

Klein-Edwards Professional Services

My 15, 2005

Ms. Alison Anderson
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Carlsbad Fish & Wildlife Office
6010 Hidden Valley Road
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Subject: Results, and Conclusions of Quino Checkerspot Butterfly Monitoring on the Otay Truck Trail Site Located in San Diego County, California.

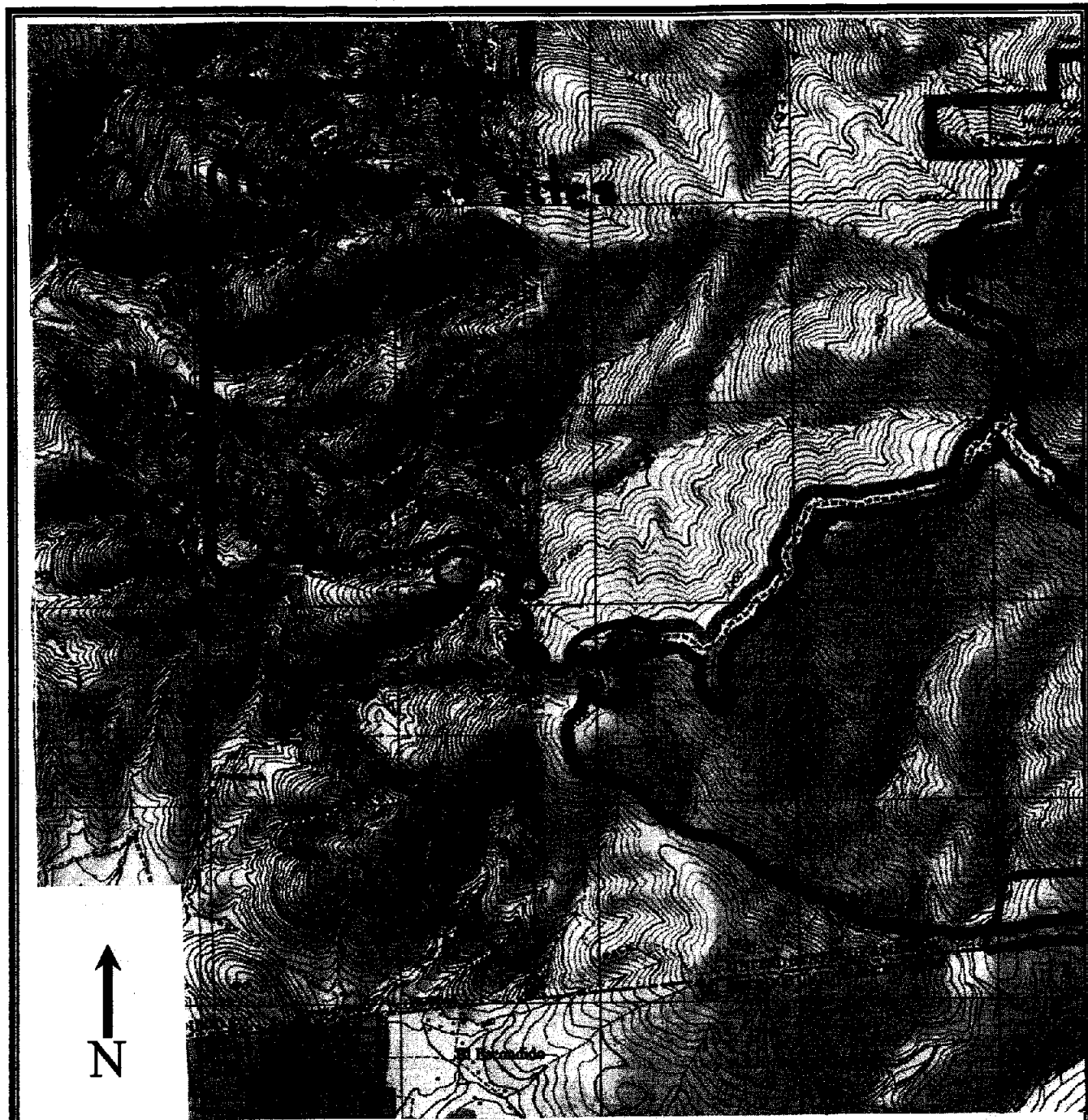
FLITE Tours, Inc, BDA: Klein-Edwards Professional Services (KEPS) was retained by the U.S. Fish and Wildlife Service to conduct post-fire monitoring for the federally endangered Quino checkerspot butterfly (*Euphydryas editha quino*) on the Otay Truck Trail site located in the County of San Diego, California. KEPS's surveys were conducted according to the U.S. Fish and Wildlife Service protocols for this species (USFWS 2002). A total of ten (10) Quino checkerspot butterflies were detected on site. The sightings were as follows: 5 adults (3 females and 2 males) on a mesa just east of Wild Bill Canyon and 5 adults (1 female and 4 males) just outside of BLM jurisdictional lands within lands owned and managed formerly by the Environmental Trust. This report provides the results and conclusions of KEPS's 2005 surveys for the adult Quino checkerspot butterfly.

Site Location and Description

The Otay Truck Trail site is located on Otay Mountain in southern San Diego County, California. The scope of the survey areas were suitable areas on the western side of the Mountain west of Doghouse Junction. Monitored sites included nine locations along the Otay Mountain Truck Trail and the Pack Trail just east of Wild Bill Canyon all within the Designated Wilderness area of the Bureau of Land Management (BLM) and three locations along the Otay Mountain Truck Trail west of the BLM Wilderness area within the area owned and managed formerly by the Environmental Trust. The site is within portions of the USGS 7.5' Otay Mesa and Otay Mountain Quadrangles, Sections 28 and 29, Township 18 South, Range 2 East. The site can also be found on The Thomas Guide for San Diego County, Detail Map Page 1352, and Map Coordinates H-1 to J-2.

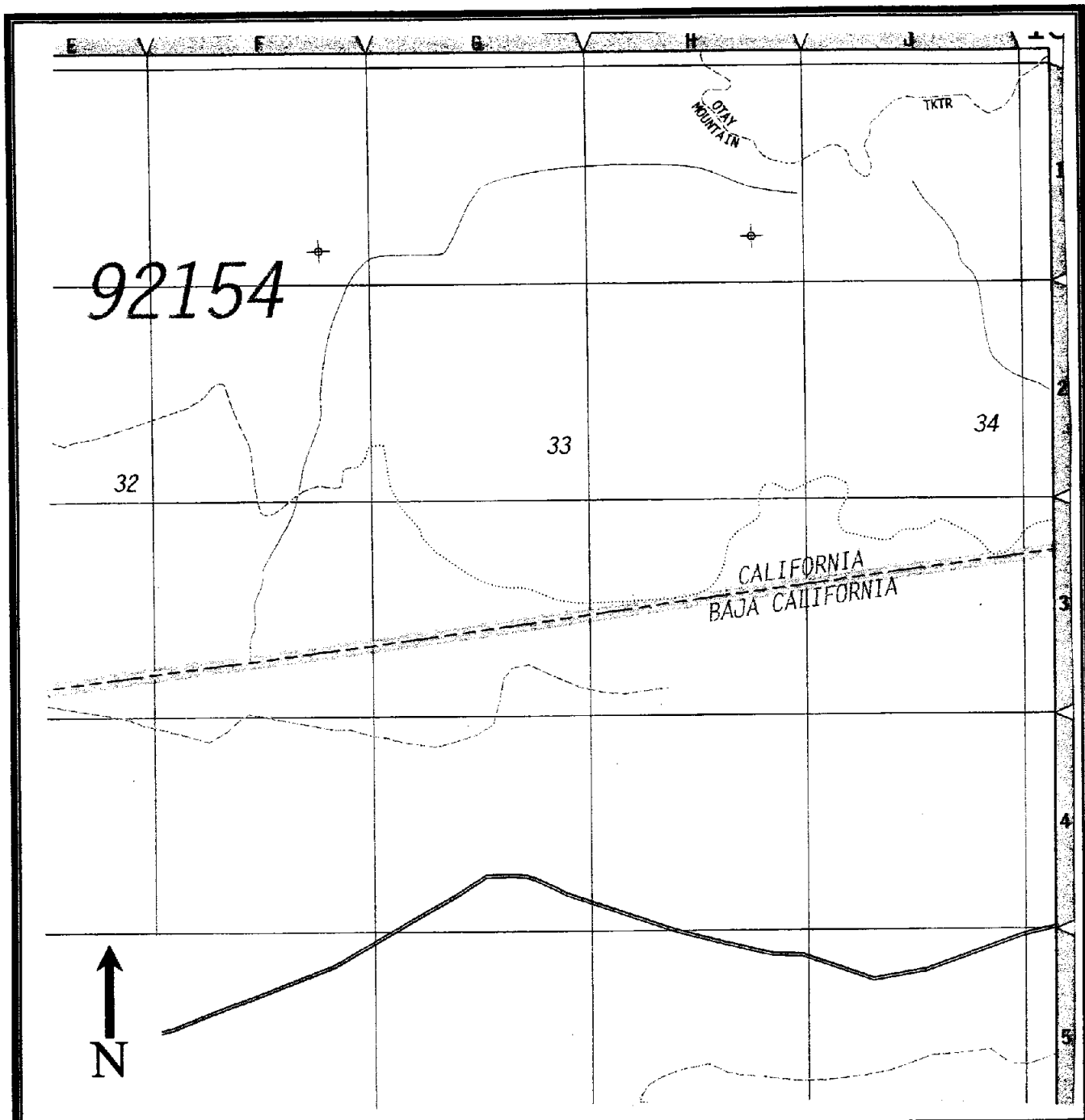
The fires of October 2003 removed the vegetation but new growth is sprouting back indicative of dense chaparral, and Tecate Cypress Woodland. There are interspersed refugia within Section 28 of Tecate Cypress Woodland and chaparral still intact.

Elevations on site range from approximately 1,330 feet above mean sea level (MSL) at the western end of the Truck Trail to over 2,700 MSL at the eastern most monitored site. Within Wild Bill Canyon elevations range from approximately 960 feet MSL at the Canyon floor to over 1,500 feet MSL along the eastern edge of the mesa along the Pack Trail.



REGIONAL LOCATION
ON USGS 1:24000 SCALE
OTAY MOUNTAIN QUADRANGLE

FIGURE 1



OTAY TRUCK TRAIL
THOMAS BROS MAP
PAGE 1352

FIGURE 2

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Immediately south is the International Border with Wild Bill Canyon and its mesa immediately adjacent to the International fence. There are several steep canyons and drainages throughout which makes access without a vehicle difficult. The Truck Trail and access road into Wild Bill Canyon are regularly maintained by the Border Patrol and therefore these primary roads are in fair to good condition.

Proximity to Known Quino Checkerspot Butterfly Sightings

There are recent historical records of QCB along the Truck Trail, and Wild Bill Canyon. All of the monitored areas except one have recorded Quino. Therefore the potential for observing QCB within any of these monitored areas in 2005 is high.

Survey Methods

Biologist Michael W. Klein (TE039305-2) conducted a protocol assessment of the site to evaluate continued suitability of these monitored areas as well as looking for host plant and nectar resources. At the same time Mr. Klein monitored for the presence of adult Quino checkerspot butterflies. Survey approach was to monitor the Otay Mountain Truck Trail one day then access Wild Bill Canyon, the Pack Trail and the mesa east of the Canyon on a second visit.

As part of gaining the required field hours, William (Bill) Gendron and Jane Higginson accompanied me on most visits. They were in a 'Supervised' capacity and within the required distance to me during all visits.

**TABLE 1:
OTAY TRUCK TRAIL QUINO CHECKERSPOT BUTTERFLY SURVEY INFORMATION**

Date	Survey Hours	Weather Conditions	Purpose of Visit, Biologist(s)
3/01/05	0930-1445	Partly to Mostly Cloudy; calm to NW at 12 mph, 61-59°F. Bill Gendron and Jane Higginson accompanied	Site Assessment & adult QCB searching along the Truck Trail. No Adults observed
3/02/05	0930-1430	Partly to Mostly Cloudy, NW at 6-10 mph, 55-59°F. Bill Gendron and Jane Higginson accompanied	Site Assessment & adult QCB searching along Pack Trail in Wild Bill Canyon. No adults observed.
3/08/05	0930-1500	Sunny; calm to W at 4 mph; 65-73°F. Bill Gendron accompanied	QCB adult presence search along Truck Trail. 3 male QCB observed within former Environmental Trust lands.
3/09/05	0930-1500	Sunny, SW to W at 5-9 mph, 68-75°F Bill Gendron and Jane Higginson accompanied	QCB adult presence search along Pack Trail in Wild Bill Canyon. 3 females and 2 male QCB observed on mesa. Also, observed 4 males and 1 female QCB within former Environmental Trust lands.

3/15/05	0900-1545	Sunny, NE to W at 7-12 mph, 67-69°F	QCB adult presence search along Truck Trail. 2 male QCB observed within former Environmental Trust lands.
3/29/05	0930-1530	Partly Cloudy to Partly Sunny, N to SW at 5-22 mph, 59-63°F. Bill Gendron accompanied.	QCB adult presence search along Pack Trail in Wild Bill Canyon. No adults observed.
4/05/05	0930-1545	Sunny; SE to S 8-15 mph; 62-68°F Bill Gendron and Jane Higginson accompanied	QCB adult presence search along the Truck Trail. No Adults observed

Results

A total of at least ten (10) adult Quino Checkerspot butterflies were observed at 2 locations and are herein described below:

Location #1 – Is located along the Otay Mountain Truck Trail approximately 1km west of the entrance to the BLM Wilderness area sign. Three male quinos were observed aggressively hilltopping on March 8th. GPS location is 11S 509942 3604499. The hill is a small rocky hill with both primary and secondary hostplants at the north side base of the hill. The hostplants were dwarf plantain (*Plantago erecta*) and purple owl's clover (*Castilleja exserta*). William Gendron was present on March 8th and observed the hilltopping behavior for at least 30 minutes.

This location was also checked on March 9th and four males were observed hilltopping and one female was observed at the base of the hill patrolling the hostplants. William Gendron independently observed the female and noted it for Mr. Klein. Mr. Klein confirmed Mr. Gendron's sighting and concluded the female was apparently looking for a place in which to oviposit. The four hilltopping males were observed by William Gendron and Jane Higginson. The watched the hilltopping behavior for approximately 30-minutes. Also two male quinos were observed on the hilltop on the morning of March 15th.

Location #2 – is located on a mesa top along a pack trail adjacent and east of the bottom of Wild Bill Canyon. It is also about due south of a historical quino sighting. Two male and three female quinos were observed on March 9th. William Gendron and Jane Higginson independently observed a female resting on the ground within the pack trail. Mr. Klein confirmed the observation. The initial female was observed for approximately 15 minutes until she came to rest on the ground and rested long enough for Mr. Klein to obtain a photograph (see photo plates in attached Appendix). At this point Mr. Klein recommended a transect walk with Mr. Gendron on one side of Mr. Klein and Ms. Higginson on the other. Mr. Gendron and Ms. Higginson were approximately six feet on either side of Mr. Klein walking this transect in an easterly direction to a small hill. During this transect walk Mr. Gendron flushed one male and one more female quino and Ms. Higginson flushed one more female quino. Mr. Klein confirmed all sightings and logged them.

Upon reaching the small hill we moved north approximately twenty feet and walked a transect west back to the original sighting of the female. Mr. Klein flushed out one more male quino. The mesa top contains dwarf plantain, purple owl's clover and bird's beak (*Cordylanthus ridgides*). There are a series of small rolling hills, rock outcrops and many open bare ground



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patches throughout. There is also a large diverse amount of nectar resources including but limited to popcornflower (*Plagiobotrys sp.*), forget-me-not (*Cryptantha sp.*), goldfields (*Lasthenia californica*) and blue dicks (*Dichelostemma capitatum*). This was the only day quino were observed on the mesa.

Presence and Distribution of Larval Host Plants

Dwarf plantain, the primary larval host plant for the Quino checkerspot butterfly within the region, was found at all but one location monitored during the adult flight season. Also, bird's beak was found at three of the monitored locations. Purple owl's clover found at all but one location which was at the same location in which no hostplants were found. This was at the most eastern monitored spot approximately 2 km from the road that takes you into Wild Bill Canyon.

Diversity and Distribution of Adult Nectar Sources

The nutrients from the fire and winter rains provided a diversity of nectar resources for the butterfly. Popcornflower and forget-me-not were found at every monitored location. Ground pink (*Linanthus dianthiflorus*), goldfields (*Lasthenia californica*), bluedicks (*Dichelostemma capitatum*) and early onion (*Allium praecox*) were also found at these locations.

Open Soils

Open soils and sparsely vegetated ground occur throughout the site due mostly to the October fires. Tuber and stump sprouting of shrub plants are occurring and with record winter rains, the currently open areas will once again contain dense cover. Many areas where the soils were open were in association to rocky areas.

Availability of Ridgelines and Hilltops

All of the monitored sites were in association to hilltops and ridgelines. Four of the locations burned in the October 2003 fires and are in a recovering succession. The remaining locations monitored were impacted from a fire in 1996 and show suitable recovery with limited exotic weedy conversion. At each location, time was spent standing in one location to watch for hilltopping activity. All monitored locations were visited by butterflies and other insects associated with hilltopping behavior.

Dirt Roads

All monitored locations had vehicular dirt roads except the two locations where quino were found. The Wild Bill Canyon Location did have access via a pack trail and the other location was adjacent to Otay Mountain Truck Trail. The roads are used regularly by Border Patrol vehicles and the trucks will park on these hilltops sometimes for hours.

A total of twenty-six butterfly species were detected over the course of the surveys.

Scientific Name

Papilio zelicaon

Papilio rutulus

Papilio eurymedon

Pontia protodice

Common Name

anise swallowtail

western tiger swallowtail

pale swallowtail

checkered white

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Pieris rapae

Anthocharis sara sara

Anthocharis cethura

Nathalis iole

Strymon melinus

Callophrys perplexa

Callophrys thornei

Glaucopsyche lygdamus australis

Celastrina ladon echo

Apodemia virgulti

Speyeria callippe comstocki

Chlosyne gabbii

Euphydryas editha quino

Euphydryas chalcedona chalcedona

Vanessa atalanta

Vanessa cardui

Vanessa annabella

Junonia coenia

Erynnis properties

Erynnis funeralis

Pyrgus albescens

Heliopetes ericetorum

cabbage white

Pacific sara orange-tip

desert orange-tip

dainty sulphur

gray hairstreak

perplexing hairstreak

Thorne's hairstreak

southern blue

echo blue

Behr's metalmark

Comstock's fritillary

Gabb's checkerspot

quino checkerspot

chalcedon checkerspot

red admiral

painted lady

west coast lady

buckeye

properties duskywing

funeral duskywing

western checkered skipper

northern white skipper

Conclusions

All of the monitored locations should continue to be suitable for the presence of quino. Even though the October 2003 fires impacted some of the sites, the presence of dirt roads will still provide conditions suitable for hilltopping butterflies as well as dispersing one.

If you have any questions or comments regarding this report, please contact me directly at 619.282.8687.

Sincerely,

KLEIN-EDWARDS PROFESSIONAL SERVICES

Michael W. Klein Sr.

Ms. Alison Anderson

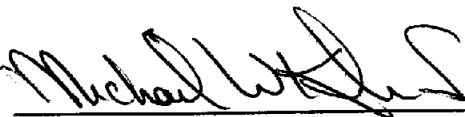
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- U.S. Fish and Wildlife Service. Quino Checkerspot Butterfly (*Euphydryas editha Quino*) Survey Protocol Information, February 2002.

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


Michael W. Klein Sr.

May 15, 2005
Date

Permit # TE039305-2

Quino Checkerspot Butterfly Surveys
Performed at the Otay Mountain Truck Trail
San Diego County – 2005

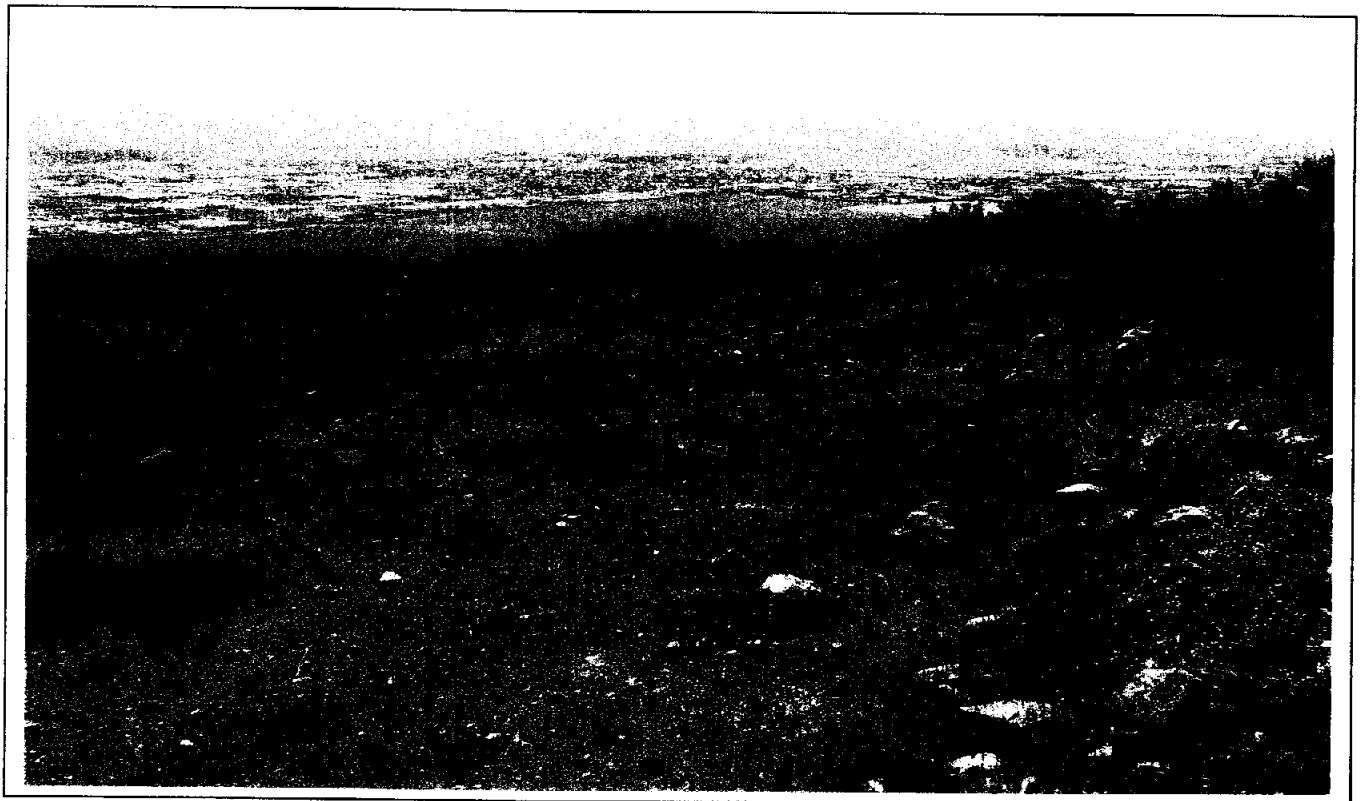
APPENDIX 1

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

Otay Mountain Truck Trail QCB Monitoring



Example of the monitored QCB sites. Lots of open areas with dense patches of plantain.



Another example of one of the monitored areas along the Truck Trail. Again, lots of open ground with dense patches of plantain.

Otay Mountain Truck Trail QCB Monitoring

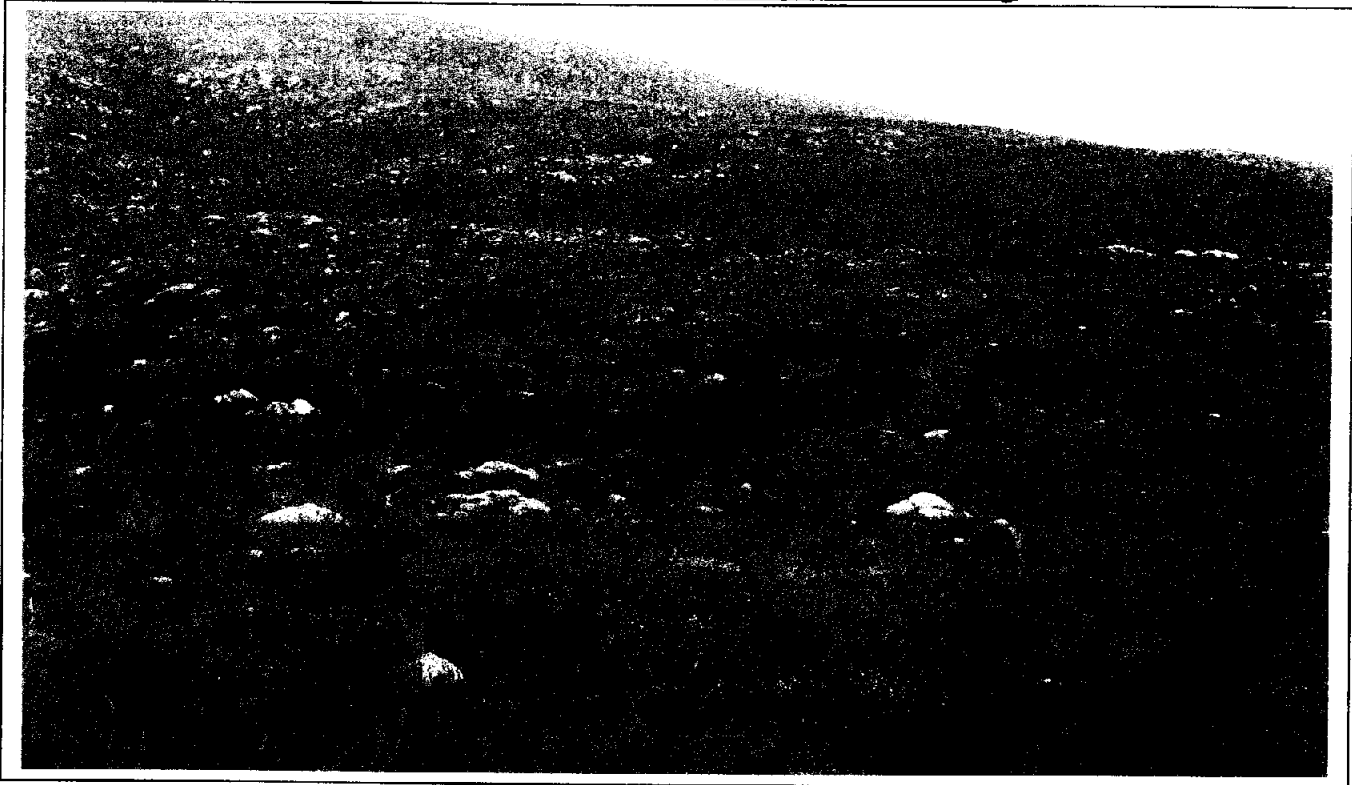


Example of dirt roads accessing hilltops and ridgelines utilized by Border Patrol vehicles.



Bird's Beak, another of the hostplants observed on most of the monitored areas.

Otay Mountain Truck Trail QCB Monitoring

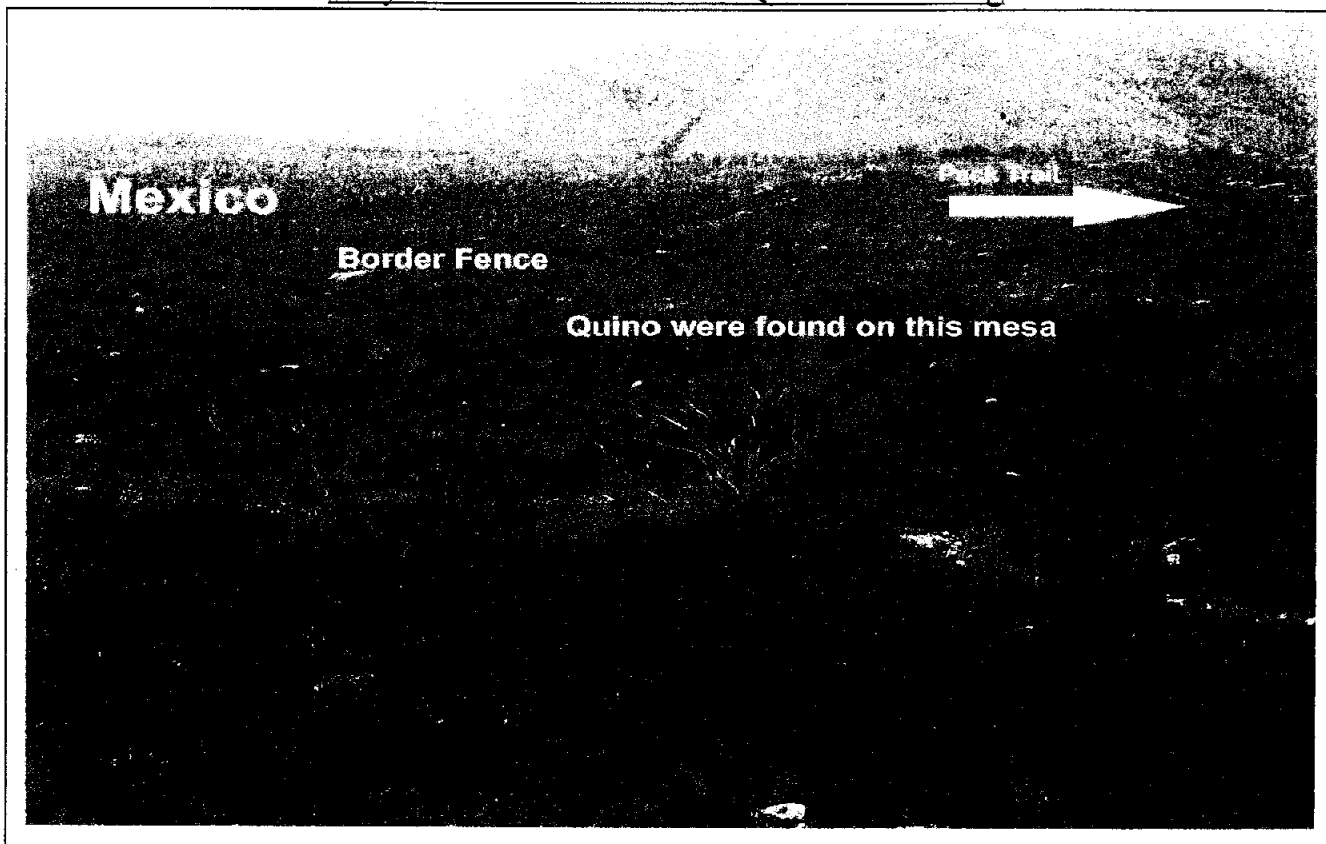


Mesa above Wild Bill Canyon where quino were found. This is looking northeast with the pack trail in the middle where the female quino was first found.



Example of a few of the open area on the mesa above Wild Bill Canyon.

Otay Mountain Truck Trail QCB Monitoring

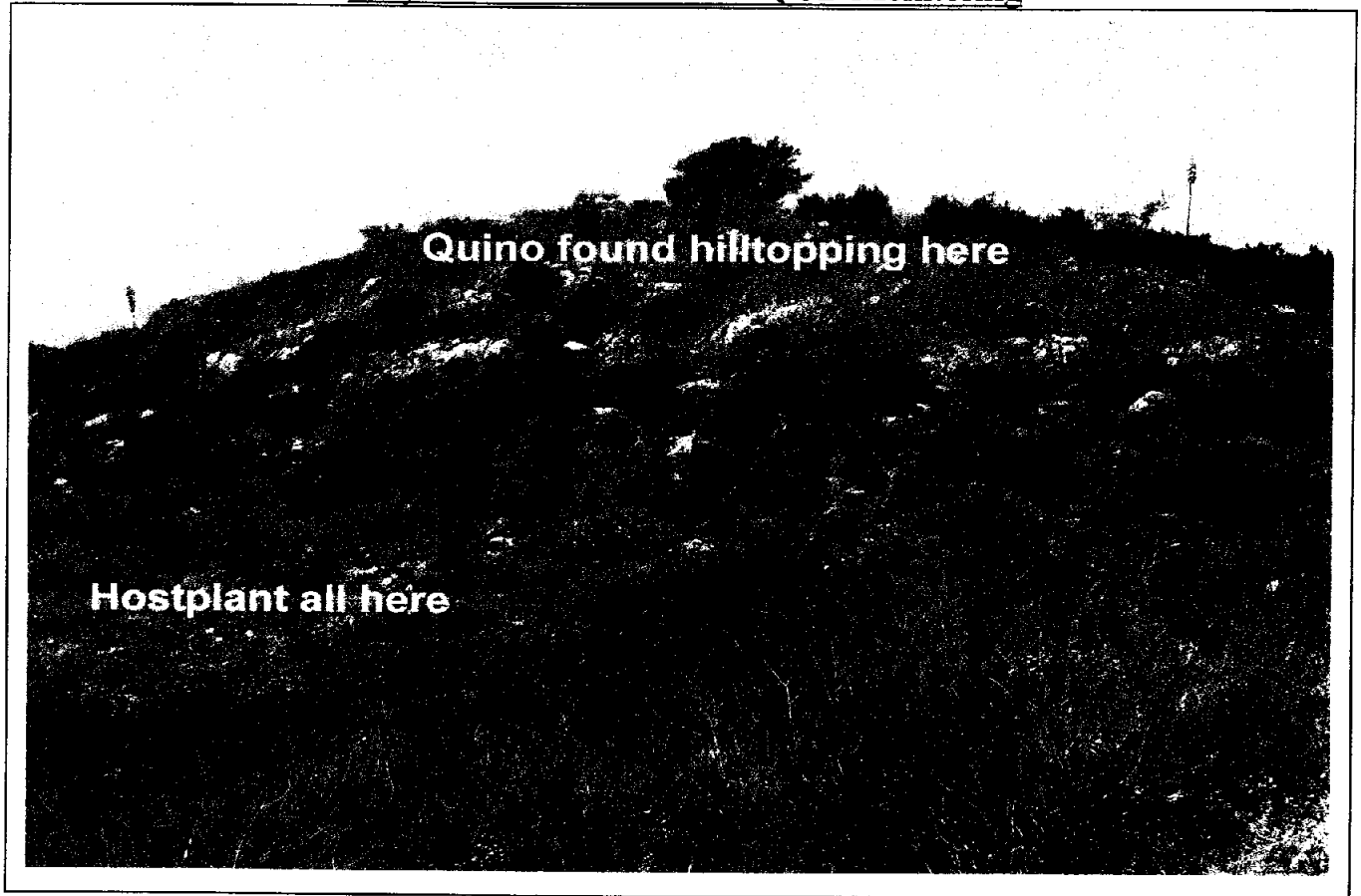


From a hilltop looking west at the mesa above Wild Bill Canyon. This is Location #2 on map.



Female quino perched on grass from Wild Bill Canyon on March 9, 2005.

Otay Mountain Truck Trail QCB Monitoring



Hilltop at Location #1 on map showing where quino were found on March 8, 8 and 15, 2005. Males were hilltopping and female was below where hostplant is noted patrolling. This site is within the previous Environmental Trust Lands.

Quino Checkerspot Butterfly Surveys
Performed at the Otay Mountain Truck Trail
San Diego County – 2005

APPENDIX 2

FLORAL COMPENDIUM
PLANT SPECIES IDENTIFIED ONSITE

OTAY TRUCK TRAIL FLORA COMPENDIUM

This list includes only those plants observed in flower. It is not an exhaustive list since the focus was for monitoring adult Quino Checkerspot Butterflies and the possible plants to be utilized by them to nectar on.

Non-native species are indicated with an asterisk (*).

DICOTS

ASTERACEAE - SUNFLOWER FAMILY

- Anaphalis margaritacea*
pearly everlasting
- Eriophyllum confertiflorum*
golden-yarrow
- Filago californica*
California filago
- Gnaphalium californicum*
California everlasting
- Lasthenia californica*
coast goldfields
- **Sonchus asper* ssp. *asper*
prickly sow thistle

BORAGINACEAE - BORAGE FAMILY

- Cryptantha intermedia*
common forget-me-not
- Phacelia cicutaria*
caterpillar phacelia
- Phacelia grandiflora*
large-flowered phacelia
- Phacelia parryi*
Parry's phacelia
- Plagiobothrys* sp.
popcornflower

BRASSICACEAE - MUSTARD FAMILY

- **Brassica nigra*
black mustard
- **Hirschfeldia incana*
short-podded mustard
- **Lepidium virginicum*
wild peppergrass
- **Raphanus sativus*
radish

CARYOPHYLLACEAE - PINK FAMILY

- **Silene gallica*
common catchfly

CONVOLVULACEAE - MORNING-GLORY FAMILY

- Calystegia macrostegia*
wild morning-glory
- **Convolvulus arvensis*
bindweed

CUCURBITACEAE - GOURD FAMILY

- Marah macrocarpus* var. *macrocarpus*
wild cucumber

EUPHORBIACEAE - SPURGE FAMILY

- Acalypha californica*
California copperleaf

FABACEAE - LEGUME FAMILY

- Lathyrus vestitus alefeldii*
San Diego sweetpea
- Lotus scoparius*
deerweed
- Pickeringia montana*
chaparral pea

GERANIACEAE - GERANIUM FAMILY

- **Erodium cicutarium*
red-stemmed filaree
- **Erodium moschatum*
white-stemmed filaree

LAMIACEAE - MINT FAMILY

- Salvia munzii*
Munz's sage
- Trichostema lanatum*
woolly bluecurls

MALVACEAE - MALLOW FAMILY

- **Malva parviflora*
cheeseweed

NYCTAGINACEAE - FOUR O'CLOCK
FAMILY

Mirabilis californica
California wishbone plant

OROBANCHACEAE - BROOMRAPE
FAMILY

Castilleja exserta
purple owl's-clover
Cordylanthus rigidus
thread-leaved bird's-beak

PAPAVERACEAE - POPPY FAMILY

Dendromecon rigida
bush poppy
Dicentra chrysantha
golden ear-drops
Eschscholzia californica
California poppy
Papaver californicum
fire poppy

PHRYMACEAE - MONKEYFLOWER
FAMILY

Mimulus aurantiacus
bush monkey-flower

POLEMONIACEAE - PHLOX FAMILY

Linanthus dianthiflorus
ground-pink

PORTULACACEAE - PURSLANE FAMILY

Calandrinia ciliata
red maids
Claytonia perfoliata
miner's lettuce

PRIMULACEAE - PRIMROSE FAMILY

**Anagallis arvensis*
scarlet pimpernel
Dodecatheon clevelandii
Padres' shooting star

RHAMNACEAE - BUCKTHORN FAMILY

Ceanothus tomentosus
Ramona lilac

ROSACEAE - ROSE FAMILY

Chamaebatia australis
southern mountain misery

SCROPHULARIACEAE - FIGWORT
FAMILY

Scrophularia californica
California figwort

SOLANACEAE - NIGHTSHADE FAMILY

Solanum xanti
chaparral nightshade

VERONICACEAE - VERONICA FAMILY

Plantago erecta
dwarf plantain

MONOCOTS

AGAVACEAE - AGAVE FAMILY

Chlorogalum pomeridianum
soap plant

ALLIACEAE - ONION FAMILY

Allium peninsulare
peninsular onion
Allium praecox
early onion

LILIACEAE - LILY FAMILY

Calochortus dunnii
Dunn's mariposa lily

MELANTHIACEAE - [name of] FAMILY

Zigadenus fremontii
Fremont's star-lily

THEMIDACEAE - BRODIAEA FAMILY

Dichelostemma capitatum
blue dicks

Quino Checkerspot Butterfly Surveys
Performed at the Otay Mountain Truck Trail
San Diego County – 2005

APPENDIX 3

FAUNA COMPENDIUM

IDENTIFIED ONSITE

OTAY TRUCK TRAIL FAUNAL COMPENDIUM

INSECTA - INSECTS

ODONATA - DRAGONFLIES & DAMSELFLIES

Enallagma cyathigerum
northern bluet

Sympetrum corruptum
variegated meadowhawk

Perithemis intense
Mexican amberwing

ORTHOPTERA - GRASSHOPPERS, CRICKETS & KATYDIDS

Melanoplus sp.
lubber grasshopper
Trimerotropis pallidipennis
pallid-winged grasshopper
Gryllus sp.
field cricket

ISOPTERA - TERMITES

Zootermopsis angusticollis
Pacific dampwood termite

HEMIPTERA - TRUE BUGS

Apiomerus sp.
assassin bug
Gerris remigis
common water strider

NEUROPTERA - NERVE-WINGED INSECTS

Family *Chrysopidae*
green lacewing

LEPIDOPTERA - BUTTERFLIES & MOTHS

Hyles lineata
white-lined spinx moth
Family *Geometridae*
inch-worm moth
Autographa californica
alfalfa looper
Papilio zelicaon
anise swallowtail

Papilio rutulus
western tiger swallowtail

Papilio eurymedon
pale swallowtail

Pontia protodice
checkered white

Pieris rapae
cabbage white

Anthocharis sara sara
Pacific sara orange-tip

Anthocharis cethura
desert orangetip

Nathalis iole
dainty sulphur

Callophrys perplexa
perplexing hairstreak

Strymon melinus
gray hairstreak

Callophrys thornei
Thorne's hairstreak

Glaucopsyche lygdamus australis
southern blue

Celastrina ladon echo
echo blue

Apodemia virgulti
Behr's metalmark

Speyeria callippe comstocki
Comstock's fritillary

Chlosyne gabbii
Gabb's checkerspot

Euphydryas editha quino
quino checkerspot

Euphydryas chalcedona chalcedona
chalcedon checkerspot

Vanessa atalanta
red admiral

Vanessa cardui
painted lady

Vanessa annabella
west coast lady

Junonia coenia
common buckeye

Erynnis propertius
propertius duskywing

Erynnis funeralis
funereal duskywing
Pyrgus albescens
western checkered skipper
Heliopetes ericetorum
large white skipper

DIPTERA - GNATS, MIDGES & FLIES

Holorusia hespera
common crane fly
Family *Culicidae*
mosquito sp.
Family *Simuliidae*
black (buffalo) fly sp.
Bibio sp.
March fly
Rhagio californicus
snipe fly
Tabanus punctifer
big black horse fly
Family *Asilidae*
robber fly
Family *Muscidae*
muscid fly
Family *Albicapillus*
bee fly sp.
Conophorus sp.
bee fly sp.
Metasyrphus americanus
syrphid fly
Sphecomyia vittatum
syrphid fly
Sphegina sp.
syrphid fly
Eristalis tenax
drone fly
Parasarcophaga sp.
flesh fly sp.
Phaenicia sericata
green bottle fly

COLEOPTERA - BEETLES

Calosoma semilaeve
common calosoma
Paracotalpa ursine
bear beetle
Coccinella californica
California ladybird beetle

Hippodamia convergens
convergent lady beetle
Family *Phalacridae*
shining flower beetle
Meloida sp.
blister beetle
Eleodes sp.
stink beetle

HYMENOPTERA - ANTS, WASPS & BEES

Vespula pensylvanica
yellow jacket
Subfamily *Andreninae*
mining bee
Subfamily *Anthophorinae*
digger bee
Bombus sonorus
Sonoran bumblebee
Bombus vosnesenskii
Vosnesenski's bumblebee
Bombus crotchii
Crotch's bumblebee
Apis mellifera
honeybee

DIPLOPODA - MILLIPEDES

Hittonius sp.
common millipede

CRUSTACEA - CRUSTACEANS

ISOPODA - SOWBUGS, ETC.

Armadillium vulgare
common pillbug

REPTILES

IGUANIDAE - IGUANID LIZARDS

Sceloporus occidentalis
western fence lizard
Uta stansburiana
side-blotched lizard
Phrynosoma coronatum blainvillei
San Diego coast horned lizard

COLUBRIDAE - COLUBRID SNAKES

Salvadora hexalepis
western patch-nosed

BIRDS

CATHARTIDAE - NEW WORLD VULTURES

Cathartes aura
turkey vulture

ACCIPITRIDAE - HAWKS

Circus cyaneus
northern harrier
Buteo jamaicensis
red-tailed hawk
Aquila chrysaetos
golden eagle

ODONTOPHORIDAE - QUAILS

Callipepla californica
California quail

CUCULIDAE - CUCKOOS & ROADRUNNERS

Geococcyx californianus
greater roadrunner

APODIDAE - SWIFTS

Aeronautes saxatalis
white-throated swift

TROCHILIDAE - HUMMINGBIRDS

Calypte anna
Anna's hummingbird

TYRANNIDAE - TYRANT FLYCATCHERS

Sayornis nigricans
black phoebe

CORVIDAE - JAYS & CROWS

Corvus brachyrhynchos
American crow
Corvus corax
common raven

ALAUDIDAE - LARKS

Eremophila alpestris
horned lark

HIRUNDINIDAE - SWALLOWS

Stelgidopteryx serripennis
northern rough-winged swallow

AEGITHALIDAE - BUSHTITS

Psaltiriparus minimus
bushtit

TROGLODYTIDAE - WRENS

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

SYLVIIDAE - OLD WORLD FLYCATCHERS

Poliophtila caerulea
blue-gray gnatcatcher

TIMILLIDAE - BABBLERS

Chamaea fasciata
wren

MIMIDAE - THRASHERS

Toxostoma redivivum
California thrasher

PARULIDAE - WOOD WARBLERS

Dendroica coronata
yellow-rumped 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
Junco hyemalis
dark-eyed junco

ICTERIDAE - BLACKBIRDS, ORIOLES & ALLIES

Sturnella neglecta
western meadowlark

FRINGILLIDAE – FINCHES

Carduelis psaltria

lesser goldfinch

Carduelis lawrencei

Lawrence's goldfinch

MAMMALS

SCIURIDAE – SQUIRRELS

Spermophilus beecheyi

California ground squirrel

Quino Checkerspot Butterfly Surveys
Performed at the Otay Mountain Truck Trail
San Diego County – 2005

APPENDIX 4

COPIES OF SURVEY FIELD NOTES

3/1/05 Otay Mt Truck Trail QCB Survey

Start - 0930, Partly Cloudy, gentle NW, 61°F

Stop: 1445, Mostly Cloudy, NW @ 12 mph, 59°F

With Jan Higginson, Bill Gention.

First QCB Survey of this area. Starting at the furthest east location and will work my way west along the truck trail. First QCB location

had a bramble Hairstreak. Clouds

coming in from the north and blustery

making conditions unsuitable for leg

activity. Limited nectar resources and

no host plant found.

Second location has some *P. laevis*

moving through as well as a ♀

A. sara. Good nectar resources, no

host plant. Clouds are showing signs

& getting thicker and may hinder the

remainder of the survey

Heavy clouds deterred butterfly

activity. Many places along the

truck trail are suitable for QCB. None observed today.

Plants

mt. usumy
chap. pa.
chrysalis
gold finch
hirsutioid
inexp. poppy
searuchus
erectum
mimulus
gold yellow
bini. weed
C. tomentosus
golden ear drops
brassica nigra
nightshade
shedding stars
blue dicks
P. erecta
C. rigida
phacelia
weedy blue curls.

Birds

ANNA
CORA
L. ASP
(ATO)
SPTD
WREN
RUSP
CATH
LEGO
COCA
BOWE
VIZWA

Invert

Conspat
Muscif
syphid
andronel
Brombia (1)
A. melana
A. sara (P. 1)
V. cordis (H. 1)
V. atkins (H. 1)
A. (C. 1)
M. Thornei (1)
V. annabill (1)
Sarcophagid

3/2/05 Otay Mt Truck Trail QCB Survey

0930 - Partly Cloudy, NW @ 16, 55°F

1430 - mostly Cloudy, NW @ 10 mph, 59°F

Bill Gendron, Jane Higginson

Monitoring the Wild Bill Canyon Parcel today. Due to the winter rains the Border Patrol requested I park on the Helio Pad over 1/2 way into the canyon. Also they indicated that the bottom of the road was washed out which makes our hiking a bit further. Currently cooler than expected conditions but hopefully by the time I get to the parcel it will be warmer and less clouds.

Within the survey zone Excellent

QCB conditions. NW breezes at 10-12 mph. Second hill over has plenty of nectar resources, plantain and cordylanthus. The first hill has plantain and castilleja.

Birds

WE ME
BLPH
CATH
CUBA
RORR
RANUM
RCSF
LEGO
PUCR
HUA

Mon
and sp

Hipp
WFLZ

Insect

Jeri Hunt
Mullipede
Rushton (1)
Cane Fly
A. ... (1)
Ass bug
Staphylinid
gnats
P. ... (1)
Jes Bumble
V. ... (1)
Mosquito
E. ... (1)
field cricket
A. ...
G. l. ... (1)
J. ... (1)
P. ... (1)
C. ... (1)
A. ... (1)

Plant

CA ...
Fire poppy
Minor's lettuce
CA ...
Sweet pea
Clove sage
4 o'clock
radish
Alum
windmill pink

3/3/05 Otay MFT Track Trail QCB Monitoring

0930, Sunny, no breeze, 65°F

1500, Sunny, @ 4 mph, 73°F

Training: Bill Gendron

Second visit on the Truck Trail and starting at the far east location.

We are above the marine layer and gorgeous conditions. 1035 - No

Birds

SPTO LACO
CATO WOFI
DEJTB BESP
CITTA COXA
BEHR TAVU
ANNU LASP
YRWA WHEW
RESP BEGN
RTHA

Plants

Muir's sage

Inverts

V. centus (50+200+200+200)
P. rapae (1)
Gnats
E. funicularis (1)
Muscio
H. lineata (1)
C. dumetorum (1)
Gn. lucaswing
A. melifera
P. corymbosa (1)
Bombilid
A. cethura (1111)
Syrphid
A. corymbosa (100+100)
Dampwood Termites
P. protuberans (211 ♂1)
A. sara (1)
V. atalanta (1)
V. anabella (1)
Sarcophagid
Field crickets
Colossoma
Pzelicora (1)
M. thomae (♂1)
J. coenia (1)
G. l. australis (1)
QCB (♂111)

QCB. The eastern hill has some

minor hilltopping activity with one

P. corymbosa but there is limited

nectar resources. Moving on to the

next spot. 1120 - Sub breeze due to

marine layer still burning. If we

are still above the marine layer in

100% sun.

1430 - Within Sec 29 of the Topo

area 38 QCB aggressively hilltopping

They all look very fresh. When resting

they are on rocks with wings spread

facing towards the sun. They are too

fidgety to photograph.

(113 509942 3604499, 1420)

3/9/05 Otay Mt Truck Trail GCB Monitoring

0930 - Sunny, SW @ 5mph, 68°F

1500 - Sunny, W @ 9mph, 75°F

Bill Gendron, Jane Higginson are with me for training purposes

Above the marine layer and just a beautiful day. Many

Painted Ladies moving through at about 600/hr. 1140 - ♀ 2 GCB

Inverts

V. cardinal (100+600+600)

Cnats

A. cithara (11)

P. rapae (♂ 11 ♂ 11)

P. nictitans (1)

Cr. Bat Fly

musical

Mosquito

Platygaster (50+100)

H. andersoni (1)

P. albescens (11)

C. gabbi (♂ 1)

J. coenia (111)

Assin bug (♂)

54P phid

P. protulice (111+111)

GCB (♀ 111 ♂ 11)

A. Sara (♂ 111)

Field cricket

max ambrosia

Crane fly

Blister Beetle

V. catalina (1)

Flower beetle

Spink beetle

Birds

PSUP

NRSW

GREEN

CAGU

HERP

CHLZ

WFLZ

SBLZ

Plants

Bee Plant

Wildradish

along a pack trail. Bill and Jane

saw one of them first. I was walking

between hilltops when they called me

over. She was originally observed along

the first trail. I confirmed the sighting

She then flew to the north of the trail

Jane attempted a picture and I also

got one from a distance. Her and

a second ♀ were flying in a very

lazy lethargic manner which seems

indicative of being weighted down

with eggs. They could possibly be

looking for our perching location.

(Location - 11S 514079 3602332,

1,145') 1215 - we walked a tunnel

to the east hill top and flushed a ♂ GCB. 1230 - found an old ♀ GCB. Abdomen

banding was white. No much wing wear but the scaling appeared diffused.

1300 - no activity on eastern hilltop. Upon leaving a ♂ GCB flew past us.

We visited the site from yesterday for Jane's benefit to

3/9/05 Olay Mountain Truck Trail GCB Monitoring Page 2
have her observe aggressive ♂ hilltopping behavior. Besides
the 3 males from yesterday a 4th male showed up on the
hilltop and a female was observed down in the plantain patch.
It appeared as though she was looking for sites in which to
oviposit. So we added 7 more butterflies in addition
from the 3 yesterday.

3/15/05 Otay Mt Truck Trail QCB Monitoring

0900, Sunny, NE @ 7mph, 67°F

1545, Sunny, W @ 12mph, 69°F

Started at the western end where QCB were observed last week. 2 ♂ QCB were observed @ 0930-1015 on the hill above the host plant patch. Compared to last week they were more lethargic and rested more readily on rocks. They both showed very little depressive hilltopping behavior.

Insects

V. canalis (600+1200+300)
gnat
syrphid
muscid
E. equus (3/1)
C. dimidiatus (1)
C. chalcidius (1)
P. zelandicus (1)
D. virgatus (1)
I. australis (11)
M. thornei (8/1 ♀ - very worn)
F. funealis (1)
V. atlantica (1111)
A. sara (111111111)
A. cethura (11111111111)
A. melana
Calosoma
Pillbug
J. coenae (111)
Anthrophoid
Auctographa (50+50+50)

I continued ~~to~~ to the eastern spot and began working west.

Painted Lady dispersal today was in full force especially in the afternoon with up to 40+/minute passing north. 1230 - at my third site I had a hilltopping Chalcid.

This my first of the season.

Went back to the QCB ^{site} ~~spot~~ and searched ~ 1/3 of the host plant patch looking for egg masses.

None were observed. Expecting to begin seeing larval clusters next week.

3/29/05 Otay Mt Truck Trail monitoring QCB

0930, Partly Cloudy (50% clouds), N@ 5-10 mph, 59°F

1530, Partly Sunny (20% clouds), SW@ 15-22 mph, 63°F

Downing Wild Bill Canyon today with Bill Gendron. We made it all the way down into the canyon bottom. The road appears to have had some minor filling due to winter rains. Saving the time of hiking in down into the canyon as well as of course, climbing out will free up more time to monitor the mesa just east of where we are parked and take time to follow the pack trail further east towards Copper Canyon. Area is still very lush + green. Whites are flitting about on the mustards so other butterfly activity should be good today.

1145 - Walked the pack trail east almost to the entrance of Copper Canyon. There is a large section of the pack trail which is completely overgrown with erodium and arena as well as mustards. Even the facing slopes are pretty well converted to this exotic annual grassland. Not suitable at all for QCB. Bill and I will begin hiking back to the more suitable mesa top where quino was observed a few weeks ago.

1250 - Back at the east boundary of the occupied quino mesa. Bill + I are on an NW + E hilltop with many open areas and not finding any quino. We had a male + female in the area a few weeks back. Wind's though are coming from the NW @ 12-22 mph. When some of the cumulus clouds block out the sun it cools things significantly. Probably any adults

3/29/05 Gray Mountain Track Trail GCB Monitoring 1

Page 2

Birds
 WREN YRWA
 CORA WTAW
 LEGO BPH
 ANHU LTA
 ROWR WENE
 CATO BOSP
 WCSP HOFI
 SPTO HCAR

Wasp
SBC

Insects
 H. sana (HMH)
 P. rapae (HMH)
 P. protodice (HMH)
 P. albescens (1)
 Field Crick
 V. cardui (5, about 5,000)
 Syrphid
 drone fly
 I. canis (HMH)
 Gr. Bat Fly
 V. umbellata (HMH)
 Autographa (1000)
 Crotch's bumble
 G. l. caudatus (9-1)
 A. cethusa (11)
 box beetle
 muscid
 gnats
 Calosoma
 Robberfly
 North Bluet
 Vane Meadow
 E. funeralis (11)
 Bulbous grass
 Convergent ladybird
 water strider

Plants
 Purple Night
 mariposa lily

one forced onto the open ground or S-facing rocks. We are maneuvering through these areas in an attempt to flush a quino but currently no success.
 1345 - Completed the mesa with no GCB observed. Winds are fairly strong and is keeping all butterfly activity stopped except for V. cardui. Bill and I will go and check one other occupied site to see if they are flying or if it is too windy. No luck on any of the other sites. Too cool + windy

4/5/05 City Truck Trail GCB Monitoring

0930, Sunny, SE 8-13 mph w/ gusts to 20 mph, 62°F
1545, Sunny, SE 8-15 mph, 68°F
Bill Gendron, Jane Higinson - Supervised

Beginning monitoring along the truck trail at the far eastern hill. There are gusty winds up to 20 mph. But in driving to the site from the west the winds were not this strong. These east hills may be too windy for lepreactivity.

~~At~~ 1030 - near the top of the first hill and observed a hilltopping ♂ Chalcedon checkerspot. I had Bill + Jane ID it for me as part of their testing and had them describe why it was what they thought it may have been chalcedon. Jane described 3 features she saw and then told me that she was 100% convinced it was a chalcedon. Bill got close enough to see the abdomen and at then he was convinced it was a chalcedon. The winds are gusty and keeping it from being too aggressive in its hilltopping behavior. 1100 - Completed hill #1 moving onto hill #2. I have decided to skip the flat area just west of hill #1 with all the Teate Cypress. The reason for this is that the winds are coming from the SE and the better GCB area is in the direct path of the winds. The next hill down from that has better quino conditions as well as host plants. 1230 - Completed the second hill. Winds died down for ~ 30 minutes and we had excellent hilltop butterfly activity. We even had 2 early record of Comstock's Fritillaries. No quino observed and then

4/5/05 Otay Truck Trail QCB monitoring

Page 2

Birds

CORA ROSE
CATO GREEN
BGGN BUTI
ANAN TUVU
ECSP NRNS
SPTO
LEGO
ROSP
CAQU

Insects

FILDCRICK
Polid bandwing
dros fly
- V. candida (1111111111)
geometrid
- P. protactica (111)
- E. funerals (111)
A. melifera
Sonoran Bumble
Autographa (1111111111)
- G. l. australis (11)
gnats
- P. telicam (111)
bean beetle
- P. virymedon (111)
- E. chalciton (11)
- P. mellea (111)
- A. sara (1111111111)
- E. blue (111)
Syrphid
- V. annabella (1111)
Variegated Meadow
- S. comstocki (11)
beetle
Calf bodybird
- E. propertius (1)
- U. atalanta (11)
- N. ida (1)
H. lineata (1)
V. pennsylvanica
Cane Fly
horse fly
- M. ericetorum (1)
- A. virgultii (1)
- J. coenia (11)
- S. melinus (1)

Plants

Zigadaria
scarlet pimpernel

winds shifted from SE to
S and picked up to 20+ mph.

We are moving to hill #3
which is just north of my
Thorne's hairstreak site.

310- hill #3 had a couple of A. sara
and some looper moths. No other
lep activity. Moving now to
the entrance of the BLU builderness
area to search there and then a
hill just west of that. Blue gate
area has Castilleja and the Plantain is
mostly dried. There are a few still with
flower heads but most appears past bloom.
Hill just west of Tank 2-1 has
excellent QCB habitat with plantain
Castilleja, Corely lanthus and a wide
variety of host plants. No QCB
observed.

K330 - checked

last hill which we

had adult QCB about
month ago.