

A 2011 Survey of Butterflies at West Eugene's Coyote Prairie



By Eugene/Springfield
North American Butterfly Association
Summer 2011
Reported by David & Lois Hagen

Coyote Prairie

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Background

In 2011, a volunteer group from the Eugene/Springfield chapter of the North American Butterfly Association (NABA-E/S) surveyed the butterfly population of Coyote Prairie.

Coyote Prairie, located on Cantrell Road about four miles west of the Eugene city limits, is a 240 acre site managed for wetlands restoration by the City of Eugene, Parks and Open Space Division. The site was formerly a rye grass field. The site is divided into four contiguous zones (see Figure 1) corresponding to the phases of the restoration project:

- Phase 1 ("Zone 1") is 26 acres and began in 2007
- Phase 2 ("Zone 2") is 38 acres and began in 2008
- Phase 3 ("NE Zone") is ~85 acres and began in 2009
- Phase 4 ("NW Zone") is now partially in experimental plots (~11 acres) and partially leased for rye grass farming (~67 acres)



Our survey group sought to identify butterfly species, to count the total number of butterflies, and to comment on the general quality of the butterfly habitat. This year was a particularly challenging butterfly year for Lane County in general due to a cool, rainy spring. Therefore, our observations at Coyote Prairie may be atypically low in count numbers and late in butterfly emergence times.

Procedures

At Coyote Prairie for 2011 we performed surveys across the butterfly season at intervals of approximately two weeks. We followed a route (see Figure 1) which we established after a preliminary site visit. Each day we recorded the weather, the number and names of the participants, and the time on site. Our tally sheets contained separate columns for the four zones of Coyote Prairie. One of our members (Donald Gudehus) set up a Picasa Web Album where the survey team could upload photos and add comments. Sixty-two photos of butterflies, other animals, and plants are posted on this website. The pictures are sorted according to date and, thus, serve to photo-document each survey. The photo gallery may be accessed through the NABA-Eugene/Springfield web site (<http://www.naba.org/chapters/nabaes/>).

Results

Eight volunteers participated in the 2011 study of Coyote Prairie. The group began with a preliminary site visit on March 31, 2011, and then completed fourteen surveys extending from April 15th through October 7th. The volunteers spent 92 person-hours in the field (Tables 1 and 6). In total, we logged about 170 person-hours on this project when travel, prep work, and analysis times are included.



Anise Swallowtail

In this survey, we identified 20 different butterfly species (Table 1). We counted 1794 individual butterflies — 48 in the NW Zone (Table 2), 1027 in the NE Zone (Table 3), 358 in Zone 1 (Table 4), and 361 in Zone 2 (Table 5).

The top four butterflies observed were: Sachem Skippers (*Atalopedes campestris*), with 1013 individuals counted; Ochre Ringlets (*Coenonympha tullia*), with 299; Eastern Tailed-blues (*Cupido comyntas*), with 142; and Common Wood-nymphs (*Cercyonis pegala*), with 99 — see Table 1 and Figure 2. The top butterfly plants were: gumweed, used by Sachem Skippers and Orange Sulphurs; grasses, used by Ochre Ringlets and Common Wood-nymphs; Spanish clover, used by Eastern Tailed-blues; and lupines, used by a variety of butterflies.



Eastern Tailed-blue

It was interesting for us to compare the butterfly occurrences in the four distinct restoration zones of Coyote Prairie. The Northwest Zone (NW; see Table 2) houses several experimental plots, but a large acreage is still leased out for grass seed farming. The NW Zone was very low on butterflies. However, we occasionally spotted a few Ochre Ringlets and Wood-nymphs plus a few accidental visitors.

The Northeast Zone (NE; see Table 3) has been restored with a variety of native plants, many of which attract butterflies. Especially late in the season, there are vast tracts of gumweed. The long-blooming period of these flowers attracts Sachem Skippers in multitudes (we counted 835 there), as well as other species. In the future, this zone should attract higher numbers of butterfly species, especially Orange Sulphurs, which were surprisingly low in this weak butterfly year. Great Coppers should also thrive in this area once they discover it.

Zone 1 (see Table 4) provided the largest variety of butterflies of the four zones. This zone benefits from being surrounded by woodland and riparian strips on all edges. The butterfly numbers, high in the early part of the season, dropped off significantly as the area dried out.

Finally, Zone 2 (see Table 5) shares many of the features of the zones it lies between: the NE Zone and Zone 1. Like the

NE Zone it has a fine, late-season showing of gumweed and like Zone 1 it has a nice proximity to woodland and riparian habitats.

This year was our first opportunity to survey Coyote Prairie, so we were mostly establishing a benchmark count rather than monitoring the progress of the wetlands-restoration effort. Unfortunately this year, as noted earlier was a bad year for butterflies. The spring weather was cold and rainy, and regional butterfly counts in Lane County were down in numbers from the norm. (Year 2010 was also a bad year, so there have been two bad years in a row.)

In 2009 and 2010 NABA-E/S conducted comparable butterfly surveys at a nearby wetlands area, the Dragonfly Bend/Briggs Site. (Our survey reports are still available at <http://www.naba.org/chapters/nabaes/>.) Here we make comparisons between Coyote Prairie (CP) in 2011 and Dragonfly Bend/Briggs Site (DBBS) in 2010 and 2009.

Overall, the observations at CP are comparable to those at DBBS. At CP in 2011 we saw a total of 20 species, including four not seen at DBBS. These four (with only one sighting each) are: Anise Swallowtail, Propertius Duskywing, California Tortoiseshell, and California Sister. At DBBS, combining the results of 2009 and 2010, we saw a total of 22 species. The species seen at DBBS and not yet at CP are: Acmon Blue (19), Painted Lady (16), Spring Azure (2), Great Copper (5), and Mustard White (1).

At CP we saw more Sachem Skippers (Figure 3, Comparison 1), Dun Skippers (Comparison 3), and Field Crescents (Comparison 4) than at DBBS. The reverse was true (to a lesser extent) for Eastern

Tailed-blues (Comparison 2) and Orange Sulphurs (Comparison 5); more were seen at DBBS. The numbers of Ochre Ringlets (Comparison 1), Common Wood-nymphs (Comparison 2), Common Checkered-skippers (Comparison 3), and Woodland Skippers (Comparison 4) were comparable at the two sites.

Repercussions of the butterfly-favorable year 2009 (versus the bad years 2010 and 2011) can be seen by the earlier appearances in 2009 of Eastern Tailed-blues (Comparison 2), Woodland Skippers (Comparison 4), and Orange Sulphurs (Comparison 5).

Future Plans

The Eugene/Springfield chapter of NABA would like to repeat our survey of Coyote Prairie again in year 2012. The site is quite beautiful, and the habitat restoration is very impressive. In future surveys, hopefully with warmer, drier spring weather, we expect to see higher numbers for the butterfly species already seen. Furthermore, we anticipate spotting some butterfly species that have not yet been observed there.



Figure 1. Survey Route (bold white line)

Coyote Prairie

Site Overview

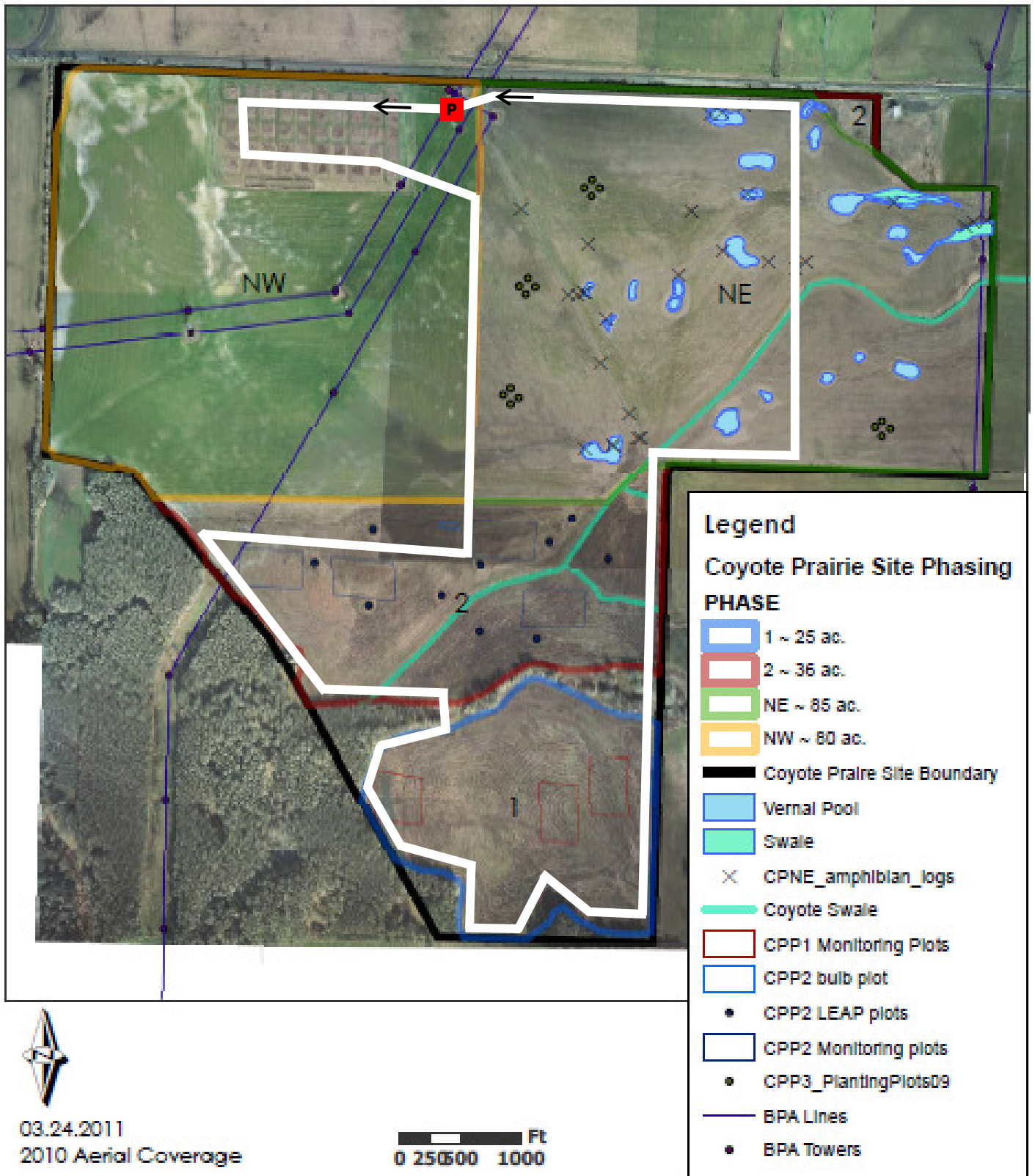
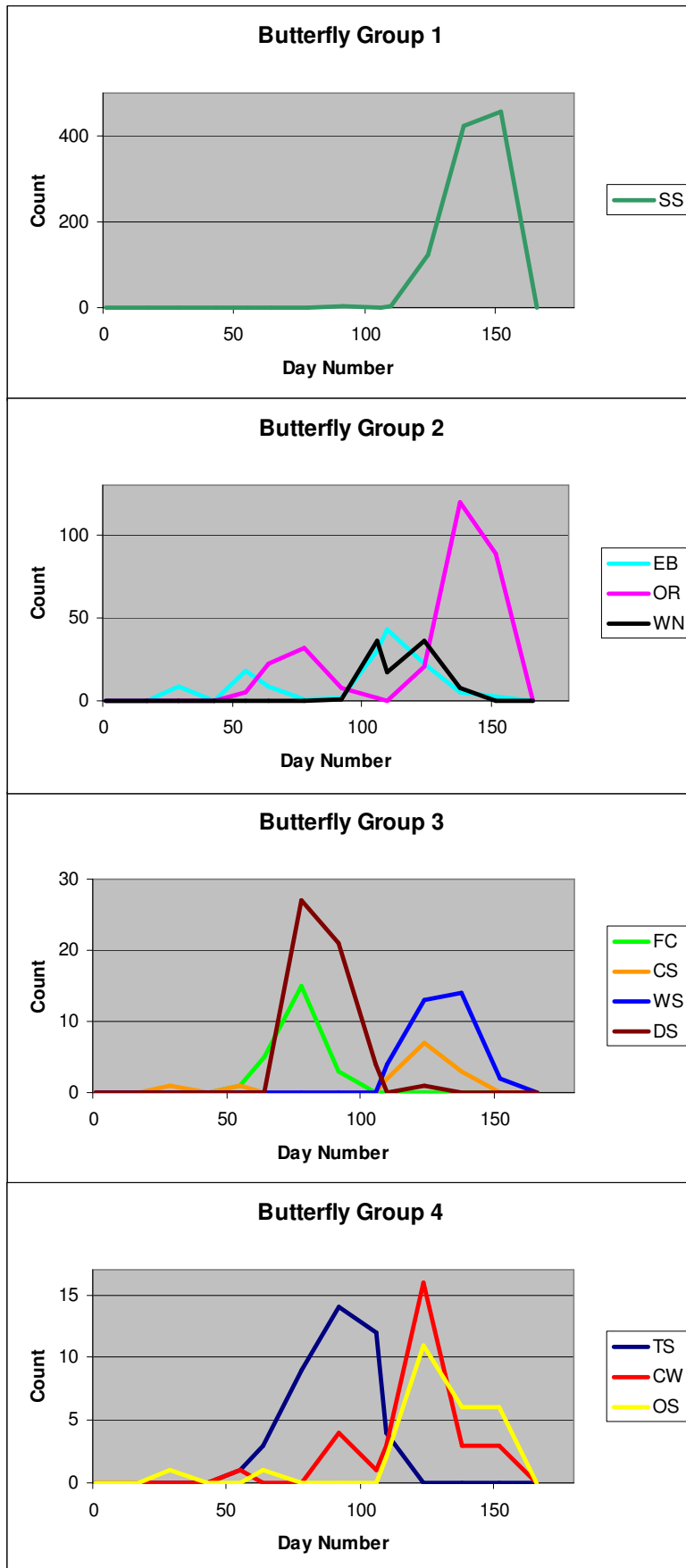


Figure 2. Coyote Prairie Survey Graphs



Notes:

Day 1 = Apr 15
 Day 50 = Jun 3
 Day 100 = Jul 23
 Day 150 = Sep 21
 Day 200 = Nov 10

Apr 1 = Day 17
 May 1 = Day 23
 Jun 1 = Day 48
 Jul 1 = Day 78
 Aug 1 = Day 109
 Sep 1 = Day 140
 Oct 1 = Day 160
 Nov 1 = Day 191

CW = Cabbage white
 CS = Checkered-skipper
 DS = Dun skipper
 EB = Eastern tailed-blue
 FC = Field crescent
 OR = Ochre ringlet
 OS = Orange sulphur
 SS = Sachem skipper
 WN = Wood nymph
 WS = Woodland skipper
 TS = W. tiger swallowtail

Table 1. Coyote Prairie Survey Summary

	Total species no:														20
Day number:	1	17	29	43	55	64	78	92	106	110	124	138	152	166	
Date:	4/15	5/1	5/13	5/27	6/8	6/17	7/1	7/15	7/29	8/12	8/26	9/9	9/23	10/7	
Common Name															Indiv. tot.
Western Tiger Swallowtail	0	0	0	0	1	3	9	14	12	4	0	0	0	0	43
Anise Swallowtail	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Cabbage White	0	0	0	0	1	0	0	4	1	3	16	3	3	0	31
Orange Sulphur	0	0	1	0	0	1	0	0	0	2	11	6	6	0	27
Gray Hairstreak	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Eastern Tailed-blue	0	0	9	0	18	9	1	2	30	43	22	5	3	0	142
Silvery Blue	0	2	2	0	0	0	0	0	0	0	0	0	0	0	4
Field Crescent	0	0	0	0	1	5	15	3	0	0	0	0	0	0	24
Mylitta Crescent	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
California Tortoiseshell	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
West Coast Lady	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2
Lorquin's Admiral	0	0	0	0	2	0	0	0	0	0	0	1	1	0	4
California Sister	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Common Wood-Nymph	0	0	0	0	0	0	0	1	36	17	36	8	0	0	98
Ochre (Common) Ringlet	0	0	0	0	5	22	32	8	2	0	21	120	89	0	299
Properius Duskywing	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Common Checkered-Skipper	0	0	1	0	1	0	0	0	0	2	7	3	0	0	14
Sachem Skipper	0	0	0	0	0	0	1	5	0	3	124	423	457	0	1013
Woodland Skipper	0	0	0	0	0	0	0	0	0	4	13	14	2	0	33
Dun Skipper	0	0	0	0	0	0	27	21	4	0	1	0	0	0	53
Indiv. totals:	0	2	15	0	31	41	85	58	85	78	252	583	564	0	1794
Surveyors:	2	2	3	2	4	3	4	3	5	3	3	4	4	1	6
Field hours:	1.25	1.75	1.00	0.25	2.00	2.25	2.50	2.00	2.50	2.50	2.50	2.50	3.00	1.75	27.75
Field-person-hours:	2.50	3.50	3.00	0.50	8.00	6.75	10.00	6.00	12.50	7.50	7.50	10.00	12.00	1.75	91.50
Tavel person-hours:	2.00	2.00	3.00	2.00	4.00	3.00	4.00	3.00	5.00	3.00	3.00	4.00	4.00	1.00	43.00
Extra vol pers-hrs (prep):	16.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	12.50	35.00
Volunteer-person-hours:	21.00	6.00	6.50	3.00	12.50	10.25	14.50	9.50	18.00	11.00	11.00	14.50	16.50	15.25	169.50
Weather notes: †	c/c/c	c/c/p	c/b/p	c/b/r	w/b/p	w/c/s	w/b/c	w/b/p	h/b/c	h/b/c	h/b/c	h/b/c	h/c/c	c/b/c	
Date:	4/15	5/1	5/13	5/27	6/8	6/17	7/1	7/15	7/29	8/12	8/26	9/9	9/23	10/7	
* Volunteer hours	Volunteer hours include hours in the field, travel time to and from the site, and prep time. Travel time was estimated at 30 minutes each way. "Extra" volunteer hours includes meeting time, prep time, report writing, etc. sometimes before or after the date.														
† Weather notes														Total volunteer hours:	169.50
	This is encoded as Temperature/Wind/Sky using the following abbreviations: Temperature: h = hot (>80F), w = warm (65-80F), c = cool (<65F) Wind: c = calm (0-5mph), b = breezy (5-15mph), w = windy (15-25mph), s = strong (>25mph) Sky: s = sunny, p = partly cloudy, c = cloudy, d = drizzly, r = rainy														

Table 2. Coyote Prairie NW Zone

	Total species no:														10									
Day number:	1	17	29	43	55	64	78	92	106	110	124	138	152	166										
Date:	4/15	5/1	5/13	5/27	6/8	6/17	7/1	7/15	7/29	8/12	8/26	9/9	9/23	10/7										
Common Name																						Indiv. tot.		
Western Tiger Swallowtail	0	0	0	0	0	2	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	5		
Anise Swallowtail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Cabbage White	0	0	0	0	1	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	4		
Orange Sulphur	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1		
Gray Hairstreak	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Eastern Tailed-blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Silvery Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Field Crescent	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Mylitta Crescent	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
California Tortoiseshell	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1		
West Coast Lady	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1		
Lorquin's Admiral	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2		
California Sister	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Common Wood-Nymph	0	0	0	0	0	0	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	18		
Ochre (Common) Ringlet	0	0	0	0	0	1	1	0	0	0	0	5	5	0	0	0	0	0	0	0	0	12		
Properius Duskywing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Common Checkered-Skipper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Sachem Skipper	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	3		
Woodland Skipper	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1		
Dun Skipper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Indiv. totals:	0	0	1	0	1	4	1	2	20	0	1	9	9	0	0	0	0	0	0	0	0	48		

Table 3. Coyote Prairie NE Zone

	Total species no:														12										
Day number:	1	17	29	43	55	64	78	92	106	110	124	138	152	166											
Date:	4/15	5/1	5/13	5/27	6/8	6/17	7/1	7/15	7/29	8/12	8/26	9/9	9/23	10/7											
Common Name																						Indiv. tot.			
Western Tiger Swallowtail	0	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	4			
Anise Swallowtail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Cabbage White	0	0	0	0	0	0	0	1	1	2	12	0	1	0	0	0	0	0	0	0	0	17			
Orange Sulphur	0	0	0	0	0	1	0	0	0	1	9	6	5	0	0	0	0	0	0	0	0	22			
Gray Hairstreak	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Eastern Tailed-blue	0	0	1	0	5	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	12			
Silvery Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Field Crescent	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Mylitta Crescent	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2			
California Tortoiseshell	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
West Coast Lady	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Lorquin's Admiral	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2			
California Sister	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Common Wood-Nymph	0	0	0	0	0	0	0	1	6	4	10	1	0	0	0	0	0	0	0	0	0	22			
Ochre (Common) Ringlet	0	0	0	0	0	2	6	1	0	0	7	45	30	0	0	0	0	0	0	0	0	91			
Properius Duskywing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Common Checkered-Skipper	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3			
Sachem Skipper	0	0	0	0	0	0	1	3	0	2	92	356	381	0	0	0	0	0	0	0	0	835			
Woodland Skipper	0	0	0	0	0	0	0	0	0	2	5	7	1	0	0	0	0	0	0	0	0	15			
Dun Skipper	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2			
Indiv. totals:	0	0	1	0	7	3	8	9	9	13	142	415	420	0	0	0	0	0	0	0	0	1027			

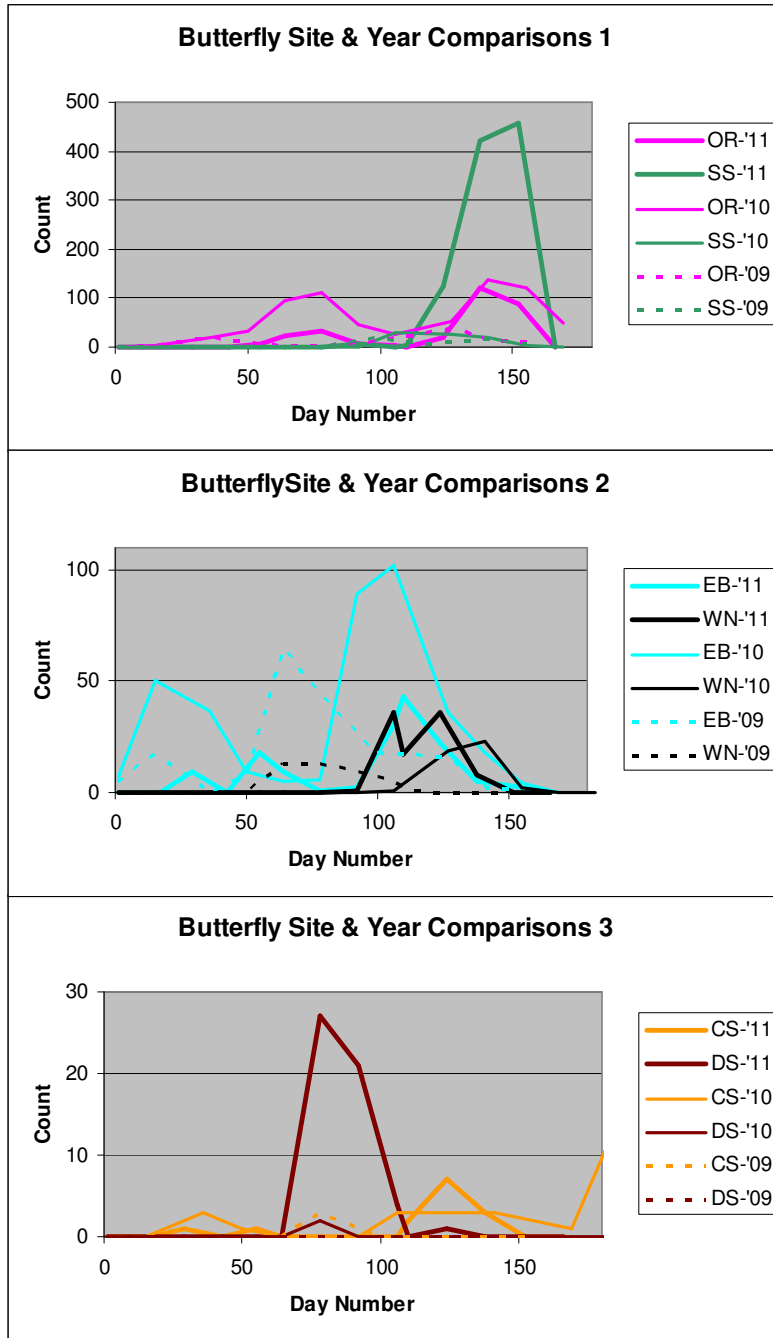
Table 4. Coyote Prairie Zone 1

Day number:	Total species no:															Indiv. tot.
	1	17	29	43	55	64	78	92	106	110	124	138	152	166		
Date:	4/15	5/1	5/13	5/27	6/8	6/17	7/1	7/15	7/29	8/12	8/26	9/9	9/23	10/7		
Common Name																
Western Tiger Swallowtail	0	0	0	0	1	1	3	8	4	2	0	0	0	0	0	19
Anise Swallowtail	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Cabbage White	0	0	0	0	0	0	0	2	0	0	0	3	0	0	5	5
Orange Sulphur	0	0	1	0	0	0	0	0	0	1	1	0	0	0	3	3
Gray Hairstreak	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1
Eastern Tailed-blue	0	0	7	0	9	8	1	0	15	34	9	4	1	0	88	88
Silvery Blue	0	2	2	0	0	0	0	0	0	0	0	0	0	0	4	4
Field Crescent	0	0	0	0	0	5	14	3	0	0	0	0	0	0	22	22
Mylitta Crescent	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
California Tortoiseshell	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
West Coast Lady	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1
Lorquin's Admiral	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
California Sister	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Common Wood-Nymph	0	0	0	0	0	0	0	0	2	3	11	6	0	0	22	22
Ochre (Common) Ringlet	0	0	0	0	5	16	15	5	0	0	10	38	19	0	108	108
Proterpius Duskywing	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Common Checkered-Skipper	0	0	1	0	1	0	0	0	0	2	4	2	0	0	10	10
Sachem Skipper	0	0	0	0	0	0	0	0	0	1	15	15	6	0	37	37
Woodland Skipper	0	0	0	0	0	0	0	0	0	1	1	2	0	0	4	4
Dun Skipper	0	0	0	0	0	0	12	16	4	0	0	0	0	0	32	32
Indiv. totals:	0	2	12	0	18	30	45	34	25	44	52	70	26	0	358	

Table 5. Coyote Prairie Zone 2

Day number:	Total species no:															Indiv. tot.
	1	17	29	43	55	64	78	92	106	110	124	138	152	166		
Date:	4/15	5/1	5/13	5/27	6/8	6/17	7/1	7/15	7/29	8/12	8/26	9/9	9/23	10/7		
Common Name																
Western Tiger Swallowtail	0	0	0	0	0	0	5	3	5	2	0	0	0	0	0	15
Anise Swallowtail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cabbage White	0	0	0	0	0	0	0	1	0	1	3	0	0	0	5	5
Orange Sulphur	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Gray Hairstreak	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eastern Tailed-blue	0	0	1	0	4	1	0	2	14	7	10	1	2	0	42	42
Silvery Blue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Field Crescent	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	2
Mylitta Crescent	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
California Tortoiseshell	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
West Coast Lady	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lorquin's Admiral	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
California Sister	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Common Wood-Nymph	0	0	0	0	0	0	0	0	10	10	15	1	0	0	36	36
Ochre (Common) Ringlet	0	0	0	0	0	3	10	2	2	0	4	32	35	0	88	88
Proterpius Duskywing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Common Checkered-Skipper	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Sachem Skipper	0	0	0	0	0	0	0	1	0	0	17	50	70	0	138	138
Woodland Skipper	0	0	0	0	0	0	0	0	0	1	7	4	1	0	13	13
Dun Skipper	0	0	0	0	0	0	15	4	0	0	0	0	0	0	19	19
Indiv. totals:	0	0	1	0	5	4	31	13	31	21	57	89	109	0	361	

Figure 3. Coyote Prairie, 2011, Compared to Dragonfly Bend/Briggs Site, 2010 & 2009



Notes:

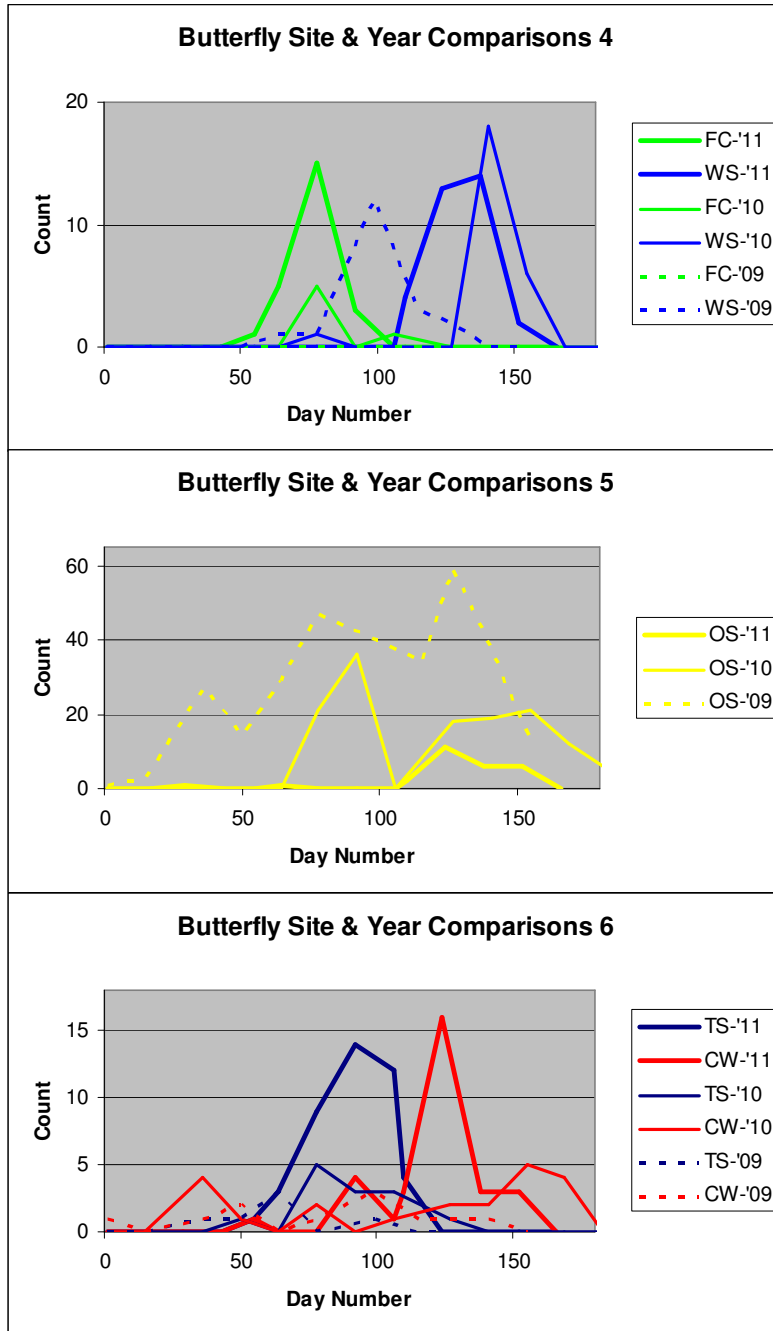
Day 1 = Apr 15
 Day 50 = Jun 3
 Day 100 = Jul 23
 Day 150 = Sep 21
 Day 200 = Nov 10

Apr 1 = Day 17
 May 1 = Day 23
 Jun 1 = Day 48
 Jul 1 = Day 78
 Aug 1 = Day 109
 Sep 1 = Day 140
 Oct 1 = Day 160
 Nov 1 = Day 191

CW = Cabbage white
 CS = Checkered-skipper
 DS = Dun skipper
 EB = Eastern tailed-blue
 FC = Field crescent
 OR = Ochre ringlet
 OS = Orange sulphur
 SS = Sachem skipper
 WN = Wood nymph
 WS = Woodland skipper
 TS = W. tiger swallowtail

'11 = Coyote Prairie, 2011
 '10 = Dragonfly Bend/
 Briggs Site, 2010
 '09 = Dragonfly Bend/
 Briggs Site, 2009

Figure 3. (Continued)



Notes:

Day 1 = Apr 15
 Day 50 = Jun 3
 Day 100 = Jul 23
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 Briggs Site, 2009

Table 6. Volunteers & Volunteer Hours

Surveyor Name																		Indiv. tot.
David Hagen	Field hrs:	1.25	1.75	1.00	0.25	2.00	2.25	2.50	2.00	2.50	2.50	2.50	2.50	3.00	1.75			27.75
	Travel & Extra Vol. hrs:	4.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	11.50	34.00
Lois Hagen	Field hrs:	1.25	1.75	1.00	0.25	2.00	2.25	2.50	2.00	2.50			2.50	3.00				21.00
	Travel & Extra Vol. hrs:	5.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	2.00			17.00
Lori Humphreys	Field hrs:					2.00	2.25	2.50	2.00	2.50	2.50	2.50	2.50	3.00				21.75
	Travel & Extra Vol. hrs:					1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				9.00
Donald Gudehus	Field hrs:			1.00						2.50	2.50	2.50		3.00				11.50
	Travel & Extra Vol. hrs:			1.00						1.00	1.00	1.00		1.00				5.00
Ellie Ryan	Field hrs:																	0.00
	Travel & Extra Vol. hrs:	3.00																3.00
Rick Ahrens	Field hrs:					2.00				2.50			2.50					7.00
	Travel & Extra Vol. hrs:	3.00				1.00				1.00			1.00					6.00
Jo von Hippel	Field hrs:							2.50										2.50
	Travel & Extra Vol. hrs:							1.00										1.00
Ingrid Ford	Field hrs:																	0.00
	Travel & Extra Vol. hrs:	3.00																3.00
Total field hours:																	91.50	
Total volunteer hours:																	169.50	
Notes:																		
Volunteer hours	Volunteer hours include hours in the field, travel time to and from the site, and preparation time. Travel time was estimated at 30 minutes each.																	
	Volunteer hours on "4/15/11" include prep, travel, and meeting times occurring before that date.																	
	Volunteer hours on "10/7/11" include report preparation times occurring after that date.																	