

# A 2010 Survey of Butterflies at Two West Eugene Wetlands Sites



By Eugene/Springfield  
North American Butterfly Association  
Summer 2010  
Reported by David & Lois Hagen

Dragonfly Bend  
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## Background

The Eugene/Springfield chapter of the North American Butterfly Association began conducting a butterfly survey in two habitat restoration sites in the West Eugene Wetlands during the summer of 2009. This document reports an extension of the same survey into the summer of 2010. These two sites are Briggs Site, managed by TNC, and Dragonfly Bend, owned and managed by the city of Eugene.

Our survey group strives to identify butterfly species, to count the total number of butterflies, and to comment on the general quality of the butterfly habitat.

## Procedures

In 2010 we performed the surveys across the butterfly season at intervals of approximately two weeks. We followed a route through the sites that was comparable to that which we used in the preceding year. Each day we recorded the weather, the number and names of the participants, and the time on site. The group recorded species counts on a tally sheet with separate columns for the Dragonfly Bend and Briggs Sites. We attempted to have more than one confirmation for each sighting, and we took numerous photos of both butterflies and habitat.

One of our members (Donald Gudehus) set up a Picasa Web Album this year where the survey team could upload photos and add comments. Over 350 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.



## Results

In the 2010 survey year, ten volunteers surveyed on thirteen days from April 9, 2010, through October 8, 2010. We spent a total of 200 person-hours in the field (Tables 1 and 4). Approximately 1/3 of this time was at Briggs Site and 2/3 at Dragonfly Bend (in proportion to the areas of the sites). Including field time, driving time, photo work, and survey analysis, volunteers spent about 257 person-hours on this project. The 2009 survey was a comparable effort; however, it began about one month later in the season.



This year surveyors observed a total of 18 species, 15 at Briggs Site and 16 at Dragonfly Bend (Tables 1, 2, and 3). Participants counted 1484 individual butterflies, 432 at Briggs Site and 1052 at Dragonfly Bend.

The top three butterflies observed were: Ochre Ringlet (*Coenonympha tullia*), Eastern Tailed-blue (*Cupido [Everes] comyntas*), and Orange Sulphur (*Colias eurytheme*) — see Table 1 and Figure 1. The top nectar plants were: gumweed, used by Orange Sulphurs, Sachem Skippers, and Common Wood Nymphs; asters, used by Orange Sulphurs, Ochre Ringlets, Woodland Skippers, and Acmon Blues; Spanish clover, used by Eastern Tailed-blues; and miscellaneous grass species, used by Ochre Ringlets.



In 2010, the time periods for seeing adult butterflies at Briggs Site and Dragonfly Bend were similar. Both sites showed evidence for two broods of Eastern Tailed-blues and Ochre Ringlets (Figure 2 and Figure 3). At Dragonfly Bend, there was evidence for two broods of Orange Sulfurs. (Far fewer Orange Sulfurs were seen at Briggs Site.)

This year at Dragonfly Bend we documented, for the first time ever, the Great Copper butterfly — five individuals were spotted. (See Table 3 and the photo, below.). Note, last year one of our surveyors thought she saw one Great Copper, but because it was not seen by others, nor was it

photographed, we did not officially count it. Great Coppers have been seen in nearby wetland sites, and its range now appears to be expanding. The habitat at Dragonfly Bend with its gum weed and willow-leaved dock appears to be ideal for the Great Copper.



This year at Briggs Site we had hoped to see Fender's Blue, but we did not. The site has been planted with Kinkaid's Lupine, but the butterflies apparently have not yet migrated in. This year, we did see high numbers of Silvery Blues early in the year, especially at Briggs Site. (We may have missed the peak of these in 2009, due to a later start.) Our surveyors are experienced in distinguishing Fender's Blues from Silvery Blues, so it is unlikely that these Silvery Blues were misidentified. (See photo, below.)



Figure 4 shows a graphic comparison of the butterflies observed at the two sites.

Dragonfly Bend yielded about two-fold greater numbers of Ochre Ringlets, Eastern Tailed-blues, and Common Wood Nymphs than did Briggs site. For Orange Sulfurs the differential — about 10-fold — was even greater. In contrast, more Silvery Blues and more Common Checkered-skipper were seen at Briggs Site.

Being the second year of conducting this survey, we can compare the results this year (2010) with that of 2009. This comparison is presented in Figure 5. We must note that 2010, was, in general, a “bad year for butterflies.” Due to severe spring weather in 2010 (cold and rainy), regional butterfly counts were substantially down. For example, the butterfly numbers counted in this year’s NABA Eugene/Springfield 4<sup>th</sup> of July Count were about 60% of what they were in 2009. At our two survey sites in West Eugene, it is rather remarkable that the counts were NOT down. In 2009, in our eleven survey days, we counted 1414 individual butterflies. In 2010, in our thirteen survey days, we counted 1484 individual butterflies. The comparison graphs (Figure 5) show some evidence for emergences being somewhat later in 2010 compared to 2009 — see the curves for the Ochre Ringlet, Eastern Tailed-blue, Orange Sulfur, and Common Wood Nymph. In the case of the Eastern Tailed-blue, it looks like there was time for three broods in 2009, but time for only two in 2010.

## **Future Plans**

The Eugene/Springfield chapter of NABA plans to conduct this survey again next year, 2011. We will continue our lookout for Fender’s Blues, especially at Briggs Site. Also, we will monitor the status of the Great Coppers at Dragonfly Bend. We hope (and expect) to see the establishment of a vigorous population there.

The habitat restoration at both sites is very impressive. In future surveys, we expect higher numbers for the butterfly species already seen. Furthermore, we anticipate spotting some butterfly species that have not yet been observed there.

# Table 1. Combined-Survey Results

Total species no: 18

Day number:	1	15	36	50	64	78	92	106	127	141	155	169	183	
Date:	4/9	4/23	5/14	5/30	6/11	6/25	7/9	7/23	8/13	8/27	9/10	9/24	10/8	
<b>Common Name</b>														<b>Indiv. tot.</b>
Western Tiger Swallowtail				1		5	3	3	1					13
Mustard White		1												1
Cabbage White			4	1		2		1	2	2	5	4		21
Orange Sulphur						21	36		18	19	21	12	5	132
Great Copper *								2	2	1				5
Gray Hairstreak		4	1						1					6
Eastern Tailed-blue		7	50	37	9	5	6	89	102	36	18	4		363
Spring Azure		1												1
Silvery Blue		7	46	3	1									57
Boisduval's Blue (& Fender's)														0
Acmon Blue										2	3			5
Field Crescent						5		1						6
Mylitta Crescent														0
Painted Lady														0
West Coast Lady														0
Lorquin's Admiral											1			1
Ochre (Common) Ringlet			2	21	33	94	110	45	25	53	138	122	49	692
Common Wood-Nymph								1	19	23	2			45
Common Checkered-Skipper			3	1				3	3	3	2	1	12	28
Sachem Skipper				1	1			1	30	25	18	4	1	81
Woodland Skipper						1				18	6			25
Dun Skipper						2								2
<b>Indiv. totals:</b>	<b>0</b>	<b>20</b>	<b>106</b>	<b>65</b>	<b>44</b>	<b>135</b>	<b>155</b>	<b>146</b>	<b>203</b>	<b>182</b>	<b>214</b>	<b>147</b>	<b>67</b>	<b>1484</b>
<b>Surveyors:</b>	6	6	6	4	5	6	3	7	5	6	5	4	4	
<b>Field hours:</b>	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.50	3.50	3.00	2.50	2.00	
<b>Volunteer hours: †</b>	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	4.00	4.00	3.50	3.00	2.50	
<b>Field-person-hours:</b>	18.00	18.00	18.00	12.00	15.00	18.00	9.00	21.00	17.50	21.00	15.00	10.00	8.00	200.50
<b>Volunteer-person-hours:</b>	21.00	21.00	21.00	14.00	17.50	21.00	10.50	24.50	20.00	24.00	17.50	12.00	10.00	234.00
<b>Extra vol pers-hrs (prep):</b>	3.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	17.25	23.25
<b>Weather notes: ‡</b>	c/b/s	w/c/s	w/c/p	w/c/c	c/b/c	w/c/p	h/b/s	h/b/s	h/b/s	w/b/p	w/c/s	h/c/s	w/c/s	
Date:	4/9	4/23	5/14	5/30	6/11	6/25	7/9	7/23	8/13	8/27	9/10	9/24	10/8	

**Total volunteer hours: 257.25**

**Notes:**

\* Great copper sightings

The sightings on "7/24/10" were actually made on 7/27/10, and added to this survey retroactively.  
 The sightings on 8/13/10 were "fleeting glimpses" – not well documented.  
 Great coppers are a rare species for Eugene, not previously seen here. Previously, they had been seen nearby in the West Eugene Wetlands (at Tsal Luk-wah and at Stewart Pond).

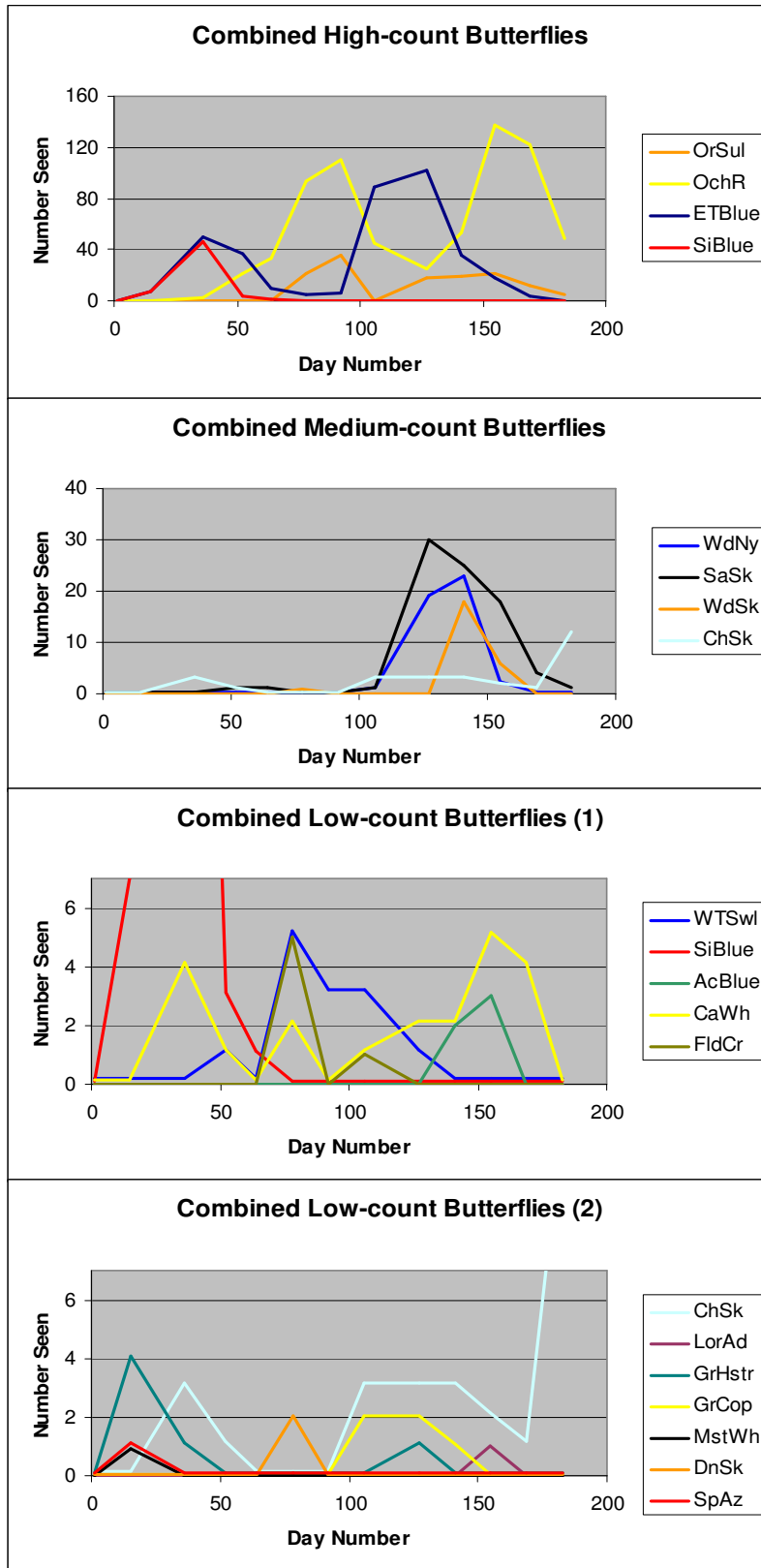
† Volunteer hours

These include hours in the field and travel time to and from the site. Travel time was estimated at 15 minutes each way, and there was very little car-pooling so each person got 30 minutes added.  
 "Extra" volunteer hours includes meeting time, prep time, report writing, etc. sometimes before or after the date.  
 Time should be credited about 2/3 to Dragonfly Bend and 1/3 to Briggs Site.

‡ Weather notes

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

**Figure 1. Combined Survey Graphs**



**Notes:**

Day 1 = Apr 9  
 Day 50 = May 28  
 Day 100 = Jul 17  
 Day 150 = Sep 5  
 Day 200 = Oct 25

Apr 1 = Day -7  
 May 1 = Day 23  
 Jun 1 = Day 54  
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AcBlue = Acmon blue  
 CabW = Cabbage white  
 ChSk = Checkered-skipper  
 DunSk = Dun skipper  
 ETBlue = Eastern tailed-blue  
 FldCr = Field crescent  
 GrCop = Great copper  
 GrHstr = Gray hairstreak  
 LorAd = Lorquin's admiral  
 MstWh = Mustard white  
 MylCr = Mylitta crescent  
 OchR = Ochre ringlet  
 OrSul = Orange sulfur  
 PtLdy = Painted lady  
 SaSk = Sachem skipper  
 SiBlue = Silvery blue  
 SpAz = Spring azure  
 WCLdy = West coast lady  
 WdNy = Wood nymph  
 WdSk = Woodland skipper  
 WTSwl = West. tiger sw-tail

## Table 2. Briggs Site Survey Results

		Total species no: <span style="border: 1px solid black; padding: 0 5px;">15</span>												*	†	
Day number:	1	15	36	50	64	78	92	106	127	141	155	169	183			
Date:	4/9	4/23	5/14	5/30	6/11	6/25	7/9	7/23	8/13	8/27	9/10	9/24	10/8			
Common Name														Indiv. tot.		
Western Tiger Swallowtail				1		1										2
Mustard White																0
Cabbage White											1	2				3
Orange Sulphur							1			1	2	2	1			7
Great Copper																0
Gray Hairstreak		1	1													2
Eastern Tailed blue		3	12	14	1	2	1	20	25	13	18	1				110
Spring Azure		1														1
Silvery Blue		5	44	3												52
Boisduval's Blue (& Fender's)																0
Acmon Blue										1	1					2
Field Crescent						1										1
Mylitta Crescent																0
Painted Lady																0
West Coast Lady																0
Lorquin's Admiral																0
Ochre (Common) Ringlet				8	6	24	44	11	2		30	19	19			163
Common Wood-Nymph								1	3	17	2					23
Common Checkered-Skipper			1					1	3	3	2	1	12			23
Sachem Skipper					1				13	8	2					24
Woodland Skipper										15	2					17
Dun Skipper						2										2
<b>Indiv. total:</b>	<b>0</b>	<b>10</b>	<b>58</b>	<b>26</b>	<b>8</b>	<b>30</b>	<b>46</b>	<b>33</b>	<b>46</b>	<b>58</b>	<b>60</b>	<b>25</b>	<b>32</b>			<b>432</b>

**Misc. notes:**

\* The site had been recently mown on 9/24/10.

† The site was still close-mown on 10/8/10

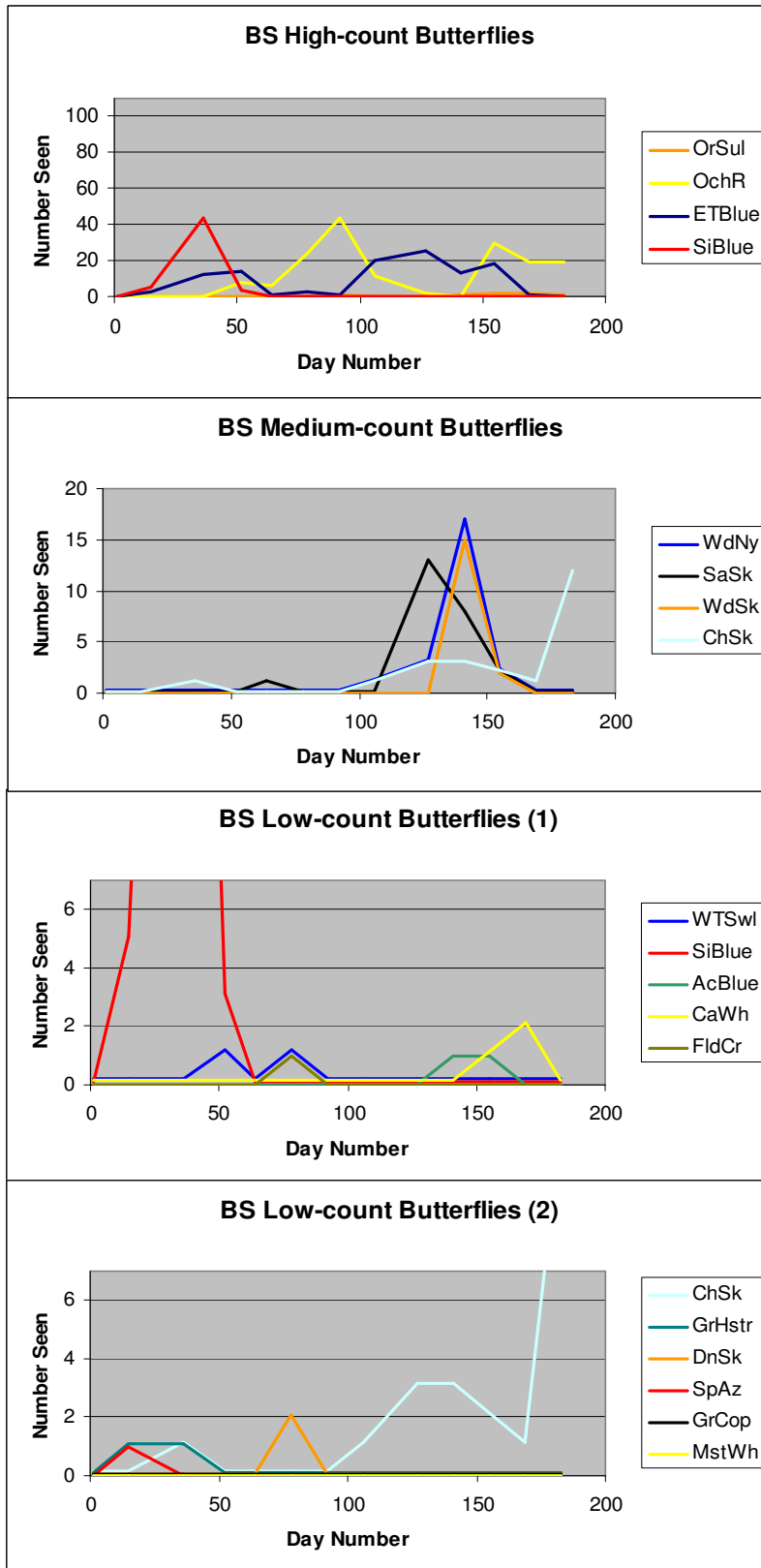
## Table 3. Dragonfly Bend Survey Results

		Total species no: <span style="border: 1px solid black; padding: 0 5px;">16</span>												*	†	
Day number:	1	15	36	50	64	78	92	106	127	141	155	169	183			
Date:	4/9	4/23	5/14	5/30	6/11	6/25	7/9	7/23	8/13	8/27	9/10	9/24	10/8			
Common Name														Indiv. tot.		
Western Tiger Swallowtail						4	3	3	1							11
Mustard White		1														1
Cabbage White			4	1		2		1	2	2	4	2				18
Orange Sulphur						21	35		18	18	19	10	4			125
Great Copper								2	2	1						5
Gray Hairstreak		3							1							4
Eastern Tailed-blue		4	38	23	8	3	5	69	77	23		3				253
Spring Azure																0
Silvery Blue		2	2		1											5
Boisduval's Blue (& Fender's)																0
Acmon Blue										1	2					3
Field Crescent						4		1								5
Mylitta Crescent																0
Painted Lady																0
West Coast Lady																0
Lorquin's Admiral											1					1
Ochre (Common) Ringlet			2	13	27	70	66	34	23	53	108	103	30			529
Common Wood-Nymph									16	6						22
Common Checkered-Skipper			2	1				2								5
Sachem Skipper				1				1	17	16	4	1				57
Woodland Skipper						1				3	4					8
Dun Skipper																0
<b>Indiv. total:</b>	<b>0</b>	<b>10</b>	<b>48</b>	<b>39</b>	<b>36</b>	<b>105</b>	<b>109</b>	<b>113</b>	<b>157</b>	<b>124</b>	<b>154</b>	<b>122</b>	<b>35</b>			<b>1052</b>

**Misc. notes:** Great copper sightings on "7/24/10" were actually made on 7/27/10, and added to this survey retroactively.

Great copper sightings on 8/13/10 were "fleeting" glimpses -- not well documented.

**Figure 2. Briggs Site Survey Graphs**



**Notes:**

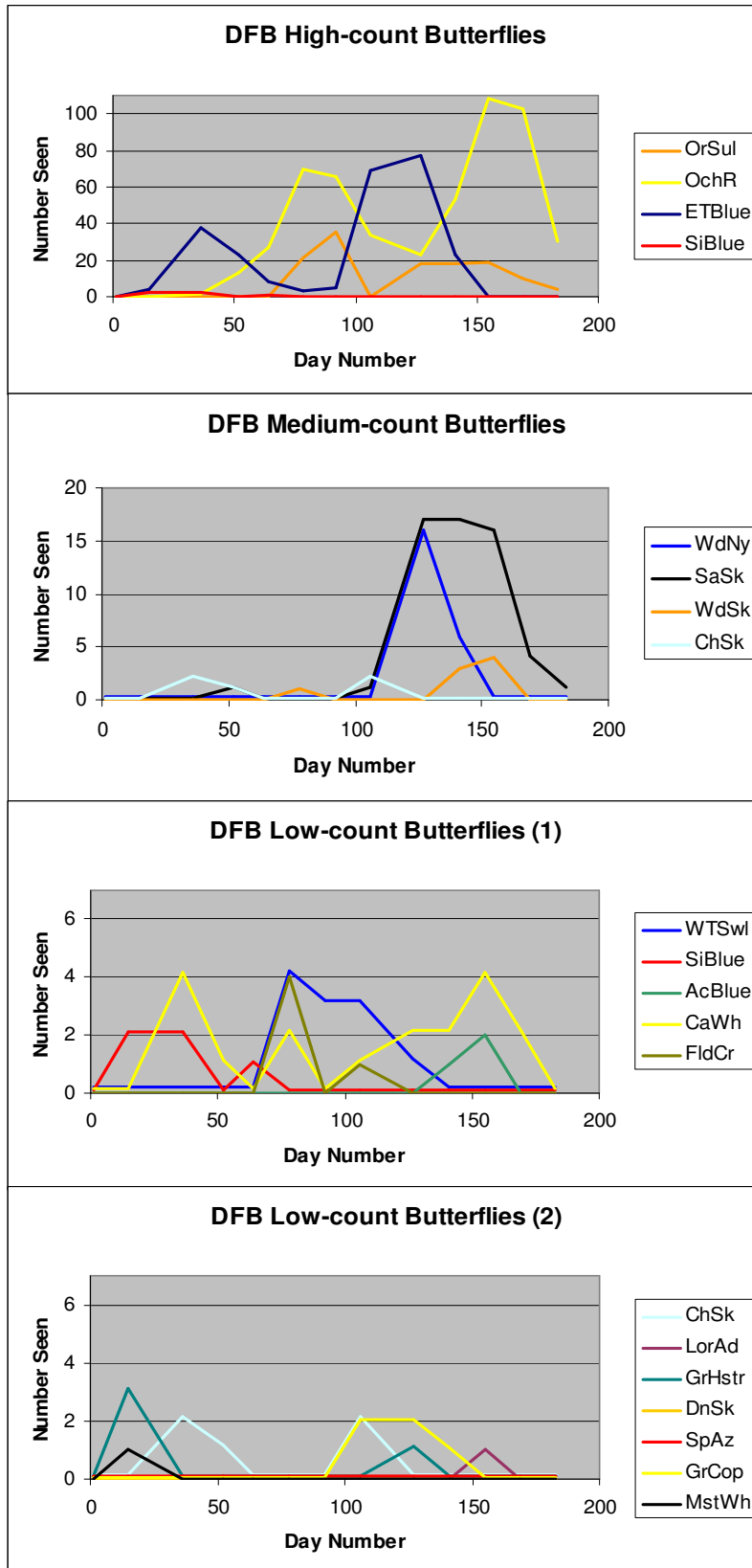
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 WCLdy = West coast lady  
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**Figure 3. Dragonfly Bend Survey Graphs**



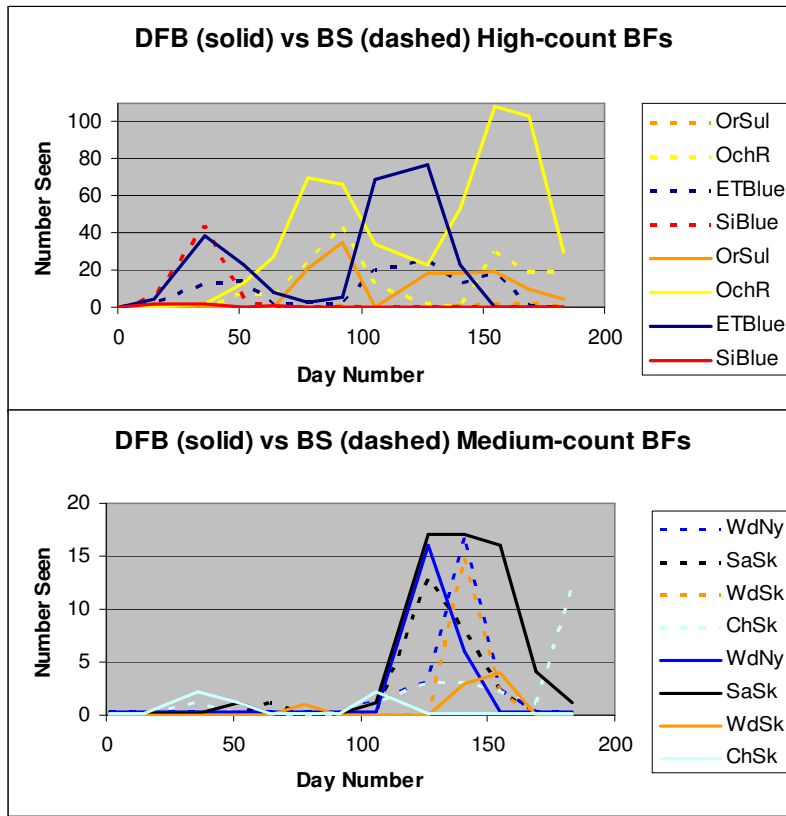
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**Figure 4. Dragonfly Bend versus Briggs Site**



**Notes:**

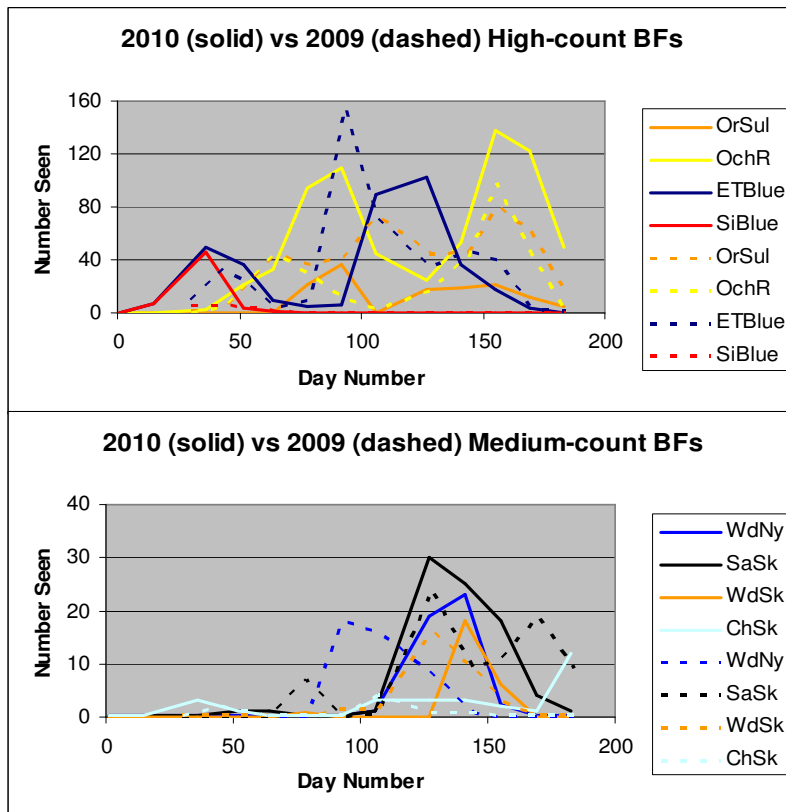
Figure 4:  
 Solid lines = DFB  
 Dashed lines = BS

Figure 5:  
 Solid lines = 2010  
 Dashed lines = 2009

Day 1 = Apr 9  
 Day 50 = May 28  
 Day 100 = Jul 17  
 Day 150 = Sep 5  
 Day 200 = Oct 25

Apr 1 = Day -7  
 May 1 = Day 23  
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**Figure 5. Survey Year 2010 versus 2009**



- AcBlue = Acmon blue
- CabW = Cabbage white
- ChSk = Checkered-skipper
- DunSk = Dun skipper
- ETBlue = Eastern tailed-blue
- FldCr = Field crescent
- GrCop = Great copper
- GrHstr = Gray hairstreak
- LorAd = Lorquin's admiral
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**Table 4. Volunteers & Volunteer Hours**

Date:		4/9	4/23	5/14	5/30	6/11	6/25	7/9	7/23	8/13	8/27	9/10	9/24	10/8	
Surveyor Name															Indiv. tot.
David Hagen	Field hrs:	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.50	3.50	3.00	2.50	2.00	38.50
	Vol. hrs:	4.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	4.25	4.25	3.75	3.25	15.75	62.25
Lois Hagen	Field hrs:	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.50	3.50	3.00	2.50	2.00	38.50
	Vol. hrs:	4.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	4.00	4.00	3.50	3.00	6.50	50.00
Ingrid Ford	Field hrs:	3.00	3.00	3.00	3.00	0.00	3.00	0.00	0.00	0.00	3.50	0.00	0.00	0.00	18.50
	Vol. hrs:	3.50	3.50	3.50	3.50	0.00	3.50	0.00	0.00	0.00	4.00	0.00	0.00	0.00	21.50
Lori Humphreys	Field hrs:	3.00	3.00	3.00	0.00	3.00	3.00	3.00	3.00	0.00	3.50	3.00	0.00	2.00	29.50
	Vol. hrs:	3.50	3.50	3.50	0.00	3.50	3.50	3.50	3.50	0.00	4.00	3.50	0.00	2.50	34.50
Donald Gudehus	Field hrs:	3.00	3.00	3.00	3.00	3.00	3.00	0.00	3.00	3.50	3.50	3.00	2.50	0.00	33.50
	Vol. hrs:	3.50	3.50	3.50	3.50	3.50	3.50	0.00	3.50	4.00	4.00	3.50	3.00	0.00	39.00
Ellie Ryan	Field hrs:	3.00	3.00	0.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.00
	Vol. hrs:	4.50	3.50	0.00	0.00	0.00	3.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.50
Rick Ahrens	Field hrs:	0.00	0.00	3.00	0.00	0.00	0.00	0.00	3.00	0.00	3.50	3.00	2.50	2.00	17.00
	Vol. hrs:	0.00	0.00	3.50	0.00	0.00	0.00	0.00	3.50	0.00	4.00	3.50	3.00	2.50	20.00
Thea Evenstad	Field hrs:	0.00	0.00	0.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00
	Vol. hrs:	0.00	0.00	0.00	0.00	3.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.50
Paula Graff	Field hrs:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	3.50	0.00	0.00	0.00	0.00	6.50
	Vol. hrs:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.50	4.00	0.00	0.00	0.00	0.00	7.50
Max Diaz (student volunteer)	Field hrs:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	3.50	0.00	0.00	0.00	0.00	6.50
	Vol. hrs:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.50	4.00	0.00	0.00	0.00	0.00	7.50
<b>Total field hours:</b>															<b>200.50</b>
<b>Total volunteer hours: †</b>															<b>257.25</b>

**Notes:**

† Volunteer hours

These include hours in the field and travel time to and from the site. Travel time was estimated at 15 minutes each way, so each person has 30 minutes added.

4/9/10 volunteer hours include prep, travel, and meeting times occurring before that date.

10/8/09 volunteer hours include report-writing times occurring after that date.

Time should be apportioned about 2/3 to Dragonfly Bend and about 1/3 to Briggs Site.