Results Of Protocol Surveys Performed For The Quino Checkerspot Butterfly At the Marron Valley Road Site San Deigo County, California

Prepared for:

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Prepared By:

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Consulting Biologist
U.S.F.W.S. Permit #TE814215-2

12 June 2001

ROBIN BRADSFORD
JULY 26, 2001
CAZARIA BARKING
BROWN FIELD EARLY MORNING.

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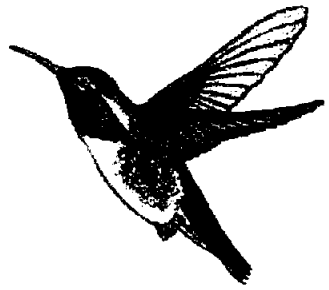
TARANTULA (BLACK) + KING SNAKE
(BLACK + YELLOW BANDS) IN THE CAST 2 DAYS.

Klein-Edwards Professional Services



June 12, 2001

Ms. Christine Moen
Endangered Species Permit Coordinator
U.S. Fish & Wildlife Service
Carlsbad Field Office
2730 Loker Avenue West
Carlsbad, CA 92008

Surveys For The Quino Checkerspot But fly
At the Marron Valley Road Property, San Diego California.

Dear Ms. Moen,

INTRODUCTION

At the request of Ms. Robin Brailsford, Klein-E formed a focused protocol survey for the Quino checkerspo on the Marron Valley Road property, San Diego Co PS biologists Claude G. Edwards and Michael (FWS) Endangered Species Permit, # T recommended survey guidelines for the were visited during the FWS-monitored s.

RESULTS OF SURVEYS

No adult QCB's were observed on the Marron Valley .tored survey period performed between March 1 and April 18, 2001. se surveys, no QCB larvae were observed during the survey.

SURVEY LOCATION AND DESCRIPTION

The ±84-acre Marron Valley Road property is located in Marron Val n south central San Diego County, California, Figure 1. The property is approximately 1.3 miles south on Marron Valley Road from the State Highway 94. The eastern boundary of the property is Marron Valley Road. The Marron Valley Road property is situated within the proposed Southwest San Diego Recovery Unit of the Draft Recovery Plan for the Quino Checkerspot Butterfly (Quino Checkerspot Butterfly (*Euphydryas editha quino*) Draft Recovery Plan, January 2001). It is within portions of the U.S. Geological Service (USGS) 7.5' Otay Mountain Quadrangle, Sections 9, Township 18 South, Range 2 East, Figure 2. The property can also be found on the 1999 Thomas Guide for San Diego County, Detail Map Page 1294, Map Coordinates B-7, Figure 3.

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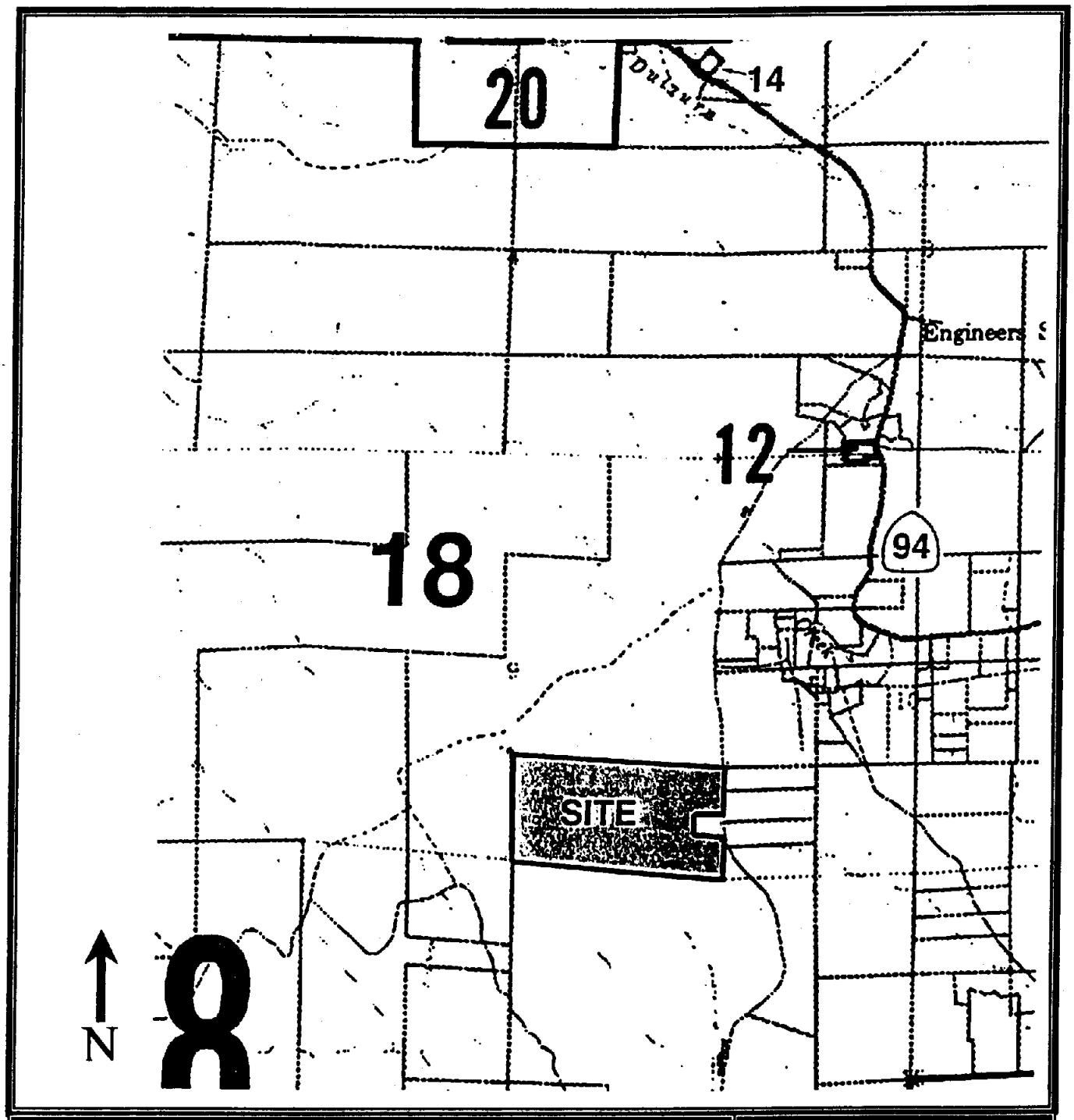
619-282-8687 toll free 877-763-5483 fax: 619-282-8687 e-mail: fieldlectures@flite-tours.com web: www.flite-tours.com



MARRON VALLEY ROAD PROPERTY
JAMUL-DULZURA
SUBREGIONAL MAP

FIGURE 1

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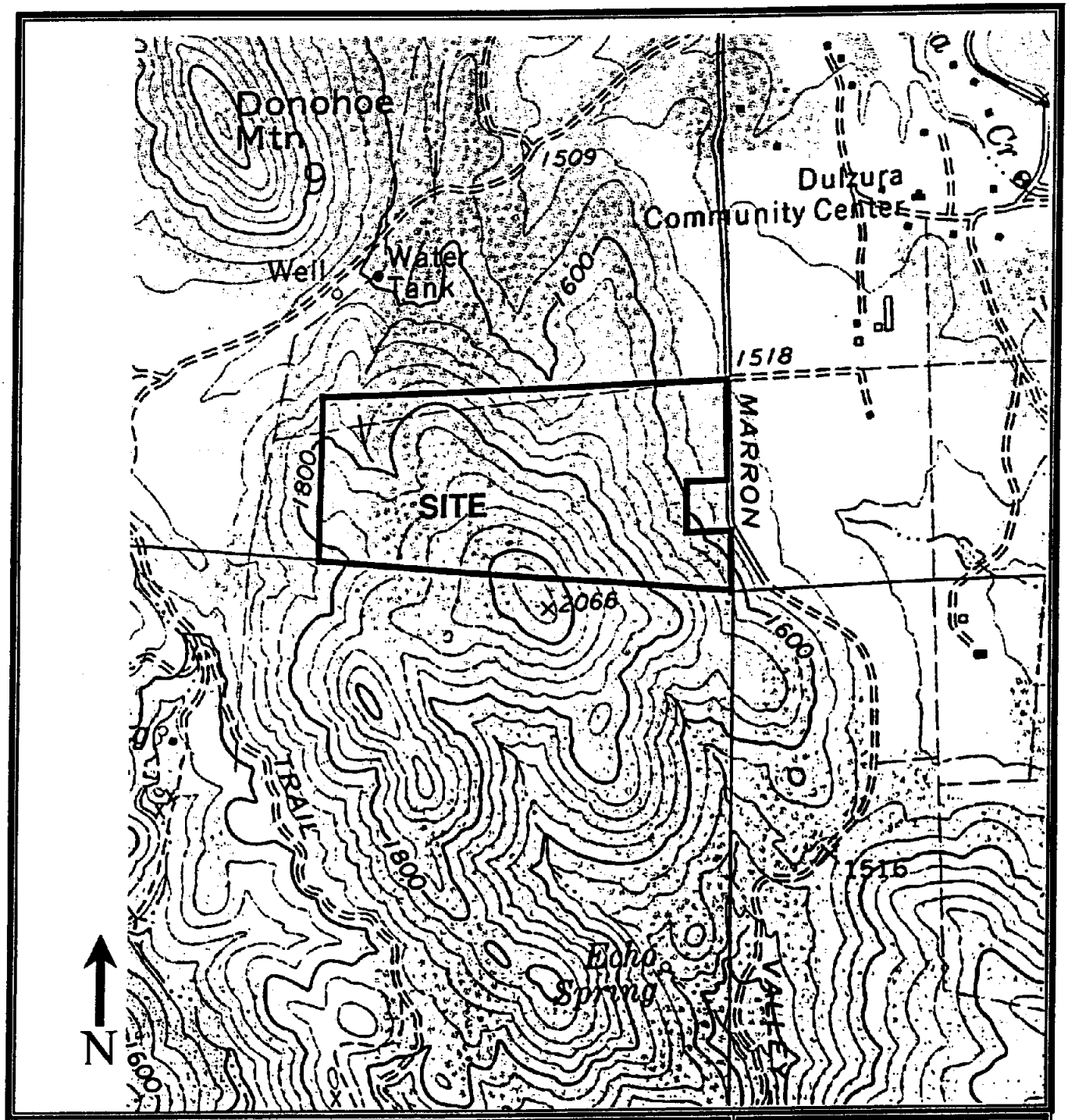

MARRON VALLEY ROAD
ON USGS 1:24000 SCALE
OTAY MOUNTAIN QUADRANGLE

FIGURE 2

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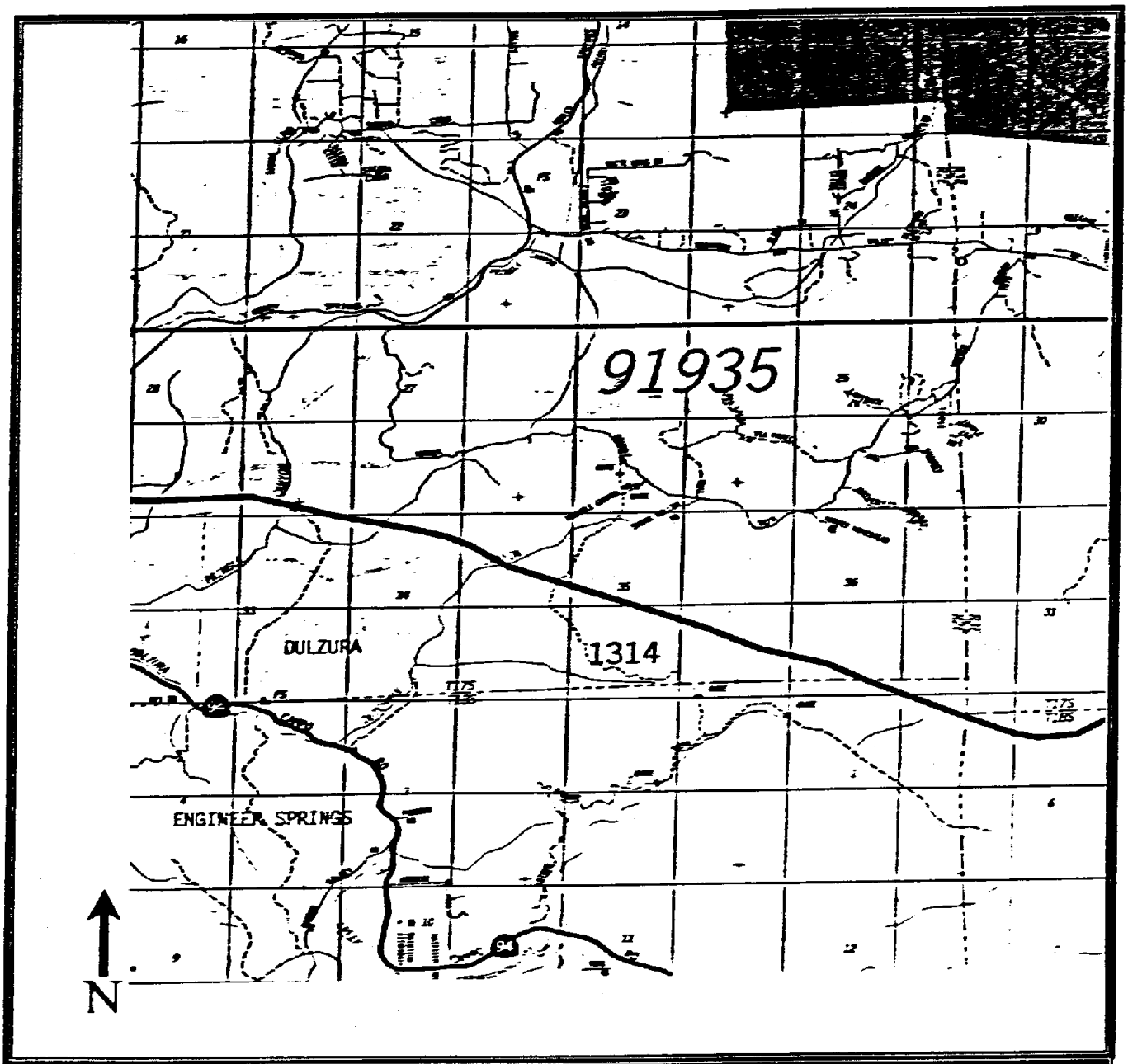


MARRON VALLEY ROAD PROPERTY
THOMAS BROS MAP
PAGE 1294

FIGURE 3

EXISTING CONDITIONS ONSITE AND IN THE IMMEDIATE VICINITY

The Marron Valley Road property is a rectangular-shaped parcel that measures approximately 0.5 miles east-to-west and 0.25 miles north-to-south. The property consists mostly of recovering chaparral from recent fires with a small amount of coastal sage scrub in the southeast corner, annual grassland along Marron Valley Road in the northeast portion and Eucalyptus Woodland also in the northeast corner of the property. Examples of these features are shown on Photo Plates 1 to 10, in Appendix 1.

Elevations onsite range from approximately 1,525 feet above meal sea level (MSL), along Marron Valley Road to approximately 2,065 feet above MSL near the middle of the southerly property line.

Areas in the general vicinity surrounding the Marron Valley Road property include agriculture to the east, recovering chaparral and recently acquired lands by the Bureau of Land Management (BLM) to the north, intact chaparral and the Gun club to the south and mountainous chaparral with Border Patrol roads to the west.

PURPOSE OF THE SURVEY

Appropriate areas of the Marron Valley Road property were visited during the FWS-monitored survey period to determine if QCB's were present onsite. The focused QCB surveys were performed in accordance with the "best scientific information" which according to the FWS is the Year 2000 Survey Protocol (FWS letter, 4 February 2001, Appendix 6).

BACKGROUND OF PREVIOUS BIOLOGICAL INVESTIGATIONS

No known QCB surveys have been performed on the Marron Valley Road property and the nearest location of adult QCB's is in the Marron Valley area approximately 5 miles to the southeast. Other noted locations of adult QCB's are south near the International Border (Quino Checkerspot Butterfly (*Euphydryas editha quino*) Draft Recovery Plan, January 2001, Figures 8).

HABITATS AND FLORAL SPECIES

During the initial QCB Habitat Assessment on March 1, 2001, the following habitat was observed: The majority of the property is recovering chaparral from recent fires, annual grassland, coastal sage scrub and large rock outcrops on the tallest hilltops. There is a small eucalyptus woodland within the annual grassland.

One hundred-fourteen (114) species of plants were identified within the Marron Valley Road property boundaries during the 2001 survey season. These were identified primarily in habitat areas visited during the surveys. Thirty-two (32), or 28%, are non-native plant species. A complete list of the plant species found onsite is in the Floral Compendium, in Appendix 2.

WILDLIFE SPECIES

A total of one hundred-eleven (111) species of fauna were identified within the Marron Valley Road property boundaries during the focused QCB surveys onsite, including forty-seven (47) invertebrate species, as well as three (3) reptiles, fifty-three (53) bird species, and eight (8) mammal species. A complete list of the Invertebrate Fauna observed onsite is found in Appendix 3, and Vertebrate Fauna are listed in Appendix 4.

2001 QUINO CHECKERSPOT BUTTERFLY SURVEY METHODOLOGY

General Overview

The Quino checkerspot butterfly (QCB) is the southern-most representative of the Edith's checkerspot (*Euphydryas editha*), which ranges over a large portion of western North America, from British Columbia and Alberta, Canada, through Colorado and Utah, and along the Pacific coast, to northern Baja California, Mexico (Ballmer, et. al., January, 2000). The taxonomic status of the QCB has changed over the years and was until recently referred to as Wright's checkerspot (*Euphydryas editha wrightii*). This common name is now applied to a different butterfly species (*Thessalia leanira wrightii*).

As early as the 1960's lepidopterists were concerned about how drastically the QCB was declining in comparison to when it was much more abundant and widespread (Emmel & Emmel, 1973; Ballmer, et. al., 2000). The QCB was subsequently listed as endangered in January, 1997, by the FWS (Federal Register Volume 62, No. 2313).

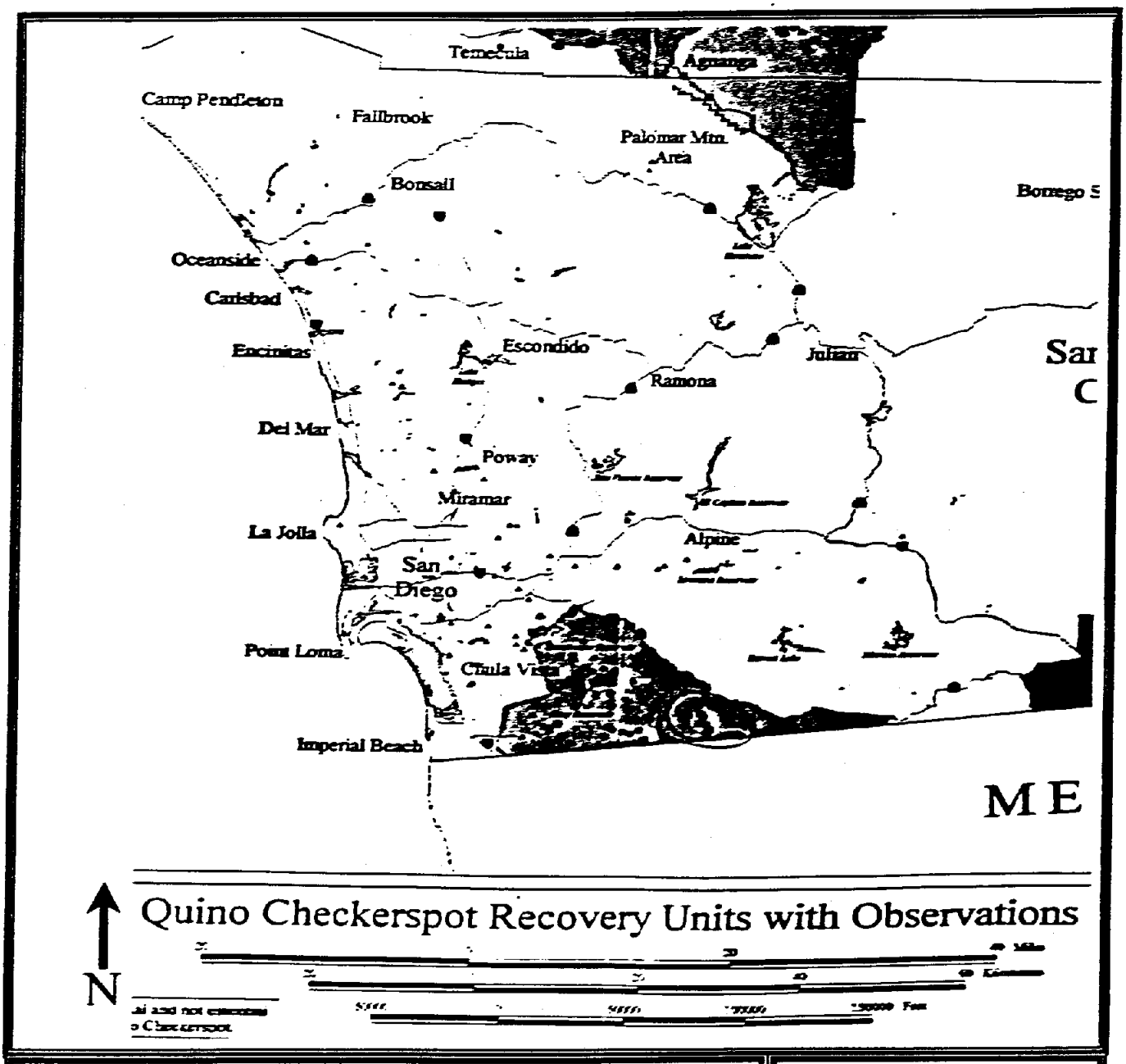
QCB's are currently restricted to a scattering of colonies, primarily in western Riverside County and in southern San Diego County in the vicinity of the U.S. / Mexico border. Its status in northern Baja California, Mexico is unknown and its future is unsecured. Habitat for this butterfly as more completely described in Ballmer, et al. generally includes coastal and inland sage scrub, grasslands occurring on clay soils, chaparral, as well as juniper woodland and desert-edge scrub. This species has been known to occur in areas up to 5,000 feet in elevation.

Survey Methodology

Focused surveys for QCB on the Marron Valley Road property were performed in accordance with "the best scientific information", which the FWS believes are the 2000 QCB Survey Protocols. The surveys were performed by Klein-Edwards Professional Services biologist Claude G. Edwards and Michael W. Klein, by authority of FWS Endangered Species Permit TE 814215-2 (Expires on 12/14/02). QCB survey dates, times and conditions are summarized below on Table 1.

A Habitat Assessment was performed on March 1, 2001 on the Marron Valley road property and areas were selected as included for surveying based on features that provided the strongest likelihood where QCB's may be found during the survey period. These included, open or sparsely vegetated soils around or near patches of dwarf plantain (*Plantago erecta*), the QCB larvae's preferred food plant, the presence of nectar plants such as forget-me-not (*Cryptantha* sp.), popcorn flower (*Plagiobthys* sp.), fiddleneck (*Amsinckia menziesii*), and goldfields (*Lasthenia glabrata*).

There were four elevated mesas, which provided for sparse vegetation but no host plant or nectar plants. There were also two hilltops. Both of which were offsite but accessible. One hilltop was just offsite on the western edge of the property. The other was just offsite on the southern edge of the property. This was the tallest hill in the close proximity of the property and was surveyed for hilltopping behavior. This proved to be the most active area during the surveys. There was also a saddle to the west between the two hilltops, which was recently burned but suitable for patrolling butterflies. This area because of the sparse vegetation was searched during the surveys. The only locations on the property where host plants were observed where at the base of the hills on the east side of the property adjacent to the disturbed annual grassland. The other location was the northwest mesa, which a portion of the mesa had not been damaged by fire and the other part was recovering. This mesa by the end of the survey season was the most active area on the property for invertebrates. Due to the recent fire the area was still going through a recovery. Those portions of the property that were not damaged from the fire were vegetated with annuals as well as a diversity of insects.



FWS QCB Recovery Units
With Observations

FIGURE 4

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FWS QCB Southwest San Diego Recovery Unit

FIGURE 5

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Marron Valley Road Property
Dwarf Plantain, Nectar and Excluded Areas Map
2001 QCB Season

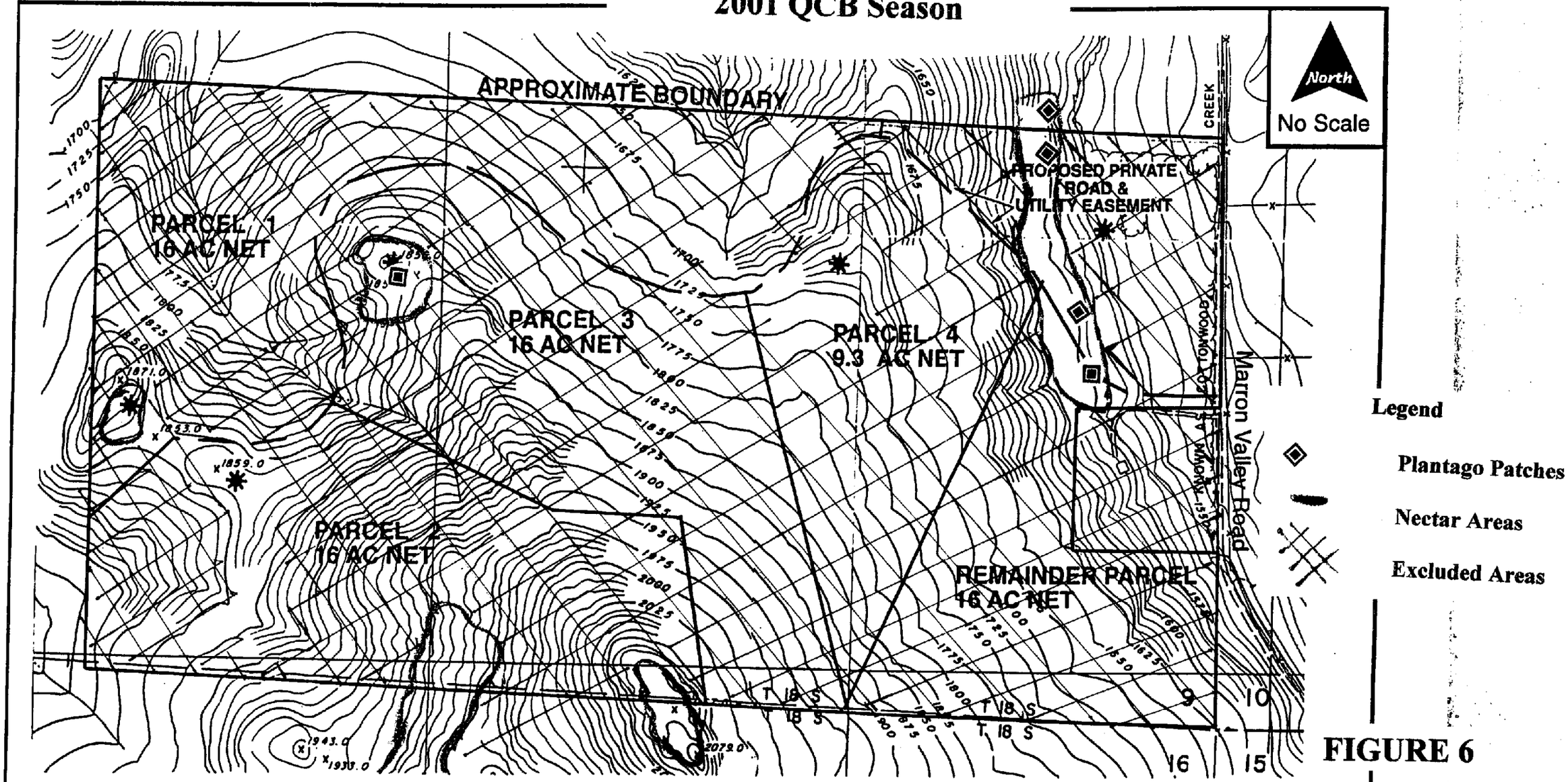


FIGURE 6

QCB survey dates, times and conditions are summarized on Table 1.

TABLE 1: Marron Valley Road Property QCB Survey Dates, Times, and Conditions

Survey Interval & Date	Survey Hours	Weather Conditions *
March 1, 2001 Habitat Assessment	1000 to 1415 hours	Partly cloudy; NW breezes to 3 mph; ±57 to 61°F.
Week 1 March 8, 2001	0930 to 1430 hours	Clear and sunny; light s to NW breezes, ±65 to 68°F.
Week 2 March 15, 2001	0840 to 1235 hours	Sunny; NW breezes, 5 to 7 mph; ±59 to 66°F.
Week 3, ABORTED March 22, 2001	0915 to 1215 hours	Overcast; NW breezes, ±66 to 68°F.
Week 3 March 30, 2001	0930 to 1430 hours	Sunny; NW breezes, 3 to 10 mph; ±69 to 77°F.
Week 4, ABORTED April 4, 2001	1130 to 1430 hours	Overcast to Mostly Cloudy; W to N, 5 to 20 mph; ±64 to 56°F.
Week 4, April 13, 2001	0945 to 1300 hours	Sunny; NW to N breezes, 4 to 11 mph; ±68 to 73°F.
Week 5 April 18, 2001	1030 to 1630 hours	Mostly Cloudy; W breezes 0 to 8 mph; ±72 to 72°F.

* -- Measured by using a Brunton "Sherpa Wind Watch" hand-held device

Survey Areas Covered

Most of the property was chaparral and recovering from a recent fire. There were suitable hilltops for hilltopping behavior, mesas where the vegetation was sparse and a saddle area on the southwestern part of the property that had little vegetation and suitable for patrolling butterflies. Areas excluded were thick vegetated chaparral, annual grassland due to no open ground, the Eucalyptus area and the southeast portion of the property covered with thick coastal sage scrub.

All butterfly species that were encountered were carefully scrutinized. Areas that supported nectar plants such as goldfields (*Lasthenia californica*), forget-me-nots (*Cryptantha* sp.), and popcorn flowers (*Plagiobothrys* sp.), were also carefully checked. Areas that supported patches of dwarf plantain (*Plantago erecta*) were also visited.

SURVEY RESULTS

Appropriate areas of the Marron Valley Road property were surveyed for QCB during FWS-monitored survey period. The surveys were performed between 1 March and 18 April 2001, to determine if QCB's were present onsite. The focused QCB surveys were performed in accordance with "the best scientific information", which the FWS believes are the 2000 QCB Survey Protocols.

The QCB survey areas were selected on the basis of topographic features and vegetational components that provided the strongest likelihood where QCB's may be found during the survey period. These included hilltops, mesas and open, sparse or bare patches.

Native wildflowers that may provide necessary nectar resources for the QCB to forage on were carefully checked. These were usually in open areas, generally devoid of dense grasses and shrubbery, supporting

plants such as goldfields (*Lasthenia californica*), forget-me-nots (*Cryptantha* sp.), and popcorn flowers (*Plagiobothrys* sp.) that have been used by adult QCB's.

Locations supporting dwarf plantain (*Plantago erecta*), the QCB larvae's preferred food plant, were also visited looking for evidence of defoliation and silken tents. The *Plantago* plants that were found onsite during the 2001 QCB survey season were averaging ±2 to 3 inches in height.

As a result of the FWS-monitored survey season, a total of fourteen (14) different species of butterflies, plus five (5) species of moths, were observed and identified onsite. However, no adult Quino Checkerspot butterflies, or their larvae, were found. A complete list of the butterfly and moth species that were observed is compiled on Table 2.

A complete set of Mr. Edwards' and Mr. Klein's survey field notes for the 2001 QCB survey season on the Murrieta Highlands property are attached, in Appendix 5.

TABLE 2: Species Of Butterflies Observed During The Focused QCB Surveys

Scientific Name	Common Name
Hyles lineta	white-lined sphinx moth
Synedoida pulchra	pulchra moth
Family Arctiidae	tiger moth
Alypia ridingsi	Ridings' forester
Pyratidae sp.	pyrastid moth
Papilio zelicaon	anise swallowtail
Pailio eurymedon	pale swallowtail
Pontia protodice	checkered white
Anthocharis sara sara	Pacific sara orangetip
Anthocharis cethura	desert orangetip
Callophyrs dumetorum perplexing	immaculate bramble hairstreak
Callophyrs augustus	brown elfin
Strymon melinus	gray hairstreak
Phyciodes mylitta	mylitta crescent
Vanessa cardui	painted lady
Vanessa annabella	west coast lady
Apodemia mormo virgulti	Behr's metalmark
Glaucopsyche lygadamus australis	southern blue
Erynnis funeralis	funeral dusky-wing

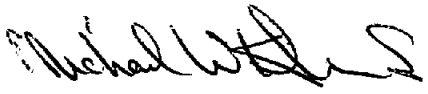
SUMMARY

The ±84-acre Marron Valley Road property was carefully surveyed during the FWS-monitored survey period to determine if the endangered Quino checkerspot butterfly (*Euphydryas editha quino*; QCB) was present onsite. No QCB's were found during these surveys. The recent fire through the area does not provide the best conditions for the butterfly. Those areas that were not affected by fire were carefully searched as well as areas that were burned but recovering.

The region around the property is not undergoing expansion of development with BLM land to the north and gun club lands to the south. This will help in the recovering of the lands and hopefully within a few years, provide good conditions for the butterfly.

If you have any questions about this survey, the findings, or the report, do not hesitate to contact me at 619-282-8687, or toll-free at 877-763-5483.

Respectfully submitted,



Michael W. Klein
Principal / Consulting Biologist

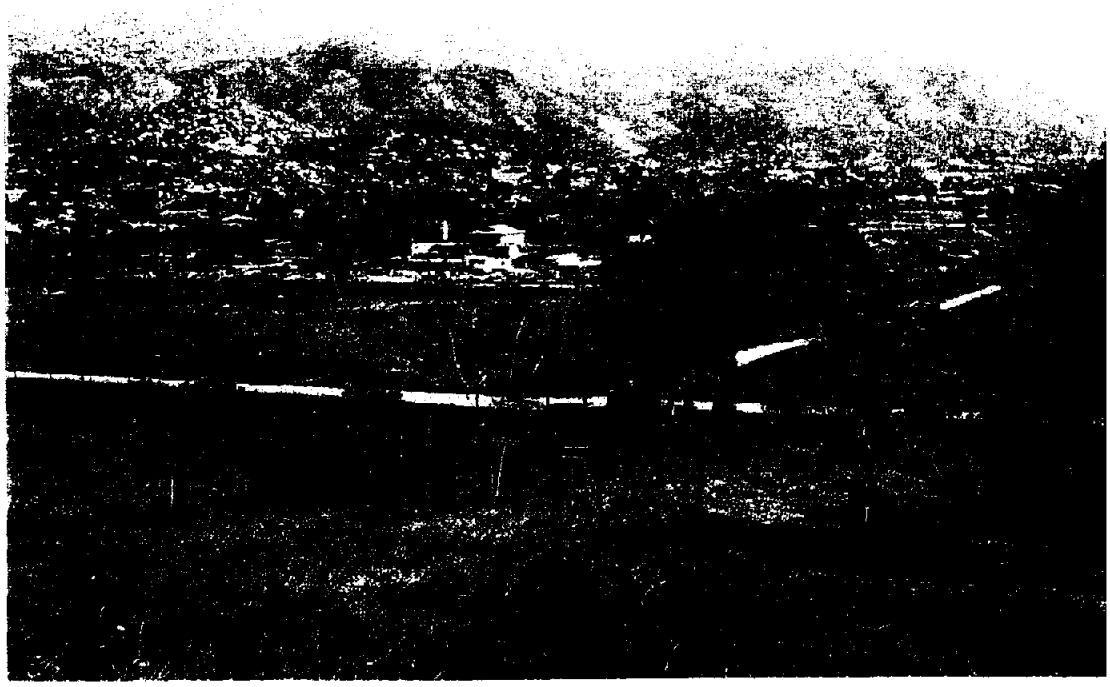
Quino Checkerspot Butterfly Surveys

Performed at the Marron Valley Road Property

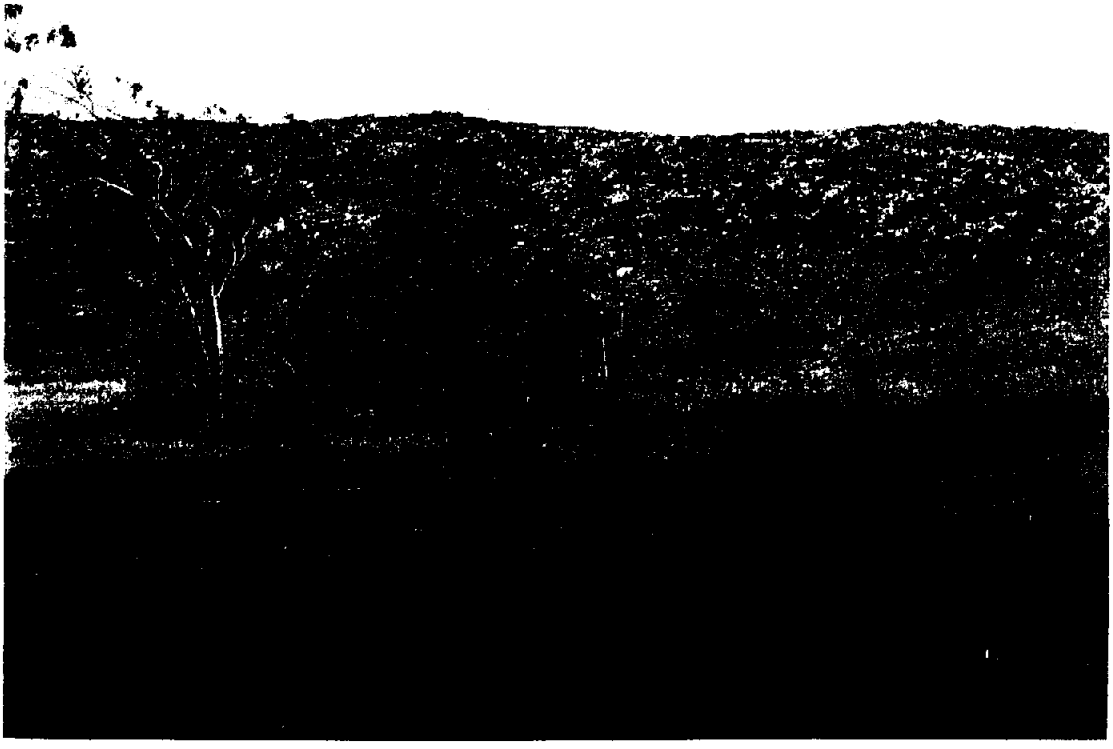
San Diego County – 2001

APPENDIX 1

PHOTO PLATES OF THE TERRAIN, VEGETATION, AND SURVEY AREAS ONSITE



Up in some of the recovering burned chaparral looking east at the northeast corner of the property.

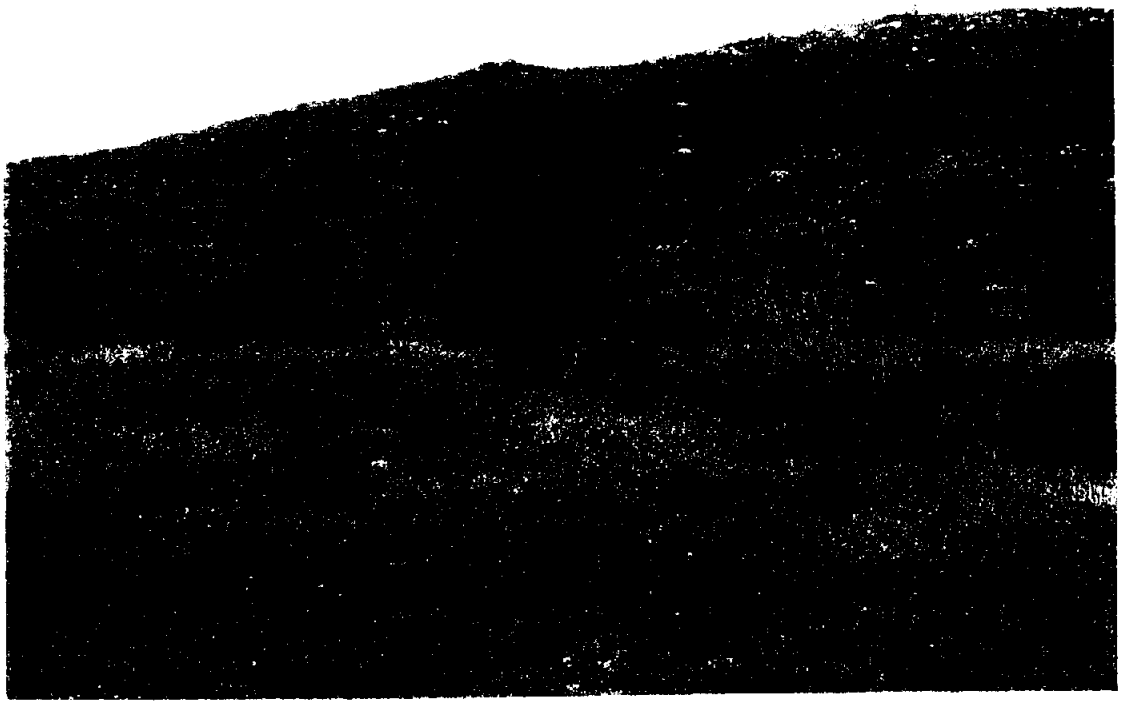


In the northeast corner looking west along the northern fence into chaparral. BLM land is to the ~~left~~ of the fence.

At the southeast corner of the property on Marron Valley Road looking north at the Eucalyptus trees.

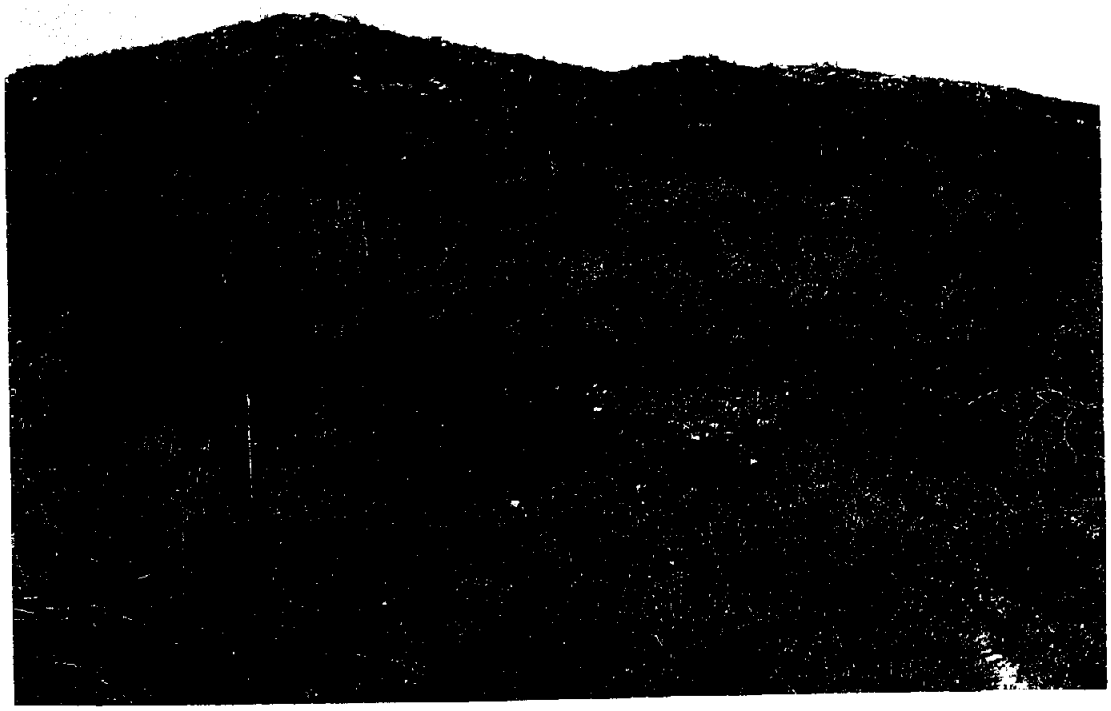
At the southeast corner of the property on Marron Valley Road looking northwest at the east facing chaparral slopes.

In the south central portion of the property looking northeast at the Eucalyptus trees and annual grassland.

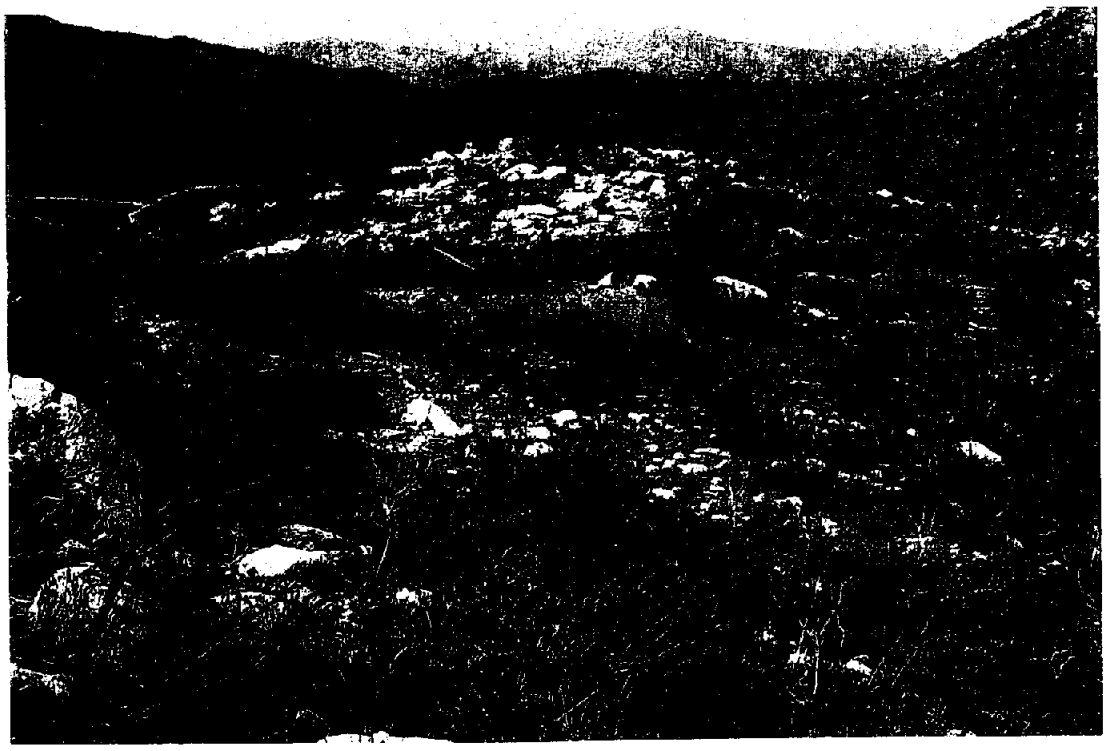


In the annual grassland looking southweast. Notice the large boulder in the upper right part of the picture. This is the tallest hill just offsite on the southern boundary. Also notice how tall the grasses are making this area unsuitable for QCB surveying.

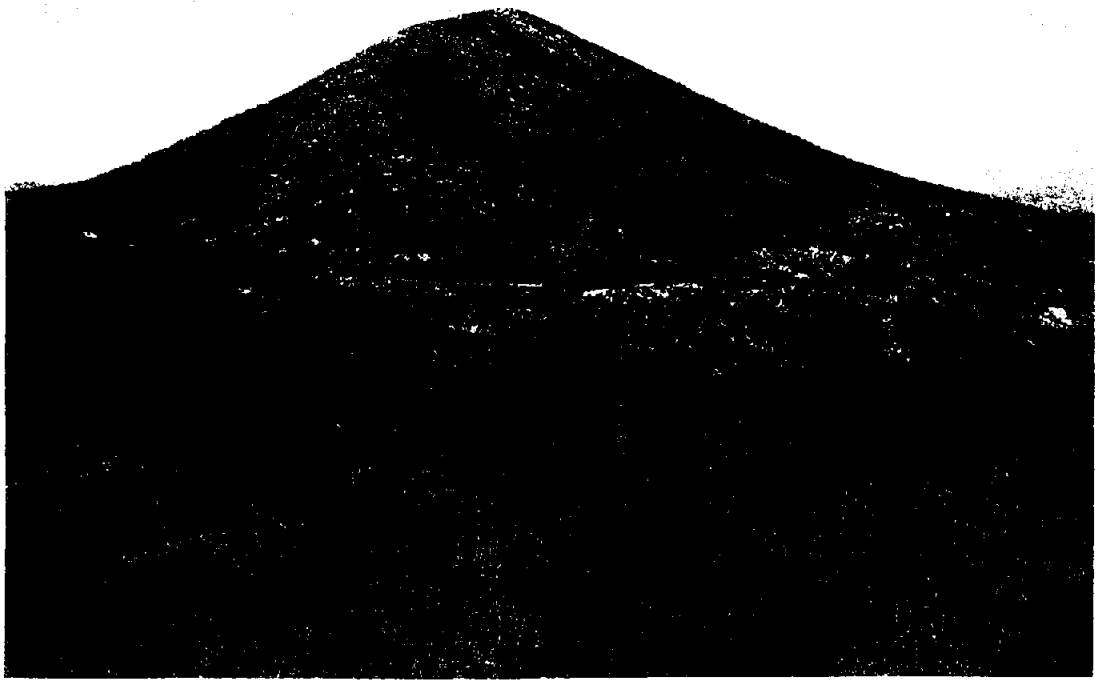
Examples of some of the open and sparse areas throughout the property. Also notice burned vegetation. Areas like these were searched throughout the QCB survey season.



On BLM land next to the north edge of the property (see fence). Looking southwest at one of the mesas on the property surveyed during the QCB season.

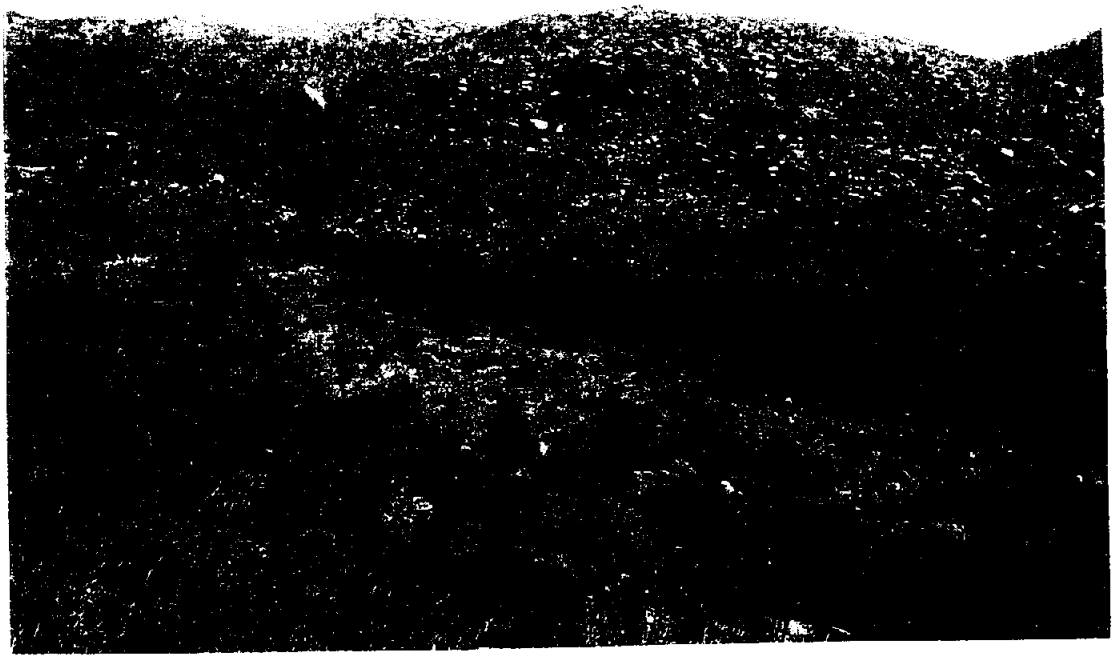


Example of open grounds with sparse vegetation on one of the mesas.



On the same mesa looking north at BLM land. Notice thicker vegetation just over the edge of the rocke from the previous picture.

North facing slopes along central portion of the property. Notice thick chaparral. This area could not be penetrating by walking. Area had to be walked around.

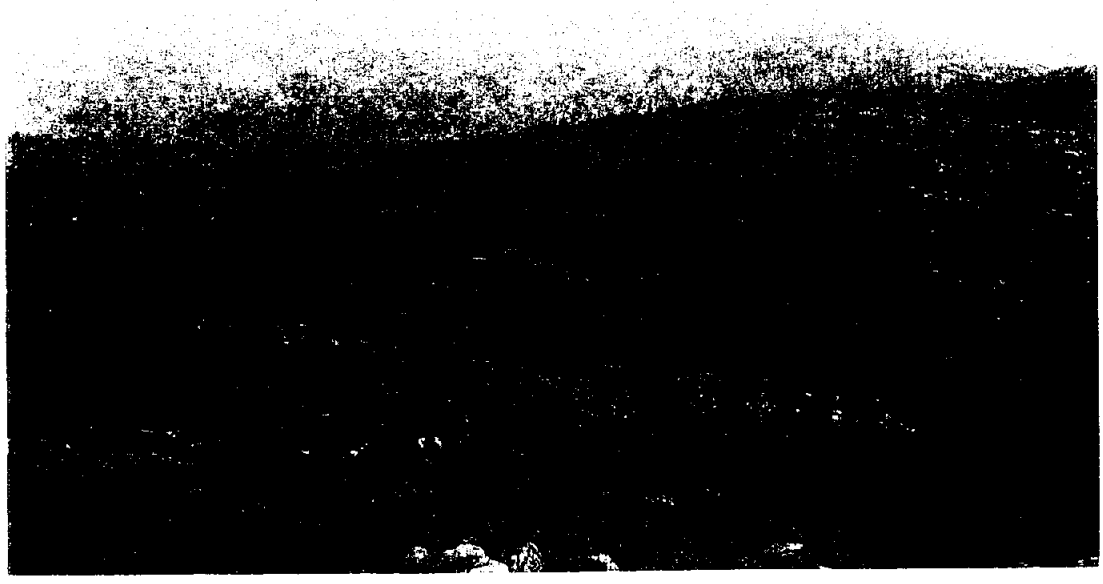


Same north facing slopes but notice patches of open areas where vegetation is low. This area was surveyed for QCB during the season.

Same open vegetated area on north facing slope. No nectar plants or host plant found here but still surveyed because of the open character. Other butterflies were observed patrolling this area.

Northwest most mesa on the property. This area had large numbers of hilltopping butterflies and plenty of nectar sources.

Mr. Edwards on the tallest hill in the area just offsite looking west at the second tallest hill, which is also offsite.



Looking west at the same second tallest hill in the area. Notice the lower slopes. This was the beginning of the saddle between the two hills that had good nectar sources.

Some of the vegetation in the saddle area between the two tall hills. Open areas were surveyed as well as the greener area.

In the upper part of the saddle looking northwest. Notice more open areas that were surveyed during the QCB season.

Another look at the saddle area with sparsely vegetated areas and open ground.

Sample of the tallest hill just offsite of the property. Very good hilltopping and plenty of open areas for activity.

Quino Checkerspot Butterfly Surveys

Performed at the Marron Valley Road Property

San Diego County – 2001

APPENDIX 2

FLORAL COMPENDIUM

PLANT SPECIES INDENTIFIED ONSITE

APPENDIX 2

FLORA IDENTIFIED ON THE BRAILSFORD / MARRON VALLEY ROAD SITE DURING FOCUSED QUINO CHECKERSPOT SURVEYS - 2001

At total of one-hundred and eighteen (118) species of plants were identified onsite during the 2001 Quino checkerspot butterfly surveys. Of these, thirty-two (32), or ±27%, are non-native species. Floral taxonomy used in this report follows the Jepson Manual (Hickman 1993) and, for sensitive species, the California Native Plant Society's Rare Plant Inventory (5th Edition) (Skinner and Pavlik 1994). Additional common plant names are taken from Munz (1974), Beauchamp (1986), Roberts (1989), Abrams (1923, 1944), Abrams and Ferris (1951, 1960), and Sunset Magazine (1995). Habitat associations are: C = Chaparral, and N = Non-Native Grassland/Ruderal.

FERNS AND FERN ALLIES

PTERIDACEAE - BRAKE FAMILY			
	Aspidotis californica	California lace fern	C
	Cheilanthes newberryi	California cottonfern	C
	Pellaea mucronata	bird's-foot fern	C
	Pentagramma triangularis	goldenback fern	C

ANGIOSPERMS (DICOTYLEDONS)

ANACARDIACEAE - SUMAC OR CASHEW FAMILY			
	Malosma laurina	laurel sumac	C, N
	Rhus ovata	sugar bush	C
*	*Schinus molle*	Peruvian pepper tree	N
	Toxicodendron diversilobum	western poison oak	C
APIACEAE - CARROT FAMILY			
	Apiastrum angustifolium	wild celery	C
*	*Foeniculum vulgare*	fennel	N
	Sanicula arguta	sharp-toothed sanicle	N
	Sanicula crassicaulis	Pacific sanicle	C
ASTERACEAE - SUNFLOWER FAMILY			
	Acourtia microcephala	sacapellote	N
	Artemisia californica	California sagebrush	C, N
	Baccharis sarothroides	broom baccharis	N
*	*Centaurea melitensis*	tocalote	C, N
	Chaenactis artemisiaefolia	white pincushion	C
*	*Conyza canadensis*	common horseweed	N
	Eriophyllum confertiflorum	golden yarrow	C
	Filago californica	California fluffweed	N
	Gnaphalium californicum	California everlasting	N
	Gutierrezia sarothrae	broom matchweed	C
	Hazardia squarrosa	saw-toothed goldenbush	C, N
*	*Hedypnois cretica*	Crete hedypnois	N
	Helianthus gracilentus	slender sunflower	C
*	*Hypochaeris glabra*	smooth cat's-ear	C, N
	Isocoma menziesii	coastal goldenbush	N
	Lasthenia californica	coast goldfields	C
	Lessingia filaginifolia	California-aster	N

	Porophyllym gracile	odora	C
	Rafinesquia californica	California chicory	N
*	*Sonchus asper* ssp. *asper*	prickly sow thistle	N
	Stylocline gnaphaloides	everlasting nest straw	C
	Viguiera laciniata	San Diego County viguiera	C
BORAGINACEAE - BORAGE FAMILY			
	Cryptantha micromeres	minute-flowered cryptantha	N
	Plagiobothrys sp.	popcornflower	C
BRASSICACEAE - MUSTARD FAMILY			
*	*Brassica nigra*	black mustard	N
*	*Brassica rapa*	field mustard	N
	Caulanthus heterophyllus var. heterophyllus	jewelflower	C
*	*Hirshfeldia incana*	short-pod mustard	C, N
	Lepidium sp.	peppergrass	C
*	*Raphanus sativus*	wild radish	N
*	*Sisymbrium irio*	London rocket	N
CAPRIFOLIACEAE - HONEYSUCKLE FAMILY			
	Lonicera subspicata	southern honeysuckle	C
CARYOPHYLLACEAE - PINK FAMILY			
*	*Silene gallica*	common catchfly	N
CHENOPODIACEAE - GOOSEFOOT FAMILY			
	Chenopodium californicum	California goosefoot	N
*	*Salsola tragus*	Russian thistle	N
CISTACEAE - ROCK-ROSE FAMILY			
	Helianthemum scoparium	peak rush-rose	C
CONVOLVULACEAE - MORNING-GLORY FAMILY			
	Calystegia macrostegia	wild morning-glory	C
CRASSULACEAE - STONECROP FAMILY			
	Crassula connata	pygmy-weed	C
CUCURBITACEAE - GOURD FAMILY			
	Marah macrocarpus var. *macrocarpus*	wild cucumber	C, N
ERICACEAE - HEATH FAMILY			
	Arctostaphylos glandulosa ssp. zacaensis	manzanita	C
	Xylococcus bicolor	mission manzanita	C, N
FABACEAE - LEGUME FAMILY			
	Lotus scoparius	deerweed	C
*	*Medicago polymorpha*	bur clover	N
*	*Melilotus indica*	sourclover	N
	Pickeringia montana	chaparral pea	C
*	*Vicia villosa*	winter vetch	N

Flora Of The Brailsford / Marron Valley Road Site – 3

FAGACEAE - OAK FAMILY			
	Quercus agrifolia	coast live oak	C
	Quercus berberidifolia	scrub oak	C
GERANIACEAE - GERANIUM FAMILY			
*	*Erodium botrys*	broad-lobed filaree	C
*	*Erodium cicutarium*	red-stemmed filaree	C
*	*Erodium moschatum*	white-stemmed filaree	C
GROSSULARIACEAE - GOOSEBERRY FAMILY			
	Ribes indecorum	white flowering currant	C
HYDROPHYLLACEAE - WATERLEAF FAMILY			
	Eriodictyon trichocalyx	hairy yerba santa	C
	Eucrypta chrysanthemifolia	common eucrypta	N
	Phacelia minor	wild canterbury-bell	C
LAMIACEAE - MINT FAMILY			
*	*Marrubium vulgare*	horehound	N
	Salvia apiana	white sage	C, N
	Salvia clevelandii	Cleveland's sage	C
	Salvia columbariae	chia	C
MYRTACEAE - MYRTLE FAMILY			
*	*Eucalyptus* sp.	gum tree	N
ONAGRACEAE - EVENING PRIMROSE FAMILY			
	Camissonia californica	mustard evening-primrose	C
	Camissonia micrantha	small primrose	C
OXALIDACEAE - OXALIS FAMILY			
*	*Oxalis pes-caprae*	Bermuda buttercup	N
PAEONIACEAE - PEONY FAMILY			
	Paeonia californica	California peony	C
PAPAVERACEAE - POPPY FAMILY			
	Eschscholzia californica	California poppy	C
PLANTAGINACEAE - PLANTAIN FAMILY			
	Plantago erecta	dwarf plantain	N
POLEMONIACEAE - PHLOX FAMILY			
	Linanthus dianthiflorus	ground-pink	C
POLYGONACEAE - BUCKWHEAT FAMILY			
	Eriogonum fasciculatum var fasciculatum	coastal California buckwheat	C, N
PORTULACACEAE - PURSLANE FAMILY			
	Calandrinia ciliata	red maids	C
	Claytonia perfoliata	miner's lettuce	C

PRIMULACEAE - PRIMROSE FAMILY			
*	*Anagallis arvensis*	scarlet pimpernel	C, N
RANUNCULACEAE - BUTTERCUP FAMILY			
	Clematis lasiantha	pipestems	C
RHAMNACEAE - BUCKTHORN FAMILY			
	Ceanothus tomentosus	Ramona lilac	C
	Rhamnus crocea	spiny redberry	C, N
ROSACEAE - ROSE FAMILY			
	Adenostoma fasciculatus	chamise	C
	Cercocarpus minutiflorus	smooth mountain-mahogany	C
	Chamaebatia australis	southern mountain-misery	C
	Heteromeles arbutifolia	toyon	C, N
RUBIACEAE - MADDER FAMILY			
	Galium nuttallii	San Diego bedstraw	C
SAXIFRAGACEAE - SAXIFRAGE FAMILY			
	Jepsonia parryi	mesa saxifrage	C
SCROPHULARIACEAE - FIGWORT FAMILY			
	Antirrhinum nuttallianum	Nuttall's snapdragon	C
	Cordylanthus rigidus	dark-tipped bird's-beak	C
	Keckiella antirrhinoides	yellow bush-penstemon	C
	Mimulus aurantiacus	bush monkey-flower	C
	Pedicularis densiflora	indian warrior	C
SOLANACEAE - NIGHTSHADE FAMILY			
	Solanum xanti	chaparral nightshade	C, N

ANGIOSPERMS (MONOCOTYLEDONS)

IRIDACEAE - IRIS FAMILY			
	Sisyrinchium bellum	blue-eyed-grass	C
LILIACEAE - LILY FAMILY			
	Allium haematochiton	red-skinned onion	C, N
	Calochortus splendens	lilac mariposa lily	C
	Chlorogalum parviflorum	small-flowered soap-plant	C, N
	Dichelostemma capitatum	blue dicks	C, N
*	*Narcissus* sp. cultivar	narcissus	N
	Yucca schidigera	Mojave yucca	C
	Yucca whipplei	chaparral yucca	C

POACEAE - GRASS FAMILY

	Achnatherum coronatum	giant needlegrass	C
*	*Arundo donax*	giant reed	N
*	*Avena fatua*	wild oat	C, N
	Bothriochloa barbinodis	cane bluestem	C
*	*Bromus diandrus*	ripgut grass	C, N
*	*Bromus hordeaceus*	soft chess	N
*	*Bromus madritensis* ssp. *rubens*	foxtail chess	C, N
	Hordeum vulgare	barley	N
*	*Lamarckia aurea*	goldentop	N
	Leymus condensatus	giant wild rye	C
	Nassella lepida	foothill needlegrass	C
*	*Schismus barbatus*	Mediterranean schismus	C

Quino Checkerspot Butterfly Surveys

Performed at the Marron Valley Road Property

San Diego County – 2001

APPENDIX 3

INVERTEBRATE FAUNA

INDENTIFIED ONSITE

INVERTEBRATE COMPENDIUM

Invertebrates species identified in the field by sight, sound, cast skin, fras, or other signs, are cited according to the nomenclature of:
Insects of the Los Angeles Basin, Hogue (1974 [1993])
California Insects, Powell & Hogue (1979)
American Insects, Arnett (2000)
Field Guide to North American Insects & Spiders, Lorus & Margery Milne (1996)
Simon & Scuster's Guide to Insects, Arnett & Jacques (1981)
Dragonflies through Binoculars, Dunkle (2000)
The Flies of Western North America, Frank R. Cole (1969)
A Field Guide to the Insects of America North of Mexico, Borror & White (1970)
Butterflies of Southern California, Emmel & Emmel (1973)
California Butterflies, Garth & Tilden (1986)
Butterflies of Greater Los Angeles, Mattoni (1990)
Butterflies of Baja California, Brown, Real & Faulkner (1992)

ORDER ODONATA	**DRAGONFLIES & DAMSELFLIES**
Archilestes californica	California archilestes
Argia vividaviolet	violet dancer damselfly
ORDER ORTHOPTERA	**GRASSHOPPERS, CRICKETS & KATYDIDS**
Trimerotropis pallidipennis	pallid-winged grasshopper
Gryllus sp.	field cricket
ORDER LEPIDOPTERA	**BUTTERFLIES & MOTHS**
Hyles lineata	white-lined spinx moth
Synedoida pulchra	pulchra moth
Family Arctiidae	tiger moth sp.
Alypia ridingsi	Ridings' forester
Pyrastidae sp.	pyrastid moth
Papilio zelicaon	anise swallowtail
Papilio eurymedon	pale swallowtail
Pontia protodice	checkered white
Anthocharis sara sara	Pacific sara orange-tip
Anthocharis cethura	desert orangetip
Callophyrs dumetorum perplexing	immaculate bramble hairstreak
Callophyrs augustus	brown elfin
Stymon melinus	gray hairstreak
Phyciodes mylitta	mylitta crescent
Vanessa cardui	painted lady
Vanessa annabella	west coast lady
Apodemia mormo virgulti	Behr's metalmark
Glaucopsyche lygadamus australis	southern blue
Erynnis funeralis	funereal duskywing
ORDER DIPTERA	**GNATS, MIDGES & FLIES**
Holorusia hespera	common cranefly
Family Simuliidae	black (buffalo) fly sp.
Family Asilidae	robber fly
Family Bombyliidae	bee fly sp.
Hemipenthes sinuosa	black-winged bee fly

Bombylius lancifer	bee fly sp.
Conophorus sp.	bee fly sp.
Exoprosopa sp.	bee fly sp.
Family Tachinidae	Tachinid Fly sp.
Family Syrphidae	Syrphid flower fly sp.
Eristalis tenax	drone fly
Parasarcophaga sp.	flesh fly sp.
Family Sarcophagidae	flesh fly
Calliphora / Paralucilia sp.	blue bottle fly
ORDER COLEOPTERA	**BEETLES**
Paracotalpa ursine	bear beetle
ORDER HYMENOPTERA	**ANTS, WASPS & BEES**
Mischocyttarus flavitarsus	Polybiine paper wasp
Polistes fuscatus aurifer	golden polistes wasp
Sceliphron caementarium	Mud dauber
Subfamily *Andreninae*	mining bee
Apis mellifera	European honeybee
CLASS ARACHNIDA	**SPIDERS & ALLIES**
ORDER ARANEAE	**SPIDERS**
Lycosa sp.	wolf spider sp.
Lycosa sp.	tunnel spider
Phidippus formisus	red jumping spider
ORDER ACARI	**MITES AND TICKS**
Rhipicephalus sanguineus	brown dog tick

Quino Checkerspot Butterfly Surveys

Performed at the Marron Valley Road Property

San Diego County – 2001

APPENDIX 4

VERTEBRATE FAUNA

INDENTIFIED ONSITE

VERTEBRATE FAUNAL COMPENDIUM

Species and references need to be updated as of 6/19/2000

Vertebrates identified in the field by sight, calls, tracks, scat, or other signs are cited according to the nomenclature of Collins (1990) for amphibians and reptiles, AOU (1999 and supplemental) for birds, and Jones et al. (1991) for mammals.

TERRESTRIAL VERTEBRATES

REPTILES

IGUANIDAE - IGUANID LIZARDS

Sceloporus orcutti
granite spiny lizard
Sceloporus occidentalis
western fence lizard
Uta stansburiana
side-blotched lizard

BIRDS

CATHARTIDAE - NEW WORLD VULTURES

Cathartes aura
turkey vulture

ACCIPITRIDAE - HAWKS

Pandion haliaetus
osprey
Accipiter cooperii
Cooper's hawk
Buteo jamaicensis
red-tailed hawk
Aquila chrysaetos
golden eagle

FALCONIDAE - FALCONS

Falco sparverius
American kestrel

ODONTOPHORIDAE - QUAILS

Callipepla californica
California quail

COLUMBIDAE - PIGEONS & DOVES

Zenaida macroura
mourning dove

CUCULIDAE - CUCKOOS & ROADRUNNERS

Geococcyx californianus
greater roadrunner

CAPRIMULGIDAE - GOATSUCKERS

Chordeiles acutipennis
lesser nighthawk

TROCHILIDAE - HUMMINGBIRDS

Calypte anna
Anna's hummingbird
Calypte costae
Costa's hummingbird
Selasphorus rufus
rufous hummingbird

PICIDAE - WOODPECKERS

Colaptes auratus
northern flicker

TYRANNIDAE - TYRANT FLYCATCHERS

Sayornis nigricans
black phoebe
Sayornis saya
Say's phoebe
Myiarchus cinerascens
ash-throated flycatcher
Tyrannus vociferans
Cassin's kingbird
Tyrannus verticalis
western kingbird

CORVIDAE - JAYS & CROWS

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

ALAUDIDAE - LARKS

Eremophila alpestris
horned lark

AEGITHALIDAE - BUSHTITS

Psaltriparus minimus
Bushtit

TROGLODYTIDAE - WRENS

Salpinctes obsoletus
rock wren
Thryomanes bewickii
Bewick's wren
Troglodytes aedon
house wren

SYLVIIDAE – OLD WORLD FLYCATCHERS

Polioptila caerulea
blue-gray gnatcatcher

TURDIDAE - THRUSHES

Sialia mexicana
western bluebird

Catharus guttatus
hermit thrush

TIMILLIDAE - BABBLERS

Chamaea fasciata
wrentit

MIMIDAE - THRASHERS

Mimus polyglottos
northern mockingbird

Toxostoma redivivum
California thrasher

STURNIDAE - STARLINGS

* *Sturnus vulgaris*
European starling

PARULIDAE - WOOD WARBLERS

Vermivora celata
orange-crowned warbler

Dendroica coronata
yellow-rumped warbler

Oporornis tolmiei
MacGillivray's warbler

Wilsonia pusilla
Wilson's warbler

EMBERIZIDAE - TOWHEES, AMERICAN SPARROWS & EMBIRIZID BUNTINGS

Pipilo crissalis
California towhee

Pipilo maculatus
spotted towhee

Aimophila ruficeps
rufous-crowned sparrow

Spizella atrogularis
black-chinned sparrow

Chondestes grammacus
lark sparrow

Amphispiza belli
sage sparrow

Passerculus sandwichensis
savannah sparrow

Zonotrichia atricapilla
golden-crowned sparrow

Zonotrichia leucophrys
white-crowned sparrow

CARDINALIDAE - CARDINAL GROSBEAKS & BUNTINGS

Passerina amoena
lazuli bunting

ICTERIDAE - BLACKBIRDS, ORIOLES & ALLIES

Icterus cucullatus
hooded oriole
Icterus galbula
Bullock s oriole

FRINGILLIDAE - FINCHES

Carpodacus mexicanus
house finch
Carduelis psaltria
lesser goldfinch
Carduelis lawrencei
Lawrence's goldfinch

MAMMALS

LEPORIDAE - HARES & RABBITS

Sylvilagus audubonii
Audubon's cottontail
Lepus californicus
black-tailed jackrabbit

SCIURIDAE - SQUIRRELS

Spermophilus beecheyi
California ground squirrel

GEOMYIDAE - POCKET GOPHERS

Thomomys bottae
Botta's pocket gopher

MURIDAE - MICE, RATS, AND VOLES

Neotoma fuscipes
dusky-footed woodrat
Neotoma lepida
desert woodrat

CANIDAE - WOLVES & FOXES

Canis latrans
coyote

CERVIDAE - DEERS

Odocoileus hemionus
mule deer

Quino Checkerspot Butterfly Surveys

Performed at the Marron Valley Road Property

San Diego County – 2001

APPENDIX 5

COPIES OF SURVEY FIELD NOTES

3/1/01 Marron Valley Road Project - C Edwards/M Klein

Start: 10:00, Cloudy, no breeze - NW 3mph, 51°F

Stop: 2:15, Cloudy to partly sunny, NW 3mph 61°F

This is a visit 1 and Habitat assessment for QCB. After 3 days of rain the area is quite green. We are assessing for quality of QCB and the first item is to look for host plant (Plantago erecta). At the same time will be inventoring for other flora/fauna. At one of the knolls next to the MT Misery. Good area for hilltopping behavior but lacking the nectary plants as well as host plant.

Found 2 patches of PE and 4 very good areas for butterfly activity. There is evidence of annuals but they are not all in bloom. Possibly in about a week the annuals will be blooming and the site be better to sect activity. Evidense of 4 sp of butterflies is not bad.

Bird		Invert	Mammals
HFIN	SCJA	Wolf Spider	Gopher (holes)
RAVE	CATH	BS Orange (11)	pack rat
LECO	BTIT	BZTICK	mule deer
HLAR	SBSP	Per Hic (1)	
ANHUM	CATO	Stinkbug	
WEBL	RCSP	Bombylid	
CROW	SPTO	Plody (11)	
WTIT	RTHA	W CLAD (1)	hemp
OSPR		FLD CRIC	SOLI2
YRWA		Moth -	
		FLESH FLY (Sarcophagidae)	

No QCB Observed

Thursday, 1 March 2001 G Edwards

Brailsford property, Harmon Vly Rd (10 - 1445)

Days of rain for a time before survey

mostly cloudy, lt NW bz, ≈58-61°F

flat & slope		ridges
CaTo	||||	||
CaBa	|||||	
Yrwa	||	
WeFl	|||||	|
EPGo		
WeBl	||||	
AnHu	||||	||
CaJa	||	
LeGo	||||	
Wren	|||||	||||
Ospy	|	
AnTr		
Bewr	|||	
Coyote		
NoFl	|	
CaTh	|	|
Cattle		
Bush		||||||
RcSp		||
deer		scat
DFWR		nest
SPTo		|
RtHa	|	
HoLa	|	

S Mixed Chaparral domin by XyBi, ArcGl, ErFa, SalClev, WeFlay, Ceanoth, RhCa, AdFa, w/ YuWh, HaSq, HeSc, HeArb, ErTw, Carrocarpus, ...

Cattle access the site.

No animal flower/nectar

Burned 3-5 years ago, bushes ± 3-5' tall, except along some canyons.

Seedling wildflowers & possible Plantago were seen along on ridges & slopes in the N-Ce & W part of the property.

No clear areas support ing PLER open areas few and small mostly along ridges. Few butterfly nectar plants, the ground being mostly devoid of vegetation except for shrubs.

Relatively few fauna sp.

[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
3-22-05
2005

Thurs. March 8, 2001 C. Edwards

Brailsford/Manor Valley Rd. property

(0930-1430) Clear, light S brz. = 65°F. to hazy to med NW " 68°F

CoRa	||||	|||	
HoFi	~~||||~~ ||	||	
GrRo	|		
AnHu	~~||||~~ |	|||	
Amke	|		
Sape	|||		||
BuSh	~~||||~~ |||	|||	
cricket calls			
BlPh	|		
Wren	||||	||||	
YrWa	||	||	
LeGo	|||		
CaTo	|||	||||	
SpTo	|	~~||||~~ |	||
NOFl	|		
RoSp	~~||||~~ ||		
WCSp	||	|	
GrKi	||||		
Bewr		||	
GCSp		||	
CoHu		|	|
Pemp		||	
bee fly		sev	
bm tick		X	
TuVu		|	
OcWa		||	
CaTh		||	
Brn elfin		|	
H-Bee		X	
WFZZ		|	
flesh fly			X
SSt			|||| |
WeBl			||

There is an abandoned home site within the NOT A Part portion, beside a lone QA and an undetd scrub oak, and aloe too. The area has been used recently by unknown visitors to the property. The upper dirt driveway is eroded.

Vegetation on the lower east ridge is ± taller and denser than on the E-fcg slopes. Openings within the shrubs have no blooms for nectaring.

Similarly, open areas a the central ridge

1130 - 66°F, lt N breezes hazy sun, w/ thin clouds. A perplexing hairstreak is patrolling & sunning on this ridge, like last week

On the west ridgetop there is a lot of bare open ground, but here also is a scattered presence of mosses, liverworts, as well as seedling and growing annual wildflowers/herbs that do provide nectar.

This ridge is @ the W edge of the property, according to the old proposed development map. The higher-mid-ridge to the S and to, as well as the saddle and next ridge are mapped offsite. At least 6 perplexing hairstreaks and a brown elfin are on this ridge,

gray fox scat

The Chamaebatia is beginning to bloom. Greater numbers and better specimens of the unknown Salvia (?) sp. were on the N face of the rocky summit of the low ridgetop just offsite to the SW.

1300 - heading east + uphill, back onsite

1320 @ high mountain summit. Hazy sun, more CO to the N + W horizons, mod NW breezes, ≈ 10-14 mph, ≈ 66°, feels warmer where it is out of the breezes. 1345 - NO butterflies NO nectar sources.

@ N fenceline headed east past ramp. 245

3/15/01 Marron Valley Road QCB Survey #2 of 5

Start: 0840, Sunny, NW to 5mph, 59°F (shade)

Stop: 1235, Sunny, NW to 7mph, 66°F (shade)

Visit 2 of 5. Sunny day but a little cooler than expected. There is a NW breeze to 5mph that is keeping the shade a little cooler. The sun does warm it up so, we shall see what kinds of butterfly activity this produces - PE found in the disturbed area at the edge of the scrub. It is ~ 50yds north of the Oak Tree. Area has sporadic open bare ground with Laurel Sumac, White Sage and Sagebrush surrounding it. This is not a bud area for QCB because this part avoided the fire. Headed NW then. Some of the recovering scrub up to the first mesa looking north. No butterfly activity. I then went South and up the north facing slope to the next mesa. Again no butterfly activity. While bushing through some of the chaparral, I did flush out a couple of Pygmy tail Moths.

Birds		Invert	Mammal
ANHM	TUVU	FLD CRICK	AMD COT
CAKI	SASP	Band Wing	1 - Unk
SAPH	WCSP	Pygmy Moth (IIII IIII)	
CATO	SPTO	PEPPLEX (IIIIII IIII)	
YRWA	SESP	Syrphid	
HFIN	CATH	Pl Lady (III)	Hoop
WEKI	RCSP	MED DAUBER	WFUZ
CROW	RCWR	WC LADY (1)	
WTIT	MODO	SOBUL (1)	
RAVE			
STAR			
BTIT			

I got to a third mesa heading up the slope and again no butterfly activity. What I am seeing in all three of these mesas is the lack of nectary plants. As it being appropriate for QCB activity, I would say yes except for no nectary plants. This makes these mesas unsuitable. Without some annual flowers, insects in general would not necessarily be here. Made it to the top hill. I have flesh flies on the rocks and so far 2- perplexing hairstreak patrolling. Saddle area west of the highest peak is excellent for QCB except for the lack of nectary plants. There is plenty of open soil, adequate brush, but no nectar sources. There is a small amount of PE (200 plants) interspersed within some grasses. Went to the top of the western most hill and no only 4 hilltopping perplexing hairstreaks. Went to the NW mesa where there is eriodictyon blooming and some PE. There is some pectocarya + fiddleneck starting to come up with 1- West Coast Lady, 2- Painted Ladies and 4- Perplexing Hairstreaks. On the last mesa at the north/central part of the property. No butterflies but alot of Syrphid + Flesh Flies.

Emphasis presently is the lack of nectary plants. Blue Dicks are still about 2 weeks from blooming which is very late since it is blooming most everywhere else. It is possible that good QCB conditions are about 2 weeks behind.

Thurs. March 22, 2001 C. Edwards

Railroad/Maroon Wy Rd site - QCB #3

(0915 to 1215) Overcast, light S bz, ~66°F.
[Abandoned Bad conditions] same, mod N bz - 68°F.
Along the road it is ~1410 ft elev. The property owners? are already onsite.
0940 - they're heavily up to the high point summit, just offsite.
0945 - @ east ridge summit. Light W breezes, O's. There are flies milling around, but it needs to warm up, or to clear up, to be appropriate.
1015 - I've confirmed the occurrence of Pedicularis Indian warrior (plant) onsite w/ a blooming individual just below/E of the central ridgecrest. I've just made eye contact w/ the people, now 1/2 way down to W ridgeline.
1025 - I met Cliff and his friend Fred as they were hiking around. We talked and visited the N and ridge-crest of the W ridge onsite.
1130 - as we returned east across the intervening slope, we came upon 4 sets of two chicken wire cages, one w/ a wire lid, situated within the available disturbed/recovering chap.
1145 - on the central ridge. Still overcast, mod NW breezes 5-10 mph, ~66°F.
1200 - Fred pointed out 2 maroon-colored pea-shaped flowers on the spiny gray-green shrub I thought might have been a Hope of Ceanothus. It may be Lathyrus or Pickeringia, very nice. Some of the plants have bright yellow new leaves, others greener.
1220 - off the E ridge summit. Still N-east, breezy and cool.

This survey will need to be redone.

3/22/01 Brailsford/Maxon Vly Orch # 2

Fauna Observed

LESP	III
CaKi	I
CaTo	IIIII
GoEa	II
TuVu	II
Buch	IIII
SaSP	IIII
SwSP	III
EPTO	III
AmRo	III
RWBl	III
HeTh	IIIII
WiWa	I
CaWr	III
MoDo	III
RuHu	II
DoWR	- nest
NoFl	I
CoHu	III
AmCr	I
RtHa	I
LaGu	I
ReSp	I
CoRa	I
CoHa	I

3/30/01 Marron Valley Road QCB #3 makeup

Start: 0945, Sunny, NW@ 3-4 mph, 69°F

Stop: 2:30, Sunny, NW@ 10 mph, 77°F

This is the makeup from last week when Claude was onsite and waiting for suitable conditions. Today conditions are excellent for insect activity. The bird vocalization is wonderful. Top hill has lots of hilltopping behavior with Bee Flys mating Syrphid Flys, Flesh flies, Anise Swallowtail, Pale Swallowtail, Desert Orangetips Common ~~Whites~~, Tiger Moths and Perplexing Hairstreaks and Funeral Duskywing's. No Quino but this hill lives up to its expectation for great hilltopping. Robin Brailsford (Property owner) joined me for a couple of hours. I showed her where the plantain is located and then we went back up to the top hill to show her hilltopping insect behavior. 3 Turkey Vultures flew 3 feet over ~~us~~ us giving Robin a thrill. Lots of butterfly activity but no Quino observed.

3/30/01 Marron Valley Road QCB #3 page 2

Birds

CATO
HFIN
STAC
AMCR
CAKI
LEGO
SPTO
BWRN
RTHA
TUTI
WEKI
ATFL
CORA
WTIT
ANHM
RCSP
CAGN

Invert

FLO CRICK
FLSH FLY
D ORANGE (IIII)
BL GNAT
S ORANGE (1)
F DUSKY (IIII)
TUNL SPDR
B WING
PLADY (IIII)
SYRPHID
SO BLUE (IIII)
GOLD POLIST
B ELFIN (1)
CRNE FLY
PERPLEX (IIII)
B FLY
ROBR FLY
BW B FLY
ANSWZL (II)
PALE SW (1)
TIGR MOTH (III)
COMMN (II)
PULCHRA (1)
W CLADY (1)
B METAL (II)
RD Jump
Alpine Pidimgi

HERPS

SBLIZ (IIII)
GR SPINY (1

MAMMALS

GOGR SQ
PACK RAT (nests)

Wednesday, 4 April 2001 C. Edwards

Bailsford/Maxon Valley Rd. QCB #4

(1130 - 1430 hrs) Overcast, light W breezes, ~64°F.
Becoming mostly cloudy, med-gsty N bz, ~ 56°F
5-20+ mph

Conditions are not good to perform a butterfly survey. This week's weather is predicted to be mostly cloudy, breezy, and unseasonably cool.

I met Robin (property owner) and her company onsite. I will remain to wait to see if things change over the next hour or so.

1230 - Still overcast and cool. The NNG on the E portion is taller and more lush. The BrRa is blooming more. On the nearby slope, the CeTom and Pickeringii are beginning to bloom.

1250 - Atop the E ridge. As I look more closely at the vegetation, it appears that the could have been through at least 2 brush-fires in recent year, up to 10 years ago. Some vegetation, particularly on the E ridge to next canyon, are more developed and mature than on the central and W ridges/slopes. The canyon may not have burned at all.

4/4/01 Brailsford/Manon Vly Rd QCS #4

Fauna Observed

AmCr ||||
CoRa ||
RtHa ||
AnHy ||||
CaTo ||||
CoHu |||
BuOr |
SpTo ||||||
Wren ||||
Swen ||||
WBSi ||
LeGo ||||||
MoDo ||
SaSp ||||||
CaKi ||
MeGw ||
BcSp ||||
Pyralid moths ≥5

1410 - Another patch of annuals is just W of the canyon on a narrow trail on the E-facing slope, intermixed w/ small-sized perennial plants. No flowers.

1415 - On the W ridge. The growth of annuals here is more pronounced and extensive. Many plants are blooming more to come.

Blooming plants of Pedicularis are more conspicuous and numerous.

1330 - At top the N end of the central ridge. It's still cloudy cool and windy. I come up slowly mostly along N boundary trails. Still no annual nectary plants are on this slope/ridge. I found a small area of seedling annuals on the W side of the ridge in softer, silty, soil.

1350 - Actually, this area extends downslope ~~almost~~ to the canyon, and north, off-site. This area burned more recently. At least 2 scrub oak bushes are blooming. It's nearly silent.

4/4/01 Brailsford/Marron Vly Rd QCB #4

I'm heading out. It's actually getting cooler and more breezy! There have been no butterflies out today, only a few small moths (Pyralidae?).

I will have to replace this survey on a warm and sunny day soon — when?

Done and leaving 1430 ... →

4/13/01 Morron Valley QCB Survey

Start: 0945, Sunny, NW@ 4mph, 68°F

Stop: 1300, Sunny, N@ 9mph gusts to 11mph, 73°F

A beautiful day for a survey. Thee bird vocalyzations are many and already lots of Painted Ladies moving NW past me. This should be the 4th visit of 5. Plantain overlay the oak tree shows lots of evidence of defoliation. I found 2 beetles on the flower eating them I will ID them to find out who they are. They appear to be a Cryosomelid. 1023 winds are shifting, coming more from the north@ 8mph I have onion blooming and popcorn flower, blue-eyed grass Purple Nightshade Lupin Chia, Chinese houses, New nectary plants coming up, It is my opinion that this area is at least 2wks behind coastal quino. 36 species of insects

Birds		Inverts	Mammals
LEGO	BUOR(PR)	✓Pbody (15+30+30+100+100) 100+134	COGRSQ
WFIN	BNH	FLD CRICK	BTJACK
WTIT	COHM	✓MCRES (1)	
CATO	SPTO	BLBOT FLY	
AMCR	RCSP	Pallid Grass	
EUST	RWRN	✓SCBLU (THL)	
BTIT	RTHA	✓BELFIN (1)	Herp
TUVU	BGGN	YDANCER	SBUZ (111)
CORA	CATH	SKIPPER (3 species)	GRSPINY (1)
WCKI	CAKI	CRN FLY	
		✓PERPLE (HH HH HH)	
		BWB FLY (4 species)	✓BMETAL (111)
		✓CMWH (1111)	Bear Beet
		✓DORANGE (HH HH 1)	✓WCLADY (1)
		FLSH FLY	mining bee
		TACK FLY	CA ARCHILS
		DRONE FLY	POLISTER
		WLSPHNX (1	✓GR HAIRSRK (1)
		✓FOLIAGY (HH 11)	
		Solitary bee	
		✓SORANGE (11)	
		BR TICK	

Shows the activity due to increase of flowering plants. The ridge + hilltops are active with hilltopping activity but the NW corner hill (I call it butterfly hill) was by far the most active. 7 species of butterflies, 4 species of Beeflies, 3 species of Syrphid flies + 2 species of beetles. This hill also has the most flowering plants. As good as the day was, there were no QCB observed.

Wednesday, 18 April 2001 C. Edwards
Brailsford/Marron Vly Rd - QCB #5
(1030) Mostly-cloudy, mod W bz, 0-5 mph, = 72°F

Overall, the disturbed eastern portion of the site is now more lush NNG, tall, ±24-30", w/ mustards; LeFil, HeGra, MaPal, fennel, AraEle, FeMe, HeGr; Ra Sat, Oxalis, DiCap, CenMel, sev sold Pla, Ba Pil, intermixed w/ CSS and native grassland elements; Nasella, Allium, Lomatium; San Arg, goldfields, sev scrub oak shrubs around old home site, Sor Bel, PlEr

A small patch of Plantago was situated ±150' E of the old homesite, on a less-heavily vegetated 2X3' patch within Dist/NNG ±50 plants ≤1" tall, blmg.
1130 - still botanizing, now overcast!!
Painted lady just flew by - west. 1140 - Another PlEr patch is N of the homesite along an old trail road? on hardened soil, low to sparse veg. ±150 plants 1-3" tall, in an area ±5X8'. Another patch ±10' away, ±250 plants, ≤2" tall, clay type soil, sparsely veg'd, dist'd. At the edge between NNG & MxCh veg. Another patch of tiny PlEr were further N, ±50 ≤1" tall. Another patch of tiny PlEr were further N, within edge of MxCh coll, ≥200 plts, ≤1" tall, in an area ±8X6' on both sides of a narrow dirt trail.
1200 - Clouds breaking up again. ≥5 Pal ε 2 Swas in NNG area, also Fur PlW. Var-lt bz = 76°F

Another small patch of small Plantago near the N. fence, thin sparse PlxCL. ≥100 pls ≤1" tall in an area ± 6x4'. Another patch @ fence, ±50, 4 ft².

1210 - more clouds coming, sun gone again! More Chap-pea is blooming mtn mahogany too. More PLEP, small plants, upslope ± 50. These were not here previously, responding to late rains.

1230 - Popcornflower plants present and blooming sparsely @ NE side of E-facing slopes, not seen here before.

1230 - On E ridgeline, no butterfly activity!

1250 - There is a singing BgGn in the denser Chap vegetation between the first E ridge and the canyon drainage to the W, good habitat for it. 1260 - BgGn along canyon bottom, singing. A Sava. orangetip flew by within the canyon.

1315 - At top central ridgeline, add 5 Pale and 2 Fun. Dsw, mostly sunning. Skies are mostly cloudy, mod NW breezes 0-10 mph, ~78°F.

1318 - A Sava. orip is patrolling the ridge.

1320 - Oooh, a big area of sunny skies, calmer and warmer. A common white flew past on this ridge.

1330 - A possible stick & stone nest of Neotoma lepida is among rocks below/W of ridge-top.

4/18/01 Brailsford/Harmon Vly QCS #5 3

Fauna Observed

HoFi ||||
AnHu ||||
WiKi || - @ Eucs
CaKi || - @ Eucs
HOOr | - @ Eucs
LzBu ||||
LeGo ||||||||||
CoRa ||||
Bush ||||||||||||
SpTo ||||||||||||||
Wren ||||||||
BcSp ||||
SgSp ||||||||
CaQu |
HoWr ||
BuOr || - @ Eucs
WeSJ ||
CaTo ||||||||||
CoHu ||||
BeWr ||||
BgGn |
TuVu |
RtHa |
WCSp 10+ ||
CaTh |
RcSp |||
LeGo |
NoMo |

heste — NMO Fuv?
WFLz SbLz Neo Lep?
BPGo - mounds And CoH-scat
Painted lady ||||||||||||||||||||||||||||||
Sara orangetip ||||
Funereal DW |||| ||
Common white |
Behr's metalmark ||
Perplexing hairstreak |

red velvet-ant graybird loc
crickets red-thorax blister beetle

Shiny Yerba-Sta is blooming.
Fun DW nectaring there.
1355 - Passing several
scrub-oak climbs along
the next canyon drainage.
1400 - At the W ridge.
Add ≥10 Pala, 1 Sara,
and 2 FunDW, that
were foraging or sunning
on the adjacent slopes
w/ sparse recovering Chap.
1410 - @ the ridge-tip.
Still mostly-cloudy, mod
breeze 5-12 mph.
Wow - the crop of annual
wildflowers, mostly popcorn
is bursting of growth &
blossoms, 6"-18" tall, more
blossoms to come! Many
more grasses in areas
too, overall more lush.
Sara otp here, 1 BeMe
1 perplexing hairstreak
passing patch of sumac
NW bz ≤6mph 77°F

4/18/01 Brailsford / Marron Vly Rd QC3 #5 4

1440- There isn't a lot of butterfly activity here today, although there are numbers of flies, bees, and small moths. Add 4 Polo, 1 Satyr, and 1 Fun Dwg. Only occasional hazy sun, calmer breezes, and still mild, ≈ 78°F.

1450- I flushed a LeNI from the NW aspect slope of the offsite summit, sparse treeing Mech, weeks, sand.

1500- At the high point summit along the S boundary. Still overcast, light-to-mod N breezes, ≈ 76°F. I met Robin Brailsford (property owner) @ the summit, coincidentally. We noted ≥ 10 Polo, plus 1 Fun Dwing.

1630- Back @ Marron Vly Rd after descending the steep slopes below the high summit and E ridge. No additional butterflies. The weather has deteriorated to deeper overcast, mod N-W brz 5-15 mph ≈ 70° and falling. I covered all appropriate areas but not so many species.

Quino Checkerspot Butterfly Surveys

Performed at the Marron Valley Road Property

San Diego County – 2001

APPENDIX 6

U.S.F.W.S. – Quino Checkerspot Survey Letter To Recovery Permit Holders, February 14, 2001

United States Department of the Interior
Fish and Wildlife Service
Ecological Services
Carlsbad Fish and Wildlife Office
2730 Loker Avenue West
Carlsbad, California 92008

February 14, 2001

Dear Holder of Quino Recovery Permit:

We are fast approaching the adult flight season for the federally endangered Quino checkerspot butterfly (*Euphydryas editha quino*, "Quino"). Since last flight season, the U.S. Fish and Wildlife Service (Service) proposed critical habitat for the Quino on February 7, 2001 (66 FR 9476), and we released a draft recovery plan for the Quino, which was noticed in the Federal Register on February 8, 2001 (66 FR 9592). In addition, the National Association of Home Builders and other organizations filed suit on September 8, 2000, in U.S. District Court challenging our survey protocol for the Quino. Among other issues, the plaintiffs seek to enjoin us from taking any actions to implement the 1999 and 2000 survey protocols.

In the draft recovery plan, we recommended surveys for the Quino within six delineated recovery units and habitat complexes. These units and complexes are: 1) Northwest Riverside Recovery Unit containing the Gavilan Hills habitat complex; 2) Southwest Riverside Recovery Unit containing the Warm Springs Creek and Skinner/Johnson habitat complexes; 3) South Riverside Recovery Unit containing the Oak Mountain/Vail Lake, Sage Road/Billy Goat Mountain, and Brown Canyon habitat complexes; 4) South Riverside/North San Diego Recovery Unit containing the Silverado and Dameron Valley/Oak Grove habitat complexes; 5) Southwest San Diego Recovery Unit containing the San Diego National Wildlife Refuge, Otay Lakes, Otay Foothills, Otay Mesa, Marron Valley, and Tecate habitat complexes; and 6) Southeast San Diego Recovery Unit containing the Jacumba Peak habitat complex.

In addition, in the draft recovery plan, we recommend surveys in some areas outside of the mapped recovery units including: 1) between the South Riverside/North San Diego Recovery Unit and Southeast San Diego Recovery Unit in eastern San Diego County, particularly the slopes of the Laguna Mountains and the slopes of Mount Palomar; 2) between State Route 94 and Interstate 8 in southern San Diego County; and 3) the eastern slope of the Santa Ana Mountains south of Lake Elsinore, including the vicinity of the Santa Rosa Plateau.

In light of this new information and the above cited recent events, we will not develop a new survey map or revise our Quino survey protocol. Instead, we recommend that Quino recovery permit holders use the draft recovery plan, guidance from local jurisdictions (i.e., county or city), and any other appropriate scientific information to determine whether surveys for the Quino are warranted.

Regarding methodology, all permit holders should use the best scientific information, which we believe is our 2000 survey protocol. In particular, surveys should:

- Be conducted in appropriate habitat for Quino, generally defined as sage scrub, open chaparral, grassland, and vernal pool areas, especially open or sparsely vegetated areas, hilltops and/or ridgelines, rocky outcrops, trails, and dirt roads.

- Not be conducted concurrently with any other focused survey (e.g., coastal California gnatcatcher).

- Begin the first week that Quino begin flying and should be conducted once per week throughout the flight season on non-consecutive days for a minimum of 5 surveys.

- Be conducted at an average rate of 10 to 15 acres per hour.

- Be conducted only under acceptable weather conditions; 1) no fog, rain, or drizzle, 2) sustained wind should be less than 15 mph measured 4-6 feet above the ground, 3) temperature in the shade at ground level should be at least 60 degrees Fahrenheit on a clear, sunny day, or at least 70 degrees Fahrenheit in the shade at ground level on an overcast or cloudy day.

With regard to live captures of Quino, by copy of this letter, we are notifying Quino recovery permit holders that capturing of Quino, as defined in the permit Terms and Conditions, is allowed only outside of the recovery units mapped in the January 2001 Recovery Plan. Please submit the required 45-day reports described in, and required by, your section 10(a)(1)(A) permit terms and conditions. We will provide comments on your species surveys during our review of project applications and supporting documents.

We are monitoring Quino larval development and host plant phenology. Based on weather forecasts, past flight season records, and larval monitoring at Lake Skinner and Marron Valley, Quino may be flying in San Diego and Riverside counties by February 26 below 3,000 feet elevation and by March 5 above 3,000 feet elevation. We will post the start of the Quino flight season on our website (http://carlsbad.fws.gov) to inform Quino recovery permit holders and other parties interested in Quino conservation and monitoring. We recommend that you frequently check our website for updated information on the start of the Quino flight season.

Sincerely,

Ken S. Berg
Field Supervisor