

2002 Butterfly Survey

Heil Valley Ranch Open Space

For Boulder County Parks and Open Space

By Jan Chu

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The natural resources at Heil Valley Open Space are being studied and documented for the purpose of development of a Master Plan. Butterflies are an important part of this survey, small, beautiful and yet significant. Butterfly diversity and populations indicate the vitality of native plants and habitats. This summer I visited each of three areas of Heil Valley, which Kevin Grady, the Manager suggested had the greatest numbers of flowers.

In March 2002, Therese Glowacki, Resource Management Manager, issued a Special Collection Permit for the purpose of advancing my training as a Volunteer Naturalist. My mission was to continue the development of a baseline inventory of butterflies on Heil Ranch and to help prepare public programs on butterflies. Ten exploratory visits were made to the Ranch in 2002, one visit in 2001. Ninety hours of volunteer time were accumulated.

This was a second summer's survey, where butterflies were identified and listed at Heil Valley Ranch. The first occurred in July and August 1995, by Sara Simonson and Phyllis Pineda, as noted in their report, Field Survey of Boulder County Open Space Hall and Heil Ranches, 1995. The only butterfly records, which I could find in the report, were the rare species notably Snow's Skipper, Ottoo Skipper and Arogos Skipper. I failed to locate any of these rare butterflies in 2002, for any number of reasons; this observer was not in their specific habitat, or not visiting at the time of emergence and limited flight time of the adults. It is not likely their colony habitats have been disturbed. The absence of these three species may be due to two summers of drought, which took a toll on the number of adults that flew this summer. One uncommon Front Range resident, the Hops blue, was found at the mouth of Plumely Canyon, flying above its food plant, the native hops.

In Boulder County, with its wide range of elevations, 195 butterfly species have been identified and confirmed. In Heil Valley, 72 species were observed and identified this summer. Within the open space property, 56 species were observed at the canyon mouth and in Plumely Canyon; 35 species at the Caretaker's residence and Geer Canyon; 21 species on the Lichen Trail, including the dirt roadway; and 20 species were noted on the Red Hill saddle.

A list of butterflies seen on five or more of the ten observation days include the black swallowtail, Western tiger swallowtail, lupine blue, Aphrodite fritillary, Edwards' fritillary, ochre ringlet and taxiles skipper. Chryxus Arctic will most likely not be seen again until 2004, because it typically has a synchronized two-year life cycle and flies here in the even numbered years. There was a well-established colony of garita skipperlings in the saddle of Red Hill, "a short grass prairie knoll," which is its expected habitat, according to Paul Opler (1995). The Rocky Mountain parnassian, found only once, is typically more common at higher altitudes. The visitors, from distant areas, seen only once, were the short-tail black swallowtail, American lady, hackberry emperor, Mexican cloudywing, and orange-headed roadside skipper. These visitors do not reproduce in this area, since their host plants are absent.

The western states experienced a severe drought in 2002, and sustained a drought for the second year with little snowfall in 2001. Denver had 59 days with temperatures above 90 degrees F. Serious fires, throughout the state, were all too common, and 2,031 fires consumed 501,686 acres in Colorado between January and September, according to the National Interagency Fire Center. The blossoming flowers were affected – some grew shorter, some barely blossomed

before they were desiccated, and the normal abundance of these plants was reduced severely. “Only in the deep Plumely Canyon, where the high walls facing both north and south held snowdrifts, was moisture available longer than on any other site in Heil,” noted Kevin Grady. Plumely Canyon stream, which parallels the road to Red Hill, was one of the two remaining traverses of above ground water. On July 18, 2002, we saw the final Plumely puddle disappear. On that early morning, a western prairie rattlesnake and hundreds of bees and wasps were drinking from the precious shallow pool of water. Nearby only the moist earth remained, and dozens of fritillaries, a hackberry emperor, an American lady, and a few skippers were mud puddling to find the remnant precious molecules of moisture. That ground was littered by hundreds of single moth wings - had the dragonflies hunted here for a much needed feast?

Recommendations:

1. Make additional days of observations of butterflies and other insects to help uncover the tremendous natural resources at Heil. One day a week would be recommended.
2. Surveys should begin earlier in the season – early April when there is still snow on the ground, and extend later.
3. Locate the rare species and verify the vitality of their habitats.
4. Provide a permit for volunteer naturalists to observe and identify butterflies in succeeding years.
5. Allow a permit to include a single catch of any unidentifiable species to be removed, given to a professional for certain identification, and placed in the University of Colorado permanent collection, directed by Virginia Scott. (In the heat of the collecting day, it is very difficult to keep a butterfly alive long enough to be “returned within 72 hours”.)
6. Look for species not yet recorded for Boulder County, i.e. “*Amblyscirtes simius*”- Simius Roadside-Skipper, *Megathymus yuccae*- Yucca Giant-Skipper, *Euphilotes rita*- Rita Dotted-Blue, and *Phyciodes picta*- Painted Crescent (a stray which lives on bindweed).

Thank you for providing this rewarding opportunity for me and for my associates. Kevin Grady with his enthusiasm assisted many times. My associates included Susan K. Harris, Jean Morgan, Donn Cook, Catherine Griswold, Steve Armstead, Larry Crowley, Mike Sportiello, and Pat Hoadley. Ray Stanford and Paul Opler are my reliable sources in identifying the butterflies. Ray Stanford confirmed the accuracy of this report.

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Parnassius smintheus	Rocky Mtn. Parnassian
Papilio polyxenes	Black Swallowtail
P. zelicaon	Anise Swallowtail
P. indra	Short-tailed Black Swallowtail
P. rutulus	W. Tiger Swallowtail
P. multicaudatus	Two-tailed Swallowtail
P. eurymedon	Pale Swallowtail swallowtail sp.
Pontia sisymbrii	Spring White
P. protodice	Checkered White
Pieris rapae	Cabbage White
Euchloe ausonides	Large Marble
E. olympia	Olympia Marble
Anthocharis julia	So. Rocky Mtn. Orangetip white sp.
Colias philodice	Clouded Sulphur
C. eurytheme	Orange Sulphur sulphur sp.
Lycaena heteronea	Blue Copper
Satrium titus	Coral Hairstreak
S. behrii	Behr's Hairstreak
Callophrys affinis	(W. Green)Bramble Hairstreak
C. eryphon	Western Pine Elfin
Strymon melinus	Gray Hairstreak
E. amyntula	W. Tailed-blue
Celestrina humulus	Hops Blue
Glycopsyche lygdamus	Silvery Blue
Icaricia icarioides	Boisduval's Blue
Euphilotes ancilla	Rocky Mtn. Dotted-blue
Glaucopsyche piasus	Arrowhead Blue
G. lygdamus	Silvery Blue
Lycaeides melissa	Melissa Blue
Plebejus saepiolus	Greenish Blue
P. icarioides	Boisduval's Blue
P. (lupini) lutzi	Lupine Blue
Euptoieta claudia	Variegated Fritillary
Speyeria aphrodite	Aphrodite Fritillary
S. edwardsii	Edwards' Fritillary

S.callippe	Callippe Fritillary
S. hesperis	Northwestern Fritillary
S. mormonia	Mormon Fritillary fritillary sp.
Chlosyne gorgone	Gorgone Checkerspot
C. nycteis	Silvery Checkerspot
C. palla	Northern Checkerspot
Euphydryas chalcedona	Variable Checkerspot checkerspot sp.
Phyciodes tharos	Pearl Crescent
P. cocyta	Northern Crescent
P. pratensis	Field Crescent
Polytonia gracilis	Hoary Comma anglewing sp.
Nymphalis antiopa	Mourning Cloak
Vanessa virginiensis	American Lady
V. atalanta	Red Admiral
V. cardui	Painted Lady
Limenitis weidemeyerii	Weidemeyer's Admiral
Asterocampa celtis	Hackberry Emperor
Coenonympha tullia ochracea	Ochre(Common) Ringlet
Cercyonis pegala	Common Wood Nymph
C. oetus	Small Wood Nymph
Erebia epipsodea	Common Alpine
Oeneis chryxus	Chryxus Arctic
O. uhleri	Uhler's Arctic
Epargyreus clarus	Silver-spotted Skipper
Thorybes pylades	Northern Cloudywing
T. mexicana	Mexican Cloudywing
Erynnis icelus	Dreamy Duskywing
E. persius	Persius Duskywing
Pyrgus communis	Common Checkered-skipper
Piruna pirus	Russet Skipperling
Oarisma garita	Garita Skipperling
Hesperia pahaska	Pahaska Skipper
H. viridis	Green Skipper
Polites themistocles	Tawny-edged Skipper
P. mystic	Long Dash
Ochlodes sylvanoides	Woodland Skipper
Poanes taxiles	Taxiles Skipper
Euphyes vestris	Dun Skipper
Amblyscirtes phylace	Orange-headed Roadside Skipper skipper species