

2002-3 Butterfly Survey

Heil Valley Ranch Open Space

For Boulder County Parks and Open Space

By Jan Chu

November 28, 2003

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The natural resources at Heil Valley Ranch 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 spring I visited three areas of Heil Valley Ranch.

My mission was to continue the development of a baseline inventory of butterflies on Heil Valley Ranch and to help prepare public programs on butterflies. Ten exploratory visits were made to the Ranch in 2002, one visit in 2001. Twenty hours of volunteer time were accumulated in 2003.

Butterflies were identified and listed only in the early season in 2003 at Heil Valley Ranch by this observer. Three new species were observed because of the early season observations in May and June, which were silvery blue, Boisduval's blue and painted lady, all in Plumely Canyon. Summer observations did not occur as planned, because of a death in the family.

Original recorded observations 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, Ottoe 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. In 2002, 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, 75 species have been observed and identified over the 3-year period by this observer. Within the open space property, 59 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 likely be seen in 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 painted lady arrived in June, and it was a surprise to me that I had not seen it during other years.

The western states experienced a continued drought in 2003. An unexpected and heavy 10" snow fell on Heil March 18,19, 2003. On April 2, I found grasses still matted, the ground cold and extremely few flowers beginning to emerge east of the Heil prairie dog colony. One-quarter inch long metallic green beetles were found on that day, by the dozens, mating and depositing masses of yellow eggs on smooth dock, which was still only 4-inches tall and growing in the wet shallow ravine. (Even deeper snowfalls were recorded at the Cal-Wood Outdoor Center, Jamestown (5 ft.), and at Rollinsville (8 ½ ft.)

Recommendations:

1. Make additional days of observations of butterflies and other insects to help uncover the tremendous natural resources at Heil. Bi-weekly would be recommended.
2. Surveys should begin early in the season – in 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 (and their associates) 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 Colorado State University permanent collection, directed by Dr. Paul Opler. (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 in 2003 included Susan K. Harris, Jean Morgan, Catherine and Donn Cook, Carol Cushman, and Larry Crowley. Ray Stanford and Paul Opler are my reliable sources in identifying the butterflies.

References:

- Glassberg, Jeffrey. Butterflies through Binoculars, the West. Oxford University Press, 2001.
- Opler, Paul A. Western Butterflies, Peterson Field Guides. Houghton Mifflin. 1999.
- Opler, Paul A. and Andrew D. Warren. Butterflies of North America, 2. Scientific Names List for Butterfly Species of North America, North of Mexico. November 5, 2002. C.P. Gillette Museum of Arthropod Diversity, Department of Bioagricultural Sciences and Pest Management, Colorado State University, Ft. Collins, CO, 80523
- Brock, Jim P. and Ken Kaufman. Butterflies of North America. Houghton Mifflin, 2003.
- Simonson, Sara and Phyllis Pineda. Field Survey of Boulder County Open Space Hall and Heil Ranches, 1995.

Butterflies		By Jan Chu																
		Observations were made in Geer Canyon, Plumely Canyon, Red Hill, Lichen Trail, Manager's Residence,																
		E. Roadway Prairie Dog Colony and east.																
Heil Valley Ranch Open Space		Geer	Plumely	Geer	Residence	Plumely	Red Hill	Red Hill	Lichen	Plumely	Geer	Plumely	E. Roadway Red Hill Plumely					
Boulder County, CO		Years: 2000 2002		2002										2003		2003 (overcast)		
		Dates:		22-June	25-Apr '02	9-May '02	23-May '02	30-May	13-Jun	20-Jun	21-Jun	27-Jun	11-Jul '02	18-July '02	2-Apr	9-May	9-Jun	
1	<i>Parnassius smintheus</i>	Rocky Mtn. Parnassian						x						1	<i>Parnassius smintheus</i>			
2	<i>Papilio polyxenes</i>	Black Swallowtail				x	x	x	x	x				2	<i>Papilio polyxenes</i>		x	
3	<i>P. zelicaon</i>	Anise Swallowtail								x				3	<i>P. zelicaon</i>			
4	<i>P. indra</i>	Short-tailed Black Swallowtail									x			4	<i>P. indra</i>			
5	<i>P. rutulus</i>	W. Tiger Swallowtail				x		x	x	x	x			5	<i>P. rutulus</i>		x	
6	<i>P. multicaudatus</i>	Two-tailed Swallowtail										x	x	6	<i>P. multicaudatus</i>			
7	<i>P. eurymedon</i>	Pale Swallowtail	x								x			7	<i>P. eurymedon</i>		x	
	swallowtail sp.				x										swallowtail sp.			
8	<i>Pontia sisymbrii</i>	Spring White			x		x							8	<i>Pontia sisymbrii</i>			
9	<i>P. protodice</i>	Checkered White						x	x	x	O		x	9	<i>P. protodice</i>			
10	<i>Pieris rapae</i>	Cabbage White			x	x						x	x	10	<i>Pieris rapae</i>			
11	<i>Euchloe ausonides</i>	Large Marble			x		x							11	<i>Euchloe ausonides</i>		x	
12	<i>E. olympia</i>	Olympia Marble					x	x						12	<i>E. olympia</i>			
13	<i>Anthocharis julia</i>	So. Rocky Mtn. Orangetip			x									13	<i>Anthocharis julia</i>			
	white															x		
14	<i>Colias philodice</i>	Clouded Sulphur	x								x			14	<i>Colias philodice</i>			
15	<i>C. eurytheme</i>	Orange Sulphur	x				x			x				15	<i>C. eurytheme</i>	x/alb	x	
	sulphur															x		
16	<i>Lycaena heteronea</i>	Blue Copper											x	16	<i>Lycaena heteronea</i>			
17	<i>Satrium titus</i>	Coral Hairstreak											x	17	<i>Satrium titus</i>			
18	<i>S. behrii</i>	Behr's Hairstreak									x			18	<i>S. behrii</i>			
19	<i>Callophrys affinis</i>	(W. Green)Bramble Hairstreak					x		x		x			19	<i>Callophrys affinis</i>			
20	<i>C. eryphon</i>	Western Pine Elfin			x		x							20	<i>C. eryphon</i>			

Heil Valley Ranch Open Space		Geer	Plumely	Geer	Residence	Plumely	Red Hill	Red Hill	Lichen	Plumely	Geer	Plumely
21	Strymon melinus											x
22	Everes comyntas					x						
23	E. amyntula	x				x						
24	Celestrina humulus								x			
25	Glycopsyche lygdamus											
26	Icaricia icarioides											
27	Euphilotes ancilla	x										
28	Glaucopygma piasus								x			
29	G. lygdamus			x		x			x			
30	Lycaeides melissa	x				x	x	x				
31	Plebejus saepiolus					x						
32	P. icarioides	x				x	x	x	x	x		
33	P. (lupini) lutzi						x					
34	Euptoieta claudia									x		
35	Speyeria aphrodite	x					x	x	x	x	x	
36	S. edwardsii					x	x	x	x	x	x	
37	S. callippe								x		x	
38	S. hesperis	x								x		
39	S. mormonia									x	x	
	fritillary sp.					x						
40	Chlosyne gorgone									x		
41	C. nycteis									x	x	
42	C. palla									x		
43	Euphydryas chalcedona									x		
	Checkerspot											
44	Phyciodes tharos	x		x		x						
45	P. cocyta									x		
46	P. pratensis					x	x			x		x
47	Polygonia gracilis					x			x		x	
	Anglewing sp.				x							
48	Nymphalis antiopa		x	x		x			x			
49	Vanessa virginiensis											x
50	V. atalanta					x						

2003

E. Roadway Red Hill Plumely
April 2 May 9 June 9

Heil Valley Ranch Open Space		April 2	May 9	June 9
21	Strymon melinus			
22	Everes comyntas			
23	E. amyntula			
24	Celestrina humulus			
25	Glycopsyche lygdamus			x O
26	Icaricia icarioides			x
27	Euphilotes ancilla			
28	Glaucopygma piasus			
29	G. lygdamus			
30	Lycaeides melissa			
31	Plebejus saepiolus			
32	P. icarioides			
33	P. (lupini) lutzi			
34	Euptoieta claudia			x
35	Speyeria aphrodite			x
36	S. edwardsii			x
37	S. callippe			
38	S. hesperis			
39	S. mormonia			
	fritillary sp.			
40	Chlosyne gorgone			
41	C. nycteis			
42	C. palla			
43	Euphydryas chalcedona			
	Checkerspot			x
44	Phyciodes tharos			x
45	P. cocyta			
46	P. pratensis			
47	Polygonia gracilis			
	Anglewing sp.			
48	Nymphalis antiopa	x		
49	Vanessa virginiensis			
50	V. atalanta			x

Butterflies	By Jan Chu
	2003
Heil Valley Ranch Open Space Boulder County, CO	
<i>Parnassius smintheus</i>	Rocky Mtn. Parnassian
<i>Papilio polyxenes</i>	Black Swallowtail
<i>P. zelicaon</i>	Anise Swallowtail
<i>P. indra</i>	Short-tailed Black Swallowtail
<i>P. rutulus</i>	W. Tiger Swallowtail
<i>P. multicaudatus</i>	Two-tailed Swallowtail
<i>P. eurymedon</i>	Pale Swallowtail swallowtail sp.
<i>Pontia sisymbrii</i>	Spring White
<i>P. protodice</i>	Checkered White
<i>Pieris rapae</i>	Cabbage White
<i>Euchloe ausonides</i>	Large Marble
<i>E. olympia</i>	Olympia Marble
<i>Anthocharis julia</i>	So. Rocky Mtn. Orangetip white sp.
<i>Colias philodice</i>	Clouded Sulphur
<i>C. eurytheme</i>	Orange Sulphur sulphur sp.
<i>Lycaena heteronea</i>	Blue Copper
<i>Satrium titus</i>	Coral Hairstreak
<i>S. behrii</i>	Behr's Hairstreak
<i>Callophrys affinis</i>	(W. Green)Bramble Hairstreak
<i>C. eryphon</i>	Western Pine Elfin
<i>Strymon melinus</i>	Gray Hairstreak
<i>Everes comyntas</i>	E. Tailed-blue
<i>E. amyntula</i>	W. Tailed-blue
<i>Celestrina humulus</i>	Hops Blue
<i>Glycopsyche lygdamus</i>	Silvery Blue
<i>Icaricia icarioides</i>	Boisduval's Blue
<i>Euphilotes ancilla</i>	Rocky Mtn. Dotted-blue
<i>Glaucopsyche piasus</i>	Arrowhead Blue
<i>G. lygdamus</i>	Silvery Blue
<i>Lycaeides melissa</i>	Melissa Blue
<i>Plebejus saepiolus</i>	Greenish Blue
<i>P. icarioides</i>	Boisduval's Blue
<i>P. (lupini) lutzi</i>	Lupine Blue
<i>Euptoieta claudia</i>	Variiegated Fritillary
<i>Speyeria aphrodite</i>	Aphrodite Fritillary
<i>S. edwardsii</i>	Edwards' Fritillary

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