

# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor: Melanie Rocks Date: 3/1/2016  
 Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch Site Visit No: 1  
 Area Surveyed G+D Acres Surveyed 99 Survey Time: 12.5 Acres per Hour: 7.92  
 Other Surveyors Present: M. Alfaro

| Field Conditions |              |                  |                  |             |
|------------------|--------------|------------------|------------------|-------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
| Start            | 0830         | 70               | 1-2              | 10% - Hazy  |
| End              | 1445         | 79               | 2-3              | 50% - Hazy  |
| Start            |              |                  |                  |             |
| End              |              |                  |                  |             |

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

DCSS - Malosma laurina, Salvia spp (incl munzii), Art cal, Baccharis  
Chamise Chaparral - Adenostoma fasc; NNG - Bromus spp.

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

| Butterfly Species                                            | No. | Butterfly Species                                               | No. |
|--------------------------------------------------------------|-----|-----------------------------------------------------------------|-----|
| <b>Checkerspots</b>                                          |     | <b>Hairstreaks</b>                                              |     |
| California patch ( <i>Chlosyne californica</i> )             |     | great purple hairstreak ( <i>Atides halesus corcorani</i> )     |     |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      |     | brown elfin ( <i>Callophrys augustinus</i> )                    |     |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |     | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |     |
| chalcid checkerspot ( <i>E. chalcidona chalcidona</i> )      |     | gray hairstreak ( <i>Strymon melinus pudica</i> )               |     |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |     | <b>Ladies/Admirals</b>                                          |     |
| Myliatta crescent ( <i>Phyciodes myliatta</i> )              |     | California sister ( <i>Adelpha bredowii californica</i> )       |     |
| <b>Blues</b>                                                 |     | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |     |
| western pygmy-blue ( <i>Brephidium exila</i> )               |     | west coast lady ( <i>Vanessa annabella</i> )                    | 1   |
| western tailed blue ( <i>Everes amyntula</i> )               |     | red admiral ( <i>V. atalanta rubria</i> )                       |     |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     |     | painted lady ( <i>V. cardui</i> )                               |     |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |     | American (Virginia) lady ( <i>V. virginensis</i> )              |     |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |     | unidentified lady ( <i>Vanessa</i> sp.)                         | 3   |
| marine blue ( <i>Leptotes marina</i> )                       |     | <b>Swallowtails</b>                                             |     |
| unidentified blue ( <i>L. k. l. g. so.</i> )                 | 1   | pale swallowtail ( <i>Papilio eurymedon</i> )                   |     |
| <b>Whites</b>                                                |     | western tiger swallowtail ( <i>P. rutulus</i> )                 |     |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | 19  | anise swallowtail ( <i>P. zelicaon</i> )                        | 2   |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |     | <b>Miscellaneous</b>                                            |     |
| common California ringlet ( <i>Coenonympha californica</i> ) | 6   | monarch ( <i>Danaus plexippus</i> )                             |     |
| cabbage white ( <i>Pieris rapae</i> )                        |     | common buckeye ( <i>Junonia coenia grisea</i> )                 |     |
| checkered (common) white ( <i>Pontia protodice</i> )         |     | mourning cloak ( <i>Nymphalis antiopa</i> )                     |     |
| spring white ( <i>P. sisymbrii</i> )                         |     | <b>Skippers</b>                                                 |     |
| unidentified white                                           |     | funereal duskywing ( <i>Erynnis funeralis</i> )                 | 2   |
| <b>Metalmarks</b>                                            |     | mournful duskywing ( <i>Erynnis tristis</i> )                   |     |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | 12  | fiery skipper ( <i>Hylephila phyleus</i> )                      |     |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |     | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    |     |
| <b>Sulphurs</b>                                              |     | <b>Other</b>                                                    |     |
| orange sulphur ( <i>Colias eurytheme</i> )                   |     |                                                                 |     |
| sleepy orange ( <i>Eurema nicippe</i> )                      |     |                                                                 |     |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |     |                                                                 |     |
| unidentified sulphur                                         | 8   |                                                                 |     |
| Column Subtotal                                              | 46  | Column Subtotal                                                 | 9   |
|                                                              |     | Total                                                           | 54  |

## 2016 Quino Checkerspot Butterfly Survey Form

**Surveyor:** Erica Harris **Date:** 2/25/16  
**Site Name:** JPD-08 Proctor Valley – Village 14 of Otay Ranch (Area H) **Site Visit No:** 1  
**Acres Surveyed** 55 **Survey Time:** 5 hours 30 minutes **Acres per Hour:** 10  
**Other Surveyors Present:** \_\_\_\_\_

| Field Conditions |              |                  |                  |             |
|------------------|--------------|------------------|------------------|-------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
| Start            | 0910         | 76               | 0-3              | 0           |
| End              | 1440         | 86               | 1-6              | 0           |
| Start            |              |                  |                  |             |
| End              |              |                  |                  |             |

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

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

| Butterfly Species                                            | No.       | Butterfly Species                                               | No.       |
|--------------------------------------------------------------|-----------|-----------------------------------------------------------------|-----------|
| <b>Checkerspots</b>                                          |           | <b>Hairstreaks</b>                                              |           |
| California patch ( <i>Chlosyne californica</i> )             |           | great purple hairstreak ( <i>Atlides halesus corcorani</i> )    |           |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      |           | brown elfin ( <i>Callophrys augustinus</i> )                    |           |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |           | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |           |
| chalcedon checkerspot ( <i>E. chalcedona chalcedona</i> )    |           | gray hairstreak ( <i>Strymon melinus pudica</i> )               | 2         |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |           | <b>Ladies/Admirals</b>                                          |           |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |           | California sister ( <i>Adelpha bredowii californica</i> )       |           |
| <b>Blues</b>                                                 |           | Lorquin's admiral ( <i>Limnitis lorquini</i> )                  |           |
| western pygmy-blue ( <i>Brephidium exila</i> )               | 3         | west coast lady ( <i>Vanessa annabella</i> )                    | 1         |
| western tailed blue ( <i>Everes amyntula</i> )               |           | red admiral ( <i>V. atalanta rubria</i> )                       |           |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     | 4         | painted lady ( <i>V. cardui</i> )                               |           |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |           | American (Virginia) lady ( <i>V. virginensis</i> )              |           |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |           | unidentified lady ( <i>Vanessa</i> sp.)                         | 4         |
| marine blue ( <i>Leptotes marina</i> )                       |           | <b>Swallowtails</b>                                             |           |
| unidentified blue                                            |           | pale swallowtail ( <i>Papilio eurymedon</i> )                   |           |
| <b>Whites</b>                                                |           | western tiger swallowtail ( <i>P. rutulus</i> )                 |           |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | 4         | anise swallowtail ( <i>P. zelicaon</i> )                        |           |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |           | <b>Miscellaneous</b>                                            |           |
| common California ringlet ( <i>Coenonympha californica</i> ) | 5         | monarch ( <i>Danaus plexippus</i> )                             | 1         |
| cabbage white ( <i>Pieris rapae</i> )                        |           | common buckeye ( <i>Junonia coenia grisea</i> )                 | 2         |
| checkered (common) white ( <i>Pontia protodice</i> )         |           | mourning cloak ( <i>Nymphalis antiopa</i> )                     |           |
| spring white ( <i>P. sisymbrii</i> )                         |           | <b>Skippers</b>                                                 |           |
| unidentified white                                           | 3         | funereal duskywing ( <i>Erynnis funeralis</i> )                 | 6         |
| <b>Metalmarks</b>                                            |           | mournful duskywing ( <i>Erynnis tristis</i> )                   |           |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | 6         | fiery skipper ( <i>Hylephila phyleus</i> )                      |           |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |           | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    | 2         |
| <b>Sulphurs</b>                                              |           | <b>Other</b>                                                    |           |
| orange sulphur ( <i>Colias eurytheme</i> )                   |           |                                                                 |           |
| sleepy orange ( <i>Eurema nicippe</i> )                      |           |                                                                 |           |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |           |                                                                 |           |
| unidentified sulphur                                         | 4         |                                                                 |           |
| <b>Column Subtotal</b>                                       | <b>29</b> | <b>Column Subtotal</b>                                          | <b>18</b> |
|                                                              |           | <b>Total</b>                                                    | <b>47</b> |



JPD 08 Thica H  
QCB #1 (Area H) 2125/116  
START: 0910, 76°F, 0-3.0%  
STOP: 1440, 80°F, 1-6, 0%

BEAR WERE RTHA PAWR  
CATH GALT WOSP WREN  
GIRRO ANHU RISP NOFL  
REKI BUSH LEGIO MODO  
HOLA OWA TRES ANCP

side-blotched coast horn liz.  
coyote SO. pac. rattle  
BJR Fence liz.

CA gr. Squirmed  
Gray Hairstreak II

|                |              |
|----------------|--------------|
| moraroh I      | Buckeye II   |
| WESTCOAST I    | SO. Blue III |
| check skip. II | Behr's HT I  |
| Funeral HT I   | Sara's III   |
| Pygmy III      | Sulphur III  |
| White Sp. III  | Lady III     |

Flower: *Hieracium sordidum*,  
*erica*, *mir laev*, *lath*, *rostr*, *cea*, *rom*,  
*pal*, *lac*, *de*, *cap*, *gu*, *ten*, *za*, *acm*, *sta*,  
*ec*, *cal*, *an*, *um*, *dry*, *ov*, *in*, *ta*, *cal*, *mac*,  
*and*, *ary*, *oval*, *is*, *se*, *sal*, *me*, *ir*, *mac*,  
*ph*, *er*, *c*, *sol*, *an*, *um*, *ph*, *ac*, *vi*, *op*, *ed*, *er*, *ica*,  
*cal*, *gil*, *sal*, *mun*, *ica*, *s*, *off*, *sis*, *be*

## 2016 Quino Checkerspot Butterfly Survey Form

**Surveyor:** Erica Harris **Date:** 2/24/16  
**Site Name:** JPD-08 Proctor Valley – Village 14 of Otay Ranch (Area I) **Site Visit No:** 1  
**Acres Surveyed** 42 **Survey Time:** 4 hours 12 minutes **Acres per Hour:** 10  
**Other Surveyors Present:**

| Field Conditions |              |                  |                  |             |
|------------------|--------------|------------------|------------------|-------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
| Start            | 0900         | 75               | 4-8              | 0           |
| End              | 1312         | 84               | 1-3              | 0           |
| Start            |              |                  |                  |             |
| End              |              |                  |                  |             |

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

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

| Butterfly Species                                            | No.       | Butterfly Species                                               | No.       |
|--------------------------------------------------------------|-----------|-----------------------------------------------------------------|-----------|
| <b>Checkerspots</b>                                          |           | <b>Hairstreaks</b>                                              |           |
| California patch ( <i>Chlosyne californica</i> )             |           | great purple hairstreak ( <i>Atlides halesus corcorani</i> )    |           |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      |           | brown elfin ( <i>Callophrys augustinus</i> )                    |           |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |           | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |           |
| chalcidon checkerspot ( <i>E. chalcidona chalcidona</i> )    |           | gray hairstreak ( <i>Strymon melinus pudica</i> )               |           |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |           | <b>Ladies/Admirals</b>                                          |           |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |           | California sister ( <i>Adelpha bredowii californica</i> )       |           |
| <b>Blues</b>                                                 |           | Lorquin's admiral ( <i>Limnitis lorquini</i> )                  |           |
| western pygmy-blue ( <i>Brephidium exila</i> )               | 1         | west coast lady ( <i>Vanessa annabella</i> )                    |           |
| western tailed blue ( <i>Everes amyntula</i> )               |           | red admiral ( <i>V. atalanta rubria</i> )                       | 1         |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     |           | painted lady ( <i>V. cardui</i> )                               |           |
| Edward's blue ( <i>Hemiarctus ceraunus gys</i> )             |           | American (Virginia) lady ( <i>V. virginensis</i> )              |           |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |           | unidentified lady ( <i>Vanessa</i> sp.)                         | 4         |
| marine blue ( <i>Leptotes marina</i> )                       |           | <b>Swallowtails</b>                                             |           |
| unidentified blue                                            | 1         | pale swallowtail ( <i>Papilio eurymedon</i> )                   |           |
| <b>Whites</b>                                                |           | western tiger swallowtail ( <i>P. rutulus</i> )                 |           |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | 5         | anise swallowtail ( <i>P. zelicaon</i> )                        | 2         |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |           | <b>Miscellaneous</b>                                            |           |
| common California ringlet ( <i>Coenonympha californica</i> ) | 3         | monarch ( <i>Danaus plexippus</i> )                             | 1         |
| cabbage white ( <i>Pieris rapae</i> )                        |           | common buckeye ( <i>Junonia coenia grisea</i> )                 |           |
| checkered (common) white ( <i>Pontia protodice</i> )         |           | mourning cloak ( <i>Nymphalis antiopa</i> )                     |           |
| spring white ( <i>P. sisymbrii</i> )                         |           | <b>Skippers</b>                                                 |           |
| unidentified white                                           | 5         | funereal duskywing ( <i>Erynnis funeralis</i> )                 | 3         |
| <b>Metalmarks</b>                                            |           | mournful duskywing ( <i>Erynnis tristis</i> )                   |           |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | 2         | fiery skipper ( <i>Hylephila phyleus</i> )                      |           |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |           | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    | 4         |
| <b>Sulphurs</b>                                              |           | <b>Other</b>                                                    |           |
| orange sulphur ( <i>Colias eurytheme</i> )                   |           |                                                                 |           |
| sleepy orange ( <i>Eurema nicippe</i> )                      |           |                                                                 |           |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |           |                                                                 |           |
| unidentified sulphur                                         | 4         |                                                                 |           |
| <b>Column Subtotal</b>                                       | <b>21</b> | <b>Column Subtotal</b>                                          | <b>15</b> |
|                                                              |           | <b>Total</b>                                                    | <b>36</b> |



JPDOS Erica H  
QCB #1 (Arca I) 2/24/10  
Start: 0900; 75°F 4-8, 0%  
Stop: 1312; 84°F, 1-3, 0%

YKWA RTHA NOKA CORA  
HOFI ANAR WOSP WOME  
ANHU HOLA CANT LETHO  
COHU SANS TRES RESP  
GROO CAKI MODO SAPH  
NOMO NPOWS

sole-biotined 1:2  
CA gr. squinned condratig

Anise II Sulphur IIII  
CA nitzet III Lady IIII  
Pygmy I Funeral III  
Sara's III White Sp. III  
Behrs II monarch I  
red admiral I Blue Sp. I  
checkered skip IIII

Flower: mea polygenalum, eritas,  
Ann men, Lac ser, Dic Cap, vid ped,  
son de, cryptantra, pla ere pan KC,  
guittenza, lam vest, mira <sup>Kite in the Rain</sup> ~~lar~~, sista  
am gla, allum, se gal, cal cil, tir inc, isoma

# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor: GARRETT HUFFMAN Date: 2/24/16  
 Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch PARCEL N Site Visit No: 1  
 Acres Surveyed: 65 Survey Time: 87 HOURS Acres per Hour: 89.3  
 Other Surveyors Present: NONE

| Field Conditions |              |                  |                  |
|------------------|--------------|------------------|------------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) |
| Start            | 0900         | 70               | 5-10             |
| End              | 1600         | 78               | 3-6              |
| Start            |              |                  |                  |
| End              |              |                  |                  |

Vegetation Communities Surveyed (inc. dominant spp.)  
CHAMISE CHAPARRAL, COASTAL SAWYER SCRUB

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

| Butterfly Species                                            | No. | Butterfly Species                                               | No. |
|--------------------------------------------------------------|-----|-----------------------------------------------------------------|-----|
| <b>Checkerspots</b>                                          |     | <b>Hairstreaks</b>                                              |     |
| California patch ( <i>Chlosyne californica</i> )             |     | great purple hairstreak ( <i>Atlides halesus corcorani</i> )    |     |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      |     | brown elfin ( <i>Callophrys augustinus</i> )                    | 2   |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |     | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |     |
| chalcidion checkerspot ( <i>E. chalcidion chalcidion</i> )   |     | gray hairstreak ( <i>Strymon melinus pudica</i> )               | 2   |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |     | <b>Ladies/Admirals</b>                                          |     |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |     | California sister ( <i>Adelpha bredowii californica</i> )       |     |
| <b>Blues</b>                                                 |     | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |     |
| western pygmy-blue ( <i>Brephidium exila</i> )               |     | west coast lady ( <i>Vanessa annabella</i> )                    |     |
| western tailed blue ( <i>Everes amyntula</i> )               |     | red admiral ( <i>V. atalanta rubria</i> )                       |     |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     |     | painted lady ( <i>V. cardui</i> )                               | 5   |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |     | American (Virginia) lady ( <i>V. virginensis</i> )              |     |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |     | unidentified lady ( <i>Vanessa</i> sp.)                         |     |
| marine blue ( <i>Leptotes marina</i> )                       | 2   | <b>Swallowtails</b>                                             |     |
| unidentified blue                                            |     | pale swallowtail ( <i>Papilio eurymedon</i> )                   |     |
| <b>Whites</b>                                                |     | western tiger swallowtail ( <i>P. rutulus</i> )                 |     |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | 31  | anise swallowtail ( <i>P. zelicaon</i> )                        | 1   |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |     | <b>Miscellaneous</b>                                            |     |
| common California ringlet ( <i>Coenonympha californica</i> ) |     | monarch ( <i>Danaus plexippus</i> )                             |     |
| cabbage white ( <i>Pieris rapae</i> )                        |     | common buckeye ( <i>Junonia coenia grisea</i> )                 | 3   |
| checkered (common) white ( <i>Pontia protodice</i> )         |     | mourning cloak ( <i>Nymphalis antiopa</i> )                     | 1   |
| spring white ( <i>P. sisymbrii</i> )                         |     | <b>Skippers</b>                                                 |     |
| unidentified white                                           |     | funereal duskywing ( <i>Erynnis funeralis</i> )                 |     |
| <b>Metalmarks</b>                                            |     | mournful duskywing ( <i>Erynnis tristis</i> )                   |     |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | 12  | fiery skipper ( <i>Hylephila phyleus</i> )                      |     |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |     | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    | 10  |
| <b>Sulphurs</b>                                              |     | <b>Other</b>                                                    |     |
| orange sulphur ( <i>Colias eurytheme</i> )                   | 5   |                                                                 |     |
| sleepy orange ( <i>Eurema nicippe</i> )                      |     |                                                                 |     |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |     |                                                                 |     |
| unidentified sulphur                                         |     |                                                                 |     |
| Column Subtotal                                              | 50  | Column Subtotal                                                 | 24  |

TOTAL 74



ADE FAS  
ERI FAS :  
ACM GLA  
MEL ALB  
HER INC  
ERO CIC  
Cammis-ia sp.  
LOT STR  
BAH CAN  
SIS BEL  
LYS ARV  
NUT T&X  
GUT CAL  
Ceanothus sp.  
ESC CAL  
MIM AWC  
SOL PA  
MAL DEN  
PEN AR  
ALL PRA  
CAL CIL  
CAL MAC  
PHA CIC  
AT VES  
SID SPA  
HEL SLO  
LIN DEN  
MIR LAE  
SAL MUN  
DIC CAP

## 2016 Quino Checkerspot Butterfly Survey Form

Surveyor

Alicia Hill

Date:

2/24/16

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

Site Visit No:

1

Acres Surveyed

63

Survey Time:

3.6

Acres per Hour:

8.75

Other Surveyors Present:

TRANS Cooper

## Field Conditions

|       | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
|-------|--------------|------------------|------------------|-------------|
| Start | 1230         | 88               | 0-1              | 0%          |
| End   | 1605         | 85               | 1-3              | 0%          |
| Start |              |                  |                  |             |
| End   |              |                  |                  |             |

Vegetation Communities Surveyed (inc. dominant spp.)

chamise chaparral (ADE FAS), non-native grassland/ruderal (ERO CIC, Bromus sp., Aster)

| Host Plants                                       |  | Obs. | Nectar Plants                                                    |                                    | Obs. |          |      |
|---------------------------------------------------|--|------|------------------------------------------------------------------|------------------------------------|------|----------|------|
| dwarf plantain ( <i>Plantago erecta</i> )         |  | X    | popcorn flower ( <i>Cryptantha/Plagiobothrys</i> spp.)           |                                    | X    |          |      |
| purple owl's clover ( <i>Castilleja exserta</i> ) |  |      | goldfields ( <i>Lasthenia</i> spp.)                              |                                    | X    |          |      |
| snapdragon ( <i>Antirrhinum coulterianum</i> )    |  |      | goldenstar ( <i>Muilla</i> spp.)                                 |                                    |      |          |      |
| birds-beak ( <i>Cordylanthus rigidus</i> )        |  |      | fiddleneck ( <i>Amsinckia menziesii</i> var. <i>intermedia</i> ) |                                    | X    |          |      |
| woolly plantain ( <i>Plantago patagonica</i> )    |  |      | onion ( <i>Allium</i> spp.)                                      |                                    | X    |          |      |
| Chinese houses ( <i>Collinsia</i> spp.)           |  |      | buckwheat ( <i>Eriogonum fasciculatum</i> )                      |                                    | X    |          |      |
|                                                   |  |      | ground pink ( <i>Linanthus dianthiflorus</i> )                   |                                    | X    |          |      |
| 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. |
|--------------------------------------------------------------|-----|-----------------------------------------------------------------|-----|
| <b>Checkerspots</b>                                          |     | <b>Hairstreaks</b>                                              |     |
| California patch ( <i>Chlosyne californica</i> )             |     | great purple hairstreak ( <i>Atides halesus corcorani</i> )     |     |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      |     | brown elfin ( <i>Callophrys augustinus</i> )                    |     |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |     | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |     |
| chalcid checkerspot ( <i>E. chalcidona chalcidona</i> )      |     | gray hairstreak ( <i>Strymon melinus pudica</i> )               |     |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |     | <b>Ladies/Admirals</b>                                          |     |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |     | California sister ( <i>Adelpha bredowii californica</i> )       |     |
| <b>Blues</b>                                                 |     | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |     |
| western pygmy-blue ( <i>Brephidium exila</i> )               |     | west coast lady ( <i>Vanessa annabella</i> )                    |     |
| western tailed blue ( <i>Everes amyntula</i> )               |     | red admiral ( <i>V. atalanta rubria</i> )                       |     |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     | 2   | painted lady ( <i>V. cardui</i> )                               | 1   |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |     | American (Virginia) lady ( <i>V. virginensis</i> )              |     |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   | 2   | unidentified lady ( <i>Vanessa</i> sp.)                         |     |
| marine blue ( <i>Leptotes marina</i> )                       |     | <b>Swallowtails</b>                                             |     |
| unidentified blue                                            | 4   | pale swallowtail ( <i>Papilio eurymedon</i> )                   |     |
| <b>Whites</b>                                                |     | western tiger swallowtail ( <i>P. rutulus</i> )                 |     |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | 39  | anise swallowtail ( <i>P. zelicaon</i> )                        |     |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |     | <b>Miscellaneous</b>                                            |     |
| common California ringlet ( <i>Coenonympha californica</i> ) |     | monarch ( <i>Danaus plexippus</i> )                             |     |
| cabbage white ( <i>Pieris rapae</i> )                        |     | common buckeye ( <i>Junonia coenia grisea</i> )                 |     |
| checkered (common) white ( <i>Pontia protodice</i> )         |     | mourning cloak ( <i>Nymphalis antiopa</i> )                     |     |
| spring white ( <i>P. sisymbrii</i> )                         |     | <b>Skippers</b>                                                 |     |
| unidentified white                                           |     | funereal duskywing ( <i>Erynnis funeralis</i> )                 | 7   |
| <b>Metalmarks</b>                                            |     | mournful duskywing ( <i>Erynnis tristis</i> )                   |     |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | 22  | fiery skipper ( <i>Hylephila phyleus</i> )                      |     |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |     | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    |     |
| <b>Sulphurs</b>                                              |     | <b>Other</b>                                                    |     |
| orange sulphur ( <i>Colias eurytheme</i> )                   | 8   |                                                                 |     |
| sleepy orange ( <i>Eurema nicippe</i> )                      |     |                                                                 |     |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |     |                                                                 |     |
| unidentified sulphur                                         |     |                                                                 |     |
| Column Subtotal                                              | 77  | Column Subtotal                                                 | 8   |
|                                                              |     | Total                                                           | 85  |



# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor: GARRET HUFFMAN

Date: 2/25/16

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

Site Visit No: 1

Acres Surveyed: 66 Survey Time: 8 hours

Acres per Hour: 8.25

Other Surveyors Present: NONE

| Field Conditions |              |                  |                  |             |
|------------------|--------------|------------------|------------------|-------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
| Start            | 0800         | 60               | 0-2              | 0 %         |
| End              | 1600         | 75               | 4-6              | 0 %         |
| Start            |              |                  |                  |             |
| End              |              |                  |                  |             |

Vegetation Communities Surveyed (inc. dominant spp.)

CHAMISE CHAPARRAL, COASTAL SAGE SCRUB

| Host Plants                                       | Obs. | Nectar Plants                                                    | Obs.          |
|---------------------------------------------------|------|------------------------------------------------------------------|---------------|
| dwarf plantain ( <i>Plantago erecta</i> )         | X    | popcorn flower ( <i>Cryptantha/Plagiobothrys</i> spp.)           | X             |
| purple owl's clover ( <i>Castilleja exserta</i> ) |      | goldfields ( <i>Lasthenia</i> spp.)                              | X             |
| snapdragon ( <i>Antirrhinum coulterianum</i> )    |      | goldenstar ( <i>Muilla</i> spp.)                                 |               |
| birds-beak ( <i>Cordylanthus rigidus</i> )        |      | fiddleneck ( <i>Amsinckia menziesii</i> var. <i>intermedia</i> ) | X             |
| woolly plantain ( <i>Plantago patagonica</i> )    |      | onion ( <i>Allium</i> spp.)                                      | X             |
| Chinese houses ( <i>Collinsia</i> spp.)           |      | buckwheat ( <i>Eriogonum fasciculatum</i> )                      | X             |
|                                                   |      | ground pink ( <i>Linanthus dianthiflorus</i> )                   | X             |
| 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. |
|--------------------------------------------------------------|-----|-----------------------------------------------------------------|-----|
| <b>Checkerspots</b>                                          |     | <b>Hairstreaks</b>                                              |     |
| California patch ( <i>Chlosyne californica</i> )             |     | great purple hairstreak ( <i>Atides halesus corcorani</i> )     |     |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      | 1   | brown elfin ( <i>Callophrys augustinus</i> )                    |     |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |     | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |     |
| chalcedon checkerspot ( <i>E. chalcedona chalcedona</i> )    |     | gray hairstreak ( <i>Strymon melinus pudica</i> )               |     |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |     | <b>Ladies/Admirals</b>                                          |     |
| Myiitta crescent ( <i>Phyciodes mylitta</i> )                |     | California sister ( <i>Adelpha bredowii californica</i> )       |     |
| <b>Blues</b>                                                 |     | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |     |
| western pygmy-blue ( <i>Brephidium exila</i> )               |     | west coast lady ( <i>Vanessa annabella</i> )                    |     |
| western tailed blue ( <i>Everes amyntula</i> )               |     | red admiral ( <i>V. atalanta rubria</i> )                       |     |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     |     | painted lady ( <i>V. cardui</i> )                               | 2   |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |     | American (Virginia) lady ( <i>V. virginensis</i> )              |     |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |     | unidentified lady ( <i>Vanessa</i> sp.)                         |     |
| marine blue ( <i>Leptotes marina</i> )                       | 7   | <b>Swallowtails</b>                                             |     |
| unidentified blue                                            |     | pale swallowtail ( <i>Papilio eurymedon</i> )                   |     |
| <b>Whites</b>                                                |     | western tiger swallowtail ( <i>P. rutulus</i> )                 |     |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | 40  | anise swallowtail ( <i>P. zelicaon</i> )                        |     |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |     | <b>Miscellaneous</b>                                            |     |
| common California ringlet ( <i>Coenonympha californica</i> ) | 5   | monarch ( <i>Danaus plexippus</i> )                             |     |
| cabbage white ( <i>Pieris rapae</i> )                        |     | common buckeye ( <i>Junonia coenia grisea</i> )                 |     |
| checkered (common) white ( <i>Pontia protodice</i> )         | 1   | mourning cloak ( <i>Nymphalis antiopa</i> )                     |     |
| spring white ( <i>P. sisymbrii</i> )                         |     | <b>Skippers</b>                                                 |     |
| unidentified white                                           |     | funereal duskywing ( <i>Erynnis funeralis</i> )                 | 2   |
| <b>Metalmarks</b>                                            |     | mournful duskywing ( <i>Erynnis tristis</i> )                   |     |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | 2   | fiery skipper ( <i>Hylephila phyleus</i> )                      |     |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |     | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    |     |
| <b>Sulphurs</b>                                              |     | <b>Other</b>                                                    |     |
| orange sulphur ( <i>Colias eurytheme</i> )                   | 2   |                                                                 |     |
| sleepy orange ( <i>Eurema nicippe</i> )                      |     |                                                                 |     |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |     |                                                                 |     |
| unidentified sulphur                                         |     |                                                                 |     |
| Column Subtotal                                              | 58  | Column Subtotal                                                 | 4   |

TOTAL 62



# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor: GARRET HUFMAN

Date: 02/27/16

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

PANEL G

Site Visit No: 1

Acres Surveyed 55

Survey Time: 7.5

Acres per Hour: 7.3

Other Surveyors Present: NONE

| Field Conditions |              |                  |                  |
|------------------|--------------|------------------|------------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) |
| Start            | <u>0830</u>  | <u>60</u>        | <u>0-1</u>       |
| End              | <u>1600</u>  | <u>75</u>        | <u>2-3</u>       |
| Start            |              |                  |                  |
| End              |              |                  |                  |

Vegetation Communities Surveyed (inc. dominant spp.)

CHAMISE CHAPARRAL, COASTAL SAGE SCRUB

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

| Butterfly Species                                            | No.        | Butterfly Species                                               | No.      |
|--------------------------------------------------------------|------------|-----------------------------------------------------------------|----------|
| <b>Checkerspots</b>                                          |            | <b>Hairstreaks</b>                                              |          |
| California patch ( <i>Chlosyne californica</i> )             |            | great purple hairstreak ( <i>Atides halesus corcorani</i> )     |          |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      |            | brown elfin ( <i>Callophrys augustinus</i> )                    | <u>1</u> |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |            | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |          |
| chalcid checkerspot ( <i>E. chalcidona chalcidona</i> )      |            | gray hairstreak ( <i>Strymon melinus pudica</i> )               |          |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |            | <b>Ladies/Admirals</b>                                          |          |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |            | California sister ( <i>Adelpha bredowii californica</i> )       |          |
| <b>Blues</b>                                                 |            | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |          |
| western pygmy-blue ( <i>Brephidium exila</i> )               |            | west coast lady ( <i>Vanessa annabella</i> )                    |          |
| western tailed blue ( <i>Everes amyntula</i> )               |            | red admiral ( <i>V. atalanta rubria</i> )                       |          |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     | <u>6</u>   | painted lady ( <i>V. cardui</i> )                               | <u>2</u> |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |            | American (Virginia) lady ( <i>V. virginensis</i> )              |          |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |            | unidentified lady ( <i>Vanessa</i> sp.)                         |          |
| marine blue ( <i>Leptotes marina</i> )                       | <u>7</u>   | <b>Swallowtails</b>                                             |          |
| unidentified blue                                            |            | pale swallowtail ( <i>Papilio eurymedon</i> )                   |          |
| <b>Whites</b>                                                |            | western tiger swallowtail ( <i>P. rutulus</i> )                 |          |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | <u>65</u>  | anise swallowtail ( <i>P. zelicaon</i> )                        | <u>2</u> |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |            | <b>Miscellaneous</b>                                            |          |
| common California ringlet ( <i>Coenonympha californica</i> ) | <u>23</u>  | monarch ( <i>Danaus plexippus</i> )                             |          |
| cabbage white ( <i>Pieris rapae</i> )                        |            | common buckeye ( <i>Junonia coenia grisea</i> )                 |          |
| checkered (common) white ( <i>Pontia protodice</i> )         | <u>1</u>   | mourning cloak ( <i>Nymphalis antiopa</i> )                     |          |
| spring white ( <i>P. sisymbrii</i> )                         |            | <b>Skippers</b>                                                 |          |
| unidentified white                                           |            | funereal duskywing ( <i>Erynnis funeralis</i> )                 | <u>3</u> |
| <b>Metalmarks</b>                                            |            | mournful duskywing ( <i>Erynnis tristis</i> )                   |          |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          |            | fiery skipper ( <i>Hylephila phyleus</i> )                      |          |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |            | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    | <u>1</u> |
| <b>Sulphurs</b>                                              |            | <b>Other</b>                                                    |          |
| orange sulphur ( <i>Colias eurytheme</i> )                   |            |                                                                 |          |
| sleepy orange ( <i>Eurema nicippe</i> )                      |            |                                                                 |          |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |            |                                                                 |          |
| unidentified sulphur                                         |            |                                                                 |          |
| Column Subtotal                                              | <u>102</u> | Column Subtotal                                                 | <u>9</u> |

TOTAL 111



Surveyor: GARRETT HUFFMAN 2016 Quino Checkerspot Butterfly Survey Form  
 Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch Date: 2/20/16  
 Acres Surveyed: 50 Survey Time: 8.5 hours Site Visit No: 1  
 Other Surveyors Present: NONE Acres per Hour: 6

|       |              | Field Conditions |                  |             |
|-------|--------------|------------------|------------------|-------------|
| Start | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
| End   | 0900         | 60               | 0-2              | 5%          |
| Start | 1630         | 79               | 0-3              | 60%         |
| End   |              |                  |                  |             |

Vegetation Communities Surveyed (inc. dominant spp.)  
CHOMISA CHAPARRAL, COASTAL SAGE SCRUB

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

| Butterfly Species                                            | No. | Butterfly Species                                               | No. |
|--------------------------------------------------------------|-----|-----------------------------------------------------------------|-----|
| <b>Checkerspots</b>                                          |     | <b>Hairstreaks</b>                                              |     |
| California patch ( <i>Chlosyne californica</i> )             |     | great purple hairstreak ( <i>Atlides halesus corcorani</i> )    |     |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      |     | brown elfin ( <i>Callophrys augustinus</i> )                    |     |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |     | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |     |
| chalcadon checkerspot ( <i>E. chalcadon chalcadon</i> )      |     | gray hairstreak ( <i>Strymon melinus pudica</i> )               | 2   |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |     | <b>Ladies/Admirals</b>                                          |     |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |     | California sister ( <i>Adelpha bredowii californica</i> )       |     |
| <b>Blues</b>                                                 |     | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |     |
| western pygmy-blue ( <i>Brephidium exila</i> )               |     | west coast lady ( <i>Vanessa annabella</i> )                    |     |
| western tailed blue ( <i>Evers amyntula</i> )                |     | red admiral ( <i>V. atalanta rubria</i> )                       |     |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     | 6   | painted lady ( <i>V. cardui</i> )                               | 1   |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |     | American (Virginia) lady ( <i>V. virginensis</i> )              |     |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |     | unidentified lady ( <i>Vanessa</i> sp.)                         |     |
| marine blue ( <i>Leptotes marina</i> )                       | 3   | <b>Swallowtails</b>                                             |     |
| unidentified blue                                            |     | pale swallowtail ( <i>Papilio eurymedon</i> )                   |     |
| <b>Whites</b>                                                |     | western tiger swallowtail ( <i>P. rutulus</i> )                 | 1   |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | 33  | anise swallowtail ( <i>P. zelicaon</i> )                        |     |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |     | <b>Miscellaneous</b>                                            |     |
| common California ringlet ( <i>Coenonympha californica</i> ) |     | monarch ( <i>Danaus plexippus</i> )                             |     |
| cabbage white ( <i>Pieris rapae</i> )                        |     | common buckeye ( <i>Junonia coenia grisea</i> )                 | 3   |
| checkered (common) white ( <i>Pontia protodice</i> )         | 2   | mourning cloak ( <i>Nymphalis antiopa</i> )                     |     |
| spring white ( <i>P. sisymbrii</i> )                         |     | <b>Skippers</b>                                                 |     |
| unidentified white                                           |     | funereal duskywing ( <i>Erynnis funeralis</i> )                 | 4   |
| <b>Metalmarks</b>                                            |     | mournful duskywing ( <i>Erynnis tristis</i> )                   |     |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | 72  | fiery skipper ( <i>Hylephila phyleus</i> )                      |     |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |     | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    |     |
| <b>Sulphurs</b>                                              |     | <b>Other</b>                                                    |     |
| orange sulphur ( <i>Colias eurytheme</i> )                   | 5   |                                                                 |     |
| sleepy orange ( <i>Eurema nicippe</i> )                      |     |                                                                 |     |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |     |                                                                 |     |
| unidentified sulphur                                         |     |                                                                 |     |
| Column Subtotal                                              | 121 | Column Subtotal                                                 | 811 |
|                                                              |     | TOTAL                                                           | 132 |



# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor: Brenna Ogg (TE 134338-2) Date: 27 Feb 2016  
 Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch - Poly S Site Visit No: 1  
 Acres Surveyed 47 Survey Time: 5 hr 20 min Acres per Hour: 8.8  
 Other Surveyors Present: —

| Field Conditions |              |                  |                     |             |
|------------------|--------------|------------------|---------------------|-------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph)    | Cloud Cover |
| Start            | 0755         | 61 @ ground      | 0-2                 | 0           |
| End              | 1315         | 81 @ ground      | 2-6, occ. gust to 8 | 0           |
| Start            |              |                  |                     |             |
| End              |              |                  |                     |             |

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

coastal sage scrub (Eriogon, Bahlac, Artzal)  
chaparral (Adepar, Cestom)

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

+ Diccup  
Bahlac

| Butterfly Species                                            | No.       | Butterfly Species                                               | No.       |
|--------------------------------------------------------------|-----------|-----------------------------------------------------------------|-----------|
| <b>Checkerspots</b>                                          |           | <b>Hairstreaks</b>                                              |           |
| California patch ( <i>Chlosyne californica</i> )             |           | great purple hairstreak ( <i>Atides halesus corcorani</i> )     |           |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      |           | brown elfin ( <i>Callophrys augustinus</i> )                    |           |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |           | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |           |
| chalcid checkerspot ( <i>E. chalcidona chalcidona</i> )      |           | gray hairstreak ( <i>Strymon melinus pudica</i> )               |           |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |           | <b>Ladies/Admirals</b>                                          |           |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |           | California sister ( <i>Adelpha bredowii californica</i> )       |           |
| <b>Blues</b>                                                 |           | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |           |
| western pygmy-blue ( <i>Brephidium exila</i> ) in poly R     | 1         | west coast lady ( <i>Vanessa annabella</i> )                    |           |
| western tailed blue ( <i>Everes amyntula</i> )               |           | red admiral ( <i>V. atalanta rubria</i> )                       |           |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     |           | painted lady ( <i>V. cardui</i> )                               | 2         |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |           | American (Virginia) lady ( <i>V. virginensis</i> )              | 3         |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |           | unidentified lady ( <i>Vanessa</i> sp.)                         | 3         |
| marine blue ( <i>Leptotes marina</i> )                       | 1         | <b>Swallowtails</b>                                             |           |
| unidentified blue                                            | 3         | pale swallowtail ( <i>Papilio eurymedon</i> )                   | 1         |
| <b>Whites</b>                                                |           | western tiger swallowtail ( <i>P. rutulus</i> )                 |           |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | 38        | anise swallowtail ( <i>P. zelicaon</i> )                        |           |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |           | <b>Miscellaneous</b>                                            |           |
| common California ringlet ( <i>Coenonympha californica</i> ) | 2         | monarch ( <i>Danaus plexippus</i> )                             |           |
| cabbage white ( <i>Pieris rapae</i> )                        |           | common buckeye ( <i>Junonia coenia grisea</i> )                 |           |
| checkered (common) white ( <i>Pontia protodice</i> )         |           | mourning cloak ( <i>Nymphalis antiopa</i> )                     |           |
| spring white ( <i>P. sisymbrii</i> )                         |           | <b>Skippers</b>                                                 |           |
| unidentified white                                           |           | funereal duskywing ( <i>Erynnis funeralis</i> )                 | 1         |
| <b>Metalmarks</b>                                            |           | mournful duskywing ( <i>Erynnis tristis</i> )                   |           |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | 22        | fiery skipper ( <i>Hylephila phyleus</i> )                      |           |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |           | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    | 3         |
| <b>Sulphurs</b>                                              |           | <b>Other</b>                                                    |           |
| orange sulphur ( <i>Colias eurytheme</i> )                   | 3         | dainty sulphur (in poly R)                                      | 1         |
| sleepy orange ( <i>Eurema nicippe</i> )                      |           | <i>Erynnis</i> sp.                                              | 2         |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |           |                                                                 |           |
| unidentified sulphur                                         | 4         |                                                                 |           |
| <b>Column Subtotal</b>                                       | <b>74</b> | <b>Column Subtotal</b>                                          | <b>16</b> |
|                                                              |           | <b>Total</b>                                                    | <b>90</b> |



# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor: JOHN DICUS, MELANIE DICUS Date: 02-27-2016  
 Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch K & L Site Visit No: 1  
 Acres Surveyed 108 Survey Time: 7 Hours Acres per Hour: 7.7 EACH  
 Other Surveyors Present: \_\_\_\_\_

| Field Conditions |              |                  |                  |             |
|------------------|--------------|------------------|------------------|-------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
| Start            | 0830         | 64               | Ø                | Ø           |
| End              | 1530         | 77               | 3                | Ø           |
| Start            |              |                  |                  |             |
| End              |              |                  |                  |             |

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

DCSS = *ARTEMISIA CALIFORNICA*, *ERODIUM* spp., *ERIOGONUM FASCICULATUM*, *MALOSMA LAURINA*  
 NNB = *BROMUS DIANDRUS*, *AVENA* spp., *HOEDEUM MARITIMUM* + *MURINUM*, *ERODIUM* spp.

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

| Butterfly Species                                            | No. | Butterfly Species                                               | No. |
|--------------------------------------------------------------|-----|-----------------------------------------------------------------|-----|
| <b>Checkerspots</b>                                          |     | <b>Hairstreaks</b>                                              |     |
| California patch ( <i>Chlosyne californica</i> )             |     | great purple hairstreak ( <i>Atlides halesus corcorani</i> )    |     |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      |     | brown elfin ( <i>Callophrys augustinus</i> )                    |     |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |     | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |     |
| chalcedon checkerspot ( <i>E. chalcedona chalcedona</i> )    |     | gray hairstreak ( <i>Strymon melinus pudica</i> )               |     |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |     | <b>Ladies/Admirals</b>                                          |     |
| Myiitta crescent ( <i>Phyciodes myiitta</i> )                |     | California sister ( <i>Adelpha bredowii californica</i> )       |     |
| <b>Blues</b>                                                 |     | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |     |
| western pygmy-blue ( <i>Brephidium exila</i> )               |     | west coast lady ( <i>Vanessa annabella</i> )                    |     |
| western tailed blue ( <i>Everes amyntula</i> )               |     | red admiral ( <i>V. atalanta rubria</i> )                       | 4   |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     |     | painted lady ( <i>V. cardui</i> )                               | 10  |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |     | American (Virginia) lady ( <i>V. virginensis</i> )              | 1   |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   | 3   | unidentified lady ( <i>Vanessa</i> sp.)                         |     |
| marine blue ( <i>Leptotes marina</i> )                       |     | <b>Swallowtails</b>                                             |     |
| unidentified blue                                            |     | pale swallowtail ( <i>Papilio eurymedon</i> )                   | 1   |
| <b>Whites</b>                                                |     | western tiger swallowtail ( <i>P. rutulus</i> )                 | 1   |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | 31  | anise swallowtail ( <i>P. zelicaon</i> )                        |     |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |     | <b>Miscellaneous</b>                                            |     |
| common California ringlet ( <i>Coenonympha californica</i> ) | 1   | monarch ( <i>Danaus plexippus</i> )                             |     |
| cabbage white ( <i>Pieris rapae</i> )                        | 5   | common buckeye ( <i>Junonia coenia grisea</i> )                 | 2   |
| checkered (common) white ( <i>Pontia protodice</i> )         | 4   | mourning cloak ( <i>Nymphalis antiopa</i> )                     |     |
| spring white ( <i>P. sisymbrii</i> )                         |     | <b>Skippers</b>                                                 |     |
| unidentified white                                           |     | funereal duskywing ( <i>Erynnis funeralis</i> )                 | 3   |
| <b>Metalmarks</b>                                            |     | mournful duskywing ( <i>Erynnis tristis</i> )                   |     |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | 12  | fiery skipper ( <i>Hylephila phyleus</i> )                      |     |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |     | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    | 9   |
| <b>Sulphurs</b>                                              |     | <b>Other</b>                                                    |     |
| orange sulphur ( <i>Colias eurytheme</i> )                   | 9   | <i>COLIAS HALFORDII</i>                                         | 1   |
| sleepy orange ( <i>Eurema nicippe</i> )                      |     | <i>HELIOPETES ERICETORUM</i>                                    | 1   |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |     |                                                                 |     |
| unidentified sulphur                                         |     |                                                                 |     |
| Column Subtotal                                              | 65  | Column Subtotal                                                 | 33  |
|                                                              |     | Total                                                           | 98  |



# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor: JOHN DICUS, MELANIE DICUS Date: 02-28-2016  
 Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch Site Visit No: 1  
 Acres Surveyed: 93 Survey Time: 7 HRS, 40 MIN Acres per Hour: 6.06 / EACH BIO  
 Other Surveyors Present: \_\_\_\_\_

| Field Conditions |              |                  |                  |             |
|------------------|--------------|------------------|------------------|-------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
| Start            | 0810         | 61               | 0                | 5%          |
| End              | 1550         | 72               | 2.6              | 10%         |
| Start            |              |                  |                  |             |
| End              |              |                  |                  |             |

Vegetation Communities Surveyed (inc. dominant spp.) CHAMISE CHAP: APOCYNACEAE FASCICULUM, ERIGONUM  
DESS: ARTEMISIA CA, ERIGONUM FASCICULUM, MIMOSA LUCIDA, CALORICALUM S.P. BROMUS SPP.  
NB/FEDERAL: BROMUS MADRITENSIS, B. DIANDRUS, ERIGONUM GORDONII, SPARGANGLARUM; NEEDLEGRASS GRASSLAND:  
SPARGANGLARUM, BROMUS SPP.

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

| Butterfly Species                                            | No. | Butterfly Species                                               | No. |
|--------------------------------------------------------------|-----|-----------------------------------------------------------------|-----|
| <b>Checkerspots</b>                                          |     | <b>Hairstreaks</b>                                              |     |
| California patch ( <i>Chlosyne californica</i> )             |     | great purple hairstreak ( <i>Atides halesus corcorani</i> )     |     |
| Gabb's checkerspot ( <i>C. gabbi</i> )                       |     | brown elfin ( <i>Callophrys augustinus</i> )                    | 1   |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |     | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) | 6   |
| chalcedon checkerspot ( <i>E. chalcedona chalcedona</i> )    |     | gray hairstreak ( <i>Strymon melinus pudica</i> )               | 1   |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |     | <b>Ladies/Admirals</b>                                          |     |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |     | California sister ( <i>Adelpha bredowii californica</i> )       |     |
| <b>Blues</b>                                                 |     | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |     |
| western pygmy-blue ( <i>Brephidium exila</i> )               |     | west coast lady ( <i>Vanessa annabella</i> )                    | 1   |
| western tailed blue ( <i>Everes amyntula</i> )               |     | red admiral ( <i>V. atalanta rubria</i> )                       | 1   |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     | 9   | painted lady ( <i>V. cardui</i> )                               | 6   |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |     | American (Virginia) lady ( <i>V. virginensis</i> )              | 2   |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   | 7   | unidentified lady ( <i>Vanessa</i> sp.)                         |     |
| marine blue ( <i>Leptotes marina</i> )                       | 1   | <b>Swallowtails</b>                                             |     |
| unidentified blue                                            |     | pale swallowtail ( <i>Papilio eurymedon</i> )                   |     |
| <b>Whites</b>                                                |     | western tiger swallowtail ( <i>P. rutulus</i> )                 |     |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | 47  | anise swallowtail ( <i>P. zelicaon</i> )                        |     |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |     | <b>Miscellaneous</b>                                            |     |
| common California ringlet ( <i>Coenonympha californica</i> ) | 4   | monarch ( <i>Danaus plexippus</i> )                             |     |
| cabbage white ( <i>Pieris rapae</i> )                        | 1   | common buckeye ( <i>Junonia coenia grisea</i> )                 | 4   |
| checkered (common) white ( <i>Pontia protodice</i> )         |     | mourning cloak ( <i>Nymphalis antiopa</i> )                     |     |
| spring white ( <i>P. sisymbrii</i> )                         |     | <b>Skippers</b>                                                 |     |
| unidentified white                                           |     | funereal duskywing ( <i>Erynnis funeralis</i> )                 | 6   |
| <b>Metalmarks</b>                                            |     | mournful duskywing ( <i>Erynnis tristis</i> )                   |     |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | 42  | fiery skipper ( <i>Hylephila phyleus</i> )                      |     |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |     | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    | 2   |
| <b>Sulphurs</b>                                              |     | <b>Other</b>                                                    |     |
| orange sulphur ( <i>Colias eurytheme</i> )                   | 19  | <i>COLIAS HARFORDII</i>                                         | 5   |
| sleepy orange ( <i>Eurema nicippe</i> )                      |     | <i>HELOPERES ERICETORUM</i>                                     | 1   |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |     |                                                                 |     |
| unidentified sulphur                                         |     |                                                                 |     |
| Column Subtotal                                              | 121 | Column Subtotal                                                 | 36  |
|                                                              |     | Total                                                           | 157 |



# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor: C Dickson Date: 2/26/16  
 Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch PT Site Visit No: 1  
 Acres Surveyed 57 Survey Time: 6 hrs Acres per Hour: 9.5  
 Other Surveyors Present: N/A

| Field Conditions |              |                  |                  |             |
|------------------|--------------|------------------|------------------|-------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
| Start            | 0900         | 69               | 2.6              | 0%          |
| End              | 1500         | 75               | 1.2              | 20%         |
| Start            |              |                  |                  |             |
| End              |              |                  |                  |             |

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

CSS / Chamise / NNG

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

| Butterfly Species                                            | No. | Butterfly Species                                               | No. |
|--------------------------------------------------------------|-----|-----------------------------------------------------------------|-----|
| <b>Checkerspots</b>                                          |     | <b>Hairstreaks</b>                                              |     |
| California patch ( <i>Chlosyne californica</i> )             |     | great purple hairstreak ( <i>Atlides halesus corcorani</i> )    |     |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      |     | brown elfin ( <i>Callophrys augustinus</i> )                    |     |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |     | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |     |
| chalcidon checkerspot ( <i>E. chalcidona chalcidona</i> )    |     | gray hairstreak ( <i>Strymon melinus pudica</i> )               | 1   |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |     | <b>Ladies/Admirals</b>                                          |     |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |     | California sister ( <i>Adelpha bredowii californica</i> )       |     |
| <b>Blues</b>                                                 |     | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |     |
| western pygmy-blue ( <i>Brephidium exila</i> )               |     | west coast lady ( <i>Vanessa annabella</i> )                    |     |
| western tailed blue ( <i>Everes amyntula</i> )               |     | red admiral ( <i>V. atalanta rubria</i> )                       |     |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     |     | painted lady ( <i>V. cardui</i> )                               | 4   |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |     | American (Virginia) lady ( <i>V. virginensis</i> )              |     |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |     | unidentified lady ( <i>Vanessa</i> sp.)                         |     |
| marine blue ( <i>Leptotes marina</i> )                       |     | <b>Swallowtails</b>                                             |     |
| unidentified blue                                            | 3   | pale swallowtail ( <i>Papilio eurymedon</i> )                   |     |
| <b>Whites</b>                                                |     | western tiger swallowtail ( <i>P. rutulus</i> )                 |     |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | 30  | anise swallowtail ( <i>P. zelicaon</i> )                        |     |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |     | <b>Miscellaneous</b>                                            |     |
| common California ringlet ( <i>Coenonympha californica</i> ) | 12  | monarch ( <i>Danaus plexippus</i> )                             |     |
| cabbage white ( <i>Pieris rapae</i> )                        |     | common buckeye ( <i>Junonia coenia grisea</i> )                 |     |
| checkered (common) white ( <i>Pontia protodice</i> )         | 1   | mourning cloak ( <i>Nymphalis antiopa</i> )                     |     |
| spring white ( <i>P. sisymbrii</i> )                         |     | <b>Skippers</b>                                                 |     |
| unidentified white                                           |     | funereal duskywing ( <i>Erynnis funeralis</i> )                 | 2   |
| <b>Metalmarks</b>                                            |     | mournful duskywing ( <i>Erynnis tristis</i> )                   |     |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | 20  | fiery skipper ( <i>Hylephila phyleus</i> )                      |     |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |     | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    | 1   |
| <b>Sulphurs</b>                                              |     | <b>Other</b>                                                    |     |
| orange sulphur ( <i>Colias eurytheme</i> )                   | 10  |                                                                 |     |
| sleepy orange ( <i>Eurema nicippe</i> )                      |     |                                                                 |     |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |     |                                                                 |     |
| unidentified sulphur                                         |     |                                                                 |     |
| Column Subtotal                                              | 76  | Column Subtotal                                                 | 8   |
|                                                              |     | Total                                                           | 84  |



# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor: Gretchen Cummings Date: 2/26/16  
 Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch (Area U) Site Visit No: 1  
 Acres Surveyed: 48 Survey Time: 5 hrs Acres per Hour: 9.6 acres/hr  
 Other Surveyors Present: None

| Field Conditions |              |                  |                  |             |
|------------------|--------------|------------------|------------------|-------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
| Start            | 0930         | 77.9             | <1.3             | Clear       |
| End              | 1430         | 79.1             | 2.8-6.1          | 30%         |
| Start            |              |                  |                  |             |
| End              |              |                  |                  |             |

Vegetation Communities Surveyed (inc. dominant spp.)

Chaparral (Chamise)

| Host Plants                                       | None | Obs. | Nectar Plants                                                    | Obs.              |
|---------------------------------------------------|------|------|------------------------------------------------------------------|-------------------|
| dwarf plantain ( <i>Plantago erecta</i> )         |      |      | popcorn flower ( <i>Cryptantha/Plagiobothrys</i> spp.)           | X                 |
| purple owl's clover ( <i>Castilleja exserta</i> ) |      |      | goldfields ( <i>Lasthenia</i> spp.)                              |                   |
| snapdragon ( <i>Antirrhinum coultarianum</i> )    |      |      | goldenstar ( <i>Muilla</i> spp.)                                 |                   |
| birds-beak ( <i>Cordylanthus rigidus</i> )        |      |      | fiddleneck ( <i>Amsinckia menziesii</i> var. <i>intermedia</i> ) |                   |
| woolly plantain ( <i>Plantago patagonica</i> )    |      |      | onion ( <i>Allium</i> spp.)                                      | X                 |
| Chinese houses ( <i>Collinsia</i> spp.)           |      |      | buckwheat ( <i>Eriogonum fasciculatum</i> )                      | X                 |
|                                                   |      |      | ground pink ( <i>Linanthus dianthiflorus</i> )                   |                   |
| Host Plant Mapping Updated (circle)               | Yes  | No   | New Area or Existing Area (circle)                               | New Existing Both |
| Species updated (list)                            |      |      |                                                                  |                   |

| Butterfly Species                                            | No. | Butterfly Species                                               | No. |
|--------------------------------------------------------------|-----|-----------------------------------------------------------------|-----|
| <b>Checkerspots</b>                                          |     | <b>Hairstreaks</b>                                              |     |
| California patch ( <i>Chlosyne californica</i> )             |     | great purple hairstreak ( <i>Atlides halesus corcorani</i> )    |     |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      |     | brown elfin ( <i>Callophrys augustinus</i> )                    |     |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |     | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |     |
| chalcedon checkerspot ( <i>E. chalcedona chalcedona</i> )    |     | gray hairstreak ( <i>Strymon melinus pudica</i> )               |     |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |     | <b>Ladies/Admirals</b>                                          |     |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |     | California sister ( <i>Adelpha bredowii californica</i> )       |     |
| <b>Blues</b>                                                 |     | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |     |
| western pygmy-blue ( <i>Brephidium exila</i> )               |     | west coast lady ( <i>Vanessa annabella</i> )                    |     |
| western tailed blue ( <i>Everes amyntula</i> )               |     | red admiral ( <i>V. atalanta rubria</i> )                       |     |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     | 3   | painted lady ( <i>V. cardui</i> )                               | 2   |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             | 1   | American (Virginia) lady ( <i>V. virginensis</i> )              |     |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   | 1   | unidentified lady ( <i>Vanessa</i> sp.)                         |     |
| marine blue ( <i>Leptotes marina</i> )                       |     | <b>Swallowtails</b>                                             |     |
| unidentified blue                                            |     | pale swallowtail ( <i>Papilio eurymedon</i> )                   |     |
| <b>Whites</b>                                                |     | western tiger swallowtail ( <i>P. rutulus</i> )                 |     |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | 10  | anise swallowtail ( <i>P. zelicaon</i> )                        |     |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |     | <b>Miscellaneous</b>                                            |     |
| common California ringlet ( <i>Coenonympha californica</i> ) |     | monarch ( <i>Danaus plexippus</i> )                             |     |
| cabbage white ( <i>Pieris rapae</i> )                        |     | common buckeye ( <i>Junonia coenia grisea</i> )                 |     |
| checkered (common) white ( <i>Pontia protodice</i> )         |     | mourning cloak ( <i>Nymphalis antiopa</i> )                     |     |
| spring white ( <i>P. sisymbrii</i> )                         |     | <b>Skippers</b>                                                 |     |
| unidentified white                                           | 3   | funereal duskywing ( <i>Erynnis funeralis</i> )                 |     |
| <b>Metalmarks</b>                                            |     | mournful duskywing ( <i>Erynnis tristis</i> )                   |     |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | 4   | fiery skipper ( <i>Hylephila phyleus</i> )                      |     |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |     | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    | 1   |
| <b>Sulphurs</b>                                              |     | <b>Other</b>                                                    |     |
| orange sulphur ( <i>Colias eurytheme</i> )                   |     |                                                                 |     |
| sleepy orange ( <i>Eurema nicippe</i> )                      |     |                                                                 |     |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |     |                                                                 |     |
| unidentified sulphur                                         |     |                                                                 |     |
| Column Subtotal                                              |     | Column Subtotal                                                 |     |
|                                                              |     | Total                                                           |     |
|                                                              |     | 31                                                              |     |

(8 species)



ERI FAS

HER INC

ERO CIC

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SOL PAR

DIC CAP

SAL MUN

Commissaria sp.

MIR LAE

DOD

LOT STR

BAH CAN

CLA CON

MAL DENS

MIM AUR

ANT NUT

NUT TEX

SN OLE

Leanthus sp.

SIS IRI

ESC CAL

ALL PRA

HEL SCO

## 2016 Quino Checkerspot Butterfly Survey Form

Surveyor

Alicia Hill

Date:

2/24/16

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

Site Visit No:

1

Acres Surveyed

44

Survey Time:

3.3

Acres per Hour:

6.7

Other Surveyors Present:

Trans Cooper

## Field Conditions

|       | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
|-------|--------------|------------------|------------------|-------------|
| Start | 845          | 70               | 1-5              | 0%          |
| End   | 1205         | 88               | 0-1              | 0%          |
| Start |              |                  |                  |             |
| End   |              |                  |                  |             |

Vegetation Communities Surveyed (inc. dominant spp.)

Chamise chaparral (ADE FAS, ERI FAS), non-native

grassland (Peromyscus, arena, ERI FAS)

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

| Butterfly Species                                            | No. | Butterfly Species                                               | No. |
|--------------------------------------------------------------|-----|-----------------------------------------------------------------|-----|
| <b>Checkerspots</b>                                          |     | <b>Hairstreaks</b>                                              |     |
| California patch ( <i>Chlosyne californica</i> )             |     | great purple hairstreak ( <i>Atlides halesus corcorani</i> )    |     |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      |     | brown elfin ( <i>Callophrys augustinus</i> )                    |     |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |     | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |     |
| chalcid checkerspot ( <i>E. chalcidona chalcidona</i> )      |     | gray hairstreak ( <i>Strymon melinus pudica</i> )               |     |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |     | <b>Ladies/Admirals</b>                                          |     |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |     | California sister ( <i>Adelpha bredowii californica</i> )       |     |
| <b>Blues</b>                                                 |     | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |     |
| western pygmy-blue ( <i>Brephidium exila</i> )               |     | west coast lady ( <i>Vanessa annabella</i> )                    |     |
| western tailed blue ( <i>Everes amyntula</i> )               |     | red admiral ( <i>V. atalanta rubria</i> )                       | 2   |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     |     | painted lady ( <i>V. cardui</i> )                               |     |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |     | American (Virginia) lady ( <i>V. virginensis</i> )              |     |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |     | unidentified lady ( <i>Vanessa</i> sp.)                         | 4   |
| marine blue ( <i>Leptotes marina</i> )                       |     | <b>Swallowtails</b>                                             |     |
| unidentified blue                                            | 10  | pale swallowtail ( <i>Papilio eurymedon</i> )                   |     |
| <b>Whites</b>                                                |     | western tiger swallowtail ( <i>P. rutulus</i> )                 |     |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | 64  | anise swallowtail ( <i>P. zelicaon</i> )                        | 1   |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |     | <b>Miscellaneous</b>                                            |     |
| common California ringlet ( <i>Coenonympha californica</i> ) | 10  | monarch ( <i>Danaus plexippus</i> )                             |     |
| cabbage white ( <i>Pieris rapae</i> )                        |     | common buckeye ( <i>Junonia coenia grisea</i> )                 | 4   |
| checkered (common) white ( <i>Pontia protodice</i> )         |     | mourning cloak ( <i>Nymphalis antiopa</i> )                     |     |
| spring white ( <i>P. sisymbrii</i> )                         |     | <b>Skippers</b>                                                 |     |
| unidentified white                                           | 4   | funereal duskywing ( <i>Erynnis funeralis</i> )                 | 4   |
| <b>Metalmarks</b>                                            |     | mournful duskywing ( <i>Erynnis tristis</i> )                   |     |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | 18  | fiery skipper ( <i>Hylephila phyleus</i> )                      |     |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |     | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    | 2   |
| <b>Sulphurs</b>                                              |     | <b>Other</b>                                                    |     |
| orange sulphur ( <i>Colias eurytheme</i> )                   | 2   | Hartford Sulphur                                                | 3   |
| sleepy orange ( <i>Eurema nicippe</i> )                      |     | Dainty Sulphur                                                  | 2   |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |     |                                                                 |     |
| unidentified sulphur                                         |     |                                                                 |     |
| Column Subtotal                                              | 108 | Column Subtotal                                                 | 22  |
|                                                              |     | Total                                                           | 130 |



# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor: C Dickson Date: 2/27/16  
 Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch Site Visit No: 1  
 Acres Surveyed: 54 Survey Time: 6 Acres per Hour: 9  
 Other Surveyors Present: n/a

| Field Conditions |              |                  |                  |             |
|------------------|--------------|------------------|------------------|-------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
| Start            | 0800         | 62.1             | 0.6              | 090         |
| End              | 1400         | 86.1             | 2.1              | 090         |
| Start            |              |                  |                  |             |
| End              |              |                  |                  |             |

| Vegetation Communities Surveyed (inc. dominant spp.) |  |
|------------------------------------------------------|--|
| <u>Chamise ch/ung</u>                                |  |
|                                                      |  |

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

| Butterfly Species                                            | No. | Butterfly Species                                               | No. |
|--------------------------------------------------------------|-----|-----------------------------------------------------------------|-----|
| <b>Checkerspots</b>                                          |     | <b>Hairstreaks</b>                                              |     |
| California patch ( <i>Chlosyne californica</i> )             |     | great purple hairstreak ( <i>Atlides halesus corcorani</i> )    |     |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      |     | brown elfin ( <i>Callophrys augustinus</i> )                    |     |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |     | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |     |
| chalcidon checkerspot ( <i>E. chalcidona chalcidona</i> )    |     | gray hairstreak ( <i>Strymon melinus pudica</i> )               |     |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |     | <b>Ladies/Admirals</b>                                          |     |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |     | California sister ( <i>Adelpha bredowii californica</i> )       |     |
| <b>Blues</b>                                                 |     | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |     |
| western pygmy-blue ( <i>Brephidium exila</i> )               |     | west coast lady ( <i>Vanessa annabella</i> )                    |     |
| western tailed blue ( <i>Everes amyntula</i> )               |     | red admiral ( <i>V. atalanta rubria</i> )                       |     |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     |     | painted lady ( <i>V. cardui</i> )                               | 1   |
| Edward's blue ( <i>Hemiarctus ceraunus gyas</i> )            |     | American (Virginia) lady ( <i>V. virginensis</i> )              |     |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |     | unidentified lady ( <i>Vanessa</i> sp.)                         |     |
| marine blue ( <i>Leptotes marina</i> )                       |     | <b>Swallowtails</b>                                             |     |
| unidentified blue                                            | 1   | pale swallowtail ( <i>Papilio eurymedon</i> )                   | 1   |
| <b>Whites</b>                                                |     | western tiger swallowtail ( <i>P. rutulus</i> )                 |     |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | 15  | anise swallowtail ( <i>P. zelicaon</i> )                        |     |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |     | <b>Miscellaneous</b>                                            |     |
| common California ringlet ( <i>Coenonympha californica</i> ) | 2   | monarch ( <i>Danaus plexippus</i> )                             |     |
| cabbage white ( <i>Pieris rapae</i> )                        | 1   | common buckeye ( <i>Junonia coenia grisea</i> )                 |     |
| checkered (common) white ( <i>Pontia protodice</i> )         | 2   | mourning cloak ( <i>Nymphalis antiopa</i> )                     |     |
| spring white ( <i>P. sisymbrii</i> )                         |     | <b>Skippers</b>                                                 |     |
| unidentified white                                           |     | funereal duskywing ( <i>Erynnis funeralis</i> )                 | 1   |
| <b>Metalmarks</b>                                            |     | mournful duskywing ( <i>Erynnis tristis</i> )                   |     |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | 3   | fiery skipper ( <i>Hylephila phyleus</i> )                      |     |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |     | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    |     |
| <b>Sulphurs</b>                                              |     | <b>Other</b>                                                    |     |
| orange sulphur ( <i>Colias eurytheme</i> )                   | 2   |                                                                 |     |
| sleepy orange ( <i>Eurema nicippe</i> )                      |     |                                                                 |     |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |     |                                                                 |     |
| unidentified sulphur                                         |     |                                                                 |     |
| Column Subtotal                                              | 26  | Column Subtotal                                                 | 3   |
|                                                              |     | Total                                                           | 29  |



# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor: Erik LaCoste Date: 2/26/16  
 Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch Site Visit No: 1  
 Acres Surveyed: 102 Survey Time: 6:25 hrs Acres per Hour: 9.9  
 Other Surveyors Present: NONE

| Field Conditions |              |                  |                  |             |
|------------------|--------------|------------------|------------------|-------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
| Start            | 09:00        | 69               | 2.6 Ave 3.5 max  | 0           |
| End              | 3:15         | 81               | 4.3 Ave 7.0 max  | 0           |
| Start            |              |                  |                  |             |
| End              |              |                  |                  |             |

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

Chamise Chaparral, CSS, NNG, mix Chaparral

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

| Butterfly Species                                            | No. | Butterfly Species                                               | No. |
|--------------------------------------------------------------|-----|-----------------------------------------------------------------|-----|
| <b>Checkerspots</b>                                          |     | <b>Hairstreaks</b>                                              |     |
| California patch ( <i>Chlosyne californica</i> )             |     | great purple hairstreak ( <i>Atlides halesus corcorani</i> )    |     |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      |     | brown elfin ( <i>Callophrys augustinus</i> )                    |     |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |     | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |     |
| chalcid checkerspot ( <i>E. chalcidona chalcidona</i> )      |     | gray hairstreak ( <i>Strymon melinus pudica</i> )               | 1   |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |     | <b>Ladies/Admirals</b>                                          |     |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |     | California sister ( <i>Adelpha bredowii californica</i> )       |     |
| <b>Blues</b>                                                 |     | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |     |
| western pygmy-blue ( <i>Brephidium exila</i> )               |     | west coast lady ( <i>Vanessa annabella</i> )                    | 1   |
| western tailed blue ( <i>Everes amyntula</i> )               |     | red admiral ( <i>V. atalanta rubria</i> )                       |     |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     | 1   | painted lady ( <i>V. cardui</i> )                               | 3   |
| Edward's blue ( <i>Hemiarctus ceraunus gyas</i> )            |     | American (Virginia) lady ( <i>V. virginensis</i> )              |     |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |     | unidentified lady ( <i>Vanessa</i> sp.)                         |     |
| marine blue ( <i>Leptotes marina</i> )                       |     | <b>Swallowtails</b>                                             |     |
| unidentified blue                                            |     | pale swallowtail ( <i>Papilio eurymedon</i> )                   | 2   |
| <b>Whites</b>                                                |     | western tiger swallowtail ( <i>P. rutulus</i> )                 |     |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | 16  | anise swallowtail ( <i>P. zelicaon</i> )                        |     |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |     | <b>Miscellaneous</b>                                            |     |
| common California ringlet ( <i>Coenonympha californica</i> ) | 1   | monarch ( <i>Danaus plexippus</i> )                             |     |
| cabbage white ( <i>Pieris rapae</i> )                        |     | common buckeye ( <i>Junonia coenia grisea</i> )                 |     |
| checkered (common) white ( <i>Pontia protodice</i> )         | 2   | mourning cloak ( <i>Nymphalis antiopa</i> )                     |     |
| spring white ( <i>P. sisymbrii</i> )                         |     | <b>Skippers</b>                                                 |     |
| unidentified white                                           |     | funereal duskywing ( <i>Erynnis funeralis</i> )                 | 2   |
| <b>Metalmarks</b>                                            |     | mournful duskywing ( <i>Erynnis tristis</i> )                   |     |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | 16  | fiery skipper ( <i>Hylephila phyleus</i> )                      |     |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |     | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    |     |
| <b>Sulphurs</b>                                              |     | <b>Other</b>                                                    |     |
| orange sulphur ( <i>Colias eurytheme</i> )                   | 3   |                                                                 |     |
| sleepy orange ( <i>Eurema nicippe</i> )                      |     |                                                                 |     |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |     |                                                                 |     |
| unidentified sulphur                                         |     |                                                                 |     |
| Column Subtotal                                              | 39  | Column Subtotal                                                 | 9   |
|                                                              |     | Total                                                           | 48  |



## 2016 Quino Checkerspot Butterfly Survey Form

Surveyor:

Chez Brungaber

Date: 2/24/16

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

Site Visit No: 1

Acres Surveyed: 58 (Area Y) Survey Time: 9:15am - 4:30pm 7.25 Acres per Hour: 8

Other Surveyors Present: none

| Field Conditions |              |                  |                  |             |
|------------------|--------------|------------------|------------------|-------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
| Start            | 0915         | 70.1             | 0-3, gust 7mph   | 0           |
| End              | 1630         | 86.6             | 0-3              | 0           |
| Start            |              |                  |                  |             |
| End              |              |                  |                  |             |

Vegetation Communities Surveyed (inc. dominant spp.)

Annual grassland, buckwheat scrub, Venegasia scrub, Oenothera chaparral

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

| Butterfly Species                                            | No. | Butterfly Species                                               | No. |
|--------------------------------------------------------------|-----|-----------------------------------------------------------------|-----|
| <b>Checkerspots</b>                                          |     | <b>Hairstreaks</b>                                              |     |
| California patch ( <i>Chlosyne californica</i> )             |     | great purple hairstreak ( <i>Atides halesus corcorani</i> )     |     |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      | 1   | brown elfin ( <i>Callophrys augustinus</i> )                    |     |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |     | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |     |
| chalcedon checkerspot ( <i>E. chalcedona chalcedona</i> )    |     | gray hairstreak ( <i>Strymon melinus pudica</i> )               |     |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |     | <b>Ladies/Admirals</b>                                          |     |
| Myliatta crescent ( <i>Phyciodes myliatta</i> )              |     | California sister ( <i>Adelpha bredowii californica</i> )       |     |
| <b>Blues</b>                                                 |     | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |     |
| western pygmy-blue ( <i>Brephidium exila</i> )               |     | west coast lady ( <i>Vanessa annabella</i> )                    |     |
| western tailed blue ( <i>Everes amyntula</i> )               |     | red admiral ( <i>V. atalanta rubria</i> )                       |     |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     | 11  | painted lady ( <i>V. cardui</i> )                               | 111 |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |     | American (Virginia) lady ( <i>V. virginensis</i> )              |     |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |     | unidentified lady ( <i>Vanessa</i> sp.)                         | 1   |
| marine blue ( <i>Leptotes marina</i> )                       |     | <b>Swallowtails</b>                                             |     |
| unidentified blue                                            | 111 | pale swallowtail ( <i>Papilio eurymedon</i> )                   | 1   |
| <b>Whites</b>                                                |     | western tiger swallowtail ( <i>P. rutulus</i> )                 |     |
| Sara orangetip ( <i>Anthocharis sara sara</i> ) + 16         | 111 | anise swallowtail ( <i>P. zelicaon</i> )                        | 1   |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            | 11  | <b>Miscellaneous</b>                                            |     |
| common California ringlet ( <i>Coenonympha californica</i> ) | 111 | monarch ( <i>Danaus plexippus</i> )                             |     |
| cabbage white ( <i>Pieris rapae</i> )                        |     | common buckeye ( <i>Junonia coenia grisea</i> )                 |     |
| checkered (common) white ( <i>Pontia protodice</i> )         |     | mourning cloak ( <i>Nymphalis antiopa</i> )                     |     |
| spring white ( <i>P. sisymbrii</i> )                         | 11  | <b>Skippers</b>                                                 |     |
| unidentified white                                           | 111 | funereal duskywing ( <i>Erynnis funeralis</i> )                 | 111 |
| <b>Metalmarks</b>                                            |     | mournful duskywing ( <i>Erynnis tristis</i> )                   |     |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | 111 | fiery skipper ( <i>Hylephila phyleus</i> )                      |     |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |     | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    |     |
| <b>Sulphurs</b>                                              |     | <b>Other</b>                                                    |     |
| orange sulphur ( <i>Colias eurytheme</i> )                   |     |                                                                 |     |
| sleepy orange ( <i>Eurema nicippe</i> )                      |     |                                                                 |     |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |     |                                                                 |     |
| unidentified sulphur                                         | 1   |                                                                 |     |
| Column Subtotal                                              | 90  | Column Subtotal                                                 | 14  |
|                                                              |     | Total                                                           | 104 |



Surveyor

## 2016 Quino Checkerspot Butterfly Survey Form

Site Name: Chez Brumgraber  
JPD-08 Proctor Valley - Village 14 of Otay RanchDate: 2/25/1653 → Acres Surveyed 2, east of roadSite Visit No: 1Other Surveyors Present: / Survey Time: 8 hrsAcres per Hour: 6.625

|       |              | Field Conditions |                  |             |
|-------|--------------|------------------|------------------|-------------|
|       | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
| Start | 0820         | 69.1             | 0-3              | 0           |
| End   | 1615         | 80.6             | 3-5              | 0           |
| Start |              |                  |                  |             |
| End   |              |                  |                  |             |

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

Chamise chap, annual grassland (*Solanum* sp., *Allium* sp., *Lathyrus* sp.), *Malosma* - *Rhus* open sandy  
 Buckwheat scrub, ~~sagebrush~~

| Host Plants                                                                          | Obs. | Nectar Plants                                                    | Obs.                                                 |
|--------------------------------------------------------------------------------------|------|------------------------------------------------------------------|------------------------------------------------------|
| dwarf plantain ( <i>Plantago erecta</i> )                                            | flwr | popcorn flower ( <i>Cryptantha/Plagiobothrys</i> spp.)           | flwr                                                 |
| purple owl's clover ( <i>Castilleja exserta</i> )                                    |      | goldfields ( <i>Lasthenia</i> spp.)                              |                                                      |
| snapdragon ( <i>Antirrhinum coulterianum</i> )                                       | flwr | goldenstar ( <i>Muilla</i> spp.)                                 |                                                      |
| birds-beak ( <i>Cordylanthus rigidus</i> )                                           |      | fiddleneck ( <i>Amsinckia menziesii</i> var. <i>intermedia</i> ) |                                                      |
| woolly plantain ( <i>Plantago patagonica</i> )                                       |      | onion ( <i>Allium</i> spp.)                                      | flwr                                                 |
| Chinese houses ( <i>Collinsia</i> spp.)                                              |      | buckwheat ( <i>Eriogonum fasciculatum</i> )                      | veg/flwr                                             |
|                                                                                      |      | ground pink ( <i>Linanthus dianthiflorus</i> )                   | flwr                                                 |
| Host Plant Mapping Updated (circle)                                                  | Yes  | No                                                               | New Area or Existing Area (circle) New Existing Both |
| Species updated (list) → I don't have data yet so I mapped what I found just in case |      |                                                                  |                                                      |

| Butterfly Species                                            | No.   | Butterfly Species                                               | No.  |
|--------------------------------------------------------------|-------|-----------------------------------------------------------------|------|
| <b>Checkerspots</b>                                          |       | <b>Hairstreaks</b>                                              |      |
| California patch ( <i>Chlosyne californica</i> )             |       | great purple hairstreak ( <i>Atides halesus corcorani</i> )     |      |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      |       | brown elfin ( <i>Callophrys augustinus</i> )                    |      |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |       | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |      |
| chalcidion checkerspot ( <i>E. chalcidion chalcidion</i> )   |       | gray hairstreak ( <i>Strymon melinus pudica</i> )               |      |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |       | <b>Ladies/Admirals</b>                                          |      |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |       | California sister ( <i>Adelpha bredowii californica</i> )       |      |
| <b>Blues</b>                                                 |       | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |      |
| western pygmy-blue ( <i>Brephidium exila</i> )               |       | west coast lady ( <i>Vanessa annabella</i> )                    | 1 1  |
| western tailed blue ( <i>Everes amyntula</i> )               |       | red admiral ( <i>V. atalanta rubria</i> )                       |      |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     | 11 3  | painted lady ( <i>V. cardui</i> )                               |      |
| Edward's blue ( <i>Hemiarctus cernaunus gyas</i> )           |       | American (Virginia) lady ( <i>V. virginensis</i> )              |      |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |       | unidentified lady ( <i>Vanessa</i> sp.)                         | 11 3 |
| marine blue ( <i>Leptotes marina</i> )                       | 11 2  | <b>Swallowtails</b>                                             |      |
| unidentified blue                                            | 16    | pale swallowtail ( <i>Papilio eurymedon</i> )                   |      |
| <b>Whites</b>                                                |       | western tiger swallowtail ( <i>P. rutulus</i> )                 |      |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | 23    | anise swallowtail ( <i>P. zelicaon</i> )                        | 1 1  |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            | 11    | <b>Miscellaneous</b>                                            |      |
| common California ringlet ( <i>Coenonympha californica</i> ) | 11    | monarch ( <i>Danaus plexippus</i> )                             |      |
| cabbage white ( <i>Pieris rapae</i> )                        |       | common buckeye ( <i>Junonia coenia grisea</i> )                 |      |
| checkered (common) white ( <i>Pontia protodice</i> )         |       | mourning cloak ( <i>Nymphalis antiopa</i> )                     |      |
| spring white ( <i>P. sisymbrii</i> )                         |       | <b>Skippers</b>                                                 |      |
| unidentified white                                           | 5     | funereal duskywing ( <i>Erynnis funeralis</i> )                 | 5    |
| <b>Metalmarks</b>                                            |       | mournful duskywing ( <i>Erynnis tristis</i> )                   | 2    |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | 11 17 | fiery skipper ( <i>Hylephila phyleus</i> )                      |      |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |       | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    | 11 2 |
| <b>Sulphurs</b>                                              |       | Other                                                           |      |
| orange sulphur ( <i>Colias eurytheme</i> )                   | 11 5  |                                                                 |      |
| sleepy orange ( <i>Eurema nicippe</i> )                      |       |                                                                 |      |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |       |                                                                 |      |
| unidentified sulphur                                         | 11 3  |                                                                 |      |
| Column Subtotal                                              | 175   | Column Subtotal                                                 | 14   |
| 145                                                          |       | Total                                                           | 159  |



## 2016 Quino Checkerspot Butterfly Survey Form

**Surveyor:** John Lovio **Date:** 3-4-16  
**Site Name:** JPD-08 Proctor Valley – Village 14 of Otay Ranch **Site Visit No:** 2  
**Area Surveyed** Polygon A **Acres Surveyed** 55 **Survey Time:** 5.5 hours **Acres per Hour:** 10  
**Other Surveyors Present:** none

| Field Conditions |              |                  |                  |                    |
|------------------|--------------|------------------|------------------|--------------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover        |
| <b>Start</b>     | 0955         | 63               | 1, west          | 80% high thin haze |
| <b>End</b>       | 1530         | 72               | 8, west          | 30% high thin haze |
| <b>Start</b>     |              |                  |                  |                    |
| <b>End</b>       |              |                  |                  |                    |

| Vegetation Communities Surveyed (inc. dominant spp.)                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Coastal sage scrub: <i>Artemisia californica</i> , <i>Eriogonum fasciculatum</i> , <i>Malosma laurina</i> , <i>Salvia apiana</i> , <i>Bahiopsis laciniata</i> . |
|                                                                                                                                                                 |

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

| Butterfly Species                                            | No.       | Butterfly Species                                               | No.       |
|--------------------------------------------------------------|-----------|-----------------------------------------------------------------|-----------|
| <b>Checkerspots</b>                                          |           | <b>Hairstreaks</b>                                              |           |
| California patch ( <i>Chlosyne californica</i> )             |           | great purple hairstreak ( <i>Atlides halesus corcorani</i> )    |           |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      | 1         | brown elfin ( <i>Callophrys augustinus</i> )                    |           |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |           | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |           |
| chalcedon checkerspot ( <i>E. chalcedona chalcedona</i> )    |           | gray hairstreak ( <i>Strymon melinus pudica</i> )               | 1         |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |           | <b>Ladies/Admirals</b>                                          |           |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |           | California sister ( <i>Adelpha bredowii californica</i> )       |           |
| <b>Blues</b>                                                 |           | Lorquin's admiral ( <i>Limnitis lorquini</i> )                  |           |
| western pygmy-blue ( <i>Brephidium exila</i> )               |           | west coast lady ( <i>Vanessa annabella</i> )                    | 3         |
| western tailed blue ( <i>Everes amyntula</i> )               |           | red admiral ( <i>V. atalanta rubria</i> )                       |           |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     |           | painted lady ( <i>V. cardui</i> )                               |           |
| Edward's blue ( <i>Hemiarctus ceraunus gys</i> )             |           | American (Virginia) lady ( <i>V. virginensis</i> )              |           |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |           | unidentified lady ( <i>Vanessa</i> sp.)                         | 1         |
| marine blue ( <i>Leptotes marina</i> )                       |           | <b>Swallowtails</b>                                             |           |
| unidentified blue                                            | 7         | pale swallowtail ( <i>Papilio eurymedon</i> )                   | 1         |
| <b>Whites</b>                                                |           | western tiger swallowtail ( <i>P. rutulus</i> )                 |           |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | 12        | anise swallowtail ( <i>P. zelicaon</i> )                        |           |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |           | <b>Miscellaneous</b>                                            |           |
| common California ringlet ( <i>Coenonympha californica</i> ) | 1         | monarch ( <i>Danaus plexippus</i> )                             |           |
| cabbage white ( <i>Pieris rapae</i> )                        |           | common buckeye ( <i>Junonia coenia grisea</i> )                 | 1         |
| checkered (common) white ( <i>Pontia protodice</i> )         |           | mourning cloak ( <i>Nymphalis antiopa</i> )                     |           |
| spring white ( <i>P. sisymbrii</i> )                         |           | <b>Skippers</b>                                                 |           |
| unidentified white                                           |           | funereal duskywing ( <i>Erynnis funeralis</i> )                 | 6         |
| <b>Metalmarks</b>                                            |           | mournful duskywing ( <i>Erynnis tristis</i> )                   |           |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | 8         | fiery skipper ( <i>Hylephila phyleus</i> )                      |           |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |           | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    | 4         |
| <b>Sulphurs</b>                                              |           | <b>Other</b>                                                    |           |
| orange sulphur ( <i>Colias eurytheme</i> )                   | 1         |                                                                 |           |
| sleepy orange ( <i>Eurema nicippe</i> )                      |           |                                                                 |           |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |           |                                                                 |           |
| unidentified sulphur                                         |           |                                                                 |           |
| <b>Column Subtotal</b>                                       | <b>30</b> | <b>Column Subtotal</b>                                          | <b>17</b> |
|                                                              |           | <b>Total</b>                                                    | <b>47</b> |



# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor

: Chez Brangor

Date: 3/3/16

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

Site Visit No: 2

Area Surveyed AA, BB Acres Surveyed 97

Survey Time: 7.75 Acres per Hour: 12.5 (6-25 ac/pp)

Other Surveyors Present: Andrew Porcher

## Field Conditions

|       | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
|-------|--------------|------------------|------------------|-------------|
| Start | <u>0815</u>  | <u>60</u>        | <u>0</u>         | <u>15%</u>  |
| End   | <u>1600</u>  | <u>70</u>        | <u>0-3</u>       | <u>90%</u>  |
| Start |              |                  |                  |             |
| End   |              |                  |                  |             |

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

Chamise chap, NNG, bunchgrassland  
(chamise, buckwheat, ~~gigartaria~~ blue dicks, Stipa sp., Malosma)

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

| Butterfly Species                                            | No.       | Butterfly Species                                               | No.        |
|--------------------------------------------------------------|-----------|-----------------------------------------------------------------|------------|
| <b>Checkerspots</b>                                          |           | <b>Hairstreaks</b>                                              |            |
| California patch ( <i>Chlosyne californica</i> )             |           | great purple hairstreak ( <i>Atides halesus corcorani</i> )     |            |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      | <u>1</u>  | brown elfin ( <i>Callophrys augustinus</i> )                    |            |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |           | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |            |
| chalcidion checkerspot ( <i>E. chalcidion chalcidion</i> )   |           | gray hairstreak ( <i>Strymon melinus pudica</i> )               | <u>1</u>   |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |           | <b>Ladies/Admirals</b>                                          |            |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |           | California sister ( <i>Adelpha bredowii californica</i> )       |            |
| <b>Blues</b>                                                 |           | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |            |
| western pygmy-blue ( <i>Brephidium exila</i> )               |           | west coast lady ( <i>Vanessa annabella</i> )                    |            |
| western tailed blue ( <i>Everes amyntula</i> )               |           | red admiral ( <i>V. atalanta rubria</i> )                       |            |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     | <u>1</u>  | painter lady ( <i>V. cardui</i> )                               | <u>1</u>   |
| Edward's blue ( <i>Hemiargus ceraunus gyes</i> )             |           | American (Virginia) lady ( <i>V. virginiensis</i> )             | <u>1</u>   |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |           | unidentified lady ( <i>Vanessa</i> sp.)                         | <u>1</u>   |
| marine blue ( <i>Leptotes marina</i> )                       | <u>1</u>  | <b>Swallowtails</b>                                             |            |
| unidentified blue                                            | <u>1</u>  | pale swallowtail ( <i>Papilio eurymedon</i> )                   | <u>1</u>   |
| <b>Whites</b>                                                |           | western tiger swallowtail ( <i>P. rutulus</i> )                 |            |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | <u>1</u>  | anise swallowtail ( <i>P. zelicaon</i> )                        | <u>1</u>   |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |           | <b>Miscellaneous</b>                                            |            |
| common California ringlet ( <i>Coenonympha californica</i> ) | <u>1</u>  | monarch ( <i>Danaus plexippus</i> )                             |            |
| cabbage white ( <i>Pieris rapae</i> )                        |           | common buckeye ( <i>Junonia coenia grisea</i> )                 | <u>1</u>   |
| checkered (common) white ( <i>Pontia protodice</i> )         |           | mourning cloak ( <i>Nymphalis antiopa</i> )                     |            |
| spring white ( <i>P. sisymbrii</i> )                         | <u>1</u>  | <b>Skippers</b>                                                 |            |
| unidentified white                                           | <u>1</u>  | funereal duskywing ( <i>Erynnis funeralis</i> )                 | <u>1</u>   |
| <b>Metalmarks</b>                                            |           | mournful duskywing ( <i>Erynnis tristis</i> )                   | <u>1</u>   |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | <u>1</u>  | fiery skipper ( <i>Hylephila phyleus</i> )                      |            |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |           | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    | <u>1</u>   |
| <b>Sulphurs</b>                                              |           | <b>Other</b>                                                    |            |
| orange sulphur ( <i>Colias eurytheme</i> )                   |           |                                                                 |            |
| sleepy orange ( <i>Eurema nicippe</i> )                      |           |                                                                 |            |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |           |                                                                 |            |
| unidentified sulphur                                         | <u>1</u>  |                                                                 |            |
| Column Subtotal                                              | <u>94</u> | Column Subtotal                                                 | <u>34</u>  |
|                                                              |           | Total                                                           | <u>128</u> |



# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor: C Dickson Date: 03/04/16  
 Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch PB Site Visit No: 02  
 Acres Surveyed 60 Survey Time: 6 hrs Acres per Hour: 10 ac  
 Other Surveyors Present: N/A

| Field Conditions |              |                  |                  |                            |
|------------------|--------------|------------------|------------------|----------------------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover                |
| Start            | <u>0940</u>  | <u>73</u>        | <u>2.9</u>       | <u>20% high &amp; thin</u> |
| End              | <u>1545</u>  | <u>68</u>        | <u>5.9</u>       | <u>50%</u>                 |
| Start            |              |                  |                  |                            |
| End              |              |                  |                  |                            |

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

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

| Butterfly Species                                            | No.       | Butterfly Species                                               | No.       |
|--------------------------------------------------------------|-----------|-----------------------------------------------------------------|-----------|
| <b>Checkerspots</b>                                          |           | <b>Hairstreaks</b>                                              |           |
| California patch ( <i>Chlosyne californica</i> )             |           | great purple hairstreak ( <i>Atlides halesus corcorani</i> )    |           |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      |           | brown elfin ( <i>Callophrys augustinus</i> )                    |           |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |           | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |           |
| chalcid checkerspot ( <i>E. chalcidona chalcidona</i> )      |           | gray hairstreak ( <i>Strymon melinus pudica</i> )               | <u>2</u>  |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |           | <b>Ladies/Admirals</b>                                          |           |
| Myliatta crescent ( <i>Phyciodes myliatta</i> )              |           | California sister ( <i>Adelpha bredowii californica</i> )       |           |
| <b>Blues</b>                                                 |           | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |           |
| western pygmy-blue ( <i>Brephidium exila</i> )               |           | west coast lady ( <i>Vanessa annabella</i> )                    |           |
| western tailed blue ( <i>Everes amyntula</i> )               |           | red admiral ( <i>V. atalanta rubria</i> )                       |           |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     | <u>2</u>  | painted lady ( <i>V. cardui</i> )                               | <u>2</u>  |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |           | American (Virginia) lady ( <i>V. virginensis</i> )              |           |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   | <u>1</u>  | unidentified lady ( <i>Vanessa</i> sp.)                         |           |
| marine blue ( <i>Leptotes marina</i> )                       |           | <b>Swallowtails</b>                                             |           |
| unidentified blue                                            | <u>2</u>  | pale swallowtail ( <i>Papilio eurymedon</i> )                   | <u>2</u>  |
| <b>Whites</b>                                                |           | western tiger swallowtail ( <i>P. rutulus</i> )                 |           |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | <u>22</u> | anise swallowtail ( <i>P. zelicaon</i> )                        | <u>1</u>  |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |           | <b>Miscellaneous</b>                                            |           |
| common California ringlet ( <i>Coenonympha californica</i> ) |           | monarch ( <i>Danaus plexippus</i> )                             |           |
| cabbage white ( <i>Pieris rapae</i> )                        | <u>1</u>  | common buckeye ( <i>Junonia coenia grisea</i> )                 |           |
| checkered (common) white ( <i>Pontia protodice</i> )         |           | mourning cloak ( <i>Nymphalis antiopa</i> )                     |           |
| spring white ( <i>P. sisymbrii</i> )                         |           | <b>Skippers</b>                                                 |           |
| unidentified white                                           |           | funereal duskywing ( <i>Erynnis funeralis</i> )                 | <u>8</u>  |
| <b>Metalmarks</b>                                            |           | mournful duskywing ( <i>Erynnis tristis</i> )                   |           |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | <u>11</u> | fiery skipper ( <i>Hylephila phyleus</i> )                      |           |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |           | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    |           |
| <b>Sulphurs</b>                                              |           | <b>Other</b>                                                    |           |
| orange sulphur ( <i>Colias eurytheme</i> )                   | <u>3</u>  |                                                                 |           |
| sleepy orange ( <i>Eurema nicippe</i> )                      |           |                                                                 |           |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |           |                                                                 |           |
| unidentified sulphur                                         |           |                                                                 |           |
| Column Subtotal                                              | <u>42</u> | Column Subtotal                                                 | <u>15</u> |
|                                                              |           | Total                                                           | <u>57</u> |



# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor: Brian Parker Date: 3-5-16  
 Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch Site Visit No: 2  
 Area Surveyed C Acres Surveyed 33 Survey Time: 3.5 Acres per Hour: 9.4  
 Other Surveyors Present:                     

| Field Conditions |              |                  |                  |             |
|------------------|--------------|------------------|------------------|-------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
| Start            | <u>1125</u>  | <u>70</u>        | <u>0</u>         | <u>40%</u>  |
| End              | <u>1455</u>  | <u>68</u>        | <u>5-8</u>       | <u>70%</u>  |
| Start            |              |                  |                  |             |
| End              |              |                  |                  |             |

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

Chamae Chaparral - Ada fas, Mal law, Syl bic  
ESS - Art cal, Bah law, Mal law, Sal api, Bro mad rub, Eru bot.

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

| Butterfly Species                                            | No.       | Butterfly Species                                               | No.       |
|--------------------------------------------------------------|-----------|-----------------------------------------------------------------|-----------|
| <b>Checkerspots</b>                                          |           | <b>Hairstreaks</b>                                              |           |
| California patch ( <i>Chlosyne californica</i> )             |           | great purple hairstreak ( <i>Atides halesus corcorani</i> )     |           |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      |           | brown elfin ( <i>Callophrys augustinus</i> )                    |           |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |           | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |           |
| chalcodon checkerspot ( <i>E. chalcodona chalcodona</i> )    |           | gray hairstreak ( <i>Strymon melinus pudica</i> )               | <u>2</u>  |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |           | <b>Ladies/Admirals</b>                                          |           |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |           | California sister ( <i>Adelpha bredowii californica</i> )       |           |
| <b>Blues</b>                                                 |           | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |           |
| western pygmy-blue ( <i>Brephidium exila</i> )               |           | west coast lady ( <i>Vanessa annabella</i> )                    |           |
| western tailed blue ( <i>Everes amyntula</i> )               |           | red admiral ( <i>V. atalanta rubria</i> )                       |           |
| southern blue ( <i>Glauropsyche lygdamus australis</i> )     |           | painted lady ( <i>V. cardui</i> )                               |           |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |           | American (Virginia) lady ( <i>V. virginensis</i> )              | <u>4</u>  |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |           | unidentified lady ( <i>Vanessa</i> sp.)                         | <u>2</u>  |
| marine blue ( <i>Leptotes marina</i> )                       |           | <b>Swallowtails</b>                                             |           |
| unidentified blue                                            | <u>1</u>  | pale swallowtail ( <i>Papilio eurymedon</i> )                   | <u>1</u>  |
| <b>Whites</b>                                                |           | western tiger swallowtail ( <i>P. rutulus</i> )                 |           |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | <u>8</u>  | anise swallowtail ( <i>P. zelicaon</i> )                        |           |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |           | <b>Miscellaneous</b>                                            |           |
| common California ringlet ( <i>Coenonympha californica</i> ) |           | monarch ( <i>Danaus plexippus</i> )                             |           |
| cabbage white ( <i>Pieris rapae</i> )                        |           | common buckeye ( <i>Junonia coenia grisea</i> )                 |           |
| checkered (common) white ( <i>Pontia protodice</i> )         |           | mourning cloak ( <i>Nymphalis antiopa</i> )                     |           |
| spring white ( <i>P. sisymbrii</i> )                         |           | <b>Skippers</b>                                                 |           |
| unidentified white                                           | <u>1</u>  | funereal duskywing ( <i>Erynnis funeralis</i> )                 | <u>1</u>  |
| <b>Metalmarks</b>                                            |           | mournful duskywing ( <i>Erynnis tristis</i> )                   |           |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | <u>2</u>  | fiery skipper ( <i>Hylephila phyleus</i> )                      |           |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |           | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    |           |
| <b>Sulphurs</b>                                              |           | <b>Other</b>                                                    |           |
| orange sulphur ( <i>Colias eurytheme</i> )                   |           |                                                                 |           |
| sleepy orange ( <i>Eurema nicippe</i> )                      |           |                                                                 |           |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |           |                                                                 |           |
| unidentified sulphur                                         |           |                                                                 |           |
| Column Subtotal                                              | <u>12</u> | Column Subtotal                                                 | <u>10</u> |
|                                                              |           | Total                                                           | <u>22</u> |



5hrs 30mins

## 2016 Quino Checkerspot Butterfly Survey Form

Surveyor

: Chez BrangerDate: 3/8/16Site Name: JPD-08 Proctor Valley - Village 14 of Otay RanchSite Visit No: 2Area Surveyed CC, FF Acres Surveyed 100Survey Time: 7:30-12:15 Acres per Hour: 18 (6 ac/pp/hr)Other Surveyors Present: Andrew Borcher, Erica Harris, Ben Rosenbaum (in training)

## Field Conditions

|       | Time (24 hr)         | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
|-------|----------------------|------------------|------------------|-------------|
| Start | 0900                 | 60               | 0-1              | 0           |
| End   | <del>1215</del> 1215 | 66               | 3-5              | 0           |
| Start | 1400                 | 67               | 3-5              | 0           |
| End   | 1615                 | 66               | 3-5              | 0           |

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

Chamise chap (chamise), buckwheat scrub, NNG, native bunch grassland (blue dick), Stipa sp., Eriogonum sp.

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

| Butterfly Species                                            | No.  | Butterfly Species                                               | No.  |
|--------------------------------------------------------------|------|-----------------------------------------------------------------|------|
| <b>Checkerspots</b>                                          |      | <b>Hairstreaks</b>                                              |      |
| California patch ( <i>Chlosyne californica</i> )             |      | great purple hairstreak ( <i>Atlides halesus corcorani</i> )    |      |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      |      | brown elfin ( <i>Callophrys augustinus</i> )                    |      |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |      | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |      |
| chalcidion checkerspot ( <i>E. chalcidion chalcidion</i> )   |      | gray hairstreak ( <i>Strymon melinus pudica</i> )               | 1    |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |      | <b>Ladies/Admirals</b>                                          |      |
| Myliatta crescent ( <i>Phyciodes myliatta</i> )              |      | California sister ( <i>Adelpha bredowii californica</i> )       |      |
| <b>Blues</b>                                                 |      | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |      |
| western pygmy-blue ( <i>Brephidium exila</i> )               |      | west coast lady ( <i>Vanessa annabella</i> )                    |      |
| western tailed blue ( <i>Evers amyntula</i> )                |      | red admiral ( <i>V. atalanta rubria</i> )                       |      |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     | 11   | painted lady ( <i>V. cardui</i> )                               |      |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |      | American (Virginia) lady ( <i>V. virginensis</i> )              | 1    |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |      | unidentified lady ( <i>Vanessa</i> sp.)                         | 11   |
| marine blue ( <i>Leptotes marina</i> )                       |      | <b>Swallowtails</b>                                             |      |
| unidentified blue                                            | 1    | pale swallowtail ( <i>Papilio eurymedon</i> )                   |      |
| <b>Whites</b>                                                |      | western tiger swallowtail ( <i>P. rutulus</i> )                 |      |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | 1111 | anise swallowtail ( <i>P. zelicaon</i> )                        |      |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |      | <b>Miscellaneous</b>                                            |      |
| common California ringlet ( <i>Coenonympha californica</i> ) | 1111 | monarch ( <i>Danaus plexippus</i> )                             |      |
| cabbage white ( <i>Pieris rapae</i> )                        |      | common buckeye ( <i>Junonia coenia grisea</i> )                 |      |
| checkered (common) white ( <i>Pontia protodice</i> )         |      | mourning cloak ( <i>Nymphalis antiopa</i> )                     |      |
| spring white ( <i>P. sisymbrii</i> )                         |      | <b>Skippers</b>                                                 |      |
| unidentified white                                           |      | funereal duskywing ( <i>Erynnis funeralis</i> )                 | 1111 |
| <b>Metalmarks</b>                                            |      | mournful duskywing ( <i>Erynnis tristis</i> )                   | 111  |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | 1111 | fiery skipper ( <i>Hylephila phyleus</i> )                      |      |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |      | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    | 111  |
| <b>Sulphurs</b>                                              |      | <b>Other</b>                                                    |      |
| orange sulphur ( <i>Colias eurytheme</i> )                   |      |                                                                 |      |
| sleepy orange ( <i>Eurema nicippe</i> )                      |      |                                                                 |      |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |      |                                                                 |      |
| unidentified sulphur                                         |      |                                                                 |      |
| Column Subtotal                                              | 42   | Column Subtotal                                                 | 21   |
|                                                              |      | Total                                                           | 63   |

42+58

3.25

2.25

5.5



JPD-08

03/03/16

QCB #2

Ben R. Erica H. Andrew B. Uez B. ~~Ben R.~~

LL, FF, DD

Start: 0900

End: ~~1000~~ 1615

Temp: 60°F

Temp: 66°F

Wind: 0-1 mph

Wind: 2-5 mph

Sky: Clear 0%

Sky: Clear

Blue: 20 grass

Castalia Estua Redwoods

Flowering Plants

Arctostaphylos Grounds

Aucuba, Blueberry, Erubium, Allium sp. ~~Redwood~~

Bahia, Mirine, Fritas, Calmar, Aristotelia,

Aster, Bimby, Splendid Maritima, Salicornia sp.

Cryptantha sp. Mimosa, Erion, ~~Stem~~ Xylaria

Phacel Phacel, Salicornia Maritima, Sibbaldia

Wildlife Blacktail Jack rabbit, Sibbaldia, lizard

WEME, EUST, LAWAI, RTHA, COBA, ANAN

PSFL Greater snake, BUTI MUD, CAK

Finches, Mockingbird, III

BROWN

Sara orange tip: ~~IIII~~ IIIII

Southern Blue: I

Heathered skipper: IIII

Behr's metal mark: III

Gray flycatcher: I



VPD 708 QCBFF200 Enca H  
QCBFF2(CC/FF) 3/8/110  
START: 0900, 60°F, 0-1, 0%  
STOP: 1515, 60°F, 2-5, 0%  
BIDS: Chez B; Ardra B;  
Ben R (supervised)

EUST WENT LENO SPTO  
AMTR OTHU CALT CATON  
HOPI TRES WESP CATH  
MODO WREN TRES BUSH  
NOFL WISW YRWA ROWR  
COHU SAPH RCSI NOFL  
BUOW CAKI

CA niglet <sup>III</sup> <sup>III</sup> <sup>III</sup> Buckeye I  
Behr's <sup>III</sup> <sup>III</sup> <sup>III</sup> <sup>III</sup> Sulphur I  
Sara's <sup>III</sup> <sup>III</sup> <sup>III</sup> <sup>III</sup> Gray Hair I  
SO Blue <sup>III</sup>

Flower: endium, aimga, sel gal,  
Dic cap, en-tas, ade-tas, lastheny,  
Behr ke, onypantra, mir ka,  
mimaur, gallium, rap-tas, Lat vest,  
Hed cre, solanum, Hir re, India,  
Scl mun, sis bel, Pra ac, cal mac  
cal spi, cas deniexe, en con, vid ped



# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor: C Dickson

Date: 03/05/16

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

Site Visit No: 2

Acres Surveyed 42

Survey Time: 5.25

Acres per Hour: 8

Other Surveyors Present: n/a

| Field Conditions |              |                  |                  |             |
|------------------|--------------|------------------|------------------|-------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
| Start            | <u>0900</u>  | <u>60°</u>       | <u>1.8</u>       | <u>90%</u>  |
| End              | <u>1411</u>  | <u>71°</u>       | <u>3.9</u>       | <u>95%</u>  |
| Start            |              |                  |                  |             |
| End              |              |                  |                  |             |

Vegetation Communities Surveyed (inc. dominant spp.)

CLH / NNG / CSS

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

| Butterfly Species                                            | No.       | Butterfly Species                                               | No.       |
|--------------------------------------------------------------|-----------|-----------------------------------------------------------------|-----------|
| <b>Checkerspots</b>                                          |           | <b>Hairstreaks</b>                                              |           |
| California patch ( <i>Chlosyne californica</i> )             |           | great purple hairstreak ( <i>Atides halesus corcorani</i> )     |           |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      | <u>2</u>  | brown elfin ( <i>Callophrys augustinus</i> )                    |           |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |           | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |           |
| chalcodon checkerspot ( <i>E. chalcodona chalcodona</i> )    |           | gray hairstreak ( <i>Strymon melinus pudica</i> )               |           |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |           | <b>Ladies/Admirals</b>                                          |           |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |           | California sister ( <i>Adelpha bredowii californica</i> )       |           |
| <b>Blues</b>                                                 |           | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |           |
| western pygmy-blue ( <i>Brephidium exila</i> )               |           | west coast lady ( <i>Vanessa annabella</i> )                    |           |
| western tailed blue ( <i>Everes amyntula</i> )               |           | red admiral ( <i>V. atalanta rubria</i> )                       |           |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     | <u>5</u>  | painted lady ( <i>V. cardui</i> )                               | <u>1</u>  |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |           | American (Virginia) lady ( <i>V. virginensis</i> )              | <u>1</u>  |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   | <u>1</u>  | unidentified lady ( <i>Vanessa</i> sp.)                         |           |
| marine blue ( <i>Leptotes marina</i> )                       | <u>1</u>  | <b>Swallowtails</b>                                             |           |
| unidentified blue                                            |           | pale swallowtail ( <i>Papilio eurymedon</i> )                   |           |
| <b>Whites</b>                                                |           | western tiger swallowtail ( <i>P. rutulus</i> )                 |           |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | <u>18</u> | anise swallowtail ( <i>P. zelicaon</i> )                        |           |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |           | <b>Miscellaneous</b>                                            |           |
| common California ringlet ( <i>Coenonympha californica</i> ) | <u>1</u>  | monarch ( <i>Danaus plexippus</i> )                             |           |
| cabbage white ( <i>Pieris rapae</i> )                        | <u>1</u>  | common buckeye ( <i>Junonia coenia grisea</i> )                 |           |
| checkered (common) white ( <i>Pontia protodice</i> )         |           | mourning cloak ( <i>Nymphalis antiopa</i> )                     |           |
| spring white ( <i>P. sisymbrii</i> )                         |           | <b>Skippers</b>                                                 |           |
| unidentified white                                           |           | funereal duskywing ( <i>Erynnis funeralis</i> )                 | <u>2</u>  |
| <b>Metalmarks</b>                                            |           | mournful duskywing ( <i>Erynnis tristis</i> )                   |           |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | <u>7</u>  | fiery skipper ( <i>Hylephila phyleus</i> )                      |           |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |           | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    | <u>1</u>  |
| <b>Sulphurs</b>                                              |           | <b>Other</b>                                                    |           |
| orange sulphur ( <i>Colias eurytheme</i> )                   | <u>7</u>  |                                                                 |           |
| sleepy orange ( <i>Eurema nicippe</i> )                      |           |                                                                 |           |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |           |                                                                 |           |
| unidentified sulphur                                         |           |                                                                 |           |
| Column Subtotal                                              | <u>43</u> | Column Subtotal                                                 | <u>5</u>  |
|                                                              |           | Total                                                           | <u>48</u> |



# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor: Gretchen Cummings Date: 3/4/16  
 Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch, E Site Visit No: 2  
 Acres Surveyed 51 Survey Time: 1015-1530 Acres per Hour: 9.7  
 Other Surveyors Present: None (5.25 hrs)

| Field Conditions |              |                  |                         |             |
|------------------|--------------|------------------|-------------------------|-------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph)        | Cloud Cover |
| Start            | 1015         | 64.7°F           | <6.1                    | 40%         |
| End              | 1530         | 70.7°F           | 3.0-5.8 w/gusts to 15.1 | 50%         |
| Start            |              |                  |                         |             |
| End              |              |                  |                         |             |

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

Chaparral (*Adenostoma fasciculatum*, *Xylococcus bicolor*)  
 Sage Scrub (*Viguiera leucantha*, *Artemisia californica*)

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

| Butterfly Species                                            | No. | Butterfly Species                                               | No. |
|--------------------------------------------------------------|-----|-----------------------------------------------------------------|-----|
| <b>Checkerspots</b>                                          |     | <b>Hairstreaks</b>                                              |     |
| California patch ( <i>Chlosyne californica</i> )             |     | great purple hairstreak ( <i>Atides halesus corcorani</i> )     |     |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      |     | brown elfin ( <i>Callophrys augustinus</i> )                    |     |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |     | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) | 2   |
| chalcid checkerspot ( <i>E. chalcidona chalcidona</i> )      |     | gray hairstreak ( <i>Strymon melinus pudica</i> )               |     |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |     | <b>Ladies/Admirals</b>                                          |     |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |     | California sister ( <i>Adelpha bredowii californica</i> )       |     |
| <b>Blues</b>                                                 |     | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |     |
| western pygmy-blue ( <i>Brephidium exila</i> )               |     | west coast lady ( <i>Vanessa annabella</i> )                    | 5   |
| western tailed blue ( <i>Everes amyntula</i> )               |     | red admiral ( <i>V. atalanta rubria</i> )                       | 1   |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     | 1   | painted lady ( <i>V. cardui</i> )                               |     |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |     | American (Virginia) lady ( <i>V. virginensis</i> )              |     |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   | 1   | unidentified lady ( <i>Vanessa</i> sp.)                         |     |
| marine blue ( <i>Leptotes marina</i> )                       |     | <b>Swallowtails</b>                                             |     |
| unidentified blue                                            |     | pale swallowtail ( <i>Papilio eurymedon</i> )                   | 1   |
| <b>Whites</b>                                                |     | western tiger swallowtail ( <i>P. rutulus</i> )                 |     |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | 22  | anise swallowtail ( <i>P. zelicaon</i> )                        | 1   |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            | 3   | <b>Miscellaneous</b>                                            |     |
| common California ringlet ( <i>Coenonympha californica</i> ) |     | monarch ( <i>Danaus plexippus</i> )                             |     |
| cabbage white ( <i>Pieris rapae</i> )                        |     | common buckeye ( <i>Junonia coenia grisea</i> )                 |     |
| checkered (common) white ( <i>Pontia protodice</i> )         |     | mourning cloak ( <i>Nymphalis antiopa</i> )                     |     |
| spring white ( <i>P. sisymbrii</i> )                         |     | <b>Skippers</b>                                                 |     |
| unidentified white                                           | 2   | funereal duskywing ( <i>Erynnis funeralis</i> )                 |     |
| <b>Metalmarks</b>                                            |     | mournful duskywing ( <i>Erynnis tristis</i> )                   | 2   |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | 4   | fiery skipper ( <i>Hylephila phyleus</i> )                      |     |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |     | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    |     |
| <b>Sulphurs</b>                                              |     | <b>Other</b>                                                    |     |
| orange sulphur ( <i>Colias eurytheme</i> )                   | 4   | <i>Erynnis pecunius</i>                                         | 1   |
| sleepy orange ( <i>Eurema nicippe</i> )                      |     |                                                                 |     |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |     |                                                                 |     |
| unidentified sulphur                                         | 1   |                                                                 |     |
| Column Subtotal                                              | 38  | Column Subtotal                                                 | 13  |
|                                                              |     | Total                                                           | 51  |

(15 species)



# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor: GARRETT HUFFMAN Date: 3/4/16  
 Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch Parcel EE+R Site Visit No: 2  
 Acres Surveyed: 65 Survey Time: 5:30-6:00 HOURS Acres per Hour: 10 6.1  
 Other Surveyors Present: ERICA HARRIS

| Field Conditions |              |                  |                  | Cloud Cover |
|------------------|--------------|------------------|------------------|-------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) |             |
| Start            | 1020         | 65               | 0-3              | 15%         |
| End              | 1600         | 63               | 1-6              | 60%         |
| Start            |              |                  |                  |             |
| End              |              |                  |                  |             |

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

CHAMISE CHAPARRAL; COASTAL SAGE SCRUB, NON-NATIVE GRASSLAND

| GRASSLAND                                         |     | Obs. | Nectar Plants                                                    | Obs.              |
|---------------------------------------------------|-----|------|------------------------------------------------------------------|-------------------|
| Host Plants                                       |     | Obs. | Nectar Plants                                                    | Obs.              |
| dwarf plantain ( <i>Plantago erecta</i> )         |     | X    | popcorn flower ( <i>Cryptantha/Plagiobothrys</i> spp.)           | X                 |
| purple owl's clover ( <i>Castilleja exserta</i> ) |     | X    | goldfields ( <i>Lasthenia</i> spp.)                              | X                 |
| snapdragon ( <i>Antirrhinum coulterianum</i> )    |     |      | goldenstar ( <i>Muilla</i> spp.)                                 |                   |
| birds-beak ( <i>Cordylanthus rigidus</i> )        |     |      | fiddleneck ( <i>Amsinckia menziesii</i> var. <i>intermedia</i> ) |                   |
| woolly plantain ( <i>Plantago patagonica</i> )    |     |      | onion ( <i>Allium</i> spp.)                                      | X                 |
| Chinese houses ( <i>Collinsia</i> spp.)           |     |      | buckwheat ( <i>Eriogonum fasciculatum</i> )                      | X                 |
|                                                   |     |      | ground pink ( <i>Linanthus dianthiflorus</i> )                   | 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. |
|--------------------------------------------------------------|-----|-----------------------------------------------------------------|-----|
| <b>Checkerspots</b>                                          |     | <b>Hairstreaks</b>                                              |     |
| California patch ( <i>Chlosyne californica</i> )             | 1   | great purple hairstreak ( <i>Atlides halesus corcorani</i> )    |     |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      | 1   | brown elfin ( <i>Callophrys augustinus</i> )                    |     |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |     | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) | 1   |
| chalcid checkerspot ( <i>E. chalcidona chalcidona</i> )      |     | gray hairstreak ( <i>Strymon melinus pudica</i> )               | 1   |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |     | <b>Ladies/Admirals</b>                                          |     |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |     | California sister ( <i>Adelpha bredowii californica</i> )       |     |
| <b>Blues</b>                                                 |     | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |     |
| western pygmy-blue ( <i>Brephidium exila</i> )               |     | west coast lady ( <i>Vanessa annabella</i> )                    |     |
| western tailed blue ( <i>Everes amyntula</i> )               |     | red admiral ( <i>V. atalanta rubria</i> )                       |     |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     | 1   | painted lady ( <i>V. cardui</i> )                               | 2   |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |     | American (Virginia) lady ( <i>V. virginensis</i> )              | 4   |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |     | unidentified lady ( <i>Vanessa</i> sp.)                         |     |
| marine blue ( <i>Leptotes marina</i> )                       |     | <b>Swallowtails</b>                                             |     |
| unidentified blue                                            |     | pale swallowtail ( <i>Papilio eurymedon</i> )                   |     |
| <b>Whites</b>                                                |     | western tiger swallowtail ( <i>P. rutulus</i> )                 |     |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | 23  | anise swallowtail ( <i>P. zelicaon</i> )                        | 1   |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |     | <b>Miscellaneous</b>                                            |     |
| common California ringlet ( <i>Coenonympha californica</i> ) | 8   | monarch ( <i>Danaus plexippus</i> )                             |     |
| cabbage white ( <i>Pieris rapae</i> )                        | 1   | common buckeye ( <i>Junonia coenia grisea</i> )                 | 4   |
| checkered (common) white ( <i>Pontia protodice</i> )         |     | mourning cloak ( <i>Nymphalis antiopa</i> )                     |     |
| spring white ( <i>P. sisymbrii</i> )                         |     | <b>Skippers</b>                                                 |     |
| unidentified white                                           |     | funereal duskywing ( <i>Erynnis funeralis</i> )                 | 3   |
| <b>Metalmarks</b>                                            |     | mournful duskywing ( <i>Erynnis tristis</i> )                   |     |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | 16  | fiery skipper ( <i>Hylephila phyleus</i> )                      |     |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |     | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    | 3   |
| <b>Sulphurs</b>                                              |     | <b>Other</b>                                                    |     |
| orange sulphur ( <i>Colias eurytheme</i> )                   | 7   |                                                                 |     |
| sleepy orange ( <i>Eurema nicippe</i> )                      |     |                                                                 |     |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |     |                                                                 |     |
| unidentified sulphur                                         |     |                                                                 |     |
| Column Subtotal                                              | 69  | Column Subtotal                                                 | 19  |
|                                                              |     | TOTAL                                                           | 78  |



JPD 08

Chirren 11  
Enica 11

QUB #2 (EE/R)

3/4/16

Start: 1020, 65°F, 0-3, 10%

Stop: 1100, 63°F, 1-6, 60%

RTIA WOSP CORA MREN

RESP ROWR AMKE NORO

CALT BUSH Bogn CANN

SPTO ANHU COHU YRUA

NOFL,

So. pac. rattle cottonwood

side-blotch BNR

coast horn liz. coyote

American 11 lady 111

GA ringlet 1111 Sarah 111

SO. Blue 1 Sulphur 111

Behr S 111 111 White sp. 11

Funeral 11 Gray hair 1

Flower: dic cap, acm gla, allium, noped

en tus, mimaur, cas aff, cas den, lindra,

escad, Bah ke, cryptantha, sokinum,

pra tic, cal trac cal cil, primalev,

cal sp, cea Tom, pla end, sal mun,

Hir inc, ade tus, guittenza

Rite in the Rain



# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor: Darin Busby Date: 3/31/16  
 Site Name: JPD-08 Proctor Valley - Village 14 of Olay Ranch Site Visit No: 2  
 Area Surveyed F Acres Surveyed 34 Survey Time: 3.5 hr Acres per Hour: ~10  
 Other Surveyors Present: N/A / Entire polygon completed

| Field Conditions |              |                  |                  |               |
|------------------|--------------|------------------|------------------|---------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover   |
| Start            | 0830         | 63               | 0-2              | light haze    |
| End              | 1200         | 79               | 3-7              | moderate haze |
| Start            |              |                  |                  |               |
| End              |              |                  |                  |               |

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

Chamise chaparral, Coastal Sage Scrub

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

| Butterfly Species                                            | No. | Butterfly Species                                               | No. |
|--------------------------------------------------------------|-----|-----------------------------------------------------------------|-----|
| <b>Checkerspots</b>                                          |     | <b>Hairstreaks</b>                                              |     |
| California patch ( <i>Chlosyne californica</i> )             |     | great purple hairstreak ( <i>Atlides halesus concolor</i> )     |     |
| Gabb's checkerspot ( <i>C. gabbi</i> )                       | 8   | brown elfin ( <i>Callophrys augustinus</i> )                    |     |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |     | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |     |
| chalcidion checkerspot ( <i>E. chalcidion chalcidion</i> )   |     | gray hairstreak ( <i>Strymon melinus pudica</i> )               | 4   |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |     | <b>Ladies/Admirals</b>                                          |     |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |     | California sister ( <i>Adelpha bredowii californica</i> )       |     |
| <b>Blues</b>                                                 |     | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |     |
| western pygmy-blue ( <i>Glaucopsyche exila</i> )             |     | west coast lady ( <i>Vanessa annabella</i> )                    | 2   |
| western tailed blue ( <i>Everes amyntula</i> )               |     | red admiral ( <i>V. atalanta rubria</i> )                       |     |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     | 6   | painted lady ( <i>V. cardui</i> )                               | 3   |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |     | American (Virginia) lady ( <i>V. virginensis</i> )              |     |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |     | unidentified lady ( <i>Vanessa</i> sp.)                         | 8   |
| marine blue ( <i>Leptotes marina</i> )                       | 1   | <b>Swallowtails</b>                                             |     |
| unidentified blue                                            |     | pale swallowtail ( <i>Papilio eurymedon</i> )                   | 2   |
| <b>Whites</b>                                                |     | western tiger swallowtail ( <i>P. rutulus</i> )                 |     |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | 30  | arise swallowtail ( <i>P. zelicaon</i> )                        |     |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |     | <b>Miscellaneous</b>                                            |     |
| common California ringlet ( <i>Coenonympha californica</i> ) | 3   | monarch ( <i>Danaus plexippus</i> )                             |     |
| cabbage white ( <i>Pieris rapae</i> )                        |     | common buckeye ( <i>Junonia coenia grisea</i> )                 |     |
| checkered (common) white ( <i>Pontia protodice</i> )         |     | mourning cloak ( <i>Nymphalis antiopa</i> )                     |     |
| spring white ( <i>P. sisymbria</i> )                         | 2   | <b>Skippers</b>                                                 |     |
| unidentified white                                           | 5   | funereal duskywing ( <i>Erynnis funeralis</i> )                 | 5   |
| <b>Metalmarks</b>                                            |     | mourning duskywing ( <i>Erynnis tristis</i> )                   |     |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | 10  | fiery skipper ( <i>Hylephila phyleus</i> )                      |     |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |     | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    | 2   |
| <b>Sulphurs</b>                                              |     | <b>Other</b>                                                    |     |
| orange sulphur ( <i>Colias eurytheme</i> )                   |     | Unidentified moth                                               | 12  |
| sleepy orange ( <i>Eurema nicippe</i> )                      |     |                                                                 |     |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |     |                                                                 |     |
| unidentified sulphur                                         | 8   |                                                                 |     |
| <b>Column Subtotal</b>                                       | 73  | <b>Column Subtotal</b>                                          | 38  |
|                                                              |     | <b>Total</b>                                                    | 111 |

\* Orange-throated whiptail (UTM = 32.69183, -116.89295)



# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor

Chez Brungaber

Date: 3/4/16

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

Site Visit No: 2

Area Surveyed FF partial Acres Surveyed 10

Survey Time: 1hr 5min

Acres per Hour: 5.1

Other Surveyors Present: /

## Field Conditions

|       | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
|-------|--------------|------------------|------------------|-------------|
| Start | 1540         | 66.2             | 0-4 mph          | 30%         |
| End   | 1645         | 70.1             | 0-3 gust 7 mph   | 100%        |
| Start |              |                  |                  |             |
| End   |              |                  |                  |             |

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

N/NG (Barnus sp.), CS (Art cal, Erig fax), native bunch grassland (Stipa sp, blue dicks, Solanum sp, Erodium sp)

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

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



## 2016 Quino Checkerspot Butterfly Survey Form

**Survey:** Diana Saucedo **Date:** 5 March 2016  
**Site Name:** JPD-08 Proctor Valley – Village 14 of Otay Ranch **Site Visit No:** 2  
**Area Surveyed** G **Acres Surveyed** 57 **Survey Time:** 6.0 **Acres per Hour:** 9.5  
**Other Surveyors Present:** None.

| Field Conditions |              |                  |                  |             |
|------------------|--------------|------------------|------------------|-------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
| <b>Start</b>     | 0915         | 64               | 0-3              | 60 %        |
| <b>End</b>       | 1115         | 74               | 0-3              | 50%         |
| <b>Start</b>     | 1330         | 83               | 0-5              | 25%         |
| <b>End</b>       | 1515         | 74               | 0-5, gust 7      | 90%         |

| Vegetation Communities Surveyed (inc. dominant spp.)                                                                                                                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sage scrub, <i>E. fasciculatum</i> , <i>A. californica</i> , <i>Viguera</i> ; chamise chaparral; <i>A. fasciculatum</i> , <i>C. tomentosus</i> ; NNG, <i>E. cicutarium</i> |
|                                                                                                                                                                            |

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

| Butterfly Species                                            | No.       | Butterfly Species                                               | No.       |
|--------------------------------------------------------------|-----------|-----------------------------------------------------------------|-----------|
| <b>Checkerspots</b>                                          |           | <b>Hairstreaks</b>                                              |           |
| California patch ( <i>Chlosyne californica</i> )             |           | great purple hairstreak ( <i>Atlides halesus corcorani</i> )    |           |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      | 1         | brown elfin ( <i>Callophrys augustinus</i> )                    |           |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |           | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |           |
| chalcedon checkerspot ( <i>E. chalcedona chalcedona</i> )    |           | gray hairstreak ( <i>Strymon melinus pudica</i> )               | 1         |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |           | <b>Ladies/Admirals</b>                                          |           |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |           | California sister ( <i>Adelpha bredowii californica</i> )       |           |
| <b>Blues</b>                                                 |           | Lorquin's admiral ( <i>Limnitis lorquini</i> )                  |           |
| western pygmy-blue ( <i>Brephidium exila</i> )               |           | west coast lady ( <i>Vanessa annabella</i> )                    |           |
| western tailed blue ( <i>Everes amyntula</i> )               |           | red admiral ( <i>V. atalanta rubria</i> )                       |           |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     | 8         | painted lady ( <i>V. cardui</i> )                               |           |
| Edward's blue ( <i>Hemiarctus ceraunus gys</i> )             |           | American (Virginia) lady ( <i>V. virginensis</i> )              |           |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |           | unidentified lady ( <i>Vanessa</i> sp.)                         |           |
| marine blue ( <i>Leptotes marina</i> )                       | 2         | <b>Swallowtails</b>                                             |           |
| unidentified blue                                            |           | pale swallowtail ( <i>Papilio eurymedon</i> )                   |           |
| <b>Whites</b>                                                |           | western tiger swallowtail ( <i>P. rutulus</i> )                 |           |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | 15        | anise swallowtail ( <i>P. zelicaon</i> )                        |           |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |           | <b>Miscellaneous</b>                                            |           |
| common California ringlet ( <i>Coenonympha californica</i> ) | 10        | monarch ( <i>Danaus plexippus</i> )                             |           |
| cabbage white ( <i>Pieris rapae</i> )                        |           | common buckeye ( <i>Junonia coenia grisea</i> )                 | 1         |
| checkered (common) white ( <i>Pontia protodice</i> )         | 2         | mourning cloak ( <i>Nymphalis antiopa</i> )                     |           |
| spring white ( <i>P. sisymbrii</i> )                         |           | <b>Skippers</b>                                                 |           |
| unidentified white                                           |           | funereal duskywing ( <i>Erynnis funeralis</i> )                 | 15        |
| <b>Metalmarks</b>                                            |           | mournful duskywing ( <i>Erynnis tristis</i> )                   |           |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | 4         | fiery skipper ( <i>Hylephila phyleus</i> )                      |           |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |           | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    | 8         |
| <b>Sulphurs</b>                                              |           | <b>Other</b>                                                    |           |
| orange sulphur ( <i>Colias eurytheme</i> )                   |           |                                                                 |           |
| sleepy orange ( <i>Eurema nicippe</i> )                      |           |                                                                 |           |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |           |                                                                 |           |
| unidentified sulphur                                         | 4         |                                                                 |           |
| <b>Column Subtotal</b>                                       | <b>46</b> | <b>Column Subtotal</b>                                          | <b>25</b> |
|                                                              |           | <b>Total</b>                                                    | <b>71</b> |



# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor: Amy Mattson & Chez Brunggraber Date: 3/4/16  
 Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch Site Visit No: \_\_\_\_\_  
 Area Surveyed H+I Acres Surveyed 97 Survey Time: 10:00 Acres per Hour: 9.7  
 Other Surveyors Present: \_\_\_\_\_

| Field Conditions |              |                  |                  |                  |
|------------------|--------------|------------------|------------------|------------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover      |
| Start            | <u>10:15</u> | <u>74.1</u>      | <u>0</u>         | <u>5% (haze)</u> |
| End              | <u>15:15</u> | <u>69.3</u>      | <u>5-7</u>       | <u>3%</u>        |
| Start            |              |                  |                  |                  |
| End              |              |                  |                  |                  |

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

NNG (Avena, Eri but, Dic cap) CSS (Mal lau, Art cal, Sal opi, Eri fars),  
SNC (Mal lau, NNGs, Sal opi, Art cal, Eri but)

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

| Butterfly Species                                            | No.       | Butterfly Species                                               | No.       |
|--------------------------------------------------------------|-----------|-----------------------------------------------------------------|-----------|
| <b>Checkerspots</b>                                          |           | <b>Hairstreaks</b>                                              |           |
| California patch ( <i>Chlosyne californica</i> )             |           | great purple hairstreak ( <i>Atlides halesus corcorani</i> )    |           |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      |           | brown elfin ( <i>Callophrys augustinus</i> )                    |           |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |           | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |           |
| chalcidon checkerspot ( <i>E. chalcidona chalcidona</i> )    |           | gray hairstreak ( <i>Strymon melinus pudica</i> )               |           |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |           | <b>Ladies/Admirals</b>                                          |           |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |           | California sister ( <i>Adelpha bredowii californica</i> )       |           |
| <b>Blues</b>                                                 |           | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |           |
| western pygmy-blue ( <i>Brephidium exila</i> )               |           | west coast lady ( <i>Vanessa annabella</i> )                    | <u>2</u>  |
| western tailed blue ( <i>Everes amyntula</i> )               |           | red admiral ( <i>V. atalanta rubria</i> )                       |           |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     | <u>1</u>  | painted lady ( <i>V. cardui</i> )                               |           |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             | <u>1</u>  | American (Virginia) lady ( <i>V. virginensis</i> )              |           |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   | <u>1</u>  | unidentified lady ( <i>Vanessa</i> sp.)                         |           |
| marine blue ( <i>Leptotes marina</i> )                       |           | <b>Swallowtails</b>                                             |           |
| unidentified blue                                            |           | pale swallowtail ( <i>Papilio eurymedon</i> )                   |           |
| <b>Whites</b>                                                |           | western tiger swallowtail ( <i>P. rutulus</i> )                 |           |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | <u>0</u>  | anise swallowtail ( <i>P. zelicaon</i> )                        |           |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |           | <b>Miscellaneous</b>                                            |           |
| common California ringlet ( <i>Coenonympha californica</i> ) |           | monarch ( <i>Danaus plexippus</i> )                             |           |
| cabbage white ( <i>Pieris rapae</i> )                        |           | common buckeye ( <i>Junonia coenia grisea</i> )                 | <u>2</u>  |
| checkered (common) white ( <i>Pontia protodice</i> )         |           | mourning cloak ( <i>Nymphalis antiopa</i> )                     |           |
| spring white ( <i>P. sisymbrii</i> )                         |           | <b>Skippers</b>                                                 |           |
| unidentified white                                           | <u>2</u>  | funereal duskywing ( <i>Erynnis funeralis</i> )                 | <u>10</u> |
| <b>Metalmarks</b>                                            |           | mournful duskywing ( <i>Erynnis tristis</i> )                   | <u>2</u>  |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | <u>10</u> | fiery skipper ( <i>Hylephila phyleus</i> )                      |           |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |           | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    | <u>1</u>  |
| <b>Sulphurs</b>                                              |           | <b>Other</b>                                                    |           |
| orange sulphur ( <i>Colias eurytheme</i> )                   |           |                                                                 |           |
| sleepy orange ( <i>Eurema nicippe</i> )                      |           |                                                                 |           |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |           |                                                                 |           |
| unidentified sulphur                                         | <u>7</u>  |                                                                 |           |
| Column Subtotal                                              | <u>28</u> | Column Subtotal                                                 | <u>17</u> |
|                                                              |           | Total                                                           | <u>45</u> |

JPD08 Amy 3/4/16

DOB 2  
H&I

|             |                        |
|-------------|------------------------|
| Eri bot     | - Eri far              |
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| Son ok      | Cal spl.               |
| Eri mas     | Mur las                |
| Eri cic     | - Cryptantha           |
| Hyp ga      | Pe                     |
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|             | Mui mar                |
|             | Bah lact               |
|             | Sal man                |
|             | Oxa cal                |

Much of lower elevation areas dominated by NDG.

Even hill tops @ lower elev. fewer nectaring resources of  
Pe.



# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor: JOHN DICUS, MELANIE DICUS Date: 03-05-2016  
 Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch Site Visit No: 2  
 Area Surveyed J, M Acres Surveyed 93 Survey Time: 5.25 HRS Acres per Hour: 8.9/EACH  
 Other Surveyors Present: \_\_\_\_\_

| Field Conditions |              |                  |                  |             |
|------------------|--------------|------------------|------------------|-------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
| Start            | 1030         | 65               | 1-4              | 40%         |
| End              | 1545         | 68               | 1-3              | 50%         |
| Start            |              |                  |                  |             |
| End              |              |                  |                  |             |

Vegetation Communities Surveyed (inc. dominant spp.) CANISE CHAP - ADONISOMA FASCICULATUM, ERODIUM SPP.  
DESS: ARTEMISIACA, E. FASCICULATA, M. LUMINA, CHLORALBUM SA, BRONUS SPP, ERODIUM SPP.  
NNI/RUDEAL = ERODIUM SPP, BRONUS MONTENSIS, DIANDRUS, NEEDLEGRASS BRASSICA =  
STIPA LEBIDA, BRONUS SPP, ERODIUM SPP.

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

| Butterfly Species                                            | No. | Butterfly Species                                               | No. |
|--------------------------------------------------------------|-----|-----------------------------------------------------------------|-----|
| <b>Checkerspots</b>                                          |     | <b>Hairstreaks</b>                                              |     |
| California patch ( <i>Chlosyne californica</i> )             |     | great purple hairstreak ( <i>Atlides halesus corcorani</i> )    |     |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      |     | brown elfin ( <i>Callophrys augustinus</i> )                    |     |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |     | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |     |
| chalcedon checkerspot ( <i>E. chalcedona chalcedona</i> )    |     | gray hairstreak ( <i>Strymon melinus pudica</i> )               |     |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |     | <b>Ladies/Admirals</b>                                          |     |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |     | California sister ( <i>Adelpha bredowii californica</i> )       |     |
| <b>Blues</b>                                                 |     | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |     |
| western pygmy-blue ( <i>Brephidium exila</i> )               |     | west coast lady ( <i>Vanessa annabella</i> )                    | 1   |
| western tailed blue ( <i>Everes amyntula</i> )               | 1   | red admiral ( <i>V. atalanta rubria</i> )                       | 3   |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     | 13  | painted lady ( <i>V. cardui</i> )                               | 3   |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |     | American (Virginia) lady ( <i>V. virginensis</i> )              | 1   |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |     | unidentified lady ( <i>Vanessa</i> sp.)                         |     |
| marine blue ( <i>Leptotes marina</i> )                       | 1   | <b>Swallowtails</b>                                             |     |
| unidentified blue                                            |     | pale swallowtail ( <i>Papilio eurymedon</i> )                   |     |
| <b>Whites</b>                                                |     | western tiger swallowtail ( <i>P. rutulus</i> )                 |     |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | 38  | anise swallowtail ( <i>P. zelicaon</i> )                        | 3   |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |     | <b>Miscellaneous</b>                                            |     |
| common California ringlet ( <i>Coenonympha californica</i> ) | 8   | monarch ( <i>Danaus plexippus</i> )                             |     |
| cabbage white ( <i>Pieris rapae</i> )                        |     | common buckeye ( <i>Junonia coenia grisea</i> )                 | 2   |
| checkered (common) white ( <i>Pontia protodice</i> )         | 4   | mourning cloak ( <i>Nymphalis antiopa</i> )                     |     |
| spring white ( <i>P. sisymbrii</i> )                         |     | <b>Skippers</b>                                                 |     |
| unidentified white                                           |     | funereal duskywing ( <i>Erynnis funeralis</i> )                 | 21  |
| <b>Metalmarks</b>                                            |     | mournful duskywing ( <i>Erynnis tristis</i> )                   |     |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | 50  | fiery skipper ( <i>Hylephila phyleus</i> )                      |     |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |     | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    |     |
| <b>Sulphurs</b>                                              |     | <b>Other</b>                                                    |     |
| orange sulphur ( <i>Colias eurytheme</i> )                   | 17  | <u>HELIOPETES ERICIDRUM</u>                                     | 1   |
| sleepy orange ( <i>Eurema nicippe</i> )                      | 1   |                                                                 |     |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |     |                                                                 |     |
| unidentified sulphur                                         |     |                                                                 |     |
| Column Subtotal                                              | 133 | Column Subtotal                                                 | 35  |
|                                                              |     | Total                                                           | 168 |



# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor: MELANIE DICUS Date: 03-04-2016  
 Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch Site Visit No: 2  
 Area Surveyed KIL Acres Surveyed 108 Survey Time: 6 HRS, 40 MIN Acres per Hour: ~8/each BIO  
 Other Surveyors Present: \_\_\_\_\_

| Field Conditions |              |                  |                  |             |
|------------------|--------------|------------------|------------------|-------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
| Start            | <u>0915</u>  | <u>60</u>        | <u>1.9</u>       | <u>40%</u>  |
| End              | <u>1555</u>  | <u>63</u>        | <u>1.6</u>       | <u>50%</u>  |
| Start            |              |                  |                  |             |
| End              |              |                  |                  |             |

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

DESS-ARTEMISIA CA, EROGONIUM SPP, E. FASCICULATUM, M. LURIDA  
UN(2): B. DIANDRUS, Avena sp. HORDEUM MURINUM, H. MARINUM, EROGONIUM SPP.

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

| Butterfly Species                                            | No.       | Butterfly Species                                               | No.            |
|--------------------------------------------------------------|-----------|-----------------------------------------------------------------|----------------|
| <b>Checkerspots</b>                                          |           | <b>Hairstreaks</b>                                              |                |
| California patch ( <i>Chlosyne californica</i> )             |           | great purple hairstreak ( <i>Atlides halesus corcorani</i> )    |                |
| Gabb's checkerspot ( <i>C. gabbi</i> )                       |           | brown elfin ( <i>Callophrys augustinus</i> )                    | <u>1</u>       |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |           | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) | <u>2</u>       |
| chalcid checkerspot ( <i>E. chalcidona chalcidona</i> )      |           | gray hairstreak ( <i>Strymon melinus pudica</i> )               | <u>1</u>       |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |           | <b>Ladies/Admirals</b>                                          |                |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |           | California sister ( <i>Adelpha bredowii californica</i> )       |                |
| <b>Blues</b>                                                 |           | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |                |
| western pygmy-blue ( <i>Brephidium exila</i> )               | <u>1</u>  | west coast lady ( <i>Vanessa annabella</i> )                    | <u>1</u>       |
| western tailed blue ( <i>Everes amyntula</i> )               |           | red admiral ( <i>V. atalanta rubria</i> )                       | <u>6</u>       |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     | <u>2</u>  | Painted lady ( <i>V. cardui</i> )                               | <u>5</u>       |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |           | American (Virginia) lady ( <i>V. virginensis</i> )              |                |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   | <u>6</u>  | unidentified lady ( <i>Vanessa</i> sp.)                         |                |
| marine blue ( <i>Leptotes marina</i> )                       | <u>2</u>  | <b>Swallowtails</b>                                             |                |
| unidentified blue                                            |           | pale swallowtail ( <i>Papilio eurymedon</i> )                   | <u>1</u>       |
| <b>Whites</b>                                                |           | western tiger swallowtail ( <i>P. rutulus</i> )                 | <u>1</u>       |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | <u>21</u> | anise swallowtail ( <i>P. zelicaon</i> )                        |                |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |           | <b>Miscellaneous</b>                                            |                |
| common California ringlet ( <i>Coenonympha californica</i> ) | <u>4</u>  | monarch ( <i>Danaus plexippus</i> )                             |                |
| cabbage white ( <i>Pieris rapae</i> )                        | <u>1</u>  | common buckeye ( <i>Junonia coenia grisea</i> )                 | <u>2</u>       |
| checkered (common) white ( <i>Pontia protodice</i> )         | <u>5</u>  | mourning cloak ( <i>Nymphalis antiopa</i> )                     |                |
| spring white ( <i>P. sisymbrii</i> )                         |           | <b>Skippers</b>                                                 |                |
| unidentified white                                           |           | funereal duskywing ( <i>Erynnis funeralis</i> )                 | <u>15</u>      |
| <b>Metalmarks</b>                                            |           | mournful duskywing ( <i>Erynnis tristis</i> )                   |                |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | <u>25</u> | fiery skipper ( <i>Hylephila phyleus</i> )                      | <u>1</u>       |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |           | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    | <u>4</u>       |
| <b>Sulphurs</b>                                              |           | <b>Other</b>                                                    |                |
| orange sulphur ( <i>Colias eurytheme</i> )                   | <u>11</u> | <u>COLIAS HARTFORDII</u>                                        | <u>1</u>       |
| sleepy orange ( <i>Eurema nicippe</i> )                      |           | <u>HELIOPIDES <del>HELIOPIDES</del></u>                         | <u>3</u>       |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |           |                                                                 |                |
| unidentified sulphur                                         |           |                                                                 |                |
| Column Subtotal                                              | <u>78</u> | Column Subtotal                                                 | <u>44</u>      |
|                                                              |           | Total                                                           | <u>+2-3122</u> |



# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor: GARRET HUFFMAN Date: 3/2/16  
 Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch Parcel N Site Visit No: 2  
 Acres Surveyed: 65 Survey Time: 8 Acres per Hour: 8.13  
 Other Surveyors Present: NONE

| Field Conditions |              |                  |                  |
|------------------|--------------|------------------|------------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) |
| Start            | 0800         | 68               | 1-3              |
| End              | 1600         | 75               | 2-4              |
| Start            |              |                  |                  |
| End              |              |                  |                  |

Vegetation Communities Surveyed (inc. dominant spp.)

CHAMISE CHAPARRAL  
NON-NATIVE GRASSLAND

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

| Butterfly Species                                            | No. | Butterfly Species                                               | No. |
|--------------------------------------------------------------|-----|-----------------------------------------------------------------|-----|
| <b>Checkerspots</b>                                          |     | <b>Hairstreaks</b>                                              |     |
| California patch ( <i>Chlosyne californica</i> )             |     | great purple hairstreak ( <i>Atides halesus corcorani</i> )     |     |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      |     | brown elfin ( <i>Callophrys augustinus</i> )                    |     |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |     | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |     |
| chalcid checkerspot ( <i>E. chalcidona chalcidona</i> )      |     | gray hairstreak ( <i>Strymon melinus pudica</i> )               |     |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |     | <b>Ladies/Admirals</b>                                          |     |
| Myliatta crescent ( <i>Phyciodes myliatta</i> )              |     | California sister ( <i>Adelpha bredowii californica</i> )       |     |
| <b>Blues</b>                                                 |     | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |     |
| western pygmy-blue ( <i>Brephidium exila</i> )               |     | west coast lady ( <i>Vanessa annabella</i> )                    |     |
| western tailed blue ( <i>Everses amyntula</i> )              |     | red admiral ( <i>V. atalanta rubria</i> )                       |     |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     | 2   | painted lady ( <i>V. cardui</i> )                               | 1   |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |     | American (Virginia) lady ( <i>V. virginensis</i> )              |     |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |     | unidentified lady ( <i>Vanessa</i> sp.)                         |     |
| marine blue ( <i>Leptotes marina</i> )                       |     | <b>Swallowtails</b>                                             |     |
| unidentified blue                                            |     | pale swallowtail ( <i>Papilio eurymedon</i> )                   |     |
| <b>Whites</b>                                                |     | western tiger swallowtail ( <i>P. rutulus</i> )                 |     |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | 22  | anise swallowtail ( <i>P. zelicaon</i> )                        |     |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |     | <b>Miscellaneous</b>                                            |     |
| common California ringlet ( <i>Coenonympha californica</i> ) | 1   | monarch ( <i>Danaus plexippus</i> )                             |     |
| cabbage white ( <i>Pieris rapae</i> )                        |     | common buckeye ( <i>Junonia coenia grisea</i> )                 | 6   |
| checkered (common) white ( <i>Pontia protodice</i> )         | 3   | mourning cloak ( <i>Nymphalis antiopa</i> )                     |     |
| spring white ( <i>P. sisymbrii</i> )                         |     | <b>Skippers</b>                                                 |     |
| unidentified white                                           |     | funereal duskywing ( <i>Erynnis funeralis</i> )                 | 1   |
| <b>Metalmarks</b>                                            |     | mournful duskywing ( <i>Erynnis tristis</i> )                   |     |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | 33  | fiery skipper ( <i>Hylephila phyleus</i> )                      |     |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |     | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    | 7   |
| <b>Sulphurs</b>                                              |     | <b>Other</b>                                                    |     |
| orange sulphur ( <i>Colias eurytheme</i> )                   | 7   | DAINTY SULPHUR ( <i>NATHALIS IOLA</i> )                         | 1   |
| sleepy orange ( <i>Eurema nicippe</i> )                      |     |                                                                 |     |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |     |                                                                 |     |
| unidentified sulphur                                         |     |                                                                 |     |
| Column Subtotal                                              | 68  | Column Subtotal                                                 | 16  |

TOTAL - 84



# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor

Alicia Hill

Date:

3/5/16

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

Site Visit No:

2

Acres Surveyed

603

Survey Time:

6.5

Acres per Hour:

9.7

Other Surveyors Present:

## Field Conditions

|       | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
|-------|--------------|------------------|------------------|-------------|
| Start | 8:45         | 70               | 1-3              | 70          |
| End   | 15:35        | 77               | 4-8              | 95          |
| Start |              |                  |                  |             |
| End   |              |                  |                  |             |

Vegetation Communities Surveyed (inc. dominant spp.)

chamise chaparral (ADE FAS, ERI FAS),

non-native grassland (Avena sp, Brassica sp), Diegan coastal sage scrub (ADE CAL, ERI FAS)

ACM GLA

BAH LAC

Cryptantha sp.

SIL GAL

DIC CAP

HER INC

ADE FAS

MIR LAG

ALI PLA

SOL PAR

ESC CAL

MIM AUR

SEA TOM

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

| Butterfly Species                                            | No. | Butterfly Species                                               | No. |
|--------------------------------------------------------------|-----|-----------------------------------------------------------------|-----|
| <b>Checkerspots</b>                                          |     | <b>Hairstreaks</b>                                              |     |
| California patch ( <i>Chlosyne californica</i> )             |     | great purple hairstreak ( <i>Atides halesus corcorani</i> )     |     |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      | 1   | brown elfin ( <i>Callophrys augustinus</i> )                    |     |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |     | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |     |
| chalcid checkerspot ( <i>E. chalcidona chalcidona</i> )      |     | gray hairstreak ( <i>Strymon melinus pudica</i> )               | 2   |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |     | <b>Ladies/Admirals</b>                                          |     |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |     | California sister ( <i>Adelpha bredowii californica</i> )       |     |
| <b>Blues</b>                                                 |     | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |     |
| western pygmy-blue ( <i>Brephidium exila</i> )               |     | west coast lady ( <i>Vanessa annabella</i> )                    |     |
| western tailed blue ( <i>Everes amyntula</i> )               |     | red admiral ( <i>V. atalanta rubria</i> )                       |     |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     | 7   | painted lady ( <i>V. cardui</i> )                               |     |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |     | American (Virginia) lady ( <i>V. virginensis</i> )              | 2   |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |     | unidentified lady ( <i>Vanessa</i> sp.)                         | 3   |
| marine blue ( <i>Leptotes marina</i> )                       |     | <b>Swallowtails</b>                                             |     |
| unidentified blue                                            | 5   | pale swallowtail ( <i>Papilio eurymedon</i> )                   |     |
| <b>Whites</b>                                                |     | western tiger swallowtail ( <i>P. rutulus</i> )                 |     |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              |     | anise swallowtail ( <i>P. zelicaon</i> )                        |     |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |     | <b>Miscellaneous</b>                                            |     |
| common California ringlet ( <i>Coenonympha californica</i> ) |     | monarch ( <i>Danaus plexippus</i> )                             |     |
| cabbage white ( <i>Pieris rapae</i> )                        |     | common buckeye ( <i>Junonia coenia grisea</i> )                 | 3   |
| checkered (common) white ( <i>Pontia protodice</i> )         | 8   | mourning cloak ( <i>Nymphalis antiopa</i> )                     |     |
| spring white ( <i>P. sisymbrii</i> )                         |     | <b>Skippers</b>                                                 |     |
| unidentified white                                           | 10  | funereal duskywing ( <i>Erynnis funeralis</i> )                 | 7   |
| <b>Metalmarks</b>                                            |     | mournful duskywing ( <i>Erynnis tristis</i> )                   |     |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          |     | fiery skipper ( <i>Hylephila phyleus</i> )                      |     |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             | 57  | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    | 6   |
| <b>Sulphurs</b>                                              |     | <b>Other</b>                                                    |     |
| orange sulphur ( <i>Colias eurytheme</i> )                   |     | CA Ringlet                                                      | 12  |
| sleepy orange ( <i>Eurema nicippe</i> )                      |     | Africanus duskywing                                             | 2   |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |     | Dainty sulphur                                                  | 3   |
| unidentified sulphur                                         | 7   |                                                                 |     |
| Column Subtotal                                              | 95  | Column Subtotal                                                 | 40  |
|                                                              |     | Total                                                           | 135 |



# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor: GARRET HUFFMAN Date: 3/5/16  
 Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch P+Q Site Visit No: 2  
 Acres Surveyed 121 Survey Time: 6-5 Hours Acres per Hour: 10  
 Other Surveyors Present: ERICA HARRIS

| Field Conditions |              |                  |                  |             |
|------------------|--------------|------------------|------------------|-------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
| Start            | <u>1000</u>  | <u>65°</u>       | <u>1-5</u>       | <u>40%</u>  |
| End              | <u>1600</u>  | <u>68°</u>       | <u>2-7</u>       | <u>100%</u> |
| Start            |              |                  |                  |             |
| End              |              |                  |                  |             |

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

CHAMISE CHAPARRAL ; COASTAL SAGE SCRUB ;  
NON-NATIVE GRASSLAND

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

| Butterfly Species                                            | No.       | Butterfly Species                                               | No.       |
|--------------------------------------------------------------|-----------|-----------------------------------------------------------------|-----------|
| <b>Checkerspots</b>                                          |           | <b>Hairstreaks</b>                                              |           |
| California patch ( <i>Chlosyne californica</i> )             |           | great purple hairstreak ( <i>Atides halesus corcorani</i> )     |           |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      |           | brown elfin ( <i>Callophrys augustinus</i> )                    |           |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |           | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |           |
| chalcedon checkerspot ( <i>E. chalcedona chalcedona</i> )    |           | gray hairstreak ( <i>Strymon melinus pudica</i> )               | <u>1</u>  |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |           | <b>Ladies/Admirals</b>                                          |           |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |           | California sister ( <i>Adelpha bredowii californica</i> )       |           |
| <b>Blues</b>                                                 |           | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |           |
| western pygmy-blue ( <i>Brephidium exila</i> )               |           | west coast lady ( <i>Vanessa annabella</i> )                    |           |
| western tailed blue ( <i>Everes amyntula</i> )               |           | red admiral ( <i>V. atalanta rubria</i> )                       |           |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     | <u>2</u>  | painted lady ( <i>V. cardui</i> )                               |           |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |           | American (Virginia) lady ( <i>V. virginensis</i> )              | <u>1</u>  |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |           | unidentified lady ( <i>Vanessa</i> sp.)                         |           |
| marine blue ( <i>Leptotes marina</i> )                       |           | <b>Swallowtails</b>                                             |           |
| unidentified blue                                            |           | pale swallowtail ( <i>Papilio eurymedon</i> )                   |           |
| <b>Whites</b>                                                |           | western tiger swallowtail ( <i>P. rutulus</i> )                 | <u>1</u>  |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | <u>21</u> | anise swallowtail ( <i>P. zelicaon</i> )                        | <u>1</u>  |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |           | <b>Miscellaneous</b>                                            |           |
| common California ringlet ( <i>Coenonympha californica</i> ) | <u>4</u>  | monarch ( <i>Danaus plexippus</i> )                             |           |
| cabbage white ( <i>Pieris rapae</i> )                        |           | common buckeye ( <i>Junonia coenia grisea</i> )                 |           |
| checkered (common) white ( <i>Pontia protodice</i> )         | <u>3</u>  | mourning cloak ( <i>Nymphalis antiopa</i> )                     |           |
| spring white ( <i>P. sisymbrii</i> )                         |           | <b>Skippers</b>                                                 |           |
| unidentified white                                           |           | funereal duskywing ( <i>Erynnis funeralis</i> )                 | <u>4</u>  |
| <b>Metalmarks</b>                                            |           | mournful duskywing ( <i>Erynnis tristis</i> )                   |           |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | <u>9</u>  | fiery skipper ( <i>Hylephila phyleus</i> )                      |           |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |           | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    | <u>3</u>  |
| <b>Sulphurs</b>                                              |           | <b>Other</b>                                                    |           |
| orange sulphur ( <i>Colias eurytheme</i> )                   | <u>1</u>  | <u>BERNADINO BLUE</u>                                           | <u>1</u>  |
| sleepy orange ( <i>Eurema nicippe</i> )                      |           | <u>(EUPHILOTES BERNADINO)</u>                                   |           |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |           |                                                                 |           |
| unidentified sulphur                                         |           |                                                                 |           |
| Column Subtotal                                              | <u>40</u> | Column Subtotal                                                 | <u>12</u> |
|                                                              |           | TOTAL                                                           | <u>52</u> |



JPD08

Carrett H  
Enca H

Q&B #2 (P/Q)

8/5/11p

Start: 1000, WST, 1-4, 40%

SDP: 1000, WST, 2-7, 100%

|      |      |      |      |
|------|------|------|------|
| WEME | ANTH | ANOR | YRUA |
| CALT | ROSP | HOFI | WCSP |
| NOFL | SPTD | ROWR | HOLA |
| OWA  | NORD | NORF | BUSH |
| TRES | CATH | COTU |      |
| GOEA | AMEE | WRTN |      |
| GABN | BEUR | WTSW |      |

BTUR

side-blacked

COTTONWOOD

coast horn 12.

coyote (sc.)

Behr's <sup>HT</sup> <sup>HT</sup> 1

Anise II

Perplexing i

A n i z e t <sup>HT</sup> II

Tiger

Lady i

Sara's <sup>HT</sup> <sup>HT</sup> II

Flint <sup>HT</sup> 0 i

Check skip II

am men, guinea  
Picmon, solanum, aemga  
Flower. lat vest, cal mal, cal spi  
mim aur, pan vic, tied re, end crass  
en fas, es cal, can tom, sal m, in  
erodium, Dic, car, prim, cle, no, pet,  
allium, Pla, ore, sis, bel, cal, cil  
cryptanth, a, cas, da, pha, ac, set, sal  
Ade fas, lasthenia, india, wuc, anip



# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor: Melissa Busby Date: 3/3/16  
 Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch Site Visit No: 2  
 Area Surveyed S, W, X Acres Surveyed approx 72 Survey Time: 7.25 Acres per Hour: approx 10  
 Other Surveyors Present: Darin Busby, Diana Saucedo

| Field Conditions |              |                  |                  |             |
|------------------|--------------|------------------|------------------|-------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
| Start            | 0900         | 65               | 0-2              | 0% (haze)   |
| End              | 1615         | 72               | 3-7              | 0% (haze)   |
| Start            |              |                  |                  |             |
| End              |              |                  |                  |             |

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

CSS, NNG, CC, CHAP, EW, B6, DIST

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

| Butterfly Species                                            | No. | Butterfly Species                                               | No. |
|--------------------------------------------------------------|-----|-----------------------------------------------------------------|-----|
| <b>Checkerspots</b>                                          |     | <b>Hairstreaks</b>                                              |     |
| California patch ( <i>Chlosyne californica</i> )             |     | great purple hairstreak ( <i>Atlides halesus corcorani</i> )    |     |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      | 1   | brown elfin ( <i>Callophrys augustinus</i> )                    |     |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |     | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) | 2   |
| chalcid checkerspot ( <i>E. chalcidona chalcidona</i> )      |     | gray hairstreak ( <i>Strymon melinus pudica</i> )               |     |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |     | <b>Ladies/Admirals</b>                                          |     |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |     | California sister ( <i>Adelpha bredowii californica</i> )       |     |
| <b>Blues</b>                                                 |     | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |     |
| western pygmy-blue ( <i>Brephidium exila</i> )               |     | west coast lady ( <i>Vanessa annabella</i> )                    | 3   |
| western tailed blue ( <i>Evers amyntula</i> )                |     | red admiral ( <i>V. atalanta rubria</i> )                       |     |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     | 4   | painted lady ( <i>V. cardui</i> )                               |     |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |     | American (Virginia) lady ( <i>V. virginensis</i> )              | 9   |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |     | unidentified lady ( <i>Vanessa</i> sp.)                         | 4   |
| marine blue ( <i>Leptotes marina</i> )                       | 5   | <b>Swallowtails</b>                                             |     |
| unidentified blue                                            |     | pale swallowtail ( <i>Papilio eurymedon</i> )                   |     |
| <b>Whites</b>                                                |     | western tiger swallowtail ( <i>P. rutulus</i> )                 |     |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | 22  | anise swallowtail ( <i>P. zelicaon</i> )                        |     |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |     | <b>Miscellaneous</b>                                            |     |
| common California ringlet ( <i>Coenonympha californica</i> ) | 13  | monarch ( <i>Danaus plexippus</i> )                             |     |
| cabbage white ( <i>Pieris rapae</i> )                        |     | common buckeye ( <i>Junonia coenia grisea</i> )                 |     |
| checkered (common) white ( <i>Pontia protodice</i> )         |     | mourning cloak ( <i>Nymphalis antiopa</i> )                     |     |
| spring white ( <i>P. sisymbria</i> )                         |     | <b>Skippers</b>                                                 |     |
| unidentified white                                           |     | funereal duskywing ( <i>Erynnis funeralis</i> )                 | 8   |
| <b>Metalmarks</b>                                            |     | mournful duskywing ( <i>Erynnis tristis</i> )                   |     |
| Behr's metalmark ( <i>Apodemis mormo virgulti</i> )          | 28  | fiery skipper ( <i>Hylephila phyleus</i> )                      |     |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |     | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    |     |
| <b>Sulphurs</b>                                              |     | <b>Other</b>                                                    |     |
| orange sulphur ( <i>Colias eurytheme</i> )                   |     | <u>Duskywing sp</u>                                             | 4   |
| sleepy orange ( <i>Eurema nicippe</i> )                      |     |                                                                 |     |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |     |                                                                 |     |
| unidentified sulphur                                         | 8   |                                                                 |     |
| Column Subtotal                                              | 81  | Column Subtotal                                                 | 30  |
|                                                              |     | Total                                                           | 111 |



# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor: Melissa Busby Date: 3/2/16  
 Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch Site Visit No: #2  
 Area Surveyed T+east X Acres Surveyed approx 65 Survey Time: 7.16 hrs Acres per Hour: approx 9  
 Other Surveyors Present: none

| Field Conditions |              |                  |                  |                 |
|------------------|--------------|------------------|------------------|-----------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover     |
| Start            | 0920         | 77               | 1-3              | 0% (light haze) |
| End              | 1630         | 80               | 3-5              | 0% (light haze) |
| Start            |              |                  |                  |                 |
| End              |              |                  |                  |                 |

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

CSS, NN6, CC, CHAP, BG, DIST

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

| Butterfly Species                                            | No. | Butterfly Species                                               | No. |
|--------------------------------------------------------------|-----|-----------------------------------------------------------------|-----|
| <b>Checkerspots</b>                                          |     | <b>Hairstreaks</b>                                              |     |
| California patch ( <i>Chlosyne californica</i> )             |     | great purple hairstreak ( <i>Atides halesus corcorani</i> )     |     |
| Gabb's checkerspot ( <i>C. gabbi</i> )                       | 2   | brown elfin ( <i>Callophrys augustinus</i> )                    |     |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |     | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |     |
| chalcedon checkerspot ( <i>E. chalcedona chalcedona</i> )    |     | gray hairstreak ( <i>Strymon melinus pudica</i> )               |     |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |     | <b>Ladies/Admirals</b>                                          |     |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |     | California sister ( <i>Adelpha bredowii californica</i> )       |     |
| <b>Blues</b>                                                 |     | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |     |
| western pygmy-blue ( <i>Brachidium exila</i> )               |     | west coast lady ( <i>Vanessa annabella</i> )                    | 1   |
| western tailed blue ( <i>Everes amyntula</i> )               |     | red admiral ( <i>V. atalanta rubria</i> )                       |     |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     | 4   | painted lady ( <i>V. cardui</i> )                               |     |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |     | American (Virginia) lady ( <i>V. virginensis</i> )              | 3   |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |     | unidentified lady ( <i>Vanessa</i> sp.)                         |     |
| marine blue ( <i>Leptotes marina</i> )                       | 7   | <b>Swallowtails</b>                                             |     |
| unidentified blue                                            |     | pale swallowtail ( <i>Papilio eurymedon</i> )                   | 2   |
| <b>Whites</b>                                                |     | western tiger swallowtail ( <i>P. rutulus</i> )                 |     |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | 14  | anise swallowtail ( <i>P. zelicaon</i> )                        | 1   |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |     | <b>Miscellaneous</b>                                            |     |
| common California ringlet ( <i>Coenonympha californica</i> ) |     | monarch ( <i>Danaus plexippus</i> )                             |     |
| cabbage white ( <i>Pieris rapae</i> )                        |     | common buckeye ( <i>Junonia coenia grisea</i> )                 |     |
| checkered (common) white ( <i>Pontia protodice</i> )         |     | mourning cloak ( <i>Nymphalis antiopa</i> )                     |     |
| spring white ( <i>P. sisymbrii</i> )                         |     | <b>Skippers</b>                                                 |     |
| unidentified white                                           |     | funereal duskywing ( <i>Erynnis funeralis</i> )                 | 3   |
| <b>Metamarks</b>                                             |     | mournful duskywing ( <i>Erynnis tristis</i> )                   |     |
| Behr's metamark ( <i>Apodemia mormo virgultii</i> )          | 22  | fiery skipper ( <i>Hylephila phyleus</i> )                      |     |
| Wright's metamark ( <i>Calephelis wrighti</i> )              |     | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    | 12  |
| <b>Sulphurs</b>                                              |     | <b>Other</b>                                                    |     |
| orange sulphur ( <i>Colias eurytheme</i> )                   |     | cabbage white                                                   | 1   |
| sleepy orange ( <i>Eurema nicippe</i> )                      |     | Harford's sulphur                                               | 4   |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |     |                                                                 |     |
| unidentified sulphur                                         |     |                                                                 |     |
| Column Subtotal                                              | 49  | Column Subtotal                                                 | 27  |
|                                                              |     | Total                                                           | 76  |



# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor: Darin Busby Date: 3/3/16  
 Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch Site Visit No: 2  
 Area Surveyed 4 Acres Surveyed ~5 Survey Time: 40 min Acres per Hour: ~8  
 Other Surveyors Present: John Lave surveyed the rest of this polygon earlier today. Entire polygon completed.

| Field Conditions |              |                  |                  |                      |
|------------------|--------------|------------------|------------------|----------------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover          |
| Start            | <u>1550</u>  | <u>75</u>        | <u>3-7</u>       | <u>moderate haze</u> |
| End              | <u>1630</u>  | <u>72</u>        | <u>3-7</u>       | <u>moderate haze</u> |
| Start            |              |                  |                  |                      |
| End              |              |                  |                  |                      |

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

Chamise chaparral

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

| Butterfly Species                                            | No.       | Butterfly Species                                               | No.       |
|--------------------------------------------------------------|-----------|-----------------------------------------------------------------|-----------|
| <b>Checkerspots</b>                                          |           | <b>Hairstreaks</b>                                              |           |
| California patch ( <i>Chlosyne californica</i> )             |           | great purple hairstreak ( <i>Atlides halesus corcoranti</i> )   |           |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      |           | brown elfin ( <i>Callophrys augustinus</i> )                    |           |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |           | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |           |
| chalcedon checkerspot ( <i>E. chalcedona chalcedona</i> )    |           | gray hairstreak ( <i>Strymon melinus pudica</i> )               | 1         |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |           | <b>Ladies/Admirals</b>                                          |           |
| Myllitta crescent ( <i>Phyciodes myllitta</i> )              |           | California sister ( <i>Adelpha bredowii californica</i> )       |           |
| <b>Blues</b>                                                 |           | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |           |
| western pygmy-blue ( <i>Brephidium exila</i> )               |           | west coast lady ( <i>Vanessa annabella</i> )                    | 1         |
| western tailed blue ( <i>Everes amyntula</i> )               |           | red admiral ( <i>V. atalanta rubria</i> )                       | 1         |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     |           | painted lady ( <i>V. cardui</i> )                               |           |
| Edward's blue ( <i>Hemiarctus cernaunus gys</i> )            |           | American (Virginia) lady ( <i>V. virginensis</i> )              | 1         |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |           | unidentified lady ( <i>Vanessa</i> sp.)                         |           |
| marine blue ( <i>Leptotes marina</i> )                       |           | <b>Swallowtails</b>                                             |           |
| unidentified blue                                            |           | pale swallowtail ( <i>Papilio eurymedon</i> )                   |           |
| <b>Whites</b>                                                |           | western tiger swallowtail ( <i>P. rutulus</i> )                 |           |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | 4         | anise swallowtail ( <i>P. zelicaon</i> )                        |           |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |           | <b>Miscellaneous</b>                                            |           |
| common California ringlet ( <i>Coenonympha californica</i> ) | 4         | monarch ( <i>Danaus plexippus</i> )                             |           |
| cabbage white ( <i>Pieris rapae</i> )                        |           | common buckeye ( <i>Junonia coenia grisea</i> )                 |           |
| checkered (common) white ( <i>Pontia protodice</i> )         |           | mourning cloak ( <i>Nymphalis antiopa</i> )                     |           |
| spring white ( <i>P. sisymbrii</i> )                         |           | <b>Skippers</b>                                                 |           |
| unidentified white                                           |           | funereal duskywing ( <i>Erynnis funeralis</i> )                 | 2         |
| <b>Metalmarks</b>                                            |           | mournful duskywing ( <i>Erynnis tristis</i> )                   |           |
| Behr's metalmark ( <i>Apodemis mormo virgulti</i> )          | 2         | fiery skipper ( <i>Hylephila phyleus</i> )                      |           |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |           | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    |           |
| <b>Sulphurs</b>                                              |           | <b>Other</b>                                                    |           |
| orange sulphur ( <i>Colias eurytheme</i> )                   |           |                                                                 |           |
| sleepy orange ( <i>Eurema nicippe</i> )                      |           |                                                                 |           |
| cloudless sulfur ( <i>Phoebus sanna marcellina</i> )         |           |                                                                 |           |
| unidentified sulphur                                         |           |                                                                 |           |
| <b>Column Subtotal</b>                                       | <b>10</b> | <b>Column Subtotal</b>                                          | <b>6</b>  |
|                                                              |           | <b>Total</b>                                                    | <b>16</b> |

\* Blainville's horned lizard (UTM = 32.67993, -116.90615)



# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor: John Lorio

Date: 3-3-16

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

Site Visit No: 2

Area Surveyed Polygon U Acres Surveyed About 40

Survey Time: 3.5 hours

Acres per Hour: 11.4

Other Surveyors Present: \_\_\_\_\_

## Field Conditions

|       | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover           |
|-------|--------------|------------------|------------------|-----------------------|
| Start | <u>0900</u>  | <u>64</u>        | <u>1 mph, W</u>  | <u>50% high haze</u>  |
| End   | <u>1230</u>  | <u>80</u>        | <u>1-5 mph</u>   | <u>100% high haze</u> |
| Start |              |                  |                  |                       |
| End   |              |                  |                  |                       |

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

Chaparral: Adenostema fasciculatum > Quercus berb., Ceanothus tomentosus > Heteromeles arbutifolia, Salvia manzii

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

| Butterfly Species                                            | No.       | Butterfly Species                                               | No.       |
|--------------------------------------------------------------|-----------|-----------------------------------------------------------------|-----------|
| <b>Checkerspots</b>                                          |           | <b>Hairstreaks</b>                                              |           |
| California patch ( <i>Chlosyne californica</i> )             |           | great purple hairstreak ( <i>Atlides halesus corcorani</i> )    |           |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      |           | brown elfin ( <i>Callophrys augustinus</i> )                    |           |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |           | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |           |
| chalcid checkerspot ( <i>E. chalcidona chalcidona</i> )      |           | gray hairstreak ( <i>Strymon melinus pudica</i> )               |           |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |           | <b>Ladies/Admirals</b>                                          |           |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |           | California sister ( <i>Adelpha bredowii californica</i> )       |           |
| <b>Blues</b>                                                 |           | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |           |
| western pygmy-blue ( <i>Brephidium exila</i> )               |           | west coast lady ( <i>Vanessa annabella</i> )                    |           |
| western tailed blue ( <i>Everes amyntula</i> )               |           | red admiral ( <i>V. atalanta rubria</i> )                       |           |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     |           | painted lady ( <i>V. cardui</i> )                               |           |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |           | American (Virginia) lady ( <i>V. virginensis</i> )              |           |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |           | unidentified lady ( <i>Vanessa</i> sp.)                         |           |
| marine blue ( <i>Leptotes marina</i> )                       |           | <b>Swallowtails</b>                                             |           |
| unidentified blue                                            | <u>1</u>  | pale swallowtail ( <i>Papilio eurymedon</i> )                   |           |
| <b>Whites</b>                                                |           | western tiger swallowtail ( <i>P. rutulus</i> )                 |           |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | <u>20</u> | anise swallowtail ( <i>P. zelicaon</i> )                        |           |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |           | <b>Miscellaneous</b>                                            |           |
| common California ringlet ( <i>Coenonympha californica</i> ) |           | monarch ( <i>Danaus plexippus</i> )                             |           |
| cabbage white ( <i>Pieris rapae</i> )                        |           | common buckeye ( <i>Junonia coenia grisea</i> )                 |           |
| checkered (common) white ( <i>Pontia protodice</i> )         |           | mourning cloak ( <i>Nymphalis antiopa</i> )                     |           |
| spring white ( <i>P. sisymbrii</i> )                         |           | <b>Skippers</b>                                                 |           |
| unidentified white                                           |           | funereal duskywing ( <i>Erynnis funeralis</i> )                 | <u>1</u>  |
| <b>Metalmarks</b>                                            |           | mournful duskywing ( <i>Erynnis tristis</i> )                   |           |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | <u>2</u>  | fiery skipper ( <i>Hylephila phyleus</i> )                      |           |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |           | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    | <u>5</u>  |
| <b>Sulphurs</b>                                              |           | Other <u>Coenonympha tullia</u>                                 | <u>2</u>  |
| orange sulphur ( <i>Colias eurytheme</i> )                   |           |                                                                 |           |
| sleepy orange ( <i>Eurema nicippe</i> ) <u>Nathalis iole</u> | <u>1</u>  |                                                                 |           |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |           |                                                                 |           |
| unidentified sulphur                                         | <u>1</u>  |                                                                 |           |
| Column Subtotal                                              | <u>25</u> | Column Subtotal                                                 | <u>8</u>  |
|                                                              |           | Total                                                           | <u>33</u> |



## 2016 Quino Checkerspot Butterfly Survey Form

**Surveyor:** Jasmine Bakker **Date:** 3/4/2016  
**Site Name:** JPD-08 Proctor Valley – Village 14 of Otay Ranch (Area V) **Site Visit No:** 2  
**Acres Surveyed** 44 **Survey Time:** 4 hours 30 minutes **Acres per Hour:** 9.8  
**Other Surveyors Present:** \_\_\_\_\_

| Field Conditions |              |                  |                  |             |
|------------------|--------------|------------------|------------------|-------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
| Start            | 1005         | 65               | 0                | 20% haze    |
| End              | 1435         | 74               | 0-3              | 10% haze    |
| Start            |              |                  |                  |             |
| End              |              |                  |                  |             |

| Vegetation Communities Surveyed (inc. dominant spp.)                                                     |
|----------------------------------------------------------------------------------------------------------|
| Chamise & Southern Mixed Chaparral (dominated by Ade fas) and Non-native grassland (dominated by Bromus) |
|                                                                                                          |

| Host Plants                                                                           | Obs. | Nectar Plants                                                    | Obs. |
|---------------------------------------------------------------------------------------|------|------------------------------------------------------------------|------|
| dwarf plantain ( <i>Plantago erecta</i> )                                             | X    | popcorn flower ( <i>Cryptantha/Plagiobothrys</i> spp.)           | X    |
| purple owl's clover ( <i>Castilleja exserta</i> )                                     |      | goldfields ( <i>Lasthenia</i> spp.)                              |      |
| snapdragon ( <i>Antirrhinum coulterianum</i> )                                        |      | goldenstar ( <i>Muilla</i> spp.)                                 |      |
| birds-beak ( <i>Cordylanthus rigidus</i> )                                            |      | fiddleneck ( <i>Amsinckia menziesii</i> var. <i>intermedia</i> ) | X    |
| woolly plantain ( <i>Plantago patagonica</i> )                                        |      | onion ( <i>Allium</i> spp.)                                      | X    |
| Chinese houses ( <i>Collinsia</i> spp.)                                               |      | buckwheat ( <i>Eriogonum fasciculatum</i> )                      | X    |
|                                                                                       |      | ground pink ( <i>Linanthus dianthiflorus</i> )                   | X    |
| Host Plant Mapping Updated (circle) <u>Yes</u> No                                     |      | New Area or Existing Area (circle) New <u>Existing</u>           | Both |
| Species updated (list) A few patches of 10Pe and 100Pe mapped along western perimeter |      |                                                                  |      |

| Butterfly Species                                            | No.       | Butterfly Species                                               | No.        |
|--------------------------------------------------------------|-----------|-----------------------------------------------------------------|------------|
| <b>Checkerspots</b>                                          |           | <b>Hairstreaks</b>                                              |            |
| California patch ( <i>Chlosyne californica</i> )             |           | great purple hairstreak ( <i>Atlides halesus corcorani</i> )    |            |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      |           | brown elfin ( <i>Callophrys augustinus</i> )                    |            |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |           | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |            |
| chalcedon checkerspot ( <i>E. chalcedona chalcedona</i> )    |           | gray hairstreak ( <i>Strymon melinus pudica</i> )               |            |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |           | <b>Ladies/Admirals</b>                                          |            |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |           | California sister ( <i>Adelpha bredowii californica</i> )       |            |
| <b>Blues</b>                                                 |           | Lorquin's admiral ( <i>Limnitis lorquini</i> )                  |            |
| western pygmy-blue ( <i>Brephidium exila</i> )               |           | west coast lady ( <i>Vanessa annabella</i> )                    | 2          |
| western tailed blue ( <i>Everes amyntula</i> )               |           | red admiral ( <i>V. atalanta rubria</i> )                       |            |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     | 3         | painted lady ( <i>V. cardui</i> )                               |            |
| Edward's blue ( <i>Hemiarctus ceraunus gyas</i> )            |           | American (Virginia) lady ( <i>V. virginensis</i> )              |            |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   | 1         | unidentified lady ( <i>Vanessa</i> sp.)                         | 1          |
| marine blue ( <i>Leptotes marina</i> )                       |           | <b>Swallowtails</b>                                             |            |
| unidentified blue                                            |           | pale swallowtail ( <i>Papilio eurymedon</i> )                   |            |
| <b>Whites</b>                                                |           | western tiger swallowtail ( <i>P. rutulus</i> )                 |            |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | 50        | anise swallowtail ( <i>P. zelicaon</i> )                        |            |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |           | <b>Miscellaneous</b>                                            |            |
| common California ringlet ( <i>Coenonympha californica</i> ) | 2         | monarch ( <i>Danaus plexippus</i> )                             |            |
| cabbage white ( <i>Pieris rapae</i> )                        |           | common buckeye ( <i>Junonia coenia grisea</i> )                 | 3          |
| checkered (common) white ( <i>Pontia protodice</i> )         |           | mourning cloak ( <i>Nymphalis antiopa</i> )                     |            |
| spring white ( <i>P. sisymbrii</i> )                         |           | <b>Skippers</b>                                                 |            |
| unidentified white                                           |           | funereal duskywing ( <i>Erynnis funeralis</i> )                 | 7          |
| <b>Metalmarks</b>                                            |           | mournful duskywing ( <i>Erynnis tristis</i> )                   |            |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | 16        | fiery skipper ( <i>Hylephila phyleus</i> )                      |            |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |           | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    | 11         |
| <b>Sulphurs</b>                                              |           | <b>Other</b>                                                    |            |
| orange sulphur ( <i>Colias eurytheme</i> )                   |           | Arizona Powdered Skipper                                        | 2          |
| sleepy orange ( <i>Eurema nicippe</i> )                      |           |                                                                 |            |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |           |                                                                 |            |
| unidentified sulphur                                         | 7         |                                                                 |            |
| <b>Column Subtotal</b>                                       | <b>79</b> | <b>Column Subtotal</b>                                          | <b>26</b>  |
|                                                              |           | <b>Total</b>                                                    | <b>105</b> |



JPD-08 Procter Valley

4 Mar 2016

Village 14 QCB Survey #2 @ Area V (4/1/00)

UB

START: 1005, 65°, 0 mph wind, 20% cc-haze

STOP: 1435, 74°, 0-3 mph, 10% cc

Butterflies

Sara's Oranges: p

Checked Skupper ~~||||~~ (11)

W. Coast Lady II (2)

Southern Blue III (3)

Sulohur sp. ~~||||~~ || (7)

Behr's metalmark ~~||||~~ ~~||||~~ ~~||||~~ (16)

Common Buckeye || (3)

Lady sp. | 1

Armen Blue 1 (1)

Fun, dusky wing ~~||||~~ (7)

Calif Ringlet 11 (2)

SKIPPER sp. 11 (2) = Arizona Powdered Skipper

Plant Sp. - flowering

Please\*

## Wildlife

Allium sp. \* Acacia Castanea Viola SPTO CAK

Die cap Lindia\* Cea km Ansimen\* Lonup CALT LEFT

Hydrophilic Calcil Pseudocal Cypriantha\* Cotcor WREN NOMO

Son asp Silgal Calmar Salmar cora 345H

ERO mos/Eric Sisymbrium Phorm. mem Sdmel CAGN CAQU

Eri pras\* Mir' lae Pectoranga Hdsco WEME BGM

Isomen Escal Anacard Lupinus BEWR

Solanum Mimosa Gallium Bahoe COAD

Yueshi Mal fas Hirinc Oxn cal ~~Commissioner~~



# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor: Dawn Busby Date: 3/3/16  
 Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch Site Visit No: 2  
 Area Surveyed W, X Acres Surveyed ~35 Survey Time: 3.5 Acres per Hour: ~10  
 Other Surveyors Present: Melissa Busby, Diana Sampedo / Entire polygon completed

| Field Conditions |              |                  |                  |               |
|------------------|--------------|------------------|------------------|---------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover   |
| Start            | 1220         | 80               | 3-7              | moderate haze |
| End              | 1550         | 75               | 3-7              | moderate haze |
| Start            |              |                  |                  |               |
| End              |              |                  |                  |               |

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

Chamise chaparral, coastal sage scrub, grassland

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

| Butterfly Species                                            | No.       | Butterfly Species                                               | No.       |
|--------------------------------------------------------------|-----------|-----------------------------------------------------------------|-----------|
| <b>Checkerspots</b>                                          |           | <b>Hairstreaks</b>                                              |           |
| California patch ( <i>Chlosyne californica</i> )             |           | great purple hairstreak ( <i>Atlides halesus corcorani</i> )    |           |
| Gabb's checkerspot ( <i>C. gabbi</i> )                       |           | brown elfin ( <i>Callophrys augustinus</i> )                    |           |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |           | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |           |
| chalcidion checkerspot ( <i>E. chalcidion chalcidion</i> )   |           | gray hairstreak ( <i>Strymon melinus pudica</i> )               | 2         |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |           | <b>Ladies/Admirals</b>                                          |           |
| Myiitta crescent ( <i>Phyciodes myiitta</i> )                |           | California sister ( <i>Adelpha bredowii californica</i> )       |           |
| <b>Blues</b>                                                 |           | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |           |
| western pygmy-blue ( <i>Brephidium exilis</i> )              |           | west coast lady ( <i>Vanessa annabella</i> )                    | 6         |
| western tailed blue ( <i>Evers amyntula</i> )                |           | red admiral ( <i>V. atalanta rubria</i> )                       |           |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     | 2         | painted lady ( <i>V. cardui</i> )                               | 4         |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |           | American (Virginia) lady ( <i>V. virginensis</i> )              |           |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |           | unidentified lady ( <i>Vanessa</i> sp.)                         |           |
| marine blue ( <i>Leptotes marina</i> )                       |           | <b>Swallowtails</b>                                             |           |
| unidentified blue                                            |           | pale swallowtail ( <i>Papilio eurymedon</i> )                   |           |
| <b>Whites</b>                                                |           | western tiger swallowtail ( <i>P. rutulus</i> )                 |           |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | 23        | anise swallowtail ( <i>P. zelicaon</i> )                        |           |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |           | <b>Miscellaneous</b>                                            |           |
| common California ringlet ( <i>Coenonympha californica</i> ) |           | monarch ( <i>Danaus plexippus</i> )                             |           |
| cabbage white ( <i>Pieris rapae</i> )                        |           | common buckeye ( <i>Junonia coenia grisea</i> )                 |           |
| checkered (common) white ( <i>Pontia protodice</i> )         |           | mourning cloak ( <i>Nymphalis antiopa</i> )                     |           |
| spring white ( <i>P. sisymbrii</i> )                         | 2         | <b>Skippers</b>                                                 |           |
| unidentified white                                           | 2         | funereal duskywing ( <i>Erynnis funeralis</i> )                 | 4         |
| <b>Metalmarks</b>                                            |           | mournful duskywing ( <i>Erynnis tristis</i> )                   |           |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | 10        | fiery skipper ( <i>Hylephila phyleus</i> )                      |           |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |           | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    | 1         |
| <b>Sulphurs</b>                                              |           | <b>Other</b>                                                    |           |
| orange sulphur ( <i>Colias eurytheme</i> )                   |           | unidentified moth                                               | 5         |
| sleepy orange ( <i>Eurema nicippe</i> )                      |           |                                                                 |           |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |           |                                                                 |           |
| unidentified sulphur                                         | 5         |                                                                 |           |
| <b>Column Subtotal</b>                                       | <b>44</b> | <b>Column Subtotal</b>                                          | <b>22</b> |
|                                                              |           | <b>Total</b>                                                    | <b>66</b> |



## 2016 Quino Checkerspot Butterfly Survey Form

Surveyor

: Chaz Brungaber

Date:

3/2/16Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch

Site Visit No:

2Area Surveyed Y, Z, DD Acres Surveyed 148Survey Time: 7hr 50minAcres per Hour: 18.89 (6.3 acre/pp/hr)Other Surveyors Present: Erica Harris, Andrew Forcher, Ben Rosenbaum (in training)

## Field Conditions

|       | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
|-------|--------------|------------------|------------------|-------------|
| Start | <u>0830</u>  | <u>67</u>        | <u>0-3</u>       | <u>20%</u>  |
| End   | <u>1620</u>  | <u>67</u>        | <u>1-3</u>       | <u>10%</u>  |
| Start |              |                  |                  |             |
| End   |              |                  |                  |             |

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

Chamise chap (chamise, Quercus berb., Malosma), NNG, native bunch grass (Stipa sp., Eriogonum fasc., blue dicks, Cryptantha sp.)

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

| Butterfly Species                                            | No.               | Butterfly Species                                               | No.        |
|--------------------------------------------------------------|-------------------|-----------------------------------------------------------------|------------|
| <b>Checkerspots</b>                                          |                   | <b>Hairstreaks</b>                                              |            |
| California patch ( <i>Chlosyne californica</i> )             |                   | great purple hairstreak ( <i>Atides halesus corcorani</i> )     |            |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      | <u>111</u>        | brown elfin ( <i>Callophrys augustinus</i> )                    |            |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |                   | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) | <u>1</u>   |
| chalcid checkerspot ( <i>E. chalcidona chalcidona</i> )      |                   | gray hairstreak ( <i>Strymon melinus pudica</i> )               |            |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |                   | <b>Ladies/Admirals</b>                                          |            |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |                   | California sister ( <i>Adelpha bredowii californica</i> )       |            |
| <b>Blues</b>                                                 |                   | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |            |
| western pygmy-blue ( <i>Brephidium exila</i> )               |                   | west coast lady ( <i>Vanessa annabella</i> )                    |            |
| western tailed blue ( <i>Everes amyntula</i> )               |                   | red admiral ( <i>V. atalanta rubria</i> )                       | <u>1</u>   |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     | <u>1111111111</u> | painted lady ( <i>V. cardui</i> )                               |            |
| Edward's blue ( <i>Hemiarctus ceraunus gyas</i> )            |                   | American (Virginia) lady ( <i>V. virginensis</i> )              |            |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |                   | unidentified lady ( <i>Vanessa</i> sp.)                         | <u>1</u>   |
| marine blue ( <i>Leptotes marina</i> )                       |                   | <b>Swallowtails</b>                                             |            |
| unidentified blue                                            | <u>1111</u>       | pale swallowtail ( <i>Papilio eurymedon</i> )                   | <u>11</u>  |
| <b>Whites</b>                                                |                   | western tiger swallowtail ( <i>P. rutulus</i> )                 |            |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | <u>111</u>        | anise swallowtail ( <i>P. zelicaon</i> )                        |            |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            | <u>1111111111</u> | <b>Miscellaneous</b>                                            |            |
| common California ringlet ( <i>Coenonympha californica</i> ) | <u>1111</u>       | monarch ( <i>Danaus plexippus</i> )                             |            |
| cabbage white ( <i>Pieris rapae</i> )                        |                   | common buckeye ( <i>Junonia coenia grisea</i> )                 |            |
| checkered (common) white ( <i>Pontia protodice</i> )         |                   | mourning cloak ( <i>Nymphalis antiopa</i> )                     |            |
| spring white ( <i>P. sisymbrii</i> )                         | <u>1</u>          | <b>Skippers</b>                                                 |            |
| unidentified white                                           | <u>11</u>         | funereal duskywing ( <i>Erynnis funeralis</i> )                 | <u>11</u>  |
| <b>Metalmarks</b>                                            |                   | mournful duskywing ( <i>Erynnis tristis</i> )                   | <u>11</u>  |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | <u>1111111111</u> | fiery skipper ( <i>Hylephila phyleus</i> )                      |            |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |                   | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    | <u>1</u>   |
| <b>Sulphurs</b>                                              |                   | <b>Other</b>                                                    |            |
| orange sulphur ( <i>Colias eurytheme</i> )                   |                   |                                                                 |            |
| sleepy orange ( <i>Eurema nicippe</i> )                      |                   |                                                                 |            |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |                   |                                                                 |            |
| unidentified sulphur                                         | <u>111111</u>     |                                                                 |            |
| Column Subtotal                                              | <u>94</u>         | Column Subtotal                                                 | <u>11</u>  |
|                                                              |                   | Total                                                           | <u>105</u> |







JPD 08 Erica H  
QUB #2 (Y, Z, DD) 312/116  
Start: 840, 67°F, 1-3; 20%  
Stop: 1630, 67°F, 1-3; 10%  
Bibs: Onez B, Andrew B.  
Ben R (Supervised)

Row R Bush Nono Ance  
RCSP CATH WREN WSP  
GALT WOME KITA COHU  
YRWA Bush LENO HOPI  
NOFL TRES Bagn

Coyote BWR  
Cottonwood side-blotch  
Blue sp III painted II  
Sulphur III red admiral I  
Behr's <sup>III</sup> <sup>III</sup> Lady sp. II  
GA ringlet <sup>III</sup> <sup>III</sup> <sup>III</sup> <sup>III</sup> check skip I  
Sara's <sup>III</sup> <sup>III</sup> <sup>III</sup> <sup>III</sup> marine I  
Funeral <sup>III</sup> "white sp. I"

Flower: Bah lac, Dic cap, acm ga,  
mir laev, Gramesylce, en tas, cal mal  
Hir inc, Sisymprium, Silanum,  
Ipha cic, Lcm vest, mal tas, mopa  
Cryptantha, pmdale, sul mun, es cal,  
Hir inc, Hed cre, cal cilica, sat  
mimaur, sam na, allum, Sista,  
Castellia spam mon, Lin dia *rite in the Rain.*  
ara cir, Sel gal, Lasthenia



## 2016 Quino Checkerspot Butterfly Survey Form

**Surveyor:** John Lovio **Date:** 3-10-16  
**Site Name:** JPD-08 Proctor Valley – Village 14 of Otay Ranch **Site Visit No:** 3  
**Area Surveyed** Polygon A **Acres Surveyed** 55 **Survey Time:** 6.25 hours **Acres per Hour:** 8.8  
**Other Surveyors Present:** none

| Field Conditions |              |                  |                  |                    |
|------------------|--------------|------------------|------------------|--------------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover        |
| Start            | 0945         | 66               | 1, southwest     | 50% high thin haze |
| End              | 1555         | High 78 to 70    | 5, southwest     | 100% clouds        |
| Start            |              |                  |                  |                    |
| End              |              |                  |                  |                    |

| Vegetation Communities Surveyed (inc. dominant spp.)                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Coastal sage scrub: <i>Artemisia californica</i> , <i>Eriogonum fasciculatum</i> , <i>Malosma laurina</i> , <i>Salvia apiana</i> , <i>Bahiopsis laciniata</i> . |
|                                                                                                                                                                 |

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

| Butterfly Species                                            | No.       | Butterfly Species                                               | No.       |
|--------------------------------------------------------------|-----------|-----------------------------------------------------------------|-----------|
| <b>Checkerspots</b>                                          |           | <b>Hairstreaks</b>                                              |           |
| California patch ( <i>Chlosyne californica</i> )             |           | great purple hairstreak ( <i>Atlides halesus corcorani</i> )    |           |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      |           | brown elfin ( <i>Callophrys augustinus</i> )                    |           |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |           | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |           |
| chalcedon checkerspot ( <i>E. chalcedona chalcedona</i> )    |           | gray hairstreak ( <i>Strymon melinus pudica</i> )               | 1         |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |           | <b>Ladies/Admirals</b>                                          |           |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |           | California sister ( <i>Adelpha bredowii californica</i> )       |           |
| <b>Blues</b>                                                 |           | Lorquin's admiral ( <i>Limnitis lorquini</i> )                  |           |
| western pygmy-blue ( <i>Brephidium exila</i> )               |           | west coast lady ( <i>Vanessa annabella</i> )                    |           |
| western tailed blue ( <i>Everes amyntula</i> )               |           | red admiral ( <i>V. atalanta rubria</i> )                       |           |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     | 3         | painted lady ( <i>V. cardui</i> )                               |           |
| Edward's blue ( <i>Hemiarctus ceraunus gyas</i> )            |           | American (Virginia) lady ( <i>V. virginensis</i> )              | 2         |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   | 3         | unidentified lady ( <i>Vanessa</i> sp.)                         |           |
| marine blue ( <i>Leptotes marina</i> )                       | 2         | <b>Swallowtails</b>                                             |           |
| unidentified blue                                            | 1         | pale swallowtail ( <i>Papilio eurymedon</i> )                   | 1         |
| <b>Whites</b>                                                |           | western tiger swallowtail ( <i>P. rutulus</i> )                 |           |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | 17        | anise swallowtail ( <i>P. zelicaon</i> )                        |           |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |           | <b>Miscellaneous</b>                                            |           |
| common California ringlet ( <i>Coenonympha californica</i> ) | 2         | monarch ( <i>Danaus plexippus</i> )                             |           |
| cabbage white ( <i>Pieris rapae</i> )                        |           | common buckeye ( <i>Junonia coenia grisea</i> )                 |           |
| checkered (common) white ( <i>Pontia protodice</i> )         |           | mourning cloak ( <i>Nymphalis antiopa</i> )                     |           |
| spring white ( <i>P. sisymbrii</i> )                         |           | <b>Skippers</b>                                                 |           |
| unidentified white                                           | 2         | funereal duskywing ( <i>Erynnis funeralis</i> )                 | 1         |
| <b>Metalmarks</b>                                            |           | mournful duskywing ( <i>Erynnis tristis</i> )                   |           |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | 12        | fiery skipper ( <i>Hylephila phyleus</i> )                      |           |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |           | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    |           |
| <b>Sulphurs</b>                                              |           | <b>Other</b>                                                    |           |
| orange sulphur ( <i>Colias eurytheme</i> )                   | 1         | Unidentified <i>Erynnis</i>                                     | 6         |
| sleepy orange ( <i>Eurema nicippe</i> )                      |           |                                                                 |           |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |           |                                                                 |           |
| unidentified sulphur                                         | 4         |                                                                 |           |
| <b>Column Subtotal</b>                                       | <b>47</b> | <b>Column Subtotal</b>                                          | <b>11</b> |
|                                                              |           | <b>Total</b>                                                    | <b>58</b> |

# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor

Chez Brungaber

Date:

3/11/16

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

Site Visit No:

3

Area Surveyed AA (partial) Acres Surveyed 40

Survey Time: 4hr 15min

Acres per Hour: 9.4

Other Surveyors Present: Griffin Brungaber (supervised)

## Field Conditions

|       | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
|-------|--------------|------------------|------------------|-------------|
| Start | 1100         | 68               | 2-7              | 25%         |
| End   | 1515         | 70               | 7-10             | 100%        |
| Start |              |                  |                  |             |
| End   |              |                  |                  |             |

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

Coastal sage scrub, NNG, bunchgrassland (Malosma, Art cal, buckwheat, Bahiopsis carperis, blue dicks, Stipa sp., Avena sp.)

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

| Butterfly Species                                            | No. | Butterfly Species                                               | No. |
|--------------------------------------------------------------|-----|-----------------------------------------------------------------|-----|
| <b>Checkerspots</b>                                          |     | <b>Hairstreaks</b>                                              |     |
| California patch ( <i>Chlosyne californica</i> )             |     | great purple hairstreak ( <i>Atlides halesus corcorani</i> )    |     |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      |     | brown elfin ( <i>Callophrys augustinus</i> )                    |     |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |     | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |     |
| chalcid checkerspot ( <i>E. chalcidona chalcidona</i> )      |     | gray hairstreak ( <i>Strymon melinus pudica</i> )               |     |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |     | <b>Ladies/Admirals</b>                                          |     |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |     | California sister ( <i>Adelpha bredowii californica</i> )       |     |
| <b>Blues</b>                                                 |     | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |     |
| western pygmy-blue ( <i>Brephidium exila</i> )               |     | west coast lady ( <i>Vanessa annabella</i> )                    |     |
| western tailed blue ( <i>Everes amyntula</i> )               |     | red admiral ( <i>V. atalanta rubria</i> )                       |     |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     | 1   | painter lady ( <i>V. cardui</i> )                               |     |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |     | American (Virginia) lady ( <i>V. virginensis</i> )              |     |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |     | unidentified lady ( <i>Vanessa</i> sp.)                         | 1   |
| marine blue ( <i>Leptotes marina</i> )                       |     | <b>Swallowtails</b>                                             |     |
| unidentified blue                                            |     | pale swallowtail ( <i>Papilio eurymedon</i> )                   |     |
| <b>Whites</b>                                                |     | western tiger swallowtail ( <i>P. rutulus</i> )                 |     |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | 1   | anise swallowtail ( <i>P. zelicaon</i> )                        |     |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            | 1   | <b>Miscellaneous</b>                                            |     |
| common California ringlet ( <i>Coenonympha californica</i> ) | 1   | monarch ( <i>Danaus plexippus</i> )                             |     |
| cabbage white ( <i>Pieris rapae</i> )                        |     | common buckeye ( <i>Junonia coenia grisea</i> )                 |     |
| checkered (common) white ( <i>Pontia protodice</i> )         |     | mourning cloak ( <i>Nymphalis antiopa</i> )                     |     |
| spring white ( <i>P. sisymbrii</i> )                         |     | <b>Skippers</b>                                                 |     |
| unidentified white                                           | 1   | funereal duskywing ( <i>Erynnis funeralis</i> )                 | 1   |
| <b>Metalmarks</b>                                            |     | mournful duskywing ( <i>Erynnis tristis</i> )                   |     |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | 1   | fiery skipper ( <i>Hylephila phyleus</i> )                      |     |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |     | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    | 1   |
| <b>Sulphurs</b>                                              |     | <b>Other</b>                                                    |     |
| orange sulphur ( <i>Colias eurytheme</i> )                   | 1   |                                                                 |     |
| sleepy orange ( <i>Eurema nicippe</i> )                      |     |                                                                 |     |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |     |                                                                 |     |
| unidentified sulphur                                         | 1   |                                                                 |     |
| Column Subtotal                                              | 55  | Column Subtotal                                                 | 14  |
|                                                              |     | Total                                                           | 69  |



## 2016 Quino Checkerspot Butterfly Survey Form

**Surveyor:** Crysta Dickson **Date:** 3/10/2016  
**Site Name:** JPD-08 Proctor Valley – Village 14 of Otay Ranch **Site Visit No:** 3  
**Area Surveyed** B **Acres Surveyed** 60 **Survey Time:** 6.5 **Acres per Hour:** 9.2  
**Other Surveyors Present:** \_\_\_\_\_

| Field Conditions |              |                  |                  |             |
|------------------|--------------|------------------|------------------|-------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
| <b>Start</b>     | 0830         | 65               | 1-9              | 10          |
| <b>End</b>       | 1450         | 71.6             | 2-5              | 80          |
| <b>Start</b>     |              |                  |                  |             |
| <b>End</b>       |              |                  |                  |             |

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

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

| Butterfly Species                                            | No.       | Butterfly Species                                               | No.       |
|--------------------------------------------------------------|-----------|-----------------------------------------------------------------|-----------|
| <b>Checkerspots</b>                                          |           | <b>Hairstreaks</b>                                              |           |
| California patch ( <i>Chlosyne californica</i> )             |           | great purple hairstreak ( <i>Atlides halesus corcorani</i> )    |           |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      |           | brown elfin ( <i>Callophrys augustinus</i> )                    |           |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |           | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |           |
| chalcidon checkerspot ( <i>E. chalcidona chalcidona</i> )    |           | gray hairstreak ( <i>Strymon melinus pudica</i> )               |           |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |           | <b>Ladies/Admirals</b>                                          |           |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |           | California sister ( <i>Adelpha bredowii californica</i> )       |           |
| <b>Blues</b>                                                 |           | Lorquin's admiral ( <i>Limnitis lorquini</i> )                  |           |
| western pygmy-blue ( <i>Brephidium exila</i> )               |           | west coast lady ( <i>Vanessa annabella</i> )                    |           |
| western tailed blue ( <i>Everes amyntula</i> )               |           | red admiral ( <i>V. atalanta rubria</i> )                       | 1         |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     | 1         | painted lady ( <i>V. cardui</i> )                               | 1         |
| Edward's blue ( <i>Hemiarctus ceraunus gys</i> )             |           | American (Virginia) lady ( <i>V. virginensis</i> )              |           |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   | 3         | unidentified lady ( <i>Vanessa</i> sp.)                         |           |
| marine blue ( <i>Leptotes marina</i> )                       |           | <b>Swallowtails</b>                                             |           |
| unidentified blue                                            |           | pale swallowtail ( <i>Papilio eurymedon</i> )                   |           |
| <b>Whites</b>                                                |           | western tiger swallowtail ( <i>P. rutulus</i> )                 |           |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | 12        | anise swallowtail ( <i>P. zelicaon</i> )                        |           |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |           | <b>Miscellaneous</b>                                            |           |
| common California ringlet ( <i>Coenonympha californica</i> ) |           | monarch ( <i>Danaus plexippus</i> )                             |           |
| cabbage white ( <i>Pieris rapae</i> )                        |           | common buckeye ( <i>Junonia coenia grisea</i> )                 |           |
| checkered (common) white ( <i>Pontia protodice</i> )         |           | mourning cloak ( <i>Nymphalis antiopa</i> )                     |           |
| spring white ( <i>P. sisymbrii</i> )                         |           | <b>Skippers</b>                                                 |           |
| unidentified white                                           |           | funereal duskywing ( <i>Erynnis funeralis</i> )                 | 10        |
| <b>Metalmarks</b>                                            |           | mournful duskywing ( <i>Erynnis tristis</i> )                   |           |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | 17        | fiery skipper ( <i>Hylephila phyleus</i> )                      |           |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |           | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    | 1         |
| <b>Sulphurs</b>                                              |           | <b>Other</b>                                                    |           |
| orange sulphur ( <i>Colias eurytheme</i> )                   | 3         |                                                                 |           |
| sleepy orange ( <i>Eurema nicippe</i> )                      |           |                                                                 |           |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |           |                                                                 |           |
| unidentified sulphur                                         |           |                                                                 |           |
| <b>Column Subtotal</b>                                       | <b>36</b> | <b>Column Subtotal</b>                                          | <b>13</b> |
|                                                              |           | <b>Total</b>                                                    | <b>49</b> |

# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor:

Chez Brungaber

Date:

3/10/16

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

Site Visit No:

3

Area Surveyed Y, BB Acres Surveyed 104

Survey Time: 7 hrs 30 mins

Acres per Hour: 13.8 (7 acre/pp/hr)

Other Surveyors Present: Andrew Bacher

## Field Conditions

|       | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
|-------|--------------|------------------|------------------|-------------|
| Start | 0830         | 63               | 0-2              | 10%         |
| End   | 1600         | 74               | 2-4              | 80%         |
| Start |              |                  |                  |             |
| End   |              |                  |                  |             |

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

CS, chamise chap, native bunch grass

Bakkeopsis cerpedoides, Malosma, Eriogonum fasc, chamise, Stipa sp., Erodium sp.)

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

| Butterfly Species                                            | No.                | Butterfly Species                                               | No.     |
|--------------------------------------------------------------|--------------------|-----------------------------------------------------------------|---------|
| <b>Checkerspots</b>                                          |                    | <b>Hairstreaks</b>                                              |         |
| California patch ( <i>Chlosyne californica</i> )             |                    | great purple hairstreak ( <i>Atlides halesus corcorani</i> )    |         |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      | III                | brown elfin ( <i>Callophrys augustinus</i> )                    |         |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |                    | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |         |
| chalcid checkerspot ( <i>E. chalcidona chalcidona</i> )      |                    | gray hairstreak ( <i>Strymon melinus pudica</i> )               |         |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |                    | <b>Ladies/Admirals</b>                                          |         |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |                    | California sister ( <i>Adelpha bredowii californica</i> )       |         |
| <b>Blues</b>                                                 |                    | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |         |
| western pygmy-blue ( <i>Brephidium exila</i> )               |                    | west coast lady ( <i>Vanessa annabella</i> )                    |         |
| western tailed blue ( <i>Everes amyntula</i> )               |                    | red admiral ( <i>V. atalanta rubria</i> )                       |         |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     | II                 | painted lady ( <i>V. cardui</i> )                               | III II  |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |                    | American (Virginia) lady ( <i>V. virginensis</i> )              |         |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |                    | unidentified lady ( <i>Vanessa</i> sp.)                         | III II  |
| marine blue ( <i>Leptotes marina</i> )                       | II                 | <b>Swallowtails</b>                                             |         |
| unidentified blue                                            | II                 | pale swallowtail ( <i>Papilio eurymedon</i> )                   |         |
| <b>Whites</b>                                                |                    | western tiger swallowtail ( <i>P. rutulus</i> )                 |         |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | III III III III    | anise swallowtail ( <i>P. zelicaon</i> )                        |         |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |                    | <b>Miscellaneous</b>                                            |         |
| common California ringlet ( <i>Coenonympha californica</i> ) | III III III        | monarch ( <i>Danaus plexippus</i> )                             | I       |
| cabbage white ( <i>Pieris rapae</i> )                        |                    | common buckeye ( <i>Junonia coenia grisea</i> )                 | III     |
| checkered (common) white ( <i>Pontia protodice</i> )         |                    | mourning cloak ( <i>Nymphalis antiopa</i> )                     | I       |
| spring white ( <i>P. sisymbrii</i> )                         |                    | <b>Skippers</b>                                                 |         |
| unidentified white                                           | III III            | funereal duskywing ( <i>Erynnis funeralis</i> )                 | III III |
| <b>Metalmarks</b>                                            |                    | mournful duskywing ( <i>Erynnis tristis</i> )                   | II      |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | II III III III III | fiery skipper ( <i>Hylephila phyleus</i> )                      |         |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |                    | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    | III     |
| <b>Sulphurs</b>                                              |                    | <b>Other</b>                                                    |         |
| orange sulphur ( <i>Colias eurytheme</i> )                   | II                 |                                                                 |         |
| sleepy orange ( <i>Eurema nicippe</i> )                      |                    |                                                                 |         |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |                    |                                                                 |         |
| unidentified sulphur                                         | III                |                                                                 |         |
| Column Subtotal                                              | 93                 | Column Subtotal                                                 | 34      |
|                                                              |                    | Total                                                           | 127     |

93  
34  
127

54-706-5975 fax



# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor: Brian Parker Date: 3-13-2016  
 Site Name: JPD-08 Proctor Valley - Village 14 of Olay Ranch Site Visit No: 3  
 Area Surveyed C Acres Surveyed 16.5 Survey Time: 2 Acres per Hour: 8.25  
 Other Surveyors Present: CRYSTA DICKSON

| Field Conditions |              |                  |                  |                |
|------------------|--------------|------------------|------------------|----------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover    |
| Start            | <u>1100</u>  | <u>75</u>        | <u>3-5</u>       | <u>25%</u>     |
| End              | <u>1300</u>  | <u>72</u>        | <u>4-6</u>       | <u>50% 10%</u> |
| Start            |              |                  |                  |                |
| End              |              |                  |                  |                |

Vegetation Communities Surveyed (inc. dominant spp.)

CSS, CC, SMC

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

| Butterfly Species                                            | No.       | Butterfly Species                                               | No.      |
|--------------------------------------------------------------|-----------|-----------------------------------------------------------------|----------|
| <b>Checkerspots</b>                                          |           | <b>Hairstreaks</b>                                              |          |
| California patch ( <i>Chlosyne californica</i> )             |           | great purple hairstreak ( <i>Atlides halesus corcorani</i> )    |          |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      |           | brown elfin ( <i>Callophrys augustinus</i> )                    |          |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |           | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |          |
| chalcidon checkerspot ( <i>E. chalcidona chalcidona</i> )    |           | gray hairstreak ( <i>Strymon melinus pudica</i> )               |          |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |           | <b>Ladies/Admirals</b>                                          |          |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |           | California sister ( <i>Adelpha bredowii californica</i> )       |          |
| <b>Blues</b>                                                 |           | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |          |
| western pygmy-blue ( <i>Brephidium exila</i> )               |           | west coast lady ( <i>Vanessa annabella</i> )                    |          |
| western tailed blue ( <i>Everes amyntula</i> )               |           | red admiral ( <i>V. atalanta rubria</i> )                       |          |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     |           | painted lady ( <i>V. cardui</i> )                               |          |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |           | American (Virginia) lady ( <i>V. virginensis</i> )              |          |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |           | unidentified lady ( <i>Vanessa</i> sp.)                         | <u>1</u> |
| marine blue ( <i>Leptotes marina</i> )                       |           | <b>Swallowtails</b>                                             |          |
| unidentified blue                                            | <u>1</u>  | pale swallowtail ( <i>Papilio eurymedon</i> )                   | <u>1</u> |
| <b>Whites</b>                                                |           | western tiger swallowtail ( <i>P. rutulus</i> )                 |          |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | <u>5</u>  | anise swallowtail ( <i>P. zelicaon</i> )                        |          |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |           | <b>Miscellaneous</b>                                            |          |
| common California ringlet ( <i>Coenonympha californica</i> ) |           | monarch ( <i>Danaus plexippus</i> )                             |          |
| cabbage white ( <i>Pieris rapae</i> )                        |           | common buckeye ( <i>Junonia coenia grisea</i> )                 |          |
| checkered (common) white ( <i>Pontia protodice</i> )         |           | mourning cloak ( <i>Nymphalis antiopa</i> )                     |          |
| spring white ( <i>P. sisymbrii</i> )                         |           | <b>Skippers</b>                                                 |          |
| unidentified white                                           | <u>2</u>  | funereal duskywing ( <i>Erynnis funeralis</i> )                 |          |
| <b>Metalmarks</b>                                            |           | mournful duskywing ( <i>Erynnis tristis</i> )                   |          |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | <u>10</u> | fiery skipper ( <i>Hylephila phyleus</i> )                      |          |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |           | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    |          |
| <b>Sulphurs</b>                                              |           | <b>Other</b>                                                    |          |
| orange sulphur ( <i>Colias eurytheme</i> )                   |           |                                                                 |          |
| sleepy orange ( <i>Eurema nicippe</i> )                      |           |                                                                 |          |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |           |                                                                 |          |
| unidentified sulphur                                         |           |                                                                 |          |
| Column Subtotal                                              | <u>18</u> | Column Subtotal                                                 | <u>2</u> |

Totals  
 Column 1:  
2  
 GRAND:  
20



# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor: CDICKSON Date: 03/13/16  
 Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch Site Visit No: PL  
 Acres Surveyed: ~15.5 Survey Time: 2 Acres per Hour: 8.25  
 Other Surveyors Present: B. PARKER

| Field Conditions |              |                  |                  |             |
|------------------|--------------|------------------|------------------|-------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
| Start            | 1100         | 14 grnd/74 air   | 4-6              | 25%         |
| End              | 1300         |                  | 4-6              | 10%         |
| Start            |              |                  |                  |             |
| End              |              |                  |                  |             |

Vegetation Communities Surveyed (inc. dominant spp.)

NNG/CSS/CCH

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

| Butterfly Species                                            | No. | Butterfly Species                                               | No. |
|--------------------------------------------------------------|-----|-----------------------------------------------------------------|-----|
| <b>Checkerspots</b>                                          |     | <b>Hairstreaks</b>                                              |     |
| California patch ( <i>Chlosyne californica</i> )             |     | great purple hairstreak ( <i>Atlides halesus corcorani</i> )    |     |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      | 1   | brown elfin ( <i>Callophrys augustinus</i> )                    |     |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |     | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |     |
| chalcodon checkerspot ( <i>E. chalcodona chalcodona</i> )    |     | gray hairstreak ( <i>Strymon melinus pudica</i> )               |     |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |     | <b>Ladies/Admirals</b>                                          |     |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |     | California sister ( <i>Adelpha bredowii californica</i> )       |     |
| <b>Blues</b>                                                 |     | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |     |
| western pygmy-blue ( <i>Brephidium exila</i> )               |     | west coast lady ( <i>Vanessa annabella</i> )                    |     |
| western tailed blue ( <i>Everses amyntula</i> )              |     | red admiral ( <i>V. atalanta rubria</i> )                       |     |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     | 1   | painted lady ( <i>V. cardui</i> )                               |     |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |     | American (Virginia) lady ( <i>V. virginensis</i> )              |     |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |     | unidentified lady ( <i>Vanessa</i> sp.)                         | 1   |
| marine blue ( <i>Leptotes marina</i> )                       |     | <b>Swallowtails</b>                                             |     |
| unidentified blue                                            |     | pale swallowtail ( <i>Papilio eurymedon</i> )                   | 1   |
| <b>Whites</b>                                                |     | western tiger swallowtail ( <i>P. rutulus</i> )                 |     |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | 1   | anise swallowtail ( <i>P. zelicaon</i> )                        | 1   |
| desert (Felder's) orangetip ( <i>A. celthura</i> )           |     | <b>Miscellaneous</b>                                            |     |
| common California ringlet ( <i>Coenonympha californica</i> ) |     | monarch ( <i>Danaus plexippus</i> )                             |     |
| cabbage white ( <i>Pieris rapae</i> )                        | 1   | common buckeye ( <i>Junonia coenia grisea</i> )                 |     |
| checkered (common) white ( <i>Pontia protodice</i> )         |     | mourning cloak ( <i>Nymphalis antiopa</i> )                     |     |
| spring white ( <i>P. sisymbrii</i> )                         | 1   | <b>Skippers</b>                                                 |     |
| unidentified white                                           |     | funeral duskywing ( <i>Erynnis funeralis</i> )                  | 1   |
| <b>Metalmarks</b>                                            |     | mourning duskywing ( <i>Erynnis tristis</i> )                   |     |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          |     | fiery skipper ( <i>Hylephila phyleus</i> )                      |     |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |     | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    |     |
| <b>Sulphurs</b>                                              |     | 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                                              | 29  | Column Subtotal                                                 | 4   |
|                                                              |     | Total                                                           | 33  |



Surveyor

## 2016 Quino Checkerspot Butterfly Survey Form

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

Date: 3/15/16

Area Surveyed: CC, PF Acres Surveyed: 68

Site Visit No: 3

Other Surveyors Present: /

Survey Time: 8hr 15min

Acres per Hour: 0.24

| Field Conditions |              |                  |                  |             |
|------------------|--------------|------------------|------------------|-------------|
| Start            | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
| End              | 0915         | 63.4             | 0-1              | 0           |
| Start            | 1730         | 73.5             | 2-4              | 0           |
| End              |              |                  |                  |             |

Vegetation Communities Surveyed (inc. dominant spp.)

NNG, native bunchgrassland, CSS, chaparral  
 B. dianthus, Erodium, Arena, stipa sp., blue dicks, buckwheat, Malosma, Rhamnus crocea

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

| Butterfly Species                                            | No. | Butterfly Species                                               | No. |
|--------------------------------------------------------------|-----|-----------------------------------------------------------------|-----|
| <b>Checkerspots</b>                                          |     | <b>Hairstreaks</b>                                              |     |
| California patch ( <i>Chlosyne californica</i> )             |     | great purple hairstreak ( <i>Atides halesus corcorani</i> )     |     |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      |     | brown elfin ( <i>Callophrys augustinus</i> )                    |     |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |     | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |     |
| chalcid checkerspot ( <i>E. chalcidona chalcidona</i> )      |     | gray hairstreak ( <i>Strymon melinus pudica</i> )               | 1   |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |     | <b>Ladies/Admirals</b>                                          |     |
| Mylitta crescent ( <i>Phyciodes mylitta</i> )                |     | California sister ( <i>Adelpha bredowii californica</i> )       |     |
| <b>Blues</b>                                                 |     | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |     |
| western pygmy-blue ( <i>Brephidium exila</i> )               |     | west coast lady ( <i>Vanessa annabella</i> )                    |     |
| western tailed blue ( <i>Evers amyntula</i> )                |     | red admiral ( <i>V. atalanta rubria</i> )                       |     |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     |     | painted lady ( <i>V. cardui</i> )                               |     |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |     | American (Virginia) lady ( <i>V. virginensis</i> )              |     |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |     | unidentified lady ( <i>Vanessa</i> sp.)                         | 1   |
| marine blue ( <i>Leptotes marina</i> )                       |     | <b>Swallowtails</b>                                             |     |
| unidentified blue                                            | 11  | pale swallowtail ( <i>Papilio eurymedon</i> )                   |     |
| <b>Whites</b>                                                |     | western tiger swallowtail ( <i>P. rutulus</i> )                 |     |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | 11  | anise swallowtail ( <i>P. zelicaon</i> )                        |     |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            | 11  | <b>Miscellaneous</b>                                            |     |
| common California ringlet ( <i>Coenonympha californica</i> ) | 11  | monarch ( <i>Danaus plexippus</i> )                             |     |
| cabbage white ( <i>Pieris rapae</i> )                        | 11  | common buckeye ( <i>Junonia coenia grisea</i> )                 | 11  |
| checkered (common) white ( <i>Pontia protodice</i> )         |     | mourning cloak ( <i>Nymphalis antiopa</i> )                     | 11  |
| spring white ( <i>P. sisymbrii</i> )                         |     | <b>Skippers</b>                                                 |     |
| unidentified white                                           | 11  | funereal duskywing ( <i>Erynnis funeralis</i> )                 | 11  |
| <b>Metalmarks</b>                                            |     | mournful duskywing ( <i>Erynnis tristis</i> )                   | 11  |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | 11  | fiery skipper ( <i>Hylephila phyleus</i> )                      | 11  |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             | 11  | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    | 11  |
| <b>Sulphurs</b>                                              |     | <b>Other</b>                                                    |     |
| orange sulphur ( <i>Colias eurytheme</i> )                   | 1   | Unknown skipper                                                 | 11  |
| sleepy orange ( <i>Eurema nicippe</i> )                      |     |                                                                 |     |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |     |                                                                 |     |
| unidentified sulphur                                         | 11  |                                                                 |     |
| Column Subtotal                                              | 62  | Column Subtotal                                                 | 29  |
|                                                              | 57  | Total                                                           | 91  |

276h

LIL R88

276h 5265-906-115



# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor: BRIAN PARKER Date: 3-13-2016  
 Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch Site Visit No: 3  
 Area Surveyed D Acres Surveyed 21 Survey Time: 2.5 Acres per Hour: 8.4  
 Other Surveyors Present: CRYSTA DICKSON

| Field Conditions |              |                  |                  |             |
|------------------|--------------|------------------|------------------|-------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
| Start            | 1300         | 72               | 4-6              | 100%        |
| End              | 1530         | 67               | 8-10             | 60%         |
| Start            |              |                  |                  |             |
| End              |              |                  |                  |             |

Vegetation Communities Surveyed (inc. dominant spp.)

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

| Butterfly Species                                            |  | No. | Butterfly Species                                               |  | No. |
|--------------------------------------------------------------|--|-----|-----------------------------------------------------------------|--|-----|
| <b>Checkerspots</b>                                          |  |     | <b>Hairstreaks</b>                                              |  |     |
| California patch ( <i>Chlosyne californica</i> )             |  |     | great purple hairstreak ( <i>Atlides halesus corcorani</i> )    |  |     |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      |  | 1   | brown elfin ( <i>Callophrys augustinus</i> )                    |  |     |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |  |     | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |  |     |
| chalcid checkerspot ( <i>E. chalcidona chalcidona</i> )      |  |     | gray hairstreak ( <i>Strymon melinus pudica</i> )               |  |     |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |  |     | <b>Ladies/Admirals</b>                                          |  |     |
| Myliatta crescent ( <i>Phyciodes myliatta</i> )              |  |     | California sister ( <i>Adelpha bredowii californica</i> )       |  |     |
| <b>Blues</b>                                                 |  |     | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |  |     |
| western pygmy-blue ( <i>Brephidium exila</i> )               |  |     | west coast lady ( <i>Vanessa annabella</i> )                    |  |     |
| western tailed blue ( <i>Everes amyntula</i> )               |  |     | red admiral ( <i>V. atalanta rubria</i> )                       |  |     |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     |  | 7   | painted lady ( <i>V. cardui</i> )                               |  |     |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |  |     | American (Virginia) lady ( <i>V. virginensis</i> )              |  | 1   |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   |  |     | unidentified lady ( <i>Vanessa</i> sp.)                         |  |     |
| marine blue ( <i>Leptotes marina</i> )                       |  |     | <b>Swallowtails</b>                                             |  |     |
| unidentified blue                                            |  |     | pale swallowtail ( <i>Papilio eurymedon</i> )                   |  |     |
| <b>Whites</b>                                                |  |     | western tiger swallowtail ( <i>P. rutulus</i> )                 |  |     |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              |  | 9   | anise swallowtail ( <i>P. zelicaon</i> )                        |  |     |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |  |     | <b>Miscellaneous</b>                                            |  |     |
| common California ringlet ( <i>Coenonympha californica</i> ) |  | 1   | monarch ( <i>Danaus plexippus</i> )                             |  |     |
| cabbage white ( <i>Pieris rapae</i> )                        |  |     | common buckeye ( <i>Junonia coenia grisea</i> )                 |  |     |
| checkered (common) white ( <i>Pontia protodice</i> )         |  |     | mourning cloak ( <i>Nymphalis antiopa</i> )                     |  |     |
| spring white ( <i>P. sisymbrii</i> )                         |  |     | <b>Skippers</b>                                                 |  |     |
| unidentified white                                           |  |     | funereal duskywing ( <i>Erynnis funeralis</i> )                 |  | 3   |
| <b>Metalmarks</b>                                            |  |     | mournful duskywing ( <i>Erynnis tristis</i> )                   |  |     |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          |  | 7   | fiery skipper ( <i>Hylephila phyleus</i> )                      |  |     |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |  |     | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    |  |     |
| <b>Sulphurs</b>                                              |  |     | <b>Other</b>                                                    |  |     |
| orange sulphur ( <i>Colias eurytheme</i> )                   |  |     |                                                                 |  |     |
| sleepy orange ( <i>Eurema nicippe</i> )                      |  |     |                                                                 |  |     |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |  |     |                                                                 |  |     |
| unidentified sulphur                                         |  |     |                                                                 |  |     |
| Column Subtotal                                              |  | 26  | Column Subtotal                                                 |  | 11  |

Totals  
 Column 4  
 GRAND:  
 30



# 2016 Quino Checkerspot Butterfly Survey Form

Surveyor: DICKSON Date: 03/13/16  
 Site Name: JPD-08 Proctor Valley - Village 14 of Otay Ranch Site Visit No: BD  
 Acres Surveyed: 21 Survey Time: 2.5 Acres per Hour: 8.4  
 Other Surveyors Present: B. PARKER

| Field Conditions |              |                  |                  |             |
|------------------|--------------|------------------|------------------|-------------|
|                  | Time (24 hr) | Temperature (°F) | Wind Speed (mph) | Cloud Cover |
| Start            | <u>1300</u>  | <u>72 grnd</u>   | <u>4-6</u>       | <u>10%</u>  |
| End              | <u>1530</u>  | <u>67 grnd</u>   | <u>8-10</u>      | <u>60%</u>  |
| Start            |              |                  |                  |             |
| End              |              |                  |                  |             |

Vegetation Communities Surveyed (inc. dominant spp.)

CCH/CSS/NN6

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

| Butterfly Species                                            | No.       | Butterfly Species                                               | No.       |
|--------------------------------------------------------------|-----------|-----------------------------------------------------------------|-----------|
| <b>Checkerspots</b>                                          |           | <b>Hairstreaks</b>                                              |           |
| California patch ( <i>Chlosyne californica</i> )             |           | great purple hairstreak ( <i>Atlides halesus corcorani</i> )    |           |
| Gabb's checkerspot ( <i>C. gabbii</i> )                      | <u>11</u> | brown elfin ( <i>Callophrys augustinus</i> )                    |           |
| Quino checkerspot ( <i>Euphydryas editha quino</i> )         |           | bramble (perplexing) hairstreak ( <i>C. dumetorum affinis</i> ) |           |
| chalcidion checkerspot ( <i>E. chalcidion chalcidion</i> )   |           | gray hairstreak ( <i>Strymon melinus pudica</i> )               |           |
| Leanira checkerspot ( <i>Thessalia leanira wrighti</i> )     |           | <b>Ladies/Admirals</b>                                          |           |
| Myiitta crescent ( <i>Phyciodes myiitta</i> )                |           | California sister ( <i>Adelpha bredowii californica</i> )       |           |
| <b>Blues</b>                                                 |           | Lorquin's admiral ( <i>Limenitis lorquini</i> )                 |           |
| western pygmy-blue ( <i>Brephidium exilis</i> )              |           | west coast lady ( <i>Vanessa annabella</i> )                    |           |
| western tailed blue ( <i>Evers amyntula</i> )                |           | red admiral ( <i>V. atalanta rubria</i> )                       |           |
| southern blue ( <i>Glaucopsyche lygdamus australis</i> )     | <u>11</u> | painted lady ( <i>V. cardui</i> )                               |           |
| Edward's blue ( <i>Hemiargus ceraunus gyas</i> )             |           | American (Virginia) lady ( <i>V. virginensis</i> )              | <u>11</u> |
| Acmon blue ( <i>Icaricia acmon acmon</i> )                   | <u>1</u>  | unidentified lady ( <i>Vanessa</i> sp.)                         |           |
| marine blue ( <i>Leptotes marina</i> )                       |           | <b>Swallowtails</b>                                             |           |
| unidentified blue                                            |           | pale swallowtail ( <i>Papilio eurymedon</i> )                   |           |
| <b>Whites</b>                                                |           | western tiger swallowtail ( <i>P. rutulus</i> )                 |           |
| Sara orangetip ( <i>Anthocharis sara sara</i> )              | <u>11</u> | anise swallowtail ( <i>P. zelicaon</i> )                        |           |
| desert (Felder's) orangetip ( <i>A. cethura</i> )            |           | <b>Miscellaneous</b>                                            |           |
| common California ringlet ( <i>Coenonympha californica</i> ) |           | monarch ( <i>Danaus plexippus</i> )                             |           |
| cabbage white ( <i>Pieris rapae</i> )                        |           | common buckeye ( <i>Junonia coenia grisea</i> )                 |           |
| checkered (common) white ( <i>Pontia protodice</i> )         |           | mourning cloak ( <i>Nymphalis antiopa</i> )                     |           |
| spring white ( <i>P. sisymbrii</i> )                         |           | <b>Skippers</b>                                                 |           |
| unidentified white                                           |           | funereal duskywing ( <i>Erynnis funeralis</i> )                 | <u>1</u>  |
| <b>Metalmarks</b>                                            |           | mournful duskywing ( <i>Erynnis tristis</i> )                   |           |
| Behr's metalmark ( <i>Apodemia mormo virgulti</i> )          | <u>11</u> | fiery skipper ( <i>Hylephila phyleus</i> )                      |           |
| Wright's metalmark ( <i>Calephelis wrighti</i> )             |           | white (common) checkered-skipper ( <i>Pyrgus albescens</i> )    |           |
| <b>Sulphurs</b>                                              |           | <b>Other</b>                                                    |           |
| orange sulphur ( <i>Colias eurytheme</i> )                   | <u>1</u>  |                                                                 |           |
| sleepy orange ( <i>Eurema nicippe</i> )                      |           |                                                                 |           |
| cloudless sulfur ( <i>Phoebus sennae marcellina</i> )        |           |                                                                 |           |
| unidentified sulphur                                         |           |                                                                 |           |
| Column Subtotal                                              | <u>24</u> | Column Subtotal                                                 | <u>3</u>  |
|                                                              |           | Total                                                           | <u>27</u> |