



desert conservation
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High Elevation Butterfly Surveys and Monitoring

August 10, 2010

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Larry Mata

2005-CC-570 and subcontracts



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- Presentation Overview
 - Background
 - Progress to date
 - Current activities
 - Future activities



Mt. Charleston blue <i>Plebejus (Icaricia) shasta charlestonensis</i>
Spring Mountains icariodes blue <i>Plebejus (Icaricia) icarioides austinorum</i>
Dark blue <i>Euphilotes enoptes (ssp.) purpurea</i>
Brett's (Bernardino) blue EVALUATION <i>Euphilotes battoides ssp.</i>
Morand's checkerspot <i>Euphydryas chalcedona (anicia) morandi</i>
Nevada Admiral <i>Limenitis weidermeyerii nevadae</i>
Spring Mountains comma skipper <i>Hesperia colorado mojavensis (comma ssp.)</i>
Carole's silverspot <i>Speyeria zerene carolae</i>
Spring Mountains acastus checkerspot <i>Chlosyne acastus robusta</i>

- Conservation Agreement between USFS, USFWS & NV DCNR (1998)
 - Addresses 58 plant and animal species
 - Nine butterflies
- CC MSHCP (2001)
 - Covers eight of the nine species



Mt. Charleston blue <i>Plebejus (Icaricia) shasta charlestonensis</i>
Spring Mountains icariodes blue <i>Plebejus (Icaricia) icarioides austinorum</i>
Dark blue - NOT INCLUDED <i>Euphilotes enoptes (ssp.) purpurea</i>
Brett's (Bernardino) blue <i>Euphilotes battoides ssp.</i>
Morand's checkerspot <i>Euphydryas chalcedona (anicia) morandi</i>
Nevada Admiral <i>Limenitis weidermeyerii nevadae</i>
Spring Mountains comma skipper <i>Hesperia colorado mojavensis (comma ssp.)</i>
Carole's silverspot <i>Speyeria zerene carolae</i>
Spring Mountains acastus checkerspot <i>Chlosyne acastus robusta</i>

- 2004 Proposal for butterfly monitoring funding
 - Included eight of the nine Conservation Agreement species
 - Included three more species of concern

Silvery blue <i>Glaucopsyche lygdamus</i>
Spring Mountains dark blue <i>Euphilotes ancilla purpura</i>
Common ringlet <i>Coenonympha tullia</i>



- MSHCP funding approved in 2005-2007 with technical conditions
 - Received SNPLMA Round 6 funds
- Project goals:
 - Monitor presence or absence of 11 species of rare butterflies
 - Map habitat “patches” for the 11 species
 - Describe likely habitat characteristics
- Work initiated in 2006



2006
UNR
looked
for 11
species

2009 CC
worked with
USFS &
USFWS to
design study,
RFP

2008 SWCA
mapped
habitat &
looked for
Mt.
Charleston
Blue

2010-2011 Pinyon
mapping habitat &
looking for Mt.
Charleston blue &
Spr. Mtns. acastus
checkerspot



- Objective One of current project:
 - Monitor and estimate relative abundance of Spring Mountains acastus checkerspot over two years
 - Map possible habitat
 - Look for ovipositing females and count eggs if identification can be confirmed



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Butterflies:
Spring Mtns acastus checkerspot
(*Chlosyne acastus robusta*)



F3309
PARATYPE
Chlosyne acastus robusta Austin
NV:Clark Co; Spring Mtns. Kyle Canyon Campground
(8400 ft)
log GAA Austin

male

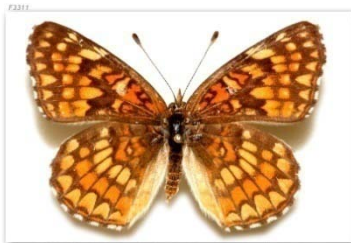
Nectar source for adults



Helioneris multiflora



Chrysothamnus spp.



F3311
PARATYPE
Chlosyne acastus robusta Austin
NV:Clark Co; Spring Mtns. Kyle Canyon Campground
(8400 ft)
log GAA Austin
SP:Popple Mt
CA 19487A
P. a. a.
0848 PBT
CA 19487B

female

Possible larval food plant

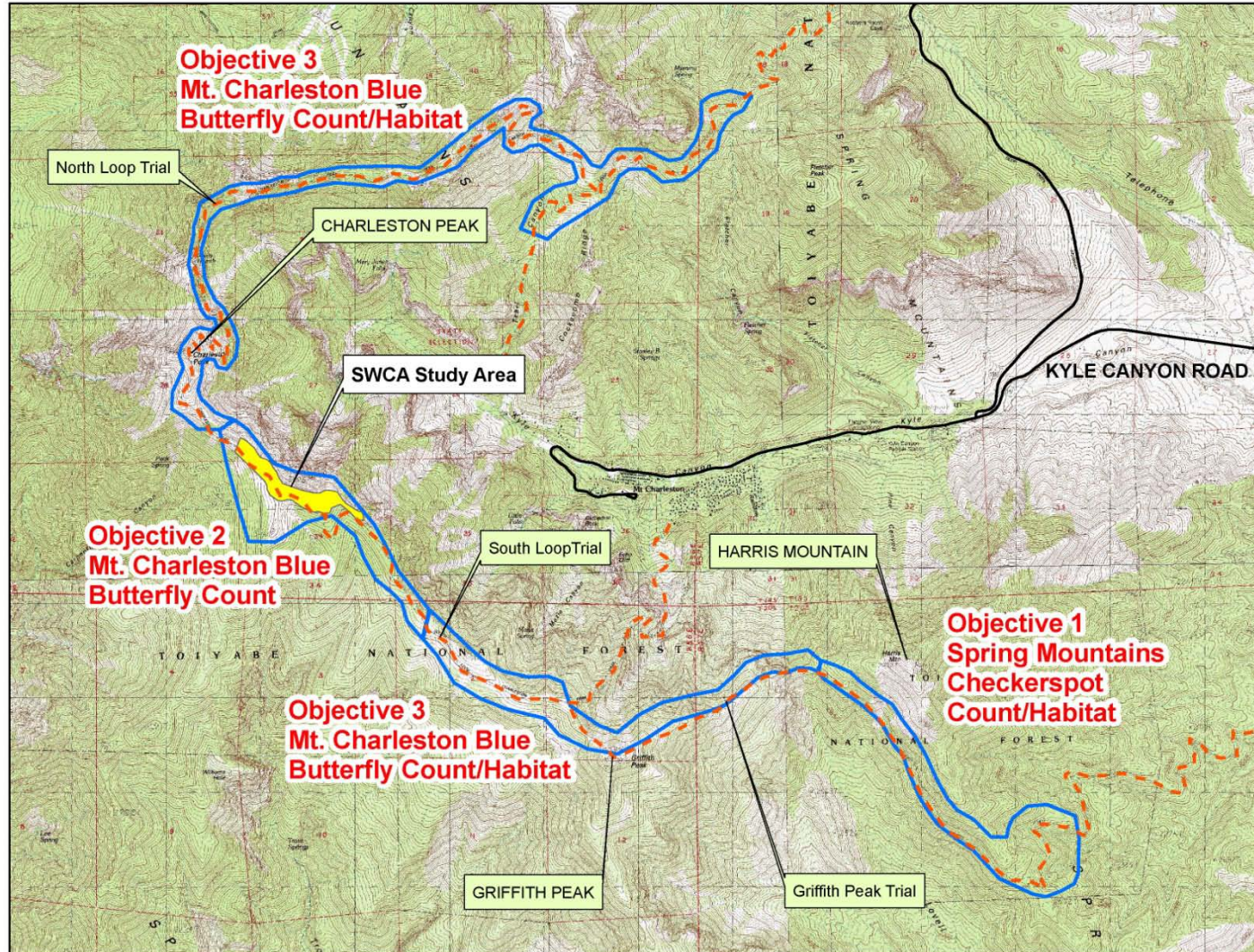
Photos of butterflies from Butterflies of America Foundation
(<http://butterfliesofamerica.com>)



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Butterflies: Current Activities





- Objectives Two and Three of current project:
 - Survey for Mt. Charleston blue in 2008 habitat assessment area
 - Survey for Mt. Charleston blue and provide habitat assessment for Mt. Charleston blue in expanded potential habitat area along South Loop Trail

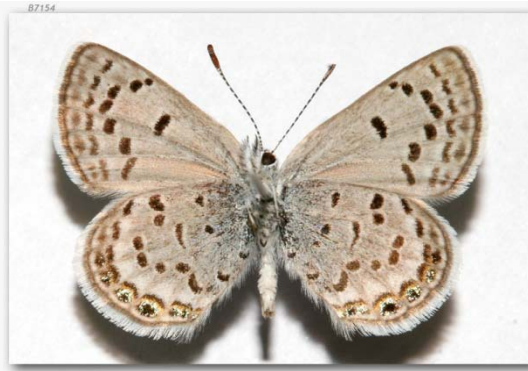


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Butterflies: Mt. Charleston blue (*Plebejus shasta ssp. charlestonensis*)



© 2008 Jim P. Brock



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male

Both collected in
Lee Canyon ski
area



© 2008 Jim P. Brock



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female

Photos of butterflies from Butterflies of America Foundation
(<http://butterfliesofamerica.com>)



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Butterflies: Mt. Charleston blue (*Plebejus shasta ssp. charlestonensis*)



South Loop Trail

Nectar sources for adults



Erigeron clokeyi



*Hymenoxys
lemmonii*

Food sources for larvae



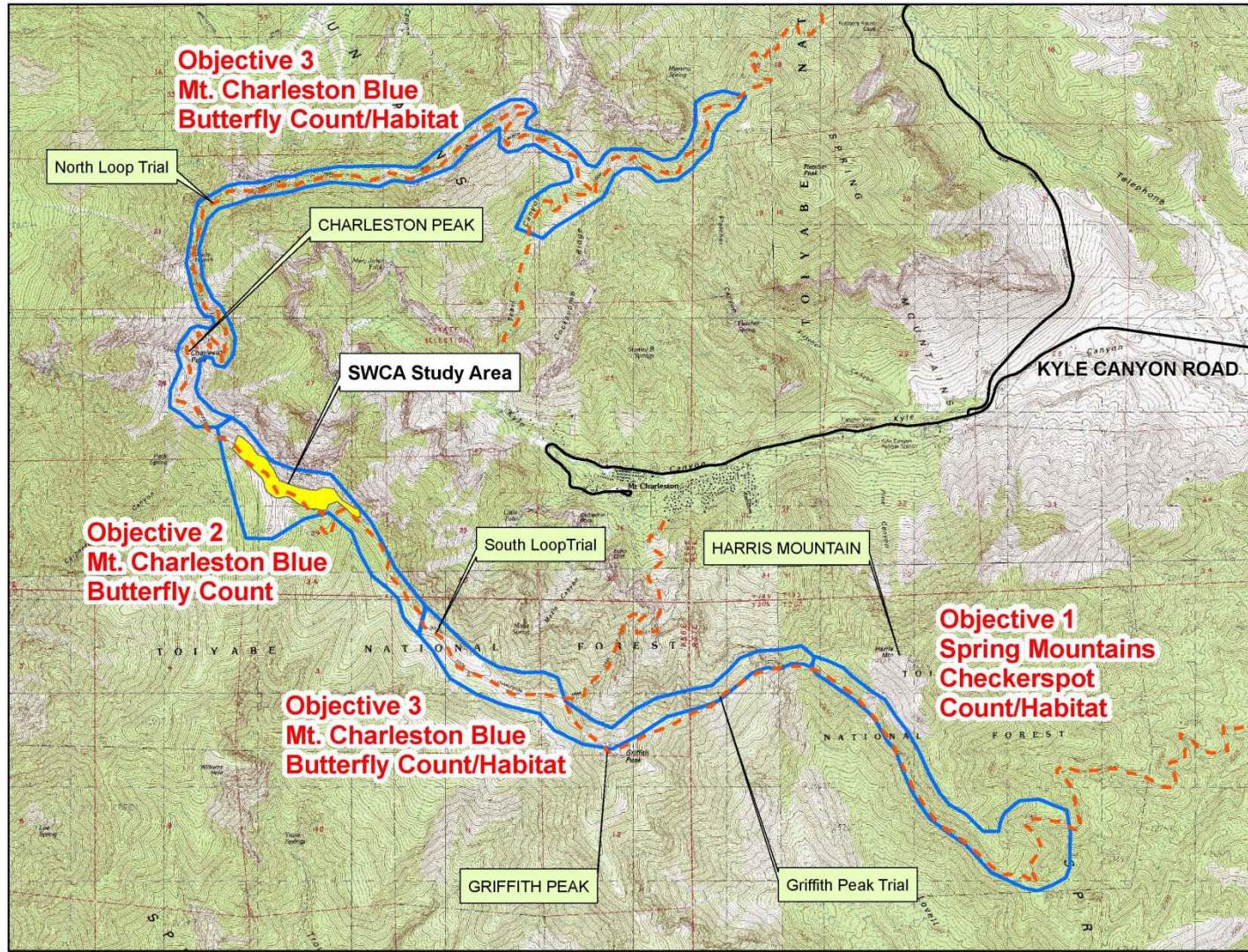
*Astragalus calycosus
var. mancus (calycosus)*



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Butterflies: Current Activities





- Pinyon, Environmental Engineering Resources, Inc. is conducting work
 - In the field this week
 - Provided with recent USGS rare plant and host plant survey data (Ostoja & Brooks)
- Contract adjusted to address weather conditions

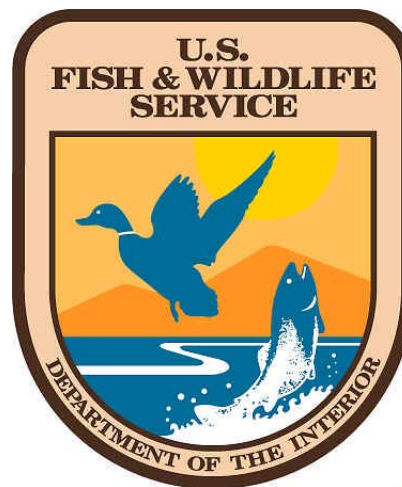


- Activities and deliverables to be completed
 - 2010 field season
 - Habitat assessment for Mt. Charleston blue (August)
 - Data sheets for both species
 - Species reports for both species (September)
 - Preliminary digital data for both species (October)
 - Quarterly progress reports
 - 2011 field season
 - Species survey efforts similar to 2010
 - Complete any remaining habitat mapping efforts
 - Deliverables similar to 2010
 - Final report (October 2011)

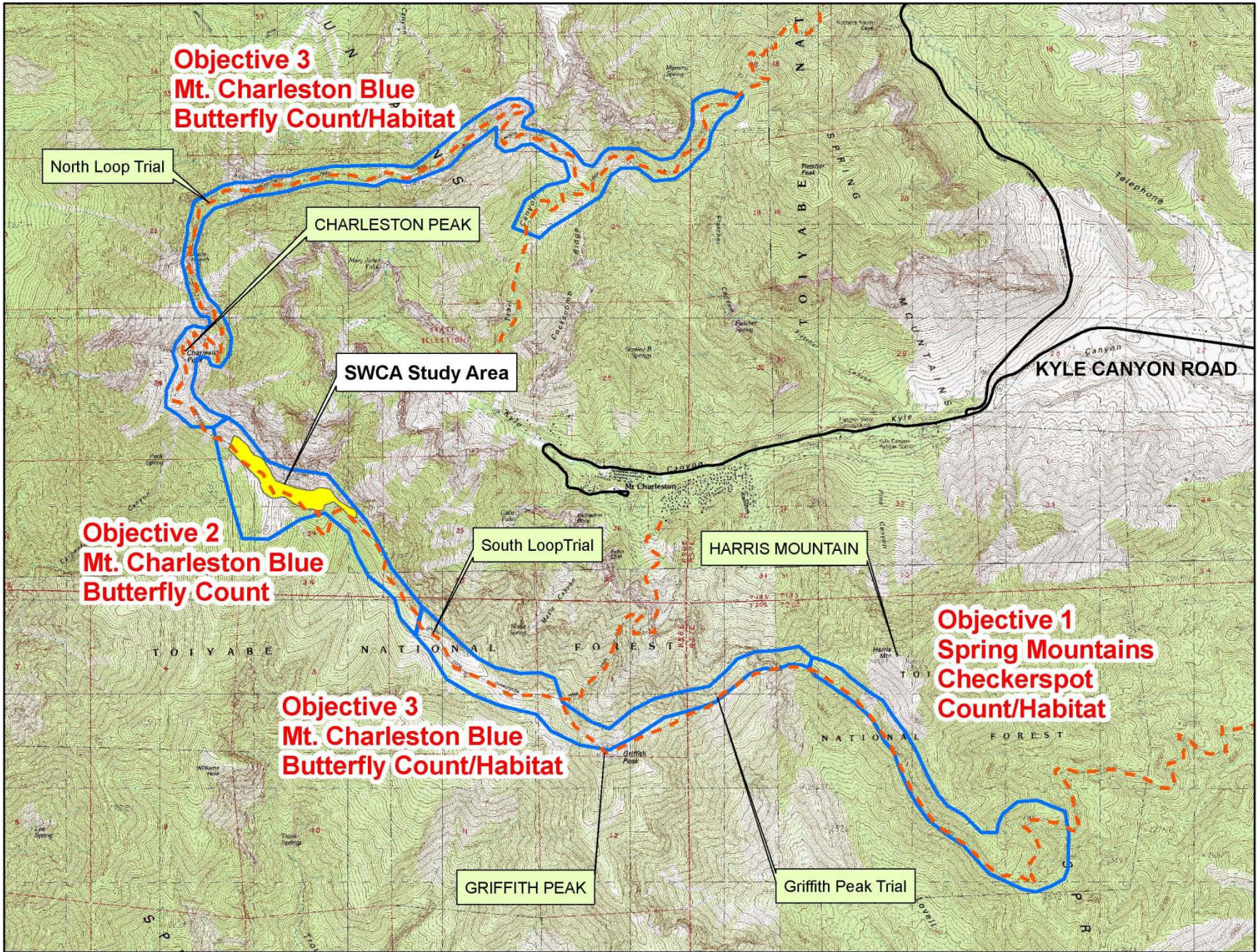


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Acknowledgements



This project is funded by Southern Nevada Public Lands Management Act, Round 6 funds.



**Objective 3
Mt. Charleston Blue
Butterfly Count/Habitat**

North Loop Trial

CHARLESTON PEAK

SWCA Study Area

**Objective 2
Mt. Charleston Blue
Butterfly Count**

South Loop Trial

HARRIS MOUNTAIN

**Objective 1
Spring Mountains
Checkerspot
Count/Habitat**

**Objective 3
Mt. Charleston Blue
Butterfly Count/Habitat**

GRIFFITH PEAK

Griffith Peak Trial

KYLE CANYON ROAD



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Questions?