

# 2014 Butterfly Survey

Howard County, Maryland



# Butterfly Survey Objectives

1. to track changes in species and populations over a long period of time.
2. to establish local species brood peaks and gaps.





Spicebush Swallowtail

7-25-14

Mike McClure

# Survey Volunteers

2013 (prototype year)  
8 surveyors

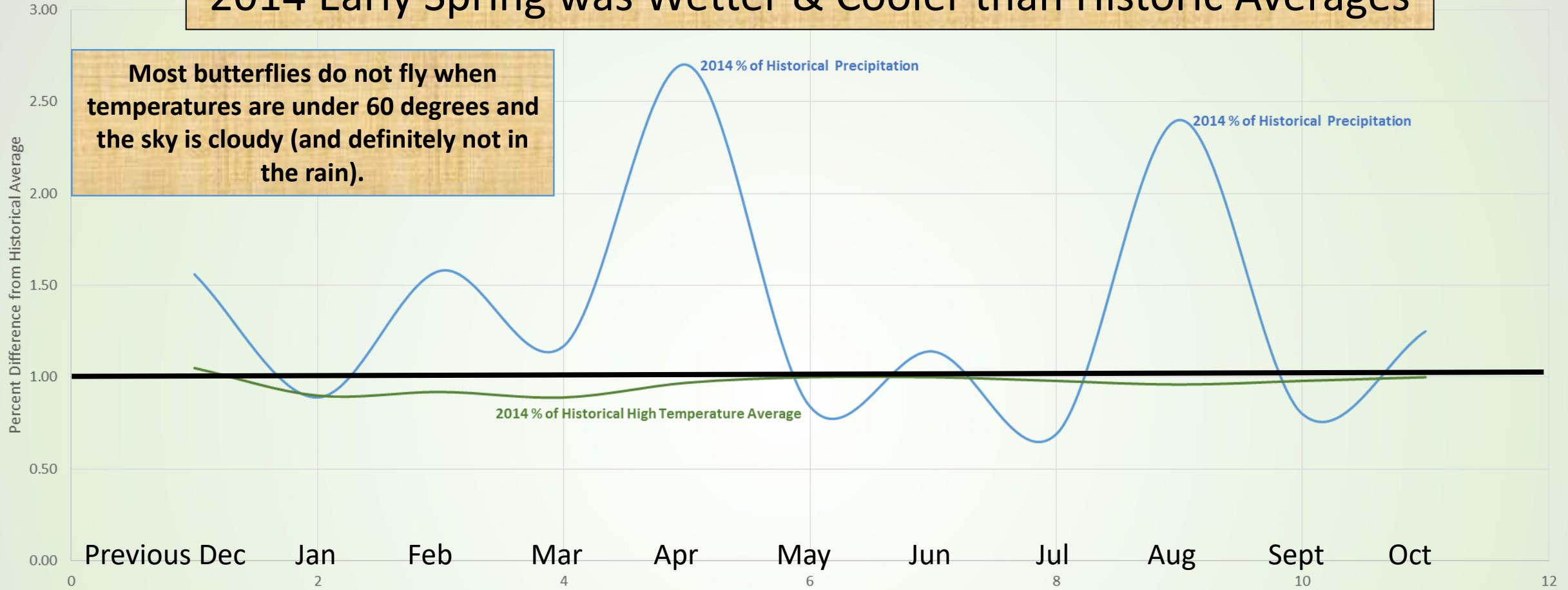
Ann Coren  
Linda Hunt  
Allen Lewis  
Kathy Litzinger  
Suzanne Probst  
Jay Sheppard  
Kate Tufts  
Jim Wilkinson

2014 (1<sup>st</sup> year)  
14 surveyors

Ann Coren  
Jeff Friedhoffer  
David Gillum  
Karen & Kevin Hefferman  
Emy Holdridge  
Linda Hunt  
Asuncion Lavind  
Allen Lewis  
Kathy Litzinger  
Richard Orr  
Bonnie Ott  
Suzanne Probst  
Jim Wilkinson

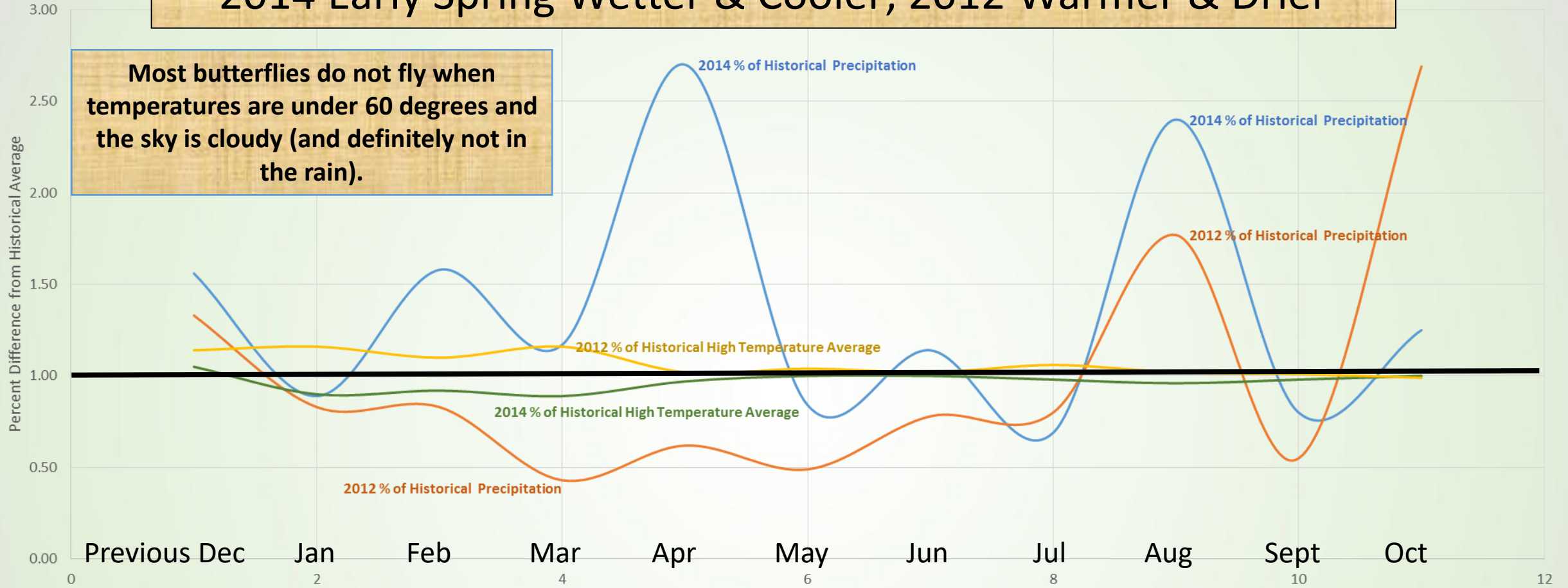
Additional Contributors: Suzanne Klick,  
Grazina & Mike McClure, John McKitterick,  
Sue Muller, Kurt Schwarz, Jo & Bob Solem

# 2014 Early Spring was Wetter & Cooler than Historic Averages

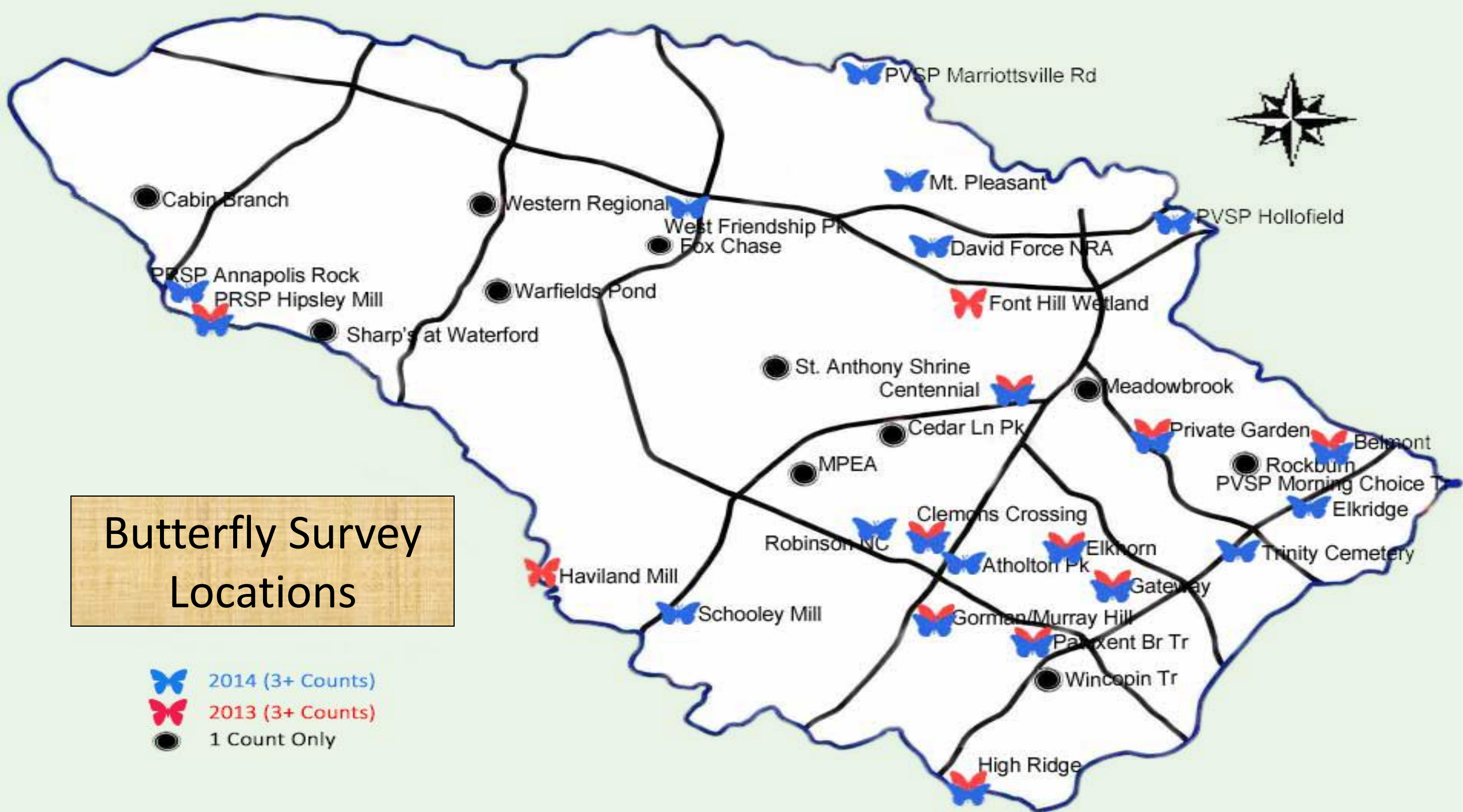


Month	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Year Ave
Historic High Ave	45.70	41.30	45.80	55.20	65.90	75.70	83.20	87.00	85.40	79.40	67.90	67.00
<b>2014 High Ave</b>	<b>48.00</b>	<b>37.00</b>	<b>42.00</b>	<b>49.00</b>	<b>64.00</b>	<b>76.00</b>	<b>83.00</b>	<b>86.00</b>	<b>82.00</b>	<b>78.00</b>	<b>68.00</b>	<b>65.00</b>
2013 High Ave	51.00	45.00	54.00	49.00	66.00	74.00	83.00	88.00	84.00	79.00	69.00	67.00
<b>2012 High Ave</b>	<b>52.00</b>	<b>48.00</b>	<b>51.00</b>	<b>64.00</b>	<b>67.00</b>	<b>79.00</b>	<b>85.00</b>	<b>92.00</b>	<b>87.00</b>	<b>80.00</b>	<b>67.00</b>	<b>70.00</b>
2012 Ave Precip	4.50	2.54	2.42	1.69	1.99	1.99	2.68	3.27	5.82	2.21	8.95	38.06
2014 Ave Precip	5.27	2.71	4.58	4.38	8.60	3.36	3.95	2.80	7.90	3.24	4.16	50.95

# 2014 Early Spring Wetter & Cooler; 2012 Warmer & Drier



Month	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Year Ave
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# Sample 2014 Completed Survey Form

## Howard County Field Butterfly Survey Form 2014

Site: **Elkhorn Garden & Meadow**

Survey date: **8/30/2014**

Name: **Allen Lewis, Jim Wilkinson, Linda Hunt**

Email: **allenlewis@gmail.com, lakekoshare@gmail.com, ra**

Start/End Times(s): **9:45-12:45**

Total minutes: **180**

Miles: **1.0**

Temp range (F): **70-75**

Cloud cover (percent): **90**

Wind speed/direction: **0**

Habitat covered: **Meadow, Wetland near Garden plots**

Nectar plants:



Silver-spotted Skipper	2	Pipevine Swallowtail *		Variegated Fritillary	3
Southern Cloudywing *		Zebra Swallowtail *		Great Spangled Fritillary	
Northern Cloudywing *		Black Swallowtail *		Meadow Fritillary *	
Dreamy Duskywing *		Eastern Tiger Swallowtail	5	Pearl Crescent	12
Sleepy Duskywing *		Spicebush Swallowtail	1	Question Mark *	
Juvenal's Duskywing *				Eastern Comma *	
Horace's Duskywing *		Cabbage White	1	Mourning Cloak	
Wild Indigo Duskywing *	2	Falcate Orangetip *		American Lady	1
Common Checkered-Skipper *	2	Clouded Sulphur		Painted Lady	
Common Sootywing *	1	Orange Sulphur	16	Red Admiral	
		Cloudless Sulphur *		Common Buckeye	1
Swarthy Skipper *		Little Yellow *		Red-spotted Purple	
Clouded Skipper *		Sleepy Orange *		Viceroy *	2
Least Skipper *	20				
European Skipper *		American Copper *		Northern Pearly-eye *	
Fiery Skipper *	1	Banded Hairstreak *		Appalachian Brown *	
Peck's Skipper *	5	Red-banded Hairstreak *	2	Little Wood-Satyr	
Tawny-edged Skipper *	1	Gray Hairstreak *		Common Wood-Nymph	
Crossline Skipper *		Eastern Tailed-Blue	10		
Northern Broken-Dash *		Spring Azure *		Monarch	2
Little Glassywing *	1	Summer Azure **			
Sachem *	20				
Mulberry Wing *					
Hobomok Skipper *					
Zabulon Skipper *	3				
Dun Skipper *	6				
Ocola Skipper *	1				

### Additional participants:

Dick's Field Trip

\* Photo required

\*\* Photo only required in April and early May

### Other Species not listed on form

Southern Broken-Dash	2

### Required photo species with no photo:




Ocola Skipper  
Elkhorn 8-30-14  
Kevin Hefferman

# Sample Summary for Late June (15 locations, 20 counts)

Survey Site	Various	David Force	Elkhorn	Trinity	Marriottsville	Murray Hill	Gateway	School Mill	Belmont	Mt Pleas	TOTALS
Month	June	June	June	June	June	June	June	June	June	June	June
Species/Date	Late	Late	Late	Late	Late	Late	Late	Late	Late	Late	Late
<b>Silver-spotted Skipper</b>	<b>10</b>	<b>15</b>		<b>35</b>		<b>5</b>				<b>8</b>	<b>73</b>
Southern Cloudywing						2					2
Northern Cloudywing											
Dreamy Duskywing											
Sleepy Duskywing											
Juvenal's Duskywing											
Horace's Duskywing	1										1
Wild Indigo Duskywing				1			1				2
Common Checkered-Skipper											
Common Sootywing											
Swarthy Skipper											
Clouded Skipper											
Least Skipper											
European Skipper											
Fiery Skipper											
Peck's Skipper											
Tawny-edged Skipper											
Crossline Skipper											
Northern Broken-Dash				5							5
<b>Little Glassywing</b>	<b>25</b>	<b>21</b>				<b>1</b>				<b>3</b>	<b>50</b>
Sachem				1							1
Mulberry wing											
Hobomok Skipper											
Zabulon Skipper									1		1
Dun Skipper							1				1
Ocola Skipper											



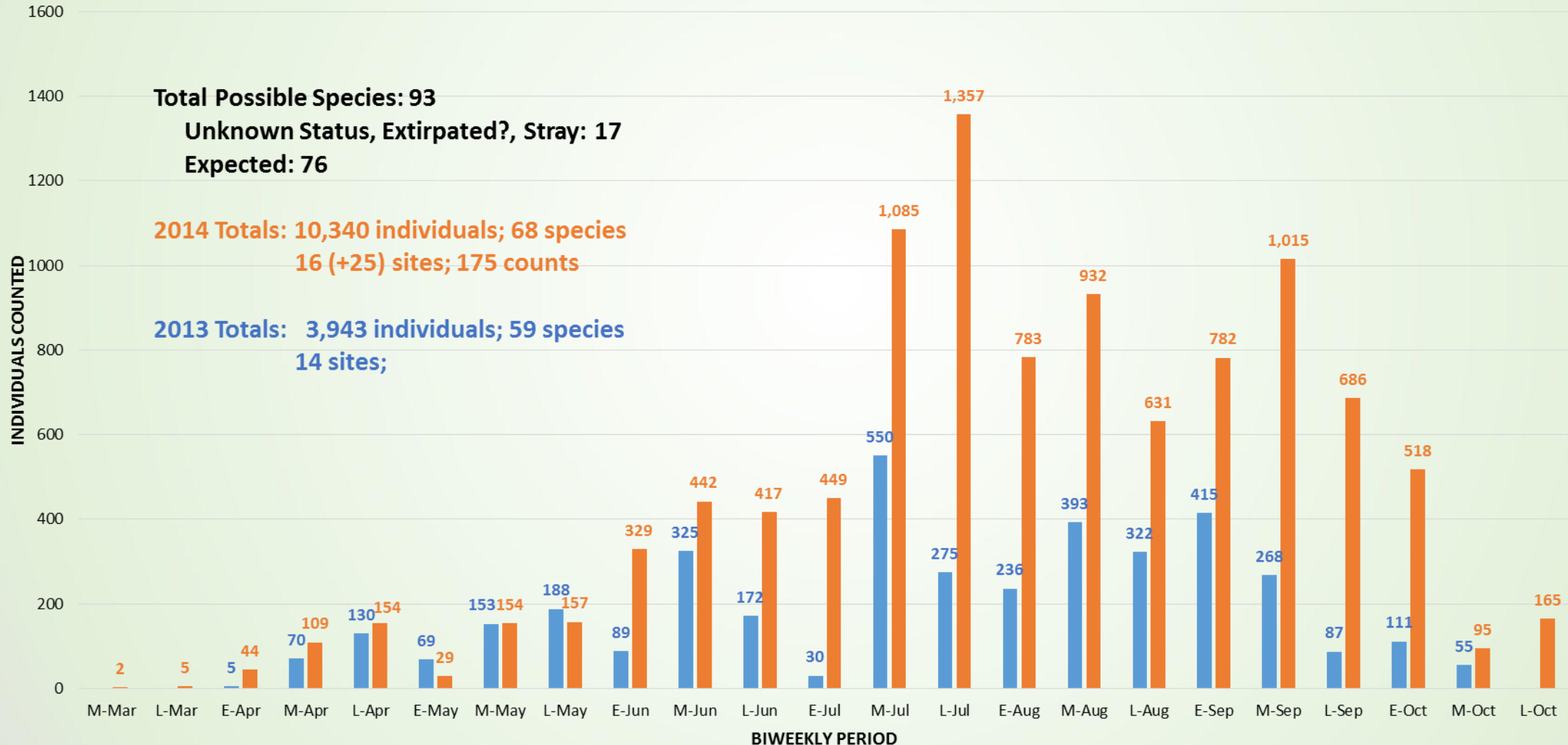
Silver-spotted Skipper  
Atholton Park 8-20-14  
Linda Hunt



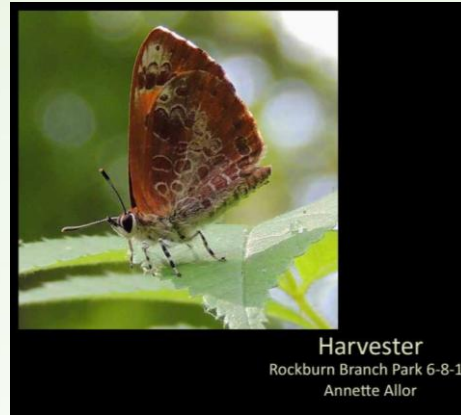
Survey Objective 1: to track changes in species and populations over a long period of time.

# 2013 & 2014 Butterfly Occurrence

Survey Length & Frequency: Mid-April to Mid-October, Every 2 Weeks



Survey Objective 1:  
2014 "New" Sightings



"Confirmed" Species –  
**Harvester**



"Differentiated" Species –  
**"Spring" Azure**



"New" Species –  
**Dusted Skipper**

Survey Objective 1:  
2013 "New" Species Recorded in  
Lower Numbers in 2014



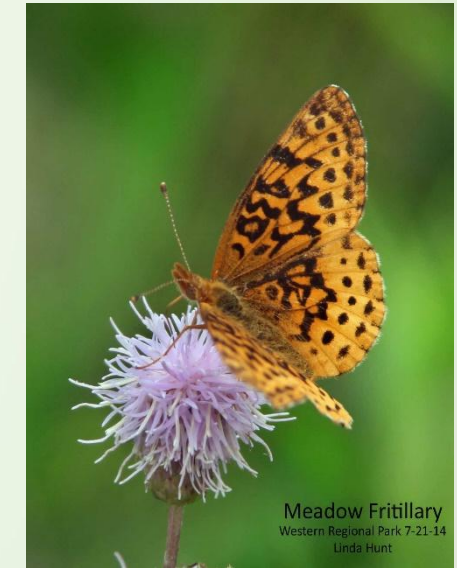
**Sleepy Orange**  
2012: multiple sightings 2014: 8



**Coral Hairstreak**  
2013: multiple sightings 2014: 1



**Silvery Checkerspot**  
2013: 50+ (MPEA), many locations  
2014: 1-5, 3 locations



**Meadow Fritillary**  
2013: 50+ (Jennings Chapel)  
2014: 1



How many Monarchs were there?

2013=16 (4%) 2014=172 (1.6%)



Where were all the Tigers in 2014?

2013=469 (11.9%) 2014=307 (3%)

# Survey Objective 1: No Sightings in 2014



Northern Oak  
Hairstreak 2012



Striped Hairstreak  
2013



Long-tailed Skipper  
2012



Checkered White  
2008



Little Yellow  
2013



Cloudless Sulphur  
2013



Clouded Skipper  
2012



Mulberry Wing  
2012

# Still Unknown/EXtirpated?

Checkered White  
Bronze Copper  
Brown Elfin  
Appalachian Azure-X  
Regal Fritillary-X  
Silver-bordered Fritillary-X  
Tawny Emperor  
Hoary Edge

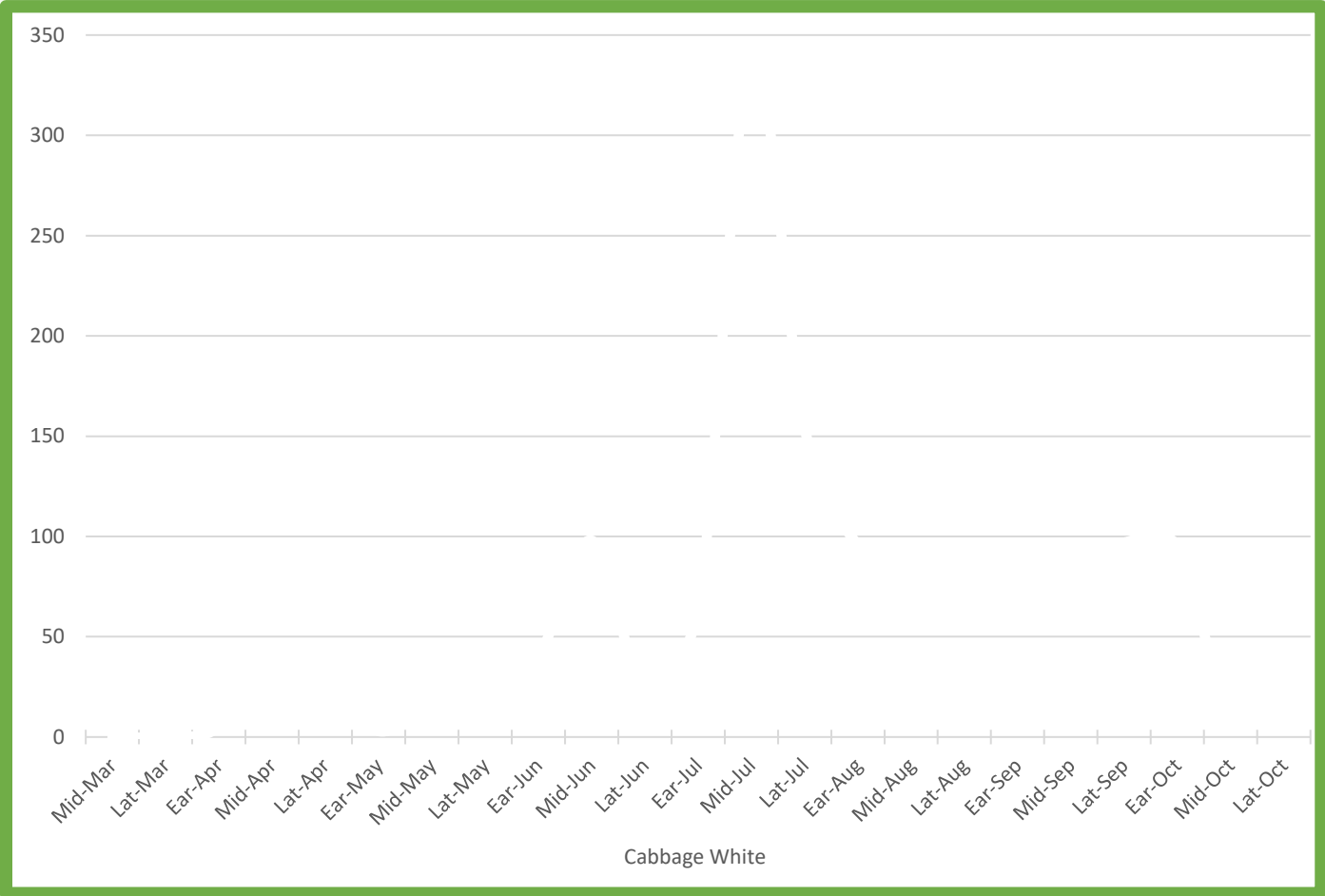
Hayhurst's Scallopwing  
Dreamy Duskywing  
Sleepy Duskywing  
European Skipper  
Leonard's Skipper-X  
Delaware Skipper-X  
Black Dash-X  
Common Roadside Skipper

# Survey Objective 2: to establish local species brood peaks and gaps

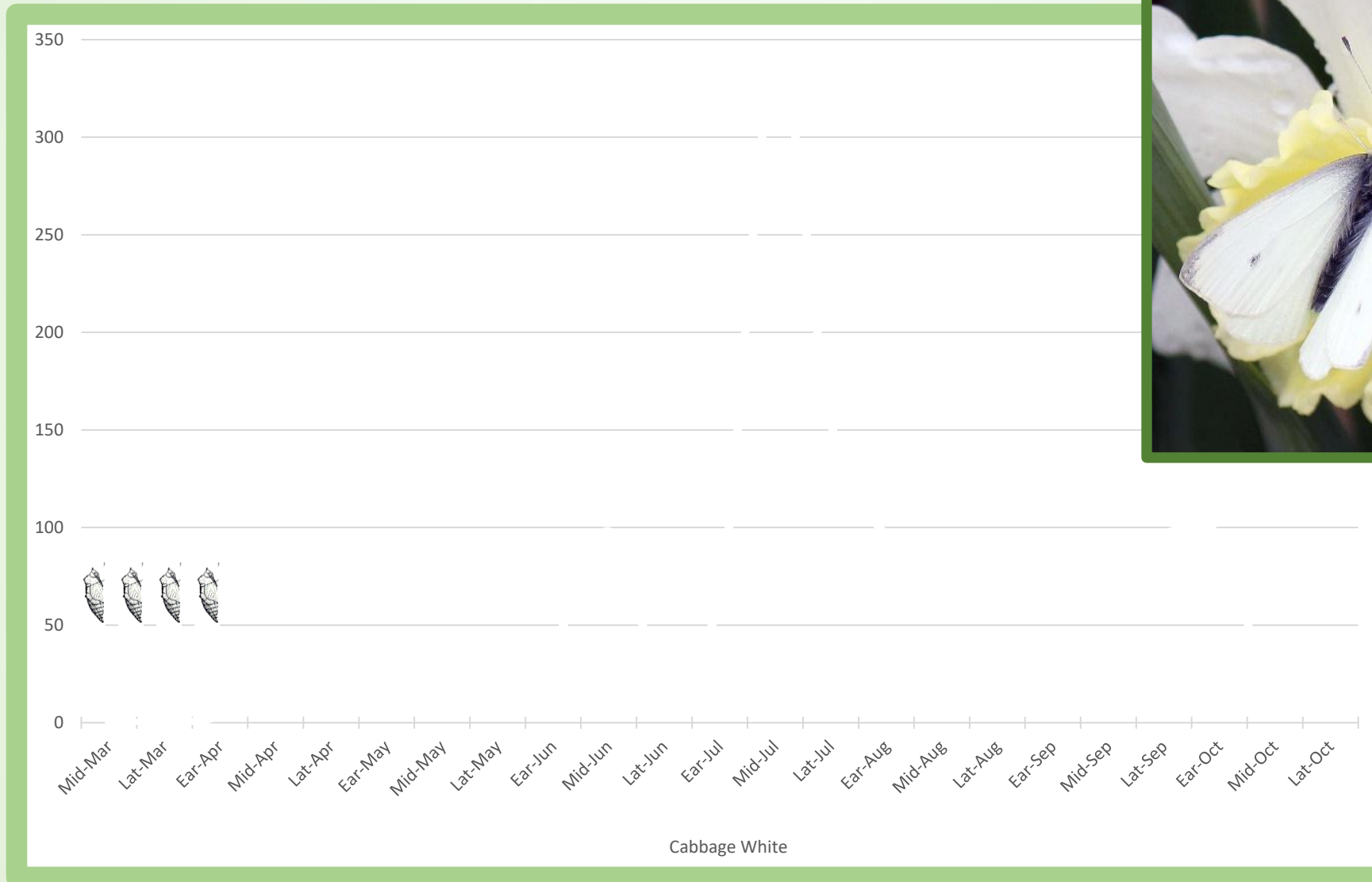
## Phenology: Broods and Adult Appearances – Cabbage White



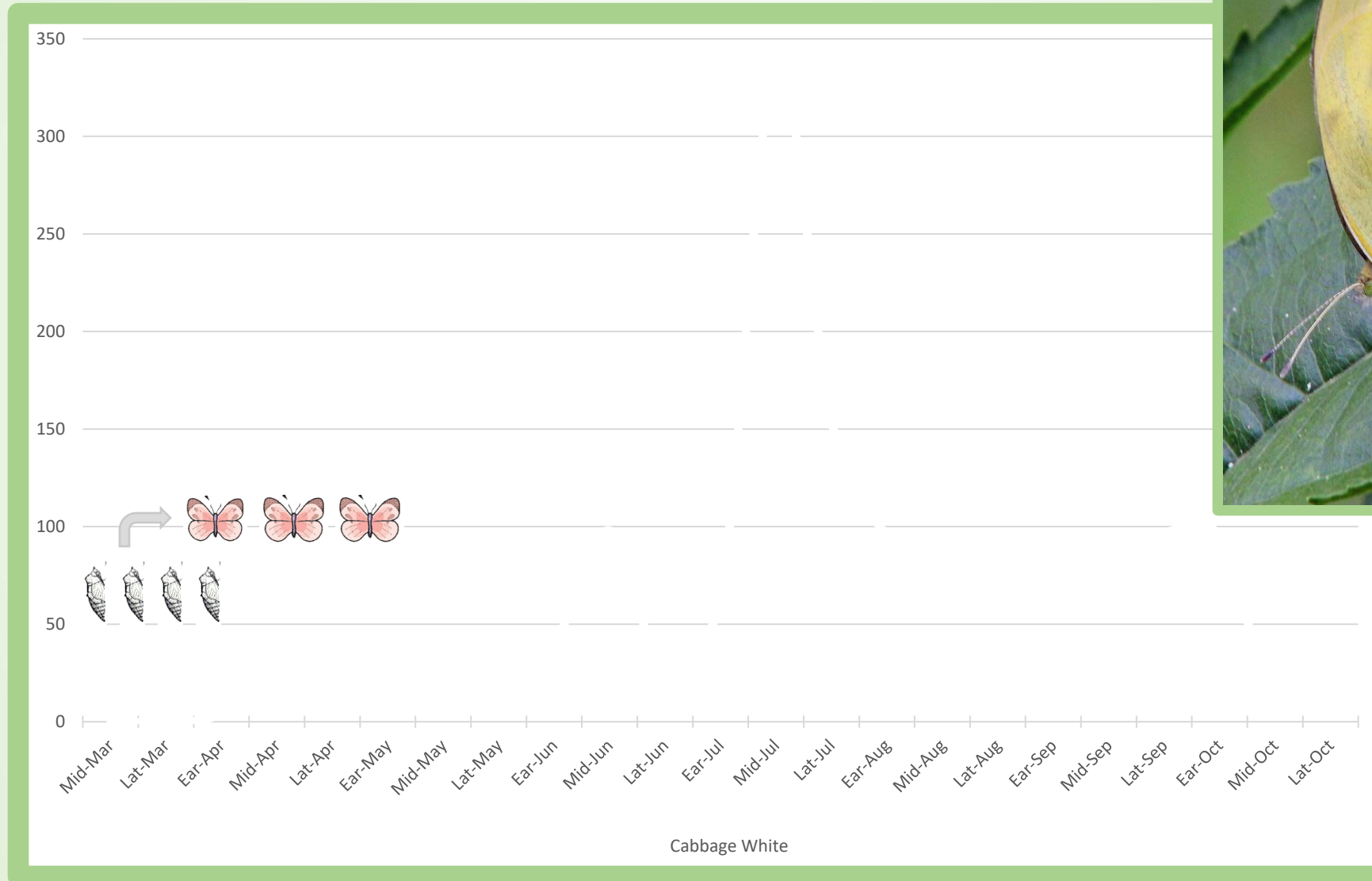
**Cabbage Whites**  
on White Virginia Bluebells  
Gorman Stream Valley NRA 4-20-14  
Jo Solem



# Phenology – Broods and Adult Appearances - Cabbage White -



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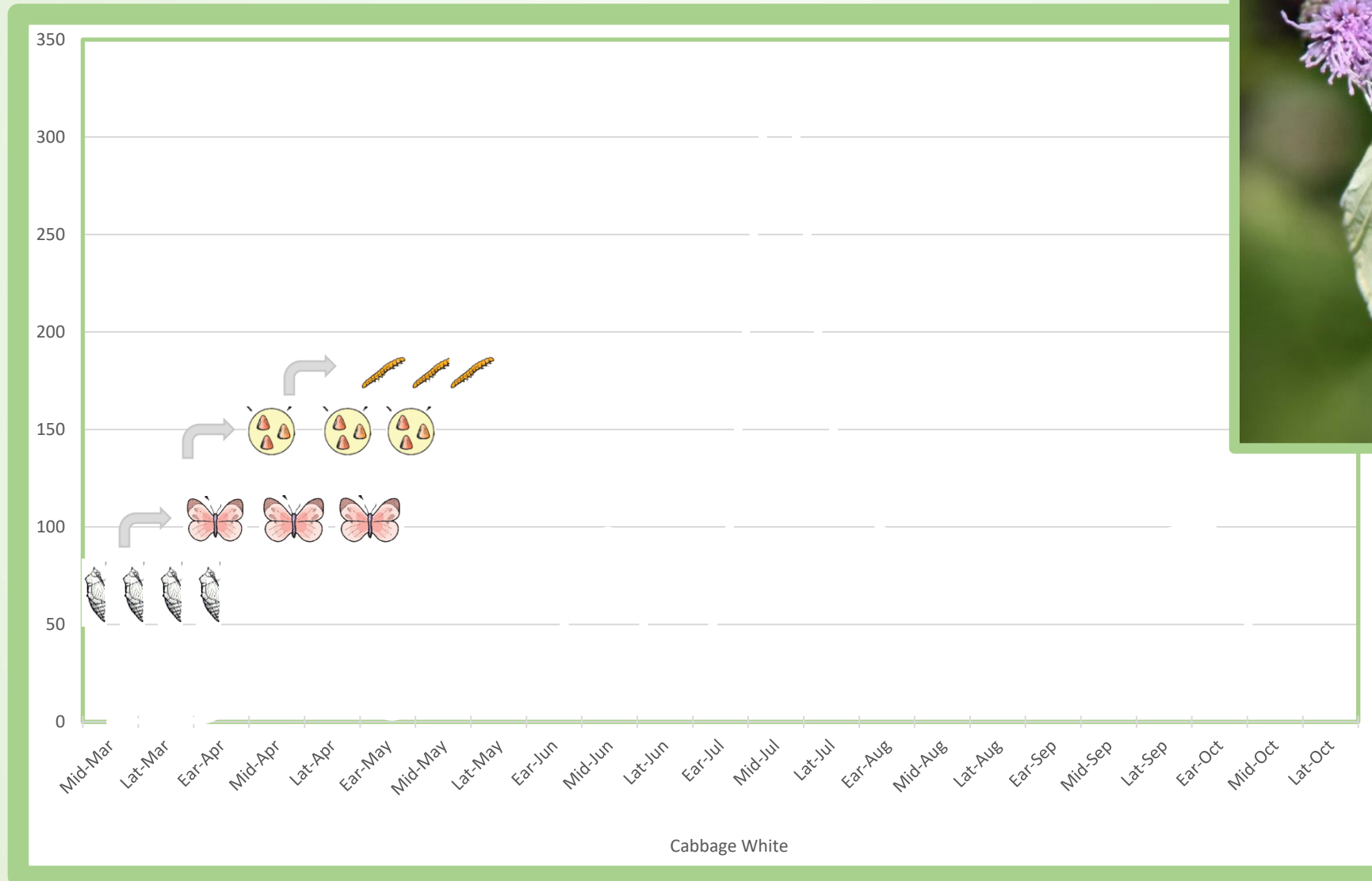


Cabbage White  
8-25-12 PBT  
L. Hunt

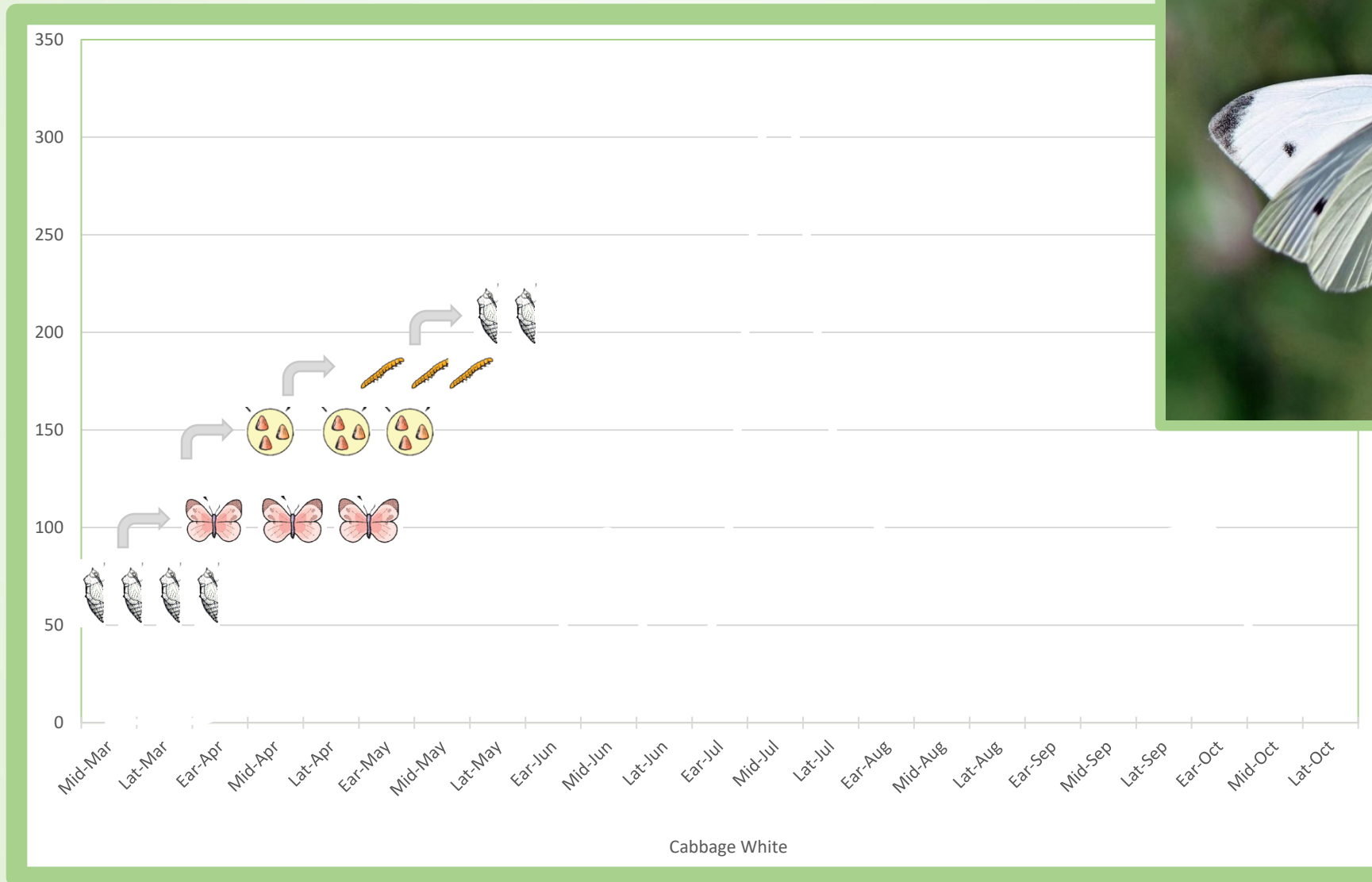
Cabbage White



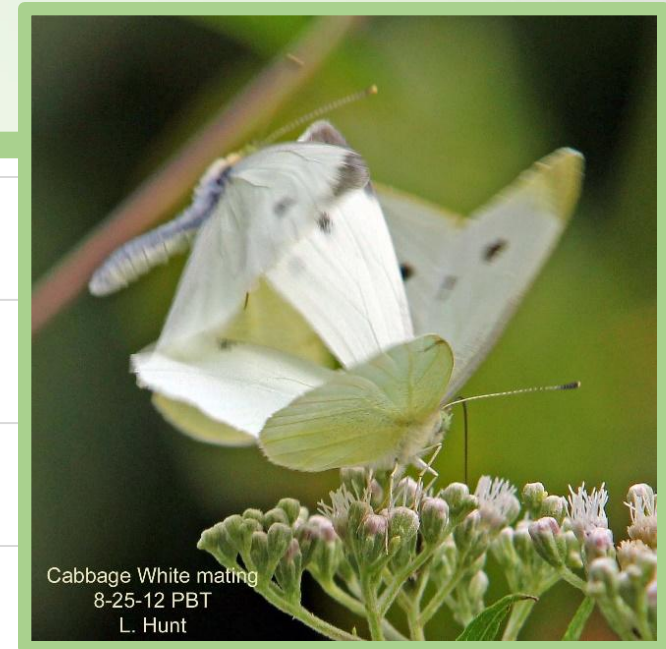
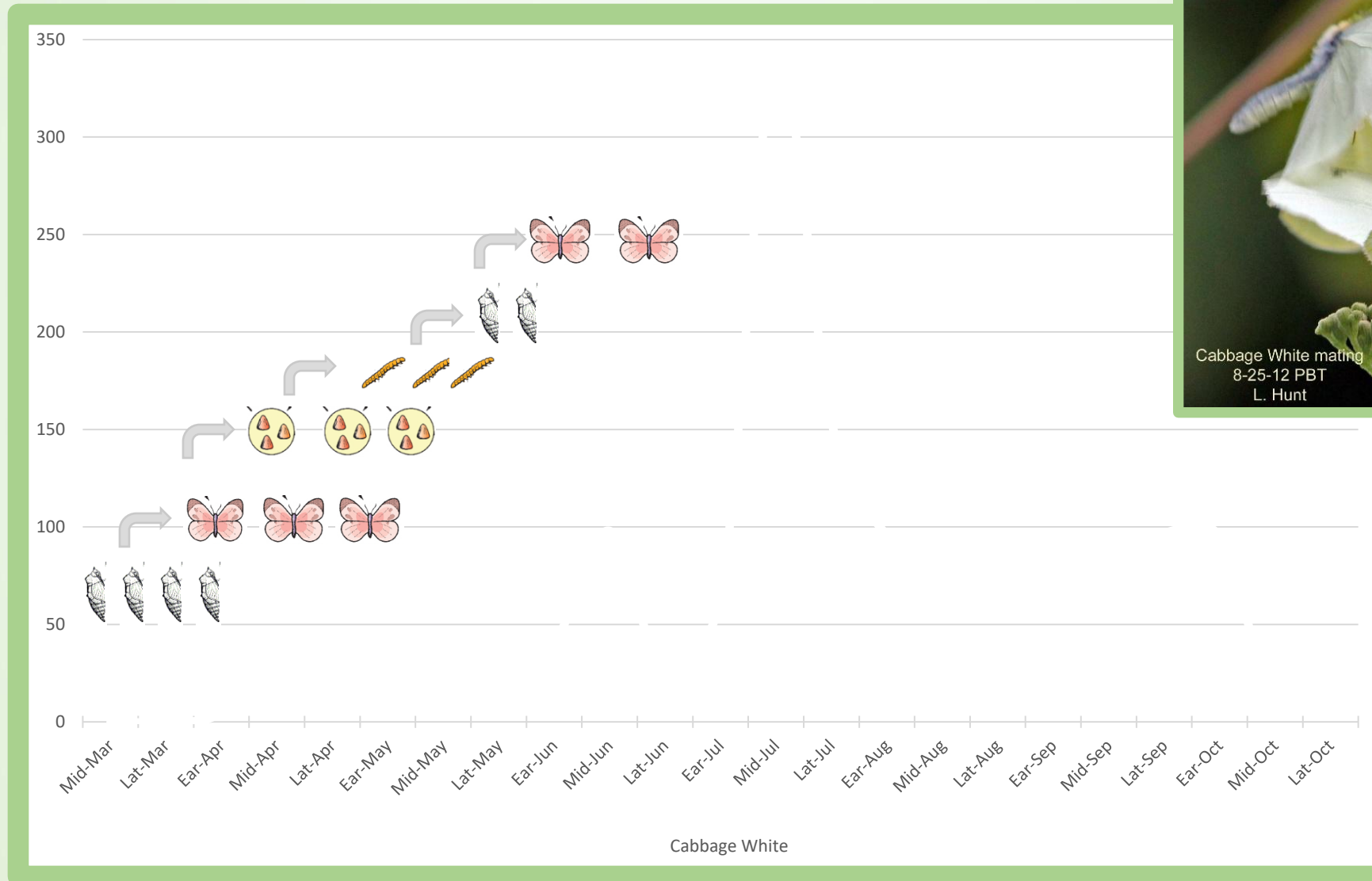
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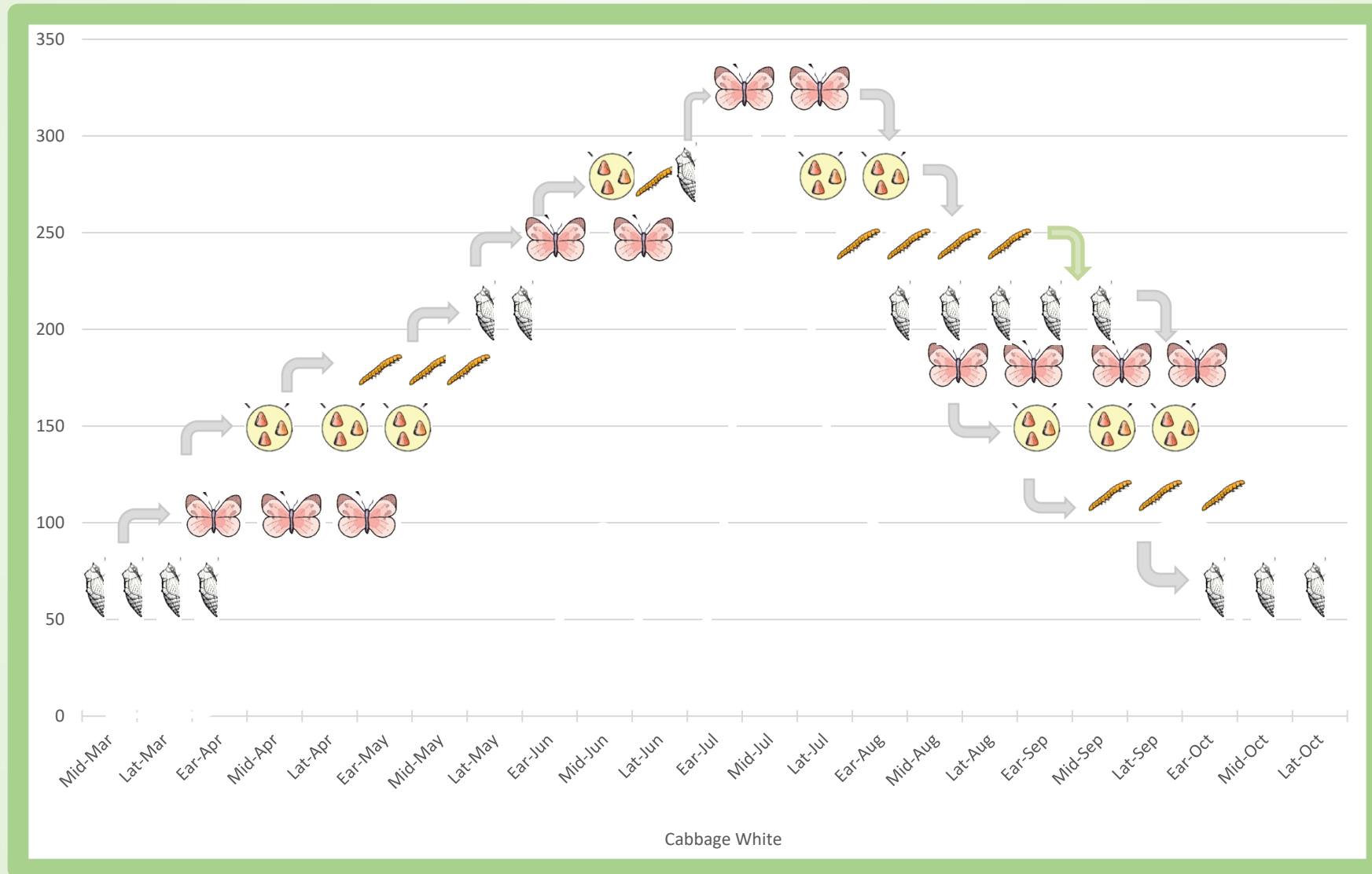
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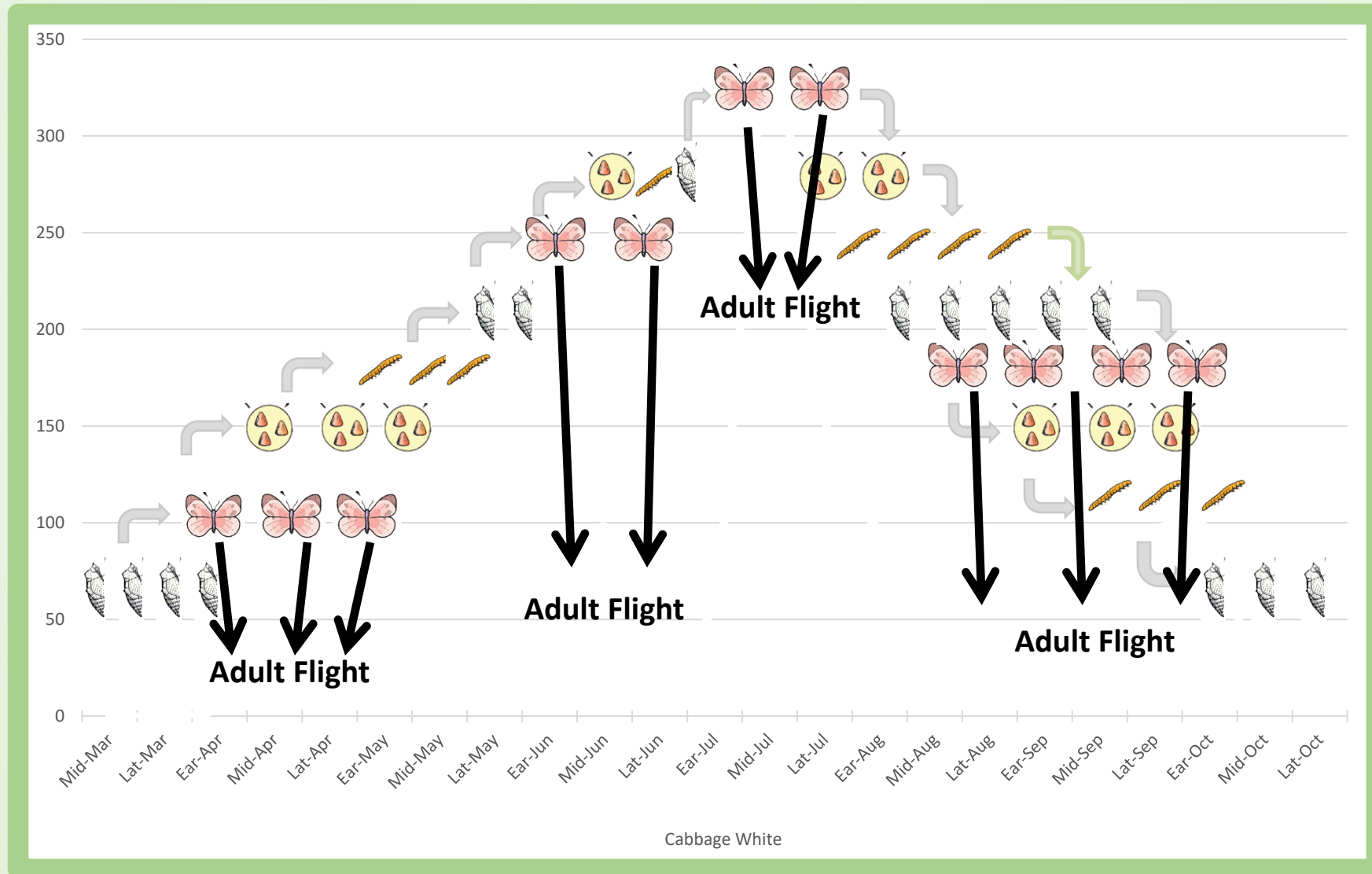
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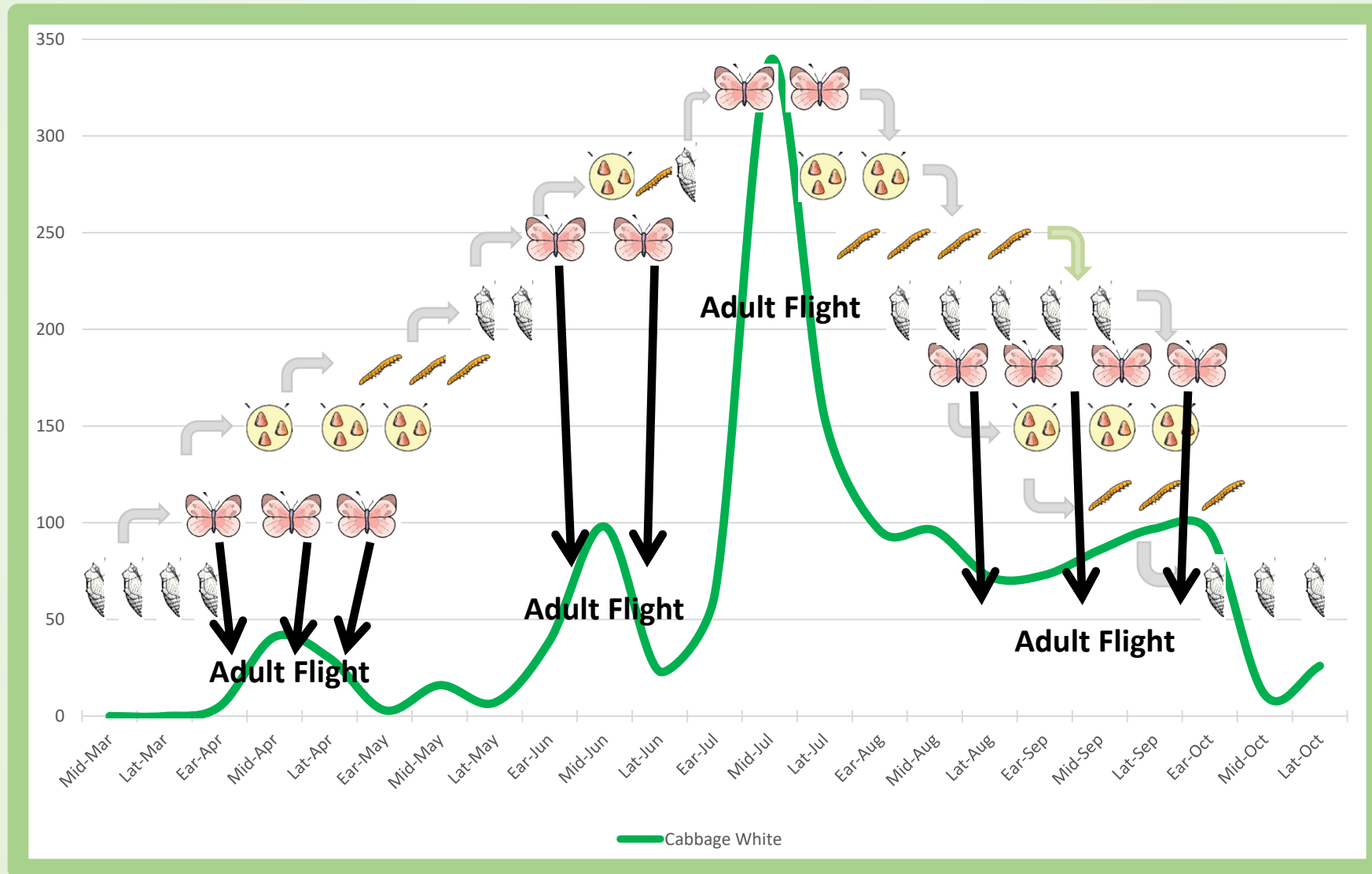
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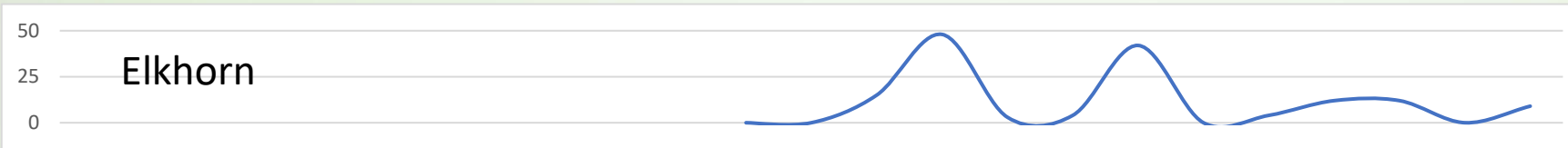
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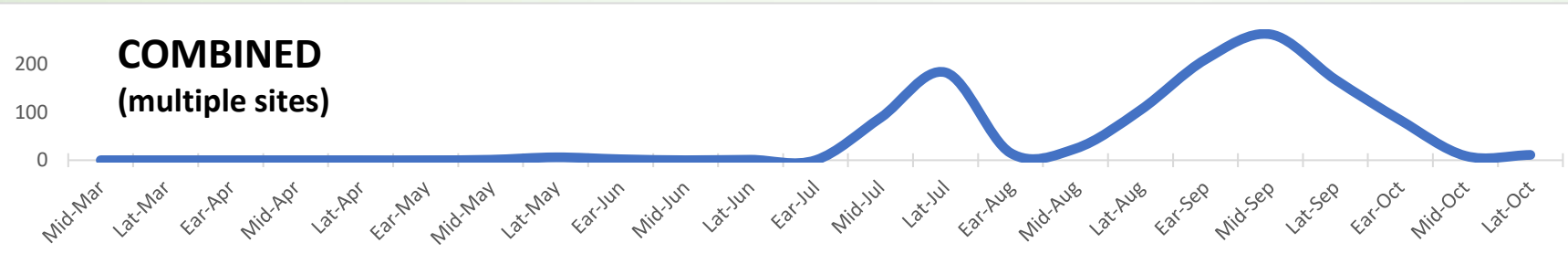
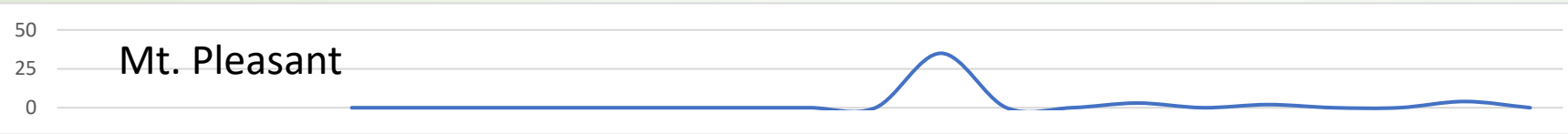
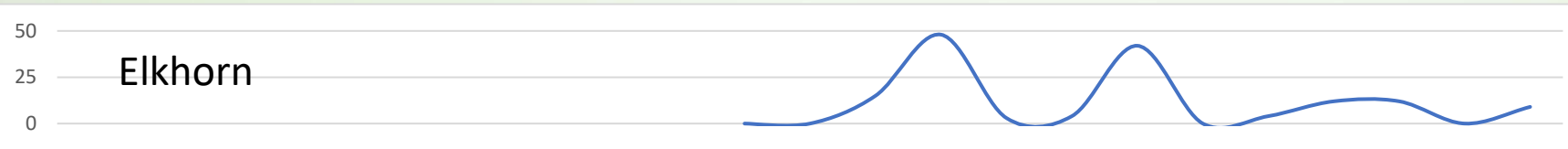


# Sachem Broods



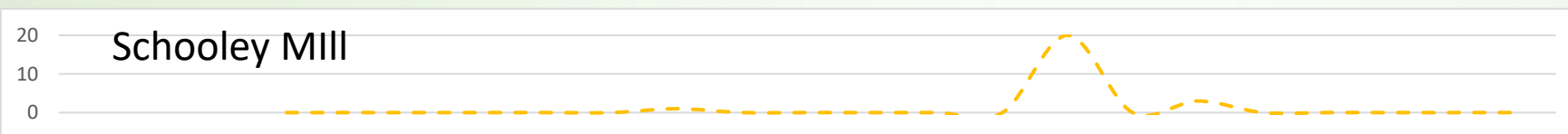
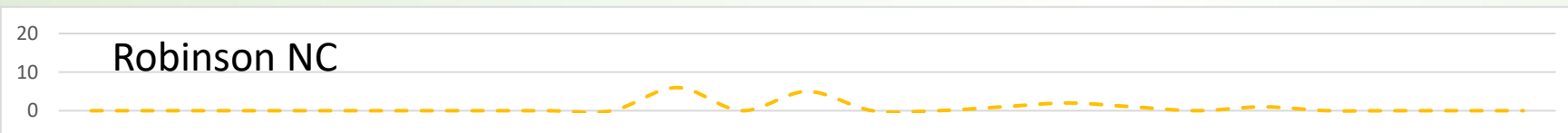
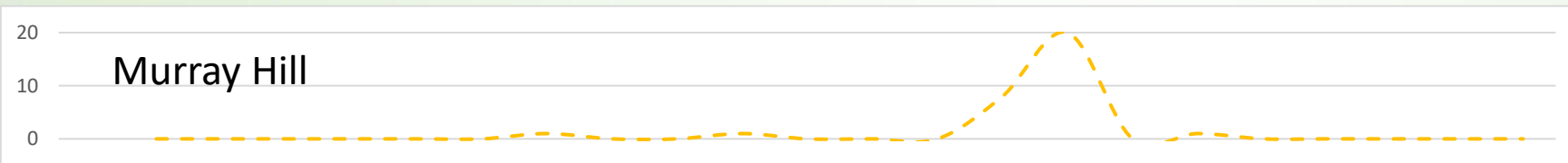
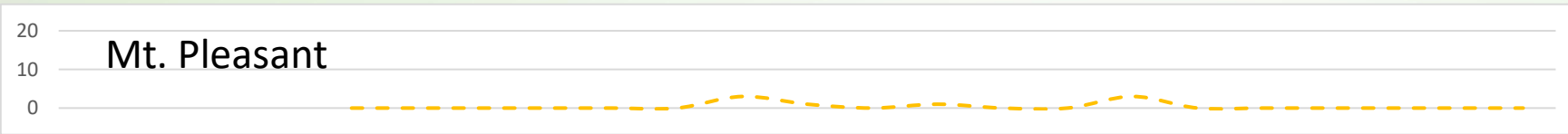
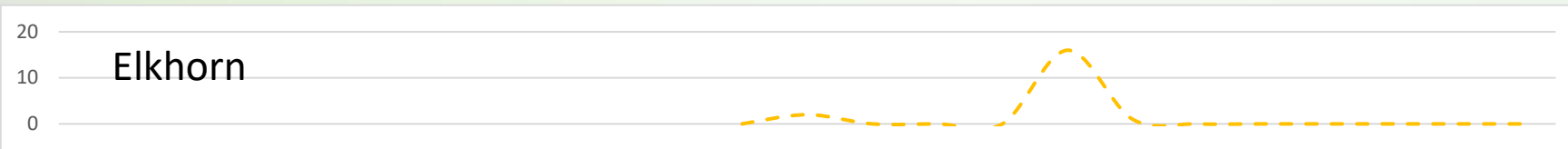
Mid-Mar Lat-Mar Ear-Apr Mid-Apr Lat-Apr Ear-May Mid-May Lat-May Ear-Jun Mid-Jun Lat-Jun Ear-Jul Mid-Jul Lat-Jul Ear-Aug Mid-Aug Lat-Aug Ear-Sep Mid-Sep Lat-Sep Ear-Oct Mid-Oct Lat-Oct

# Sachem Broods

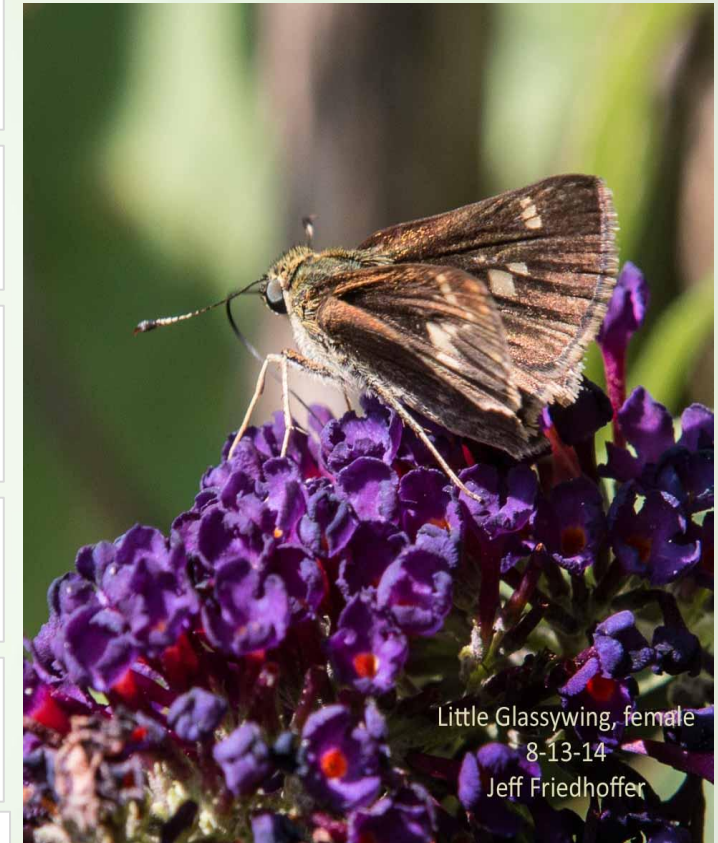




# Little Glassywing Broods

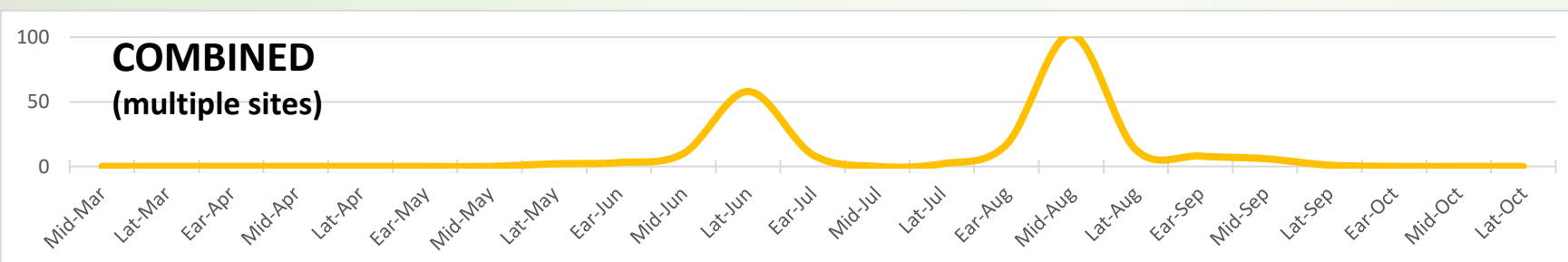
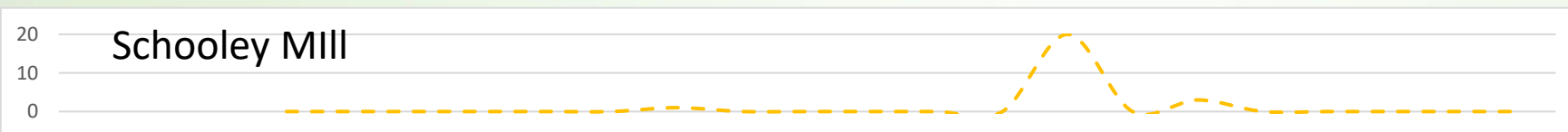
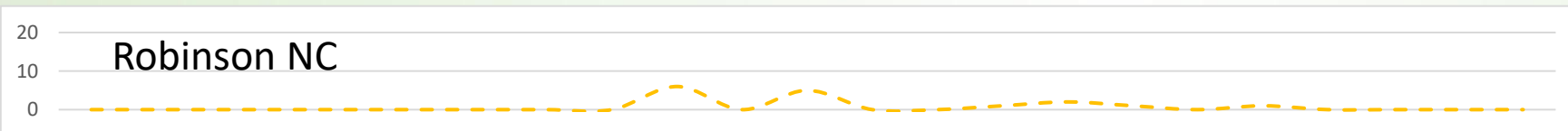
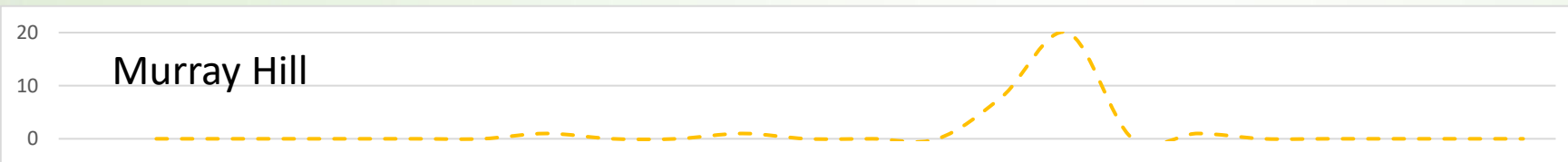
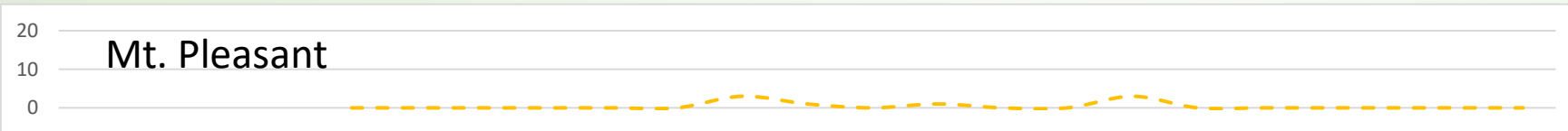
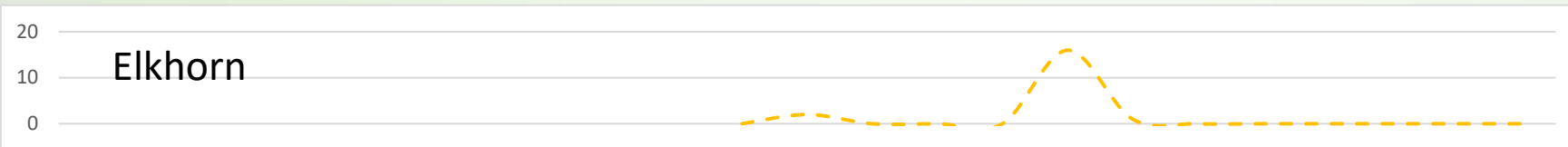


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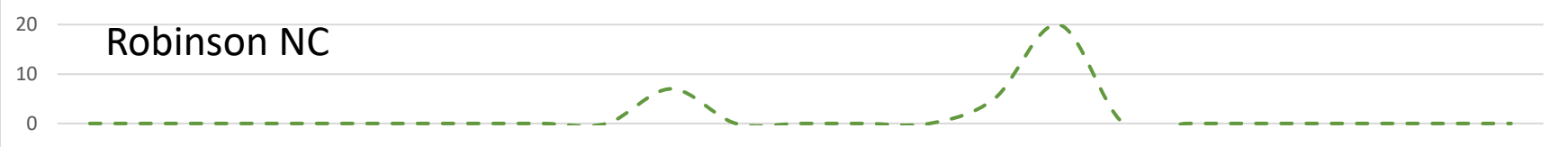
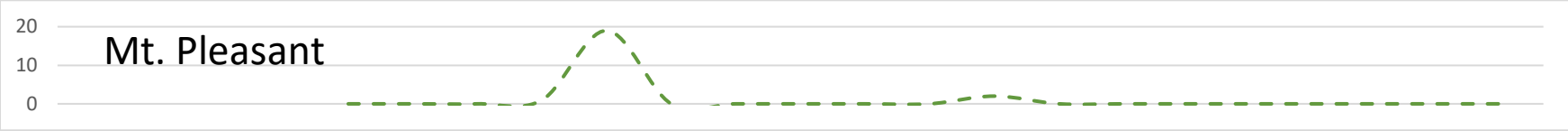
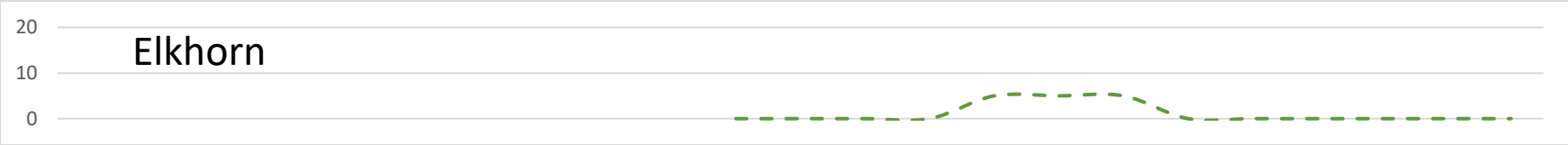


Little Glassywing, female  
8-13-14  
Jeff Friedhoffer

# Little Glassywing Broods



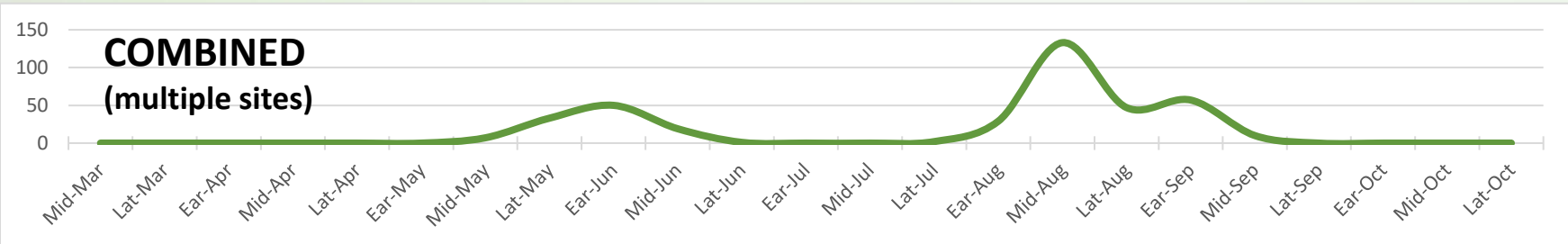
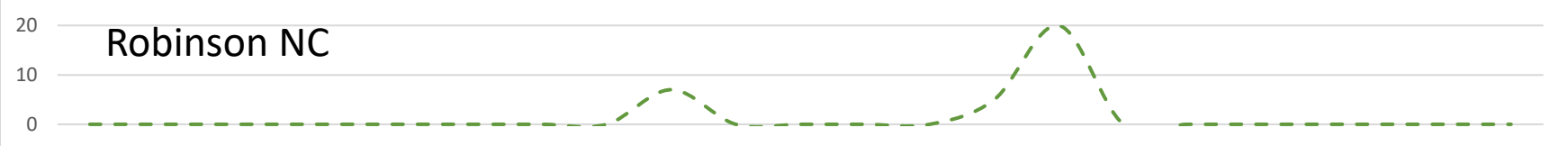
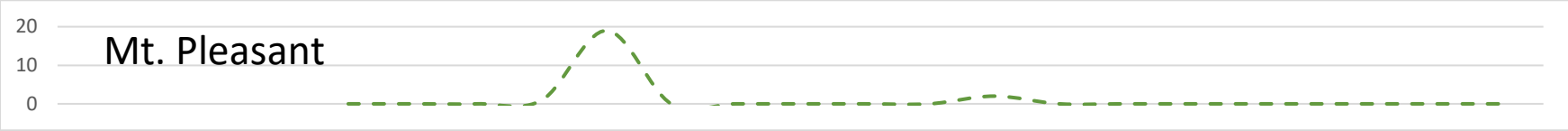
# Zabulon Skipper Broods



Zabulon Skipper, male  
Murray Hill 8-7-14  
Linda Hunt

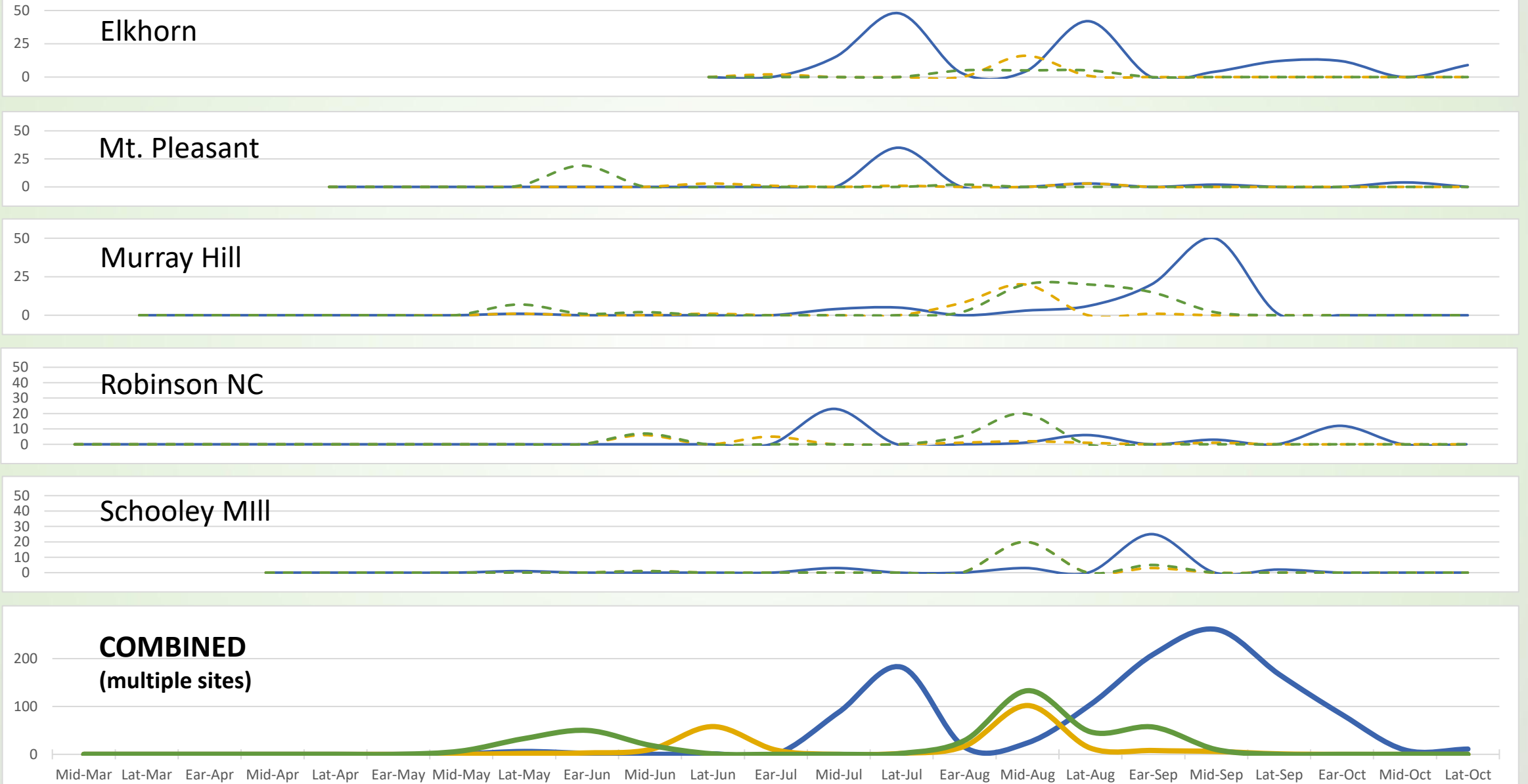
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# Zabulon Skipper Broods



Zabulon Skipper, male  
Murray Hill 8-7-14  
Linda Hunt

# Overlaid Broods



A monarch butterfly with vibrant orange wings and black markings is perched on a branch of a plant with clusters of small, round, red berries. The background is a soft-focus green.

## You can participate in the butterfly survey by:

- Doing a survey at a specific site or your garden
- Looking for and counting a specific butterfly all season (i.e., Monarch, Eastern Tiger Swallowtail)
- Reporting locations where you see lots of butterflies
- Taking pictures of butterflies and sending them to us
- Looking for specific trees/plants or habitats and reporting what you find

Monarch

UMD Farm 8-20-14

Linda Hunt

**WANTED: North America's Only Predatory Carnivorous Butterfly  
Harvester (*Feniseca tarquinius*)**



Linda H., Mike & Grazina M.,  
Kevin & Karen H. **find more  
caterpillars** & adult Harvester  
(PVSP & Wincopin)  
9 & 10-2014

Bonnie O. films aphids  
& **finds a caterpillar**  
(Rockburn)  
9-21-13

It takes an  
entire "bird"  
club to find a  
rare butterfly.



Jo S. & Grazina M.  
find more aphids &  
fungus (PVSP &  
Wincopin)  
9 & 10-2014

Linda H. finds fungus, Jo S.  
ID's, connects the Beech,  
aphids, fungus & Harvester  
(Rockburn)  
10-12-13



Annette A. & Jim  
W. find adult  
Harvesters  
(Rockburn & PVSP)  
6-2014



9 people contributed

*2014 Butterfly of the Year*  
*Giant Swallowtail*

Emmalyn Holdridge  
8-27-2014

