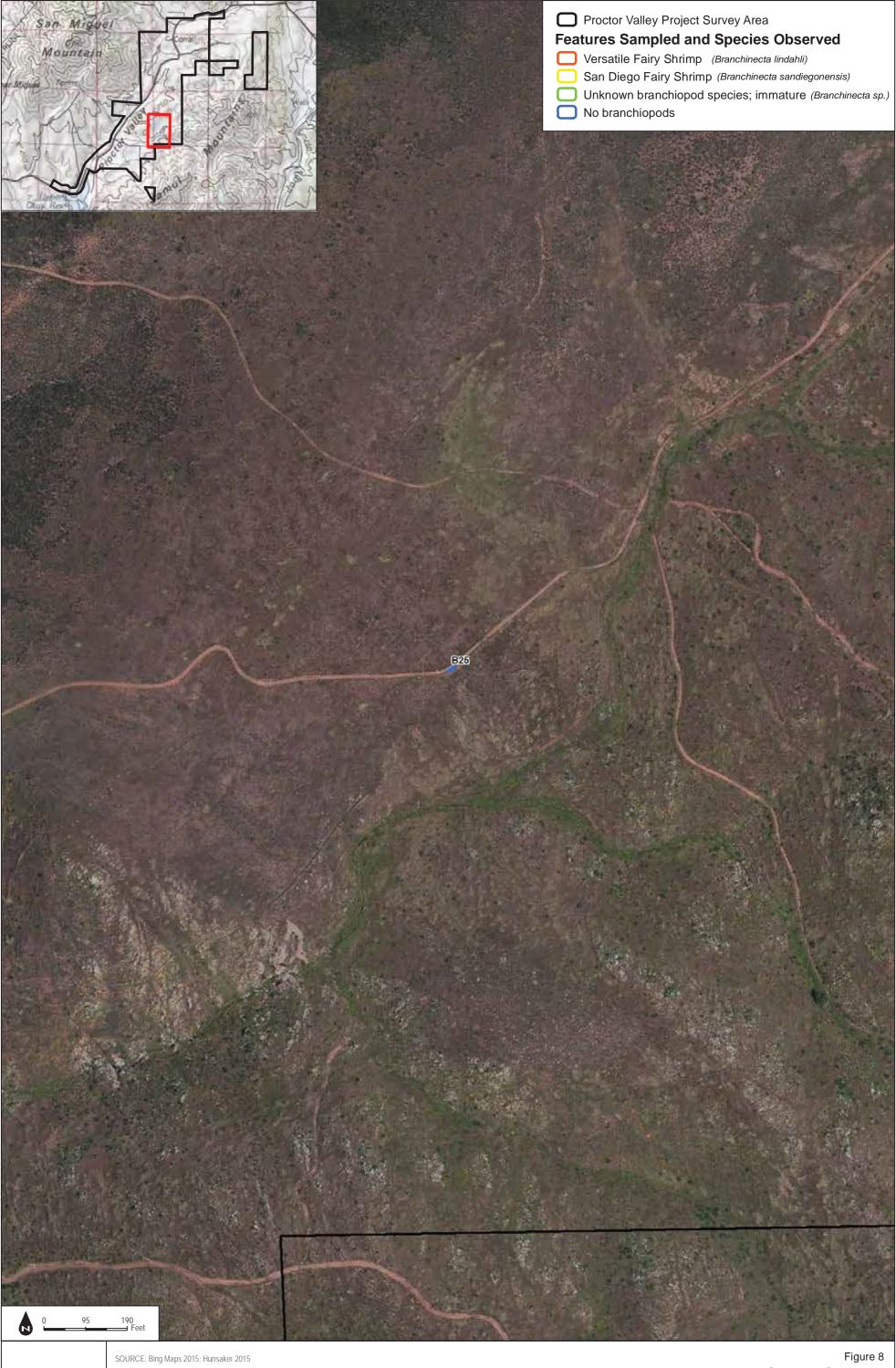
SOURCE: Bing Maps 2015; Hunsaker 2015



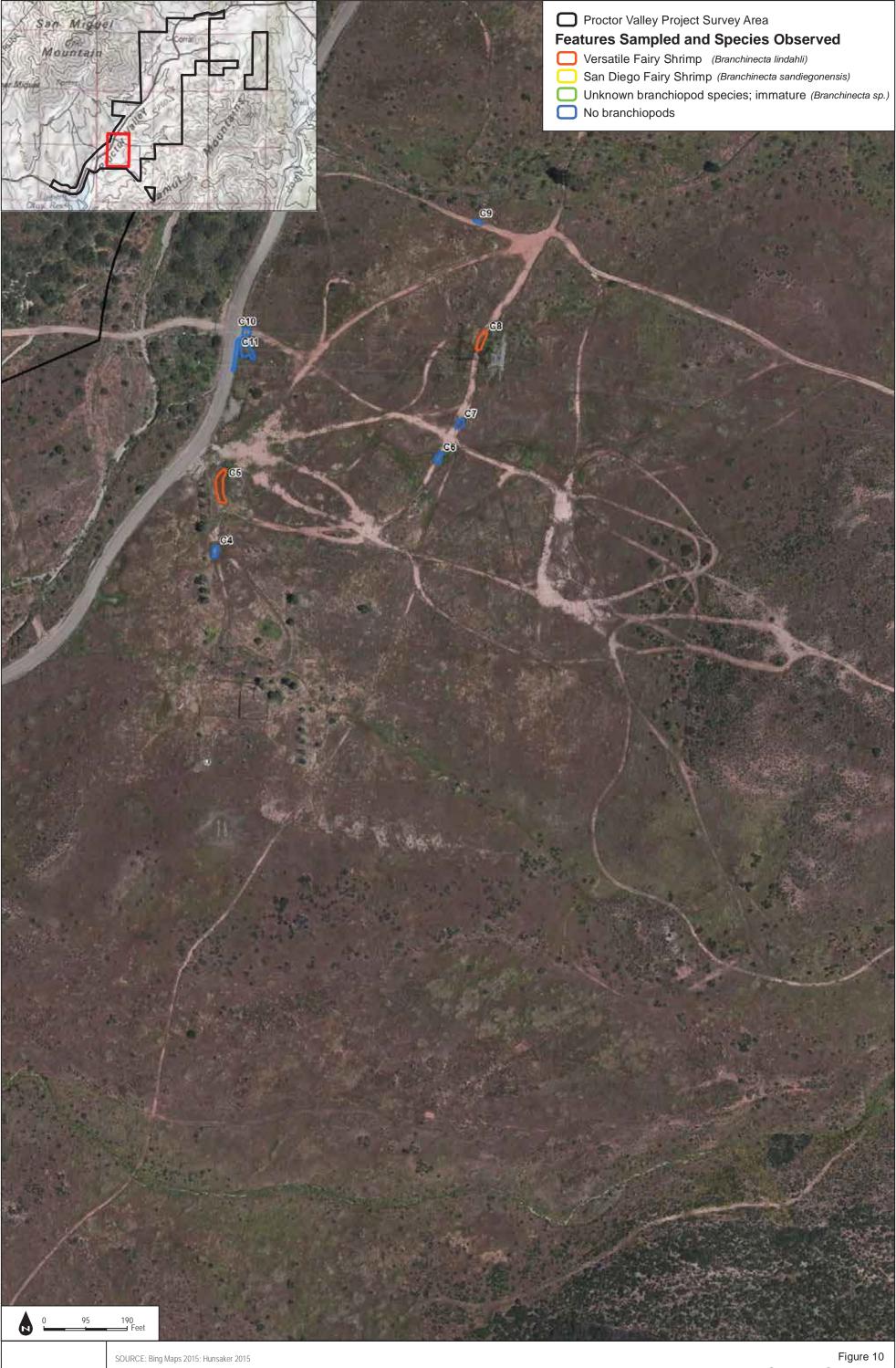


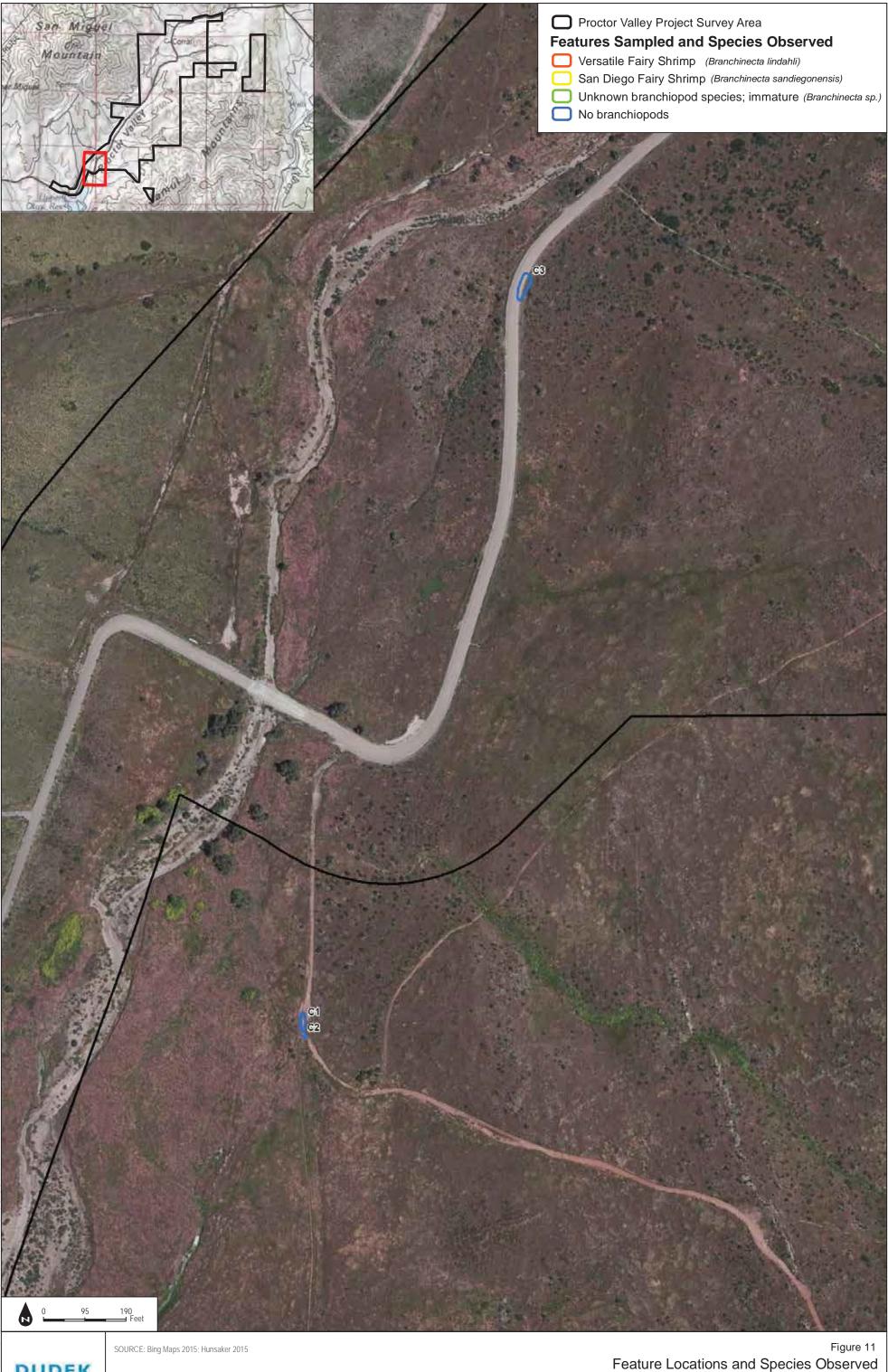


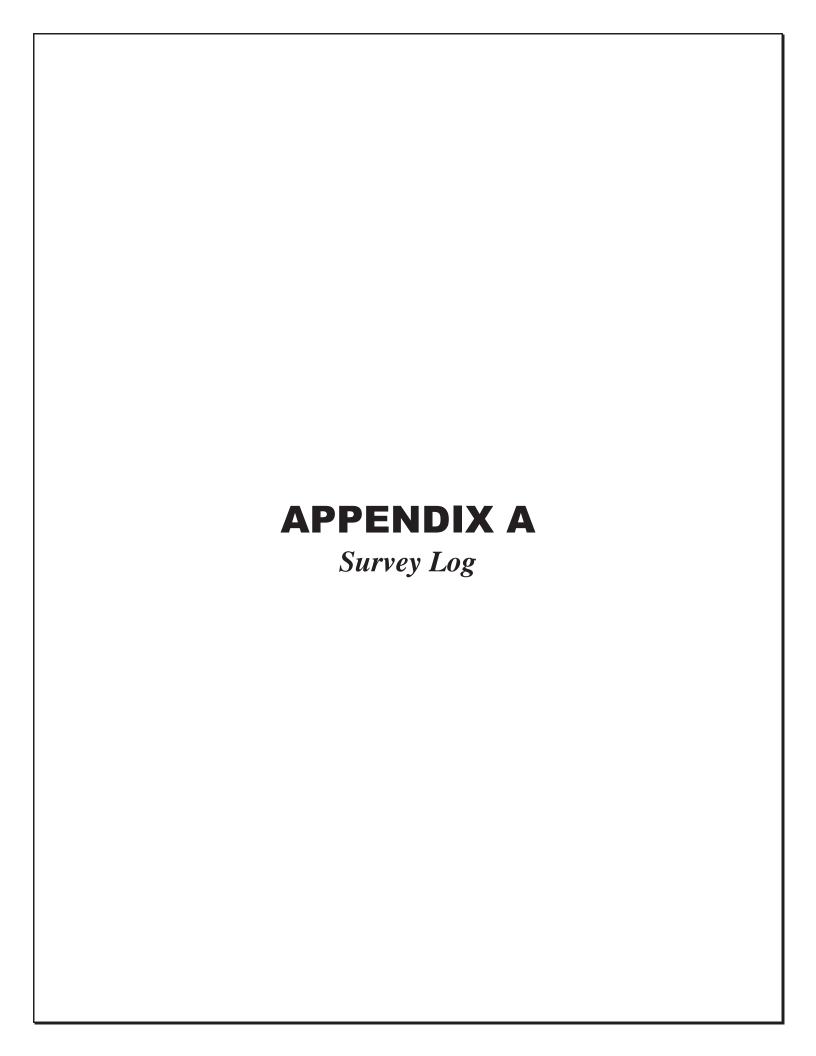






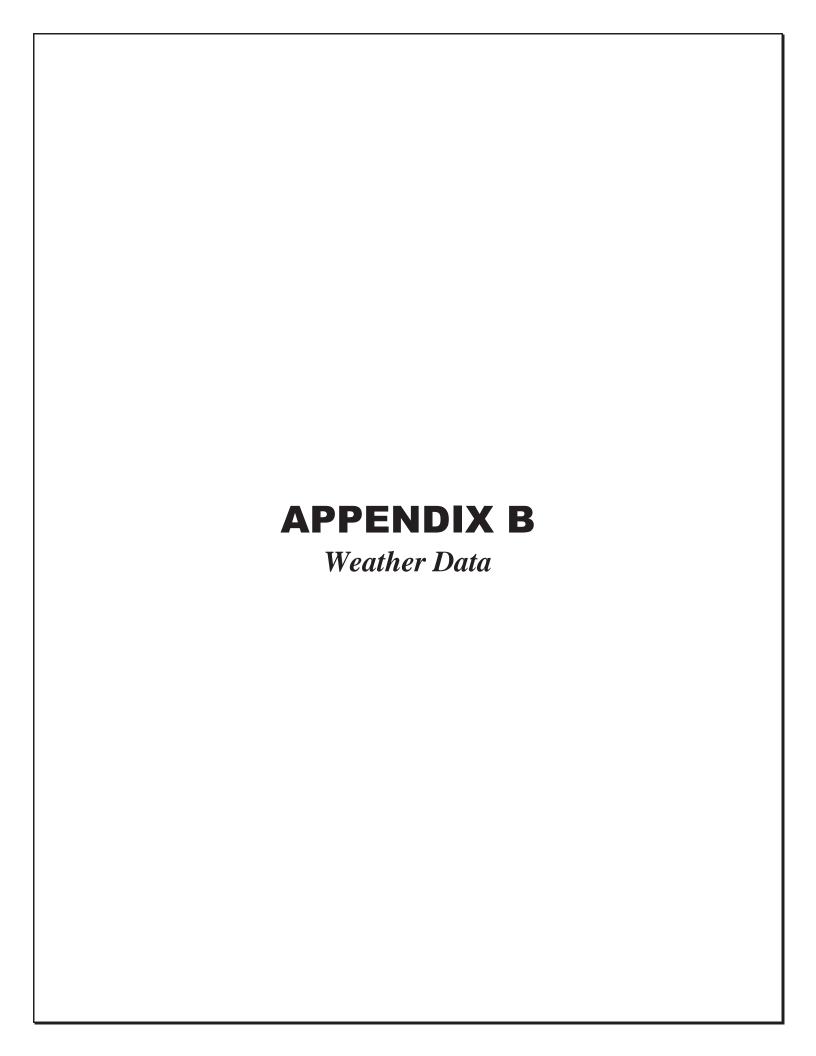






Pass #		1		2		3		4		5		6		7		8		9		10		11	
Survey Date		12/19/2014		1/2/2015	1/	13/2015		1/16/2015	1/3	30/2015	2	2/13/2015	3/	3/2015	3/1	16/2015	3/	/30/2015	5/1	8/2015		6/1/2015	
Feature ID	Wet/Dry	Fairy Shrimp (FS) Detected	Wet/Dry	Fairy Shrimp (FS) Detected	d Wet/Dry	Fairy Shrimp (FS)	Wet/Dry	Fairy Shrimp (FS)	Wet/Dry	Fairy Shrimp (FS)	Wet/Dry	Fairy Shrimp (FS)	Wet/Dry	Fairy Shrimp (FS)	Wet/Dry	Fairy Shrimp (FS)	Wet/Dry	Fairy Shrimp (FS)	Wet/Dry	Fairy Shrimp	Wet/Dry) Notes
						Detected		Detected		Detected		Detected		Detected		Detected		Detected		(FS) Detected		Detected	
A1	Wet	None	Wet	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
A2	Wet Wet	None None	Wet Wet	None None	No survey No survey	No survey No survey	Wet Dry	None None	Dry Dry	None None	Dry Dry	None None	Wet	None None	Dry Dry	None None	Dry Dry	None None	Dry Dry	None None	Dry Dry	None None	
ΔΔ	Wet	None	Wet	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
A5	Wet	None	Wet	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
A6	Wet	None	Wet	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
A7	Wet	None	Wet	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
A8	Wet	None	Wet	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
A9	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
A10	Wet	None	Wet	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
A11	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
A12 A13	Wet Wet	FS: B. Sandiegonensis None	Wet	None	No survey	No survey	Wet	None None	Dry	None None	Dry	None None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
A14	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	_
A15	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
A16	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	
A17	Wet	None	Wet	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
A18	Wet	None	Wet	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
A19	Wet	None	Wet	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Wet	None	Dry	None	Dry	None	Dry	None	
A20	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
A21	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	214.45
A22	Wet	FS: B. Sandiegonensis	Wet				-Wet		-DIV	None None	-DIV	Nome	Wet		DW DW	Nome	DIV	Nome	-DIV	None None	-B1V	None	2M; 1F 3M; 2F
A23 A24	Wet Wet	FS: <i>B. Sandiegonensis</i> None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None None	Wet	None	Dry	None None	Dry	None None	Dry	None	Dry	None None	SIVI; ZF
A25	Wet	None	Wet	None	No survey	No survey	Wet	None	Wet	None	Dry	None	Wet	None	Wet	None	Dry	None	Wet	None	Dry	None	+
A26	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	\vdash
A27	Wet	None	Wet	FS: B. Sandiegonensis			DIV	None	DIV	None	- Dry	None	Wet		- DIV	None	Dry	None	- DIY	None	_ DIV	Nome	2M
AA1	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
AA2	Wet	None	Dry	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
AA3	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	
AA4	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
B1	Wet	None	Wet	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	40.4.45
B2	Wet	FS: B. Sandiegonensis	Wet	None	No suprov	No survoy	Wet	None	Dry	None None	Dry	None None	Wet	None	Dry	None None	Dry	None	Dry	None	Dry	None	4M; 1F
B/I	Wet Wet	None None	Dry Dry	None None	No survey No survey	No survey No survey	Dry Dry	None None	Dry Dry	None	Dry Dry	None	Dry Wet	None None	Dry Dry	None	Dry Dry	None None	Dry Dry	None None	Dry Dry	None None	
B5	Wet	None	Wet	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
B6	Wet	None	Wet	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
B7	Wet	None	Wet	None	No survey	No survey	Wet	FS: B. Lindahli	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	1M
B8	Wet	None	Dry	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
В9	Wet	None	Wet	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
B10	Wet	None	Wet	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
B11	Wet	None	Wet	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	\perp
B12	No survey	No survey	No survey	No survey	Wet	None	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	4
B13	No survey	No survey No survey	No survey No survey	No survey No survey	Wet Wet	None None	Wet Wet	None None	Dry Dry	None None	Dry Dry	None None	Wet	None None	Dry Dry	None None	Dry	None None	Dry Dry	None None	Dry Dry	None None	_
R15	No survey	No survey	No survey	No survey	Wet	None	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	+
B16	No survey	No survey	No survey	No survey	Wet	None	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
B17	No survey	No survey	No survey	No survey	Wet	None	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
B18	No survey	No survey	No survey	No survey	Wet	None	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
B19	No survey	No survey	No survey	No survey	Wet	None	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
B20	No survey	No survey	No survey	No survey	Wet	None	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
B21	No survey	No survey	No survey	No survey	Wet	None	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
B22	No survey	No survey	No survey	No survey	Wet	None	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	4
B23	No survey	No survey	No survey	No survey	Wet	None	Wet	FS: immature, did not	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
B24	No survey	No survey	No survey	No survey	Wet	None	Wet	collect None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
B25	No survey	No survey	No survey	No survey	Wet	None	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	_
C1	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
C2	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
C3	Wet	None	Dry	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
C4	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
C5	Wet	FS: immature, did not collect	Wet	FS: B. Lindahli	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
C6	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	Dry	None	
C7	Wet	None	Wet	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	4
C8	Wet	FS: B. Lindahli	Wet	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	6M; 1F
C9	Wet	None	Wet	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
C10	Wet	None None	Wet	None	No survey	No survey	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Wet	None	Dry	None	
C11 C12	Wet Wet	FS: B. Lindahli	Dry Wet	None FS: B. Lindahli	No survey No survey	No survey No survey	Dry Wet	None None	Dry Wet	None None	Dry Dry	None None	Wet Wet	None None	Dry Dry	None None	Dry Dry	None None	Dry Dry	None None	Dry Dry	None None	7M
C13	Wet	FS: B. Lindanii FS: immature, did not collect	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	7 101
C14	Wet	FS: B. Sandiegonensis	51,	Tronc	. to survey	. TO Survey	DIV	None	Dry	None	DIV DIV	None		None	DIV	None	Dry	None	DIV DIV	None	DIV DIV	None	6M
C15	Wet	FS: immature, did not collect	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
C16	Wet	FS: immature, did not collect	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
C17	Wet	FS: immature, did not collect	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
C18	Wet	FS: immature, did not collect	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	1

Pass #		1		2		3		4		5		6		7		8		9		10		11	
Survey Date		12/19/2014		1/2/2015	1,	/13/2015		1/16/2015	1/3	30/2015		2/13/2015	3	3/3/2015	3	3/16/2015	3	/30/2015	5/	18/2015		6/1/2015	
Feature ID	Wet/Dry	Fairy Shrimp (FS) Detected	Wet/Dry	Fairy Shrimp (FS) Detected	Wet/Dry	Fairy Shrimp (FS)	Wet/Dry	Fairy Shrimp (FS)	Wet/Dry	Fairy Shrimp (FS)	Wet/Dry	Fairy Shrimp (FS)	Wet/Dry	Fairy Shrimp (FS)	Wet/Dry	Fairy Shrimp (FS)	Wet/Dry	Fairy Shrimp (FS)	Wet/Dry	Fairy Shrimp	Wet/Dry	Fairy Shrimp (FS) Notes
						Detected		Detected		Detected		Detected		Detected		Detected		Detected		(FS) Detected		Detected	
C19	Wet	FS: immature, did not collect	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
C20	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
C21	Wet	FS: immature, did not collect	Wet	FS: B. Sandiegonensis			Wet		Dry	None	DIV DIV	None	Wet		DIV DIV	None	DIV	None	DIV DIV	None	DIV DIV	None	
C22	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
C23	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
C24	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	
C25	Wet	None	Dry	None	No survey	No survey	Dry	None	Dry	None	Dry	None	Wet	None	Dry	None	Dry	None	Dry	None	Dry	None	



2014	T	emperatur	'e	V	Vind Spee	d	Precipitation Rate
Oct	High	Avg	Low	High	Avg	Gust	Sum
23	90 °F	70.1 °F	57.4 °F	6 mph	1 mph	6 mph	0 in
24	93.4 °F	73.4 °F	59.7 °F	6 mph	0 mph	6 mph	0 in
25	87.1 °F	69.8 °F	61.3 °F	6 mph	0 mph	6 mph	0 in
26	75.4 °F	65.6 °F	59.7 °F	8 mph	1 mph	8 mph	0 in
27	81 °F	64.1 °F	53.8 °F	7 mph	1 mph	7 mph	0 in
28	83.7 °F	66.1 °F	55.4 °F	8 mph	1 mph	8 mph	0 in
2014	T	emperatur	·e		Speed		Precip. Rate.
Nov	High	Avg	Low	High	Avg	Gust	Sum
1	55.9 °F	44.6 °F	55.6 °F	1 mph	0 mph	1 mph	0 in
2	72.5 °F	59.2 °F	53.1 °F	7 mph	0 mph	7 mph	0.04 in
3	80.1 °F	60.8 °F	49.8 °F	7 mph	0 mph	7 mph	0 in
4	81.3 °F	61.9 °F	47.8 °F	9 mph	1 mph	9 mph	0 in
5	92.7 °F	67.1 °F	50.5 °F	7 mph	1 mph	7 mph	0 in
6	95.9 °F	71.6 °F	55.6 °F	5 mph	1 mph	6 mph	0 in
7	95.9 °F	72.4 °F	60.4 °F	4 mph	0 mph	4 mph	0 in
8	94.1 °F	70.4 °F	58.5 °F	6 mph	0 mph	6 mph	0 in
9	83.7 °F	65.4 °F	54.7 °F	4 mph	0 mph	4 mph	0 in
10	76.1 °F	63.7 °F	57.6 °F	4 mph	0 mph	4 mph	0 in
11	67.3 °F	63.2 °F	61.3 °F	6 mph	1 mph	6 mph	0 in
12	74.5 °F	63.8 °F	57.6 °F	3 mph	0 mph	3 mph	0 in
13	76.1 °F	64.1 °F	57.6 °F	4 mph	0 mph	4 mph	0 in
14	75.2 °F	62.8 °F	55.8 °F	6 mph	0 mph	6 mph	0 in
15	74.1 °F	61.6 °F	53.6 °F	8 mph	1 mph	8 mph	0 in
16	78.4 °F	62.6 °F	52.7 °F	6 mph	0 mph	6 mph	0 in
17	82.8 °F	60.8 °F	48.4 °F	6 mph	1 mph	6 mph	0 in
18	83.7 °F	60.1 °F	47.8 °F	6 mph	0 mph	6 mph	0 in
19	80.4 °F	59.1 °F	47.1 °F	6 mph	0 mph	6 mph	0 in
20	78.3 °F	59.8 °F	47.1 °F	7 mph	1 mph	7 mph	0 in
21	72.1 °F	61 °F	53.4 °F	8 mph	1 mph	8 mph	0.17 in
22	78.4 °F	60.1 °F	49.8 °F	7 mph	1 mph	7 mph	0 in
23	79 °F	60.4 °F	49.6 °F	8 mph	1 mph	8 mph	0 in
24	86.4 °F	63.1 °F	50.7 °F	7 mph	1 mph	7 mph	0 in
25	88.7 °F	64.6 °F	49.8 °F	6 mph	1 mph	6 mph	0 in
26	92.1 °F	68 °F	52.2 °F	4 mph	0 mph	4 mph	0 in
27	60.8 °F	58.9 °F	57.4 °F	0 mph	0 mph	0 mph	0 in
28	88.7 °F	65.1 °F	52.9 °F	5 mph	0 mph	5 mph	0 in
29	83.3 °F	61.1 °F	49.8 °F	9 mph	1 mph	9 mph	0 in
30	76.5 °F	61.8 °F	51.4 °F	10 mph	1 mph	11 mph	0 in
2014	T	emperatur	.e		Speed		Precip. Rate.
Dec	High	Avg	Low	High	Avg	Gust	Sum
1	75.7 °F	61.6 °F	52.2 °F	3 mph	0 mph	4 mph	0 in
		00 1	V I	o mpn	op.ii		V 111

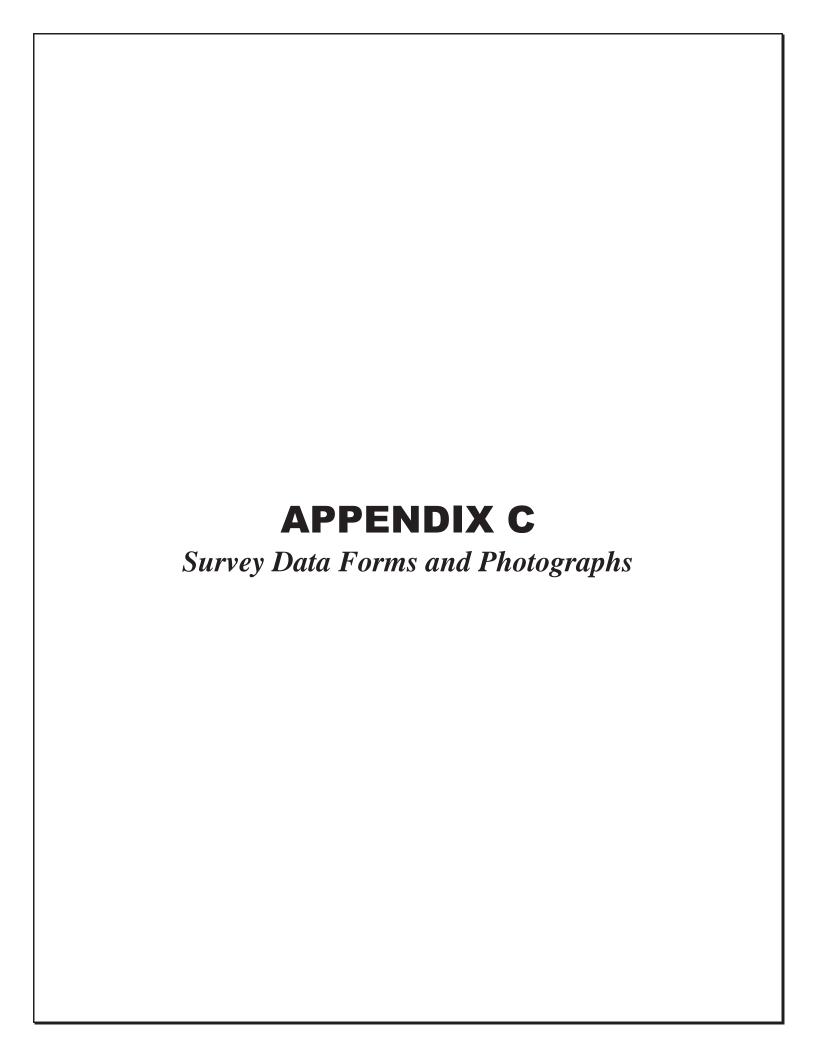
2	67.6 °F	62 °F	57.7 °F	10 mph	1 mph	10 mph	0.5 in
_	07.0	02 F	37.7 F	10 IIIpii	т шрп	TO IIIPII	0.5 111
3	65.7 °F	63.2 °F	60.1 °F	5 mph	0 mph	5 mph	0.83 in
4	76.3 °F	63.5 °F	55.2 °F			5 mph	0.62 in
5	70.3 F	60.2 °F	54 °F	4 mph	1 mph		
6	70 F 77.4 °F	62.9 °F	56.1 °F	6 mph	0 mph	6 mph	0 in
				6 mph	1 mph	6 mph	0 in
7	82.6 °F	63.1 °F	52.7 °F	6 mph	0 mph	6 mph	0 in
8	77.2 °F	62.8 °F	54.9 °F	3 mph	0 mph	3 mph	0 in
9	82.8 °F	62 °F	52.7 °F	6 mph	0 mph	6 mph	0 in
10	75.6 °F	59.5 °F	50.4 °F	5 mph	0 mph	5 mph	0 in
11	74.3 °F	62.3 °F	57.2 °F	7 mph	1 mph	7 mph	0 in
12	62.1 °F	57.2 °F	53.4 °F	10 mph	1 mph	12 mph	0.05 in
13	68.9 °F	55.6 °F	48.9 °F	6 mph	1 mph	8 mph	0.05 in
14	72.7 °F	54.4 °F	45.1 °F	5 mph	1 mph	6 mph	0 in
15	70.9 °F	55.2 °F	46.9 °F	6 mph	0 mph	6 mph	0 in
16	59.4 °F	53.8 °F	50.2 °F	3 mph	0 mph	3 mph	0.12 in
17	66 °F	56.1 °F	50.2 °F	10 mph	1 mph	10 mph	0.71 in
18	66.4 °F	55.3 °F	49.3 °F	6 mph	0 mph	6 mph	0 in
19	75.2 °F	55.9 °F	47.1 °F	6 mph	0 mph	6 mph	0 in
20	71.1 °F	56.4 °F	47.5 °F	6 mph	0 mph	6 mph	0 in
21	73 °F	59.1 °F	50.7 °F	5 mph	0 mph	5 mph	0 in
22	83.5 °F	60.6 °F	48.6 °F	6 mph	0 mph	6 mph	0 in
23	88 °F	64.6 °F	50.9 °F	6 mph	1 mph	6 mph	0 in
24	80.6 °F	61.5 °F	53.1 °F	6 mph	1 mph	6 mph	0 in
25	69.1 °F	57.2 °F	47.5 °F	8 mph	1 mph	8 mph	0 in
26	73.4 °F	53.4 °F	43.7 °F	4 mph	1 mph	6 mph	0 in
27	70.5 °F	51.9 °F	43.5 °F	6 mph	1 mph	6 mph	0 in
28	70.2 °F	49.6 °F	38.1 °F	8 mph	0 mph	8 mph	0 in
29	71.2 °F	51.4 °F	40.3 °F	7 mph	0 mph	7 mph	0 in
30	58.1 °F	50.9 °F	46.9 °F	8 mph	1 mph	8 mph	0.08 in
31	56.7 °F	45.4 °F	37.6 °F	7 mph	1 mph	7 mph	0.24 in
2015		emperatur			Speed		Precip. Rate.
Feb	High	Avg	Low	High	Avg	Gust	Sum
1	65.7 °F	46.2 °F	35.2 °F	6 mph	1 mph	6 mph	0 in
2	67.8 °F	47.6 °F	36.3 °F	7 mph	1 mph	7 mph	0 in
3	69.1 °F	50 °F	39.4 °F	5 mph	0 mph	5 mph	0 in
4	76.3 °F	53.7 °F	40.3 °F	5 mph	0 mph	5 mph	0 in
5	86.2 °F	63.6 °F	47.3 °F	5 mph	1 mph	5 mph	0 in
6	90.7 °F	66.1 °F	51.6 °F	5 mph	1 mph	5 mph	0 in
7	83.8 °F	61.1 °F	49.3 °F	5 mph	0 mph	5 mph	0 in
8	75.6 °F	60.4 °F	53.2 °F	6 mph	0 mph	6 mph	0 in
9	71.4 °F	58.7 °F	52.7 °F	6 mph	0 mph	6 mph	0 in
10	77.5 °F	59.2 °F	48 °F	-	-		0 in
IU	11.5 F	59.∠ F	40 F	6 mph	1 mph	6 mph	U III

	1			1			
11	59.4 °F	57.6 °F	54.7 °F	4 mph	0 mph	4 mph	0.08 in
12	73.8 °F	60.4 °F	56.7 °F	7 mph	1 mph	7 mph	0.08 in
13	74.5 °F	61.1 °F	53.2 °F	6 mph	1 mph	6 mph	0 in
14	77.9 °F	58.7 °F	46.2 °F	4 mph	1 mph	6 mph	0 in
15	81 °F	60.4 °F	48.7 °F	6 mph	1 mph	6 mph	0 in
16	82.2 °F	59.6 °F	48.2 °F	6 mph	1 mph	6 mph	0 in
17	81.9 °F	60.7 °F	48.9 °F	6 mph	1 mph	6 mph	0 in
22	54.9 °F	49.4 °F	53.6 °F	8 mph	3 mph	8 mph	0.08 in
23	69.3 °F	57.8 °F	51.1 °F	9 mph	2 mph	9 mph	0.17 in
24	74.3 °F	57 °F	45.5 °F	8 mph	1 mph	10 mph	0 in
25	76.5 °F	57.9 °F	45.3 °F	6 mph	1 mph	6 mph	0 in
26	72.7 °F	56.8 °F	46.6 °F	8 mph	1 mph	8 mph	0 in
27	68.7 °F	57.9 °F	48.7 °F	11 mph	3 mph	11 mph	0 in
28	66 °F	56.9 °F	52.3 °F	12 mph	2 mph	12 mph	0.33 in
2015	T	emperatur	·e		Speed		Precip. Rate.
Mar	High	Avg	Low	High	Avg	Gust	Sum
1	55.6 °F	52.6 °F	50.2 °F	4 mph	1 mph	6 mph	0.75 in
2	61.3 °F	51.8 °F	47.1 °F	10 mph	1 mph	11 mph	0.45 in
3	67.3 °F	54.7 °F	46.4 °F	6 mph	1 mph	7 mph	0 in
4	72.5 °F	56.6 °F	44.4 °F	6 mph	1 mph	6 mph	0 in
5	79.9 °F	59.3 °F	42.8 °F	5 mph	1 mph	6 mph	0 in
6	82.9 °F	61.9 °F	44.1 °F	7 mph	1 mph	8 mph	0 in
7	86.7 °F	64.7 °F	49.8 °F	6 mph	1 mph	7 mph	0 in
8	78.1 °F	67.5 °F	54.9 °F	6 mph	1 mph	7 mph	0 in
9	74.1 °F	59.8 °F	47.3 °F	6 mph	1 mph	7 mph	0 in
10	82.4 °F	63.1 °F	48.4 °F	5 mph	1 mph	6 mph	0 in
11	78.4 °F	62.4 °F	56.7 °F	6 mph	1 mph	6 mph	0 in
12	76.1 °F	75.2 °F	74.3 °F	3 mph	3 mph	3 mph	0 in
13	84.2 °F	69.9 °F	57.6 °F	9 mph	1 mph	9 mph	0 in
14	91.6 °F	75.2 °F	58.1 °F	8 mph	2 mph	8 mph	0 in
15	90.5 °F	75.4 °F	61.7 °F	9 mph	1 mph	9 mph	0 in
16	66.7 °F	63.7 °F	62.6 °F	4 mph	1 mph	4 mph	0 in
17	76.3 °F	65.4 °F	62.6 °F	4 mph	1 mph	6 mph	0 in
18	73.2 °F	63.8 °F	57.9 °F	10 mph	2 mph	10 mph	0 in
4.0	70.0.5	04-1-	EC 0.3		4 -		
19	76.3 °F	64.7 °F	58.6 °F	8 mph	1 mph	8 mph	0 in
20	79.2 °F	64.6 °F	54.5 °F	10 mph	1 mph	10 mph	0 in
0.1	70.0.0	00.0.5			4 .		0.1
21	78.3 °F	63.9 °F	55.2 °F	6 mph	1 mph	6 mph	0 in
22	75 °F	62.2 °F	53.2 °F	10 mph	1 mph	10 mph	0 in
		i l	1			1	

23	73.9 °F	61.7 °F	51.6 °F	10 mph	1 mph	10 mph	0 in
23	75.5 1	01.7	31.0 1	то пірп	тпрп	10 IIIpii	VIII
24	75.9 °F	61.5 °F	49.5 °F	9 mph	1 mph	9 mph	0 in
25	84.2 °F	65.1 °F	51.8 °F	8 mph	1 mph	8 mph	0 in
26	95.2 °F	72.3 °F	54.9 °F	7 mph	1 mph	7 mph	0 in
27	90 °F	70.8 °F	57.9 °F	8 mph	1 mph	8 mph	0 in
28	83.7 °F	67.5 °F	54.1 °F	8 mph	1 mph	8 mph	0 in
29	80.6 °F	66.5 °F	57.9 °F	8 mph	1 mph	8 mph	0 in
30	79.9 °F	64.8 °F	54.5 °F	_	1 mph	8 mph	0 in
	75.7 °F	63.7 °F	54.9 °F	8 mph		-	
31				8 mph	1 mph	8 mph	0 in
2015		emperatur		Hiada	Speed	Cust	Precip. Rate.
Apr	High 76.1 °F	Avg 64.2 °F	Low	High	Avg	Gust	Sum
1			58.1 °F	8 mph	2 mph	8 mph	0 in
2	74.7 °F	62.7 °F	54.3 °F	8 mph	1 mph	8 mph	0 in
3	89.4 °F	68.1 °F	51.4 °F	8 mph	1 mph	8 mph	0 in
4	82.4 °F	66.2 °F	55.6 °F	8 mph	1 mph	9 mph	0 in
5	72 °F	61.2 °F	53.1 °F	11 mph	2 mph	11 mph	0 in
6	70.2 °F	59.6 °F	52.5 °F	10 mph	2 mph	10 mph	0 in
7	70.3 °F	59.8 °F	52.7 °F	12 mph	1 mph	12 mph	0 in
8	70.9 °F	59.4 °F	51.6 °F	10 mph	1 mph	10 mph	0.04 in
9	72.9 °F	59.5 °F	47.8 °F	10 mph	1 mph	10 mph	0 in
				-	-	-	
10	71.4 °F	34.9 °F	52 °F	11 mph	1 mph	11 mph	0 in
11	73.8 °F	60.3 °F	49.6 °F	8 mph	1 mph	8 mph	0 in
12	76.5 °F	62.1 °F	50.4 °F	9 mph	1 mph	9 mph	0 in
13	76.1 °F	63.8 °F	55 °F	7 mph	1 mph	7 mph	0 in
14	77.4 °F	65.2 °F	56.8 °F	6 mph	0 mph	6 mph	0 in
15	78.1 °F	63.4 °F	51.1 °F	1 mph	0 mph	1 mph	0 in
16	82.6 °F	67.8 °F	54.7 °F	5 mph	0 mph	5 mph	0 in
17	85.1 °F	66.7 °F	50.7 °F	5 mph	0 mph	5 mph	0 in
18	83.5 °F	66.1 °F	50.5 °F	8 mph	1 mph	8 mph	0 in
19	77.4 °F	63.4 °F	51.6 °F	8 mph	1 mph	8 mph	0 in
20	72.7 °F	62.7 °F	57 °F	10 mph	2 mph	10 mph	0 in
20	12.1	02.1	0, 1	10 mpn	2 mpn	10 mpn	VIII
21	71.4 °F	62.2 °F	57.9 °F	10 mph	2 mph	10 mph	0 in
41	/ 1.44 1	02.2 1	01.0 1	10 mpn	Z IIIPII	10 IIIpii	VIII
22	69.1 °F	60.2 °F	55.6 °F	7 mnh	1 mnh	7 mnh	0 in
	66.2 °F	59.8 °F	54.7 °F	7 mph	1 mph	7 mph	
23				6 mph	0 mph	6 mph	0 in
24	65.7 °F	58.5 °F	55.9 °F	8 mph	2 mph	10 mph	0.04 in

25	66.6 °F	59.4 °F	55.2 °F	12 mph	3 mph	12 mph	0 in
				-	-	-	
26	73.8 °F	62.3 °F	53.8 °F	9 mph	1 mph	9 mph	0 in
27	88.7 °F	68.2 °F	51.8 °F	5 mph	0 mph	5 mph	0 in
28	91.6 °F	71.2 °F	55 °F	8 mph	1 mph	8 mph	0 in
29	92.5 °F	72.7 °F	57.4 °F	0 mph	0 mph	0 mph	0 in
30	94.3 °F	73.3 °F	59.4 °F	0 mph	0 mph	0 mph	0 in
2015	T	emperatur			Speed		Precip. Rate.
May	High	Avg	Low	High	Avg	Gust	Sum
1	96.6 °F	74.2 °F	59.2 °F	0 mph	0 mph	0 mph	0 in
2	76.5 °F	65.7 °F	57.4 °F	0 mph	0 mph	0 mph	0 in
3	74.1 °F	64.4 °F	58.8 °F	0 mph	0 mph	0 mph	0 in
4	71.8 °F	63 °F	58.1 °F	0 mph	0 mph	0 mph	0 in
5	71.1 °F	60.3 °F	57.9 °F	0 mph	0 mph	0 mph	0 in
6	66 °F	60.3 °F	57.4 °F	0 mph	0 mph	0 mph	0 in
7	66 °F	58.3 °F	55.2 °F	0 mph	0 mph	0 mph	0 in
8	61.2 °F	54.5 °F	50.2 °F	0 mph	0 mph	0 mph	0.25 in
9	66.4 °F	59.1 °F	54 °F	0 mph	0 mph	0 mph	0 in
10	78.4 °F	62.5 °F	52.5 °F	0 mph	0 mph	0 mph	0 in
11	81.3 °F	64.5 °F	54.7 °F	0 mph	0 mph	0 mph	0 in
12	73.6 °F	62.4 °F	55.4 °F	4 mph	0 mph	4 mph	0 in
13	70.7 °F	60.7 °F	55.6 °F	5 mph	1 mph	5 mph	0 in
14	67.5 °F	58.6 °F	53.2 °F	5 mph	0 mph	5 mph	0 in
15	69.8 °F	57.8 °F	54.1 °F	7 mph	1 mph	7 mph	0.67 in
16	71.6 °F	59.8 °F	53.6 °F	6 mph	0 mph	6 mph	0 in
17	70.7 °F	61.2 °F	54.5 °F	10 mph	2 mph	10 mph	0 in
18	71.1 °F	61.6 °F	56.7 °F	10 mph	2 mph	10 mph	0 in
19	72.9 °F	61.8 °F	57.2 °F	3 mph	0 mph	3 mph	0 in
20	71.6 °F	62 °F	56.1 °F	10 mph	2 mph	10 mph	0 in
21	68.7 °F	58.7 °F	56.8 °F	12 mph	2 mph	12 mph	0 in
22	71.1 °F	61.2 °F	56.1 °F	9 mph	1 mph	9 mph	0 in
23	71.2 °F	56.3 °F	56.3 °F	9 mph	2 mph	9 mph	0 in
24	71.6 °F	44.4 °F	57.9 °F	6 mph	1 mph	6 mph	0 in
25	67.1 °F	58 °F	59.4 °F	4 mph	0 mph	4 mph	0 in
26	69.3 °F	61.9 °F	58.6 °F	5 mph	0 mph	5 mph	0 in
27	75.2 °F	60.8 °F	57.2 °F	10 mph	1 mph	10 mph	0 in
28	78.3 °F	63.1 °F	58.3 °F	6 mph	0 mph	6 mph	0 in
29	78.6 °F	47.9 °F	57.6 °F	8 mph	1 mph	8 mph	0 in
30	82.4 °F	35.9 °F	58.5 °F	7 mph	0 mph	7 mph	0 in
31	79.3 °F	60.9 °F	59.7 °F	9 mph	1 mph	9 mph	0 in

2015	T	emperatur	·e	Speed		Precip. Rate.	
Jun	High	Avg	Low	High	Avg	Gust	Sum
1	78.8 °F	66.7 °F	59.4 °F	0 mph	0 mph	0 mph	0 in
2	78.4 °F	62.4 °F	55.2 °F	3 mph	0 mph	3 mph	0 in
3	75.2 °F	64.7 °F	58.8 °F	3 mph	0 mph	3 mph	0 in
4	69.8 °F	28.9 °F	58.5 °F	6 mph	0 mph	6 mph	0 in
5	73.8 °F	6.4 °F	57.9 °F	4 mph	0 mph	4 mph	0 in
6	78.6 °F	25.6 °F	59.7 °F	9 mph	0 mph	9 mph	0 in
7	81 °F	51 °F	59.4 °F	8 mph	0 mph	8 mph	0 in
8	87.1 °F	3 °F	60.1 °F	7 mph	1 mph	7 mph	0 in
9	72 °F	13.2 °F	65.7 °F	4 mph	0 mph	4 mph	0 in
10	74.8 °F	39.6 °F	63.3 °F	8 mph	2 mph	8 mph	0 in
11	77.9 °F	66.5 °F	62.6 °F	7 mph	1 mph	7 mph	0 in
12	72.7 °F	63.1 °F	61.2 °F	6 mph	1 mph	6 mph	0 in
13	72.5 °F	55.2 °F	59.4 °F	4 mph	0 mph	4 mph	0 in
14	79.7 °F	41.4 °F	62.8 °F	4 mph	0 mph	4 mph	0 in
15	82.2 °F	63.7 °F	63.1 °F	4 mph	0 mph	4 mph	0 in
16	80.8 °F	68.5 °F	61 °F	3 mph	0 mph	3 mph	0 in
17	82.9 °F	40.8 °F	60.4 °F	3 mph	0 mph	3 mph	0 in
18	85.1 °F	56.8 °F	58.6 °F	4 mph	0 mph	4 mph	0 in
19	83.1 °F	24.3 °F	58.5 °F	2 mph	0 mph	2 mph	0 in
20	84.4 °F	24.1 °F	64.9 °F	3 mph	0 mph	3 mph	0 in
21	83.3 °F	59 °F	61.3 °F	7 mph	1 mph	7 mph	0 in
22	88.7 °F	71.8 °F	60.8 °F	6 mph	1 mph	6 mph	0 in
23	89.1 °F	72.4 °F	62.2 °F	6 mph	1 mph	6 mph	0 in
24	86.7 °F	71 °F	61.9 °F	10 mph	1 mph	10 mph	0 in
25	85.3 °F	71.2 °F	63.7 °F	8 mph	1 mph	8 mph	0 in
26	86.4 °F	71.6 °F	62.6 °F	10 mph	1 mph	10 mph	0 in
27	81.1 °F	69.6 °F	62.6 °F	6 mph	1 mph	6 mph	0 in
28	85.8 °F	72.4 °F	66.7 °F	6 mph	1 mph	6 mph	0 in
29	82.8 °F	70.9 °F	65.7 °F	6 mph	1 mph	6 mph	0 in
30	86.9 °F	67.5 °F	63.1 °F	6 mph	1 mph	6 mph	0.08 in
2015	T	Temperature		Speed		Precip. Rate.	
Jul	High	Avg	Low	High	Avg	Gust	Sum
1	85.8 °F	69.7 °F	67.1 °F	6 mph	1 mph	6 mph	0.04 in
2	147.9 °F	27.8 °F	32 °F	11 mph	1 mph	11 mph	0 in
3	-200 °F	0 °F	200 °F	10 mph	1 mph	10 mph	0 in
4	-200 °F	0 °F	200 °F	8 mph	1 mph	8 mph	0 in





FIELD DATA REPORT

Vernal Pool Wet Season

Record: 51		
This form is being submitted to serve as part of the 90-day report:	Yes	
Required color slides and/or photographs for the project site are included:	Yes	
Survey Date	2014-12-19	
Survey Time	08:39:00	
County	San Diego	
Quad	Jamul	
Collector(s)	Danielle Mullen, Other	
Other Collector(s)	Kyle Matthews	
Permit Number	TE31221B0 DAM, other	
Other Permit Number(s)	RKM	
Site/Project Name	8207 PV	

Pool Data		
Pool ID	A1	
Water Temperature (°C)	10	
Air Temperature (°C)	16	
Anostracans	0	
No. of Individuals	0	
Anostracans Summary	None	
Notostracans	0	
No. of Individuals	0	
Notostracans Summary	None	

	Pool Depth (cm)
At time of sampling	10
Estimated maximum	15

Surface Area (m)		
3		
3		
5		
4		
3 x 3		
5 x 4		
	3 3 5 4 3x3	



Habitat Condition		
Disturbed	1	
Disturbance type	tire tracks	
Disturbance level	light	
Land use of habitat	road rut	

	Pool Photos
Description	
Photo	

Pool Data		
Pool ID	A2	
Water Temperature (°C)	11	
Air Temperature (°C)	16	
Anostracans	0	
No. of Individuals	0	
Anostracans Summary	None	
Notostracans	0	
No. of Individuals	0	
Notostracans Summary	None	

	Pool Depth (cm)
At time of sampling	6
Estimated maximum	10



Surface Area (m)	
length	2.6
width	1.5
length	4
width	2
Sampling Estimated maximum	2.6 x 1.5
Estimated maximum	4 x 2

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos Photo



Pool Data	
Pool ID	A3
Water Temperature (°C)	10
Air Temperature (°C)	16
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None



Pool Depth (cm)	
At time of sampling	10.5
Estimated maximum	14

Surface Area (m)	
length	11
width	2
length	13
width	3
Sampling Estimated maximum	11 x 2
Estimated maximum	13 x 3

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos Photo



Pool Data	
Pool ID	A4
Water Temperature (°C)	11
Air Temperature (°C)	16
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	10
Estimated maximum	14

Surface Area (m)	
length	3.3
width	2.5
length	4
width	4
Sampling Estimated maximum	3.3 x 2.5
Estimated maximum	4 x 4

Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos





Photo



Pool Data	
Pool ID	A5
Water Temperature (°C)	11
Air Temperature (°C)	16
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	15
Estimated maximum	18

Surface Area (m)		
length	13	
width	2.5	
length	15	
width	3	
Sampling	13 x 2.5	
Estimated maximum	15 x 3	



Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos

Photo



FIELD DATA REPORT

Vernal Pool Wet Season

Record: 63	
This form is being submitted to serve as part of the 90-day report:	Yes
Required color slides and/or photographs for the project site are included:	Yes
Survey Date	2014-12-19
Survey Time	09:27:00
County	San Diego
Quad	Jamul Mountains
Collector(s)	Danielle Mullen, Other
Other Collector(s)	RKM
Permit Number	TE31221B0 DAM, other
Other Permit Number(s)	RKM
Site/Project Name	8207 PV

Pool Data	
Pool ID	A6
Water Temperature (°C)	9.5
Air Temperature (°C)	17
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	8.5
Estimated maximum	12

Surface Area (m)	
5	
2	
6	
2.5	
5 x 2	
6 x 2.5	



Habitat Condition	
Disturbed	1
Disturbance type	tire tracks
Disturbance level	light
Land use of habitat	road rut

Pool Photos Photo

Pool Data	
Pool ID	A7
Water Temperature (°C)	12
Air Temperature (°C)	17
Anostracans	0
No. of Individuals	0
Anostracans Summary	None
Notostracans	0
No. of Individuals	0
Notostracans Summary	None

Pool Depth (cm)	
At time of sampling	8
Estimated maximum	12