Summary of the 2019 Howard County Fall Count

by Mike McClure and Chuck Stirrat

The twenty sixth annual Howard County Fall Count was conducted on Sept. 21st, 2019 with the count data shown in the table below. This count has turned out to be better than expected Countywide for the total number of bird species while the total number of individuals was again below average thus continuing the decline since the beginning of the Fall Count in 1994. For the warblers, the species count was above the average while the number of individual warblers continued their slow but sure decline.

The number of participants, parties, and the overall effort as measured by the hours and miles continues to remain strong in spite of the occasional difficult season with few birds in the field, as was the case this year.

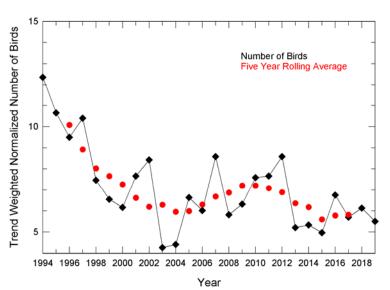
	Observed Bird	ls Countywide	Observed War	blers Countywide	Statistics
	Species	Birds	Species	Birds	Statistics
2019 Numbers	124	10,115	26	348	
Historical High : Low	140:108	26,651 : 9,293	30:13	1,004 : 130	
Year 's of High : Low	2010 : 2004	1994 : 2004	1994 : 2004	1994 : 2004	
Averages for Birds & Species	124.81	15,317.15	23.54	427.04	
2019 Counters : Parties					52:44
Counters : Parties Averages					54.6:33.3
2019 Counters Hours : Miles					190.4 : 411.8
Counters Hours : Miles Averages					195.4 : 404.9

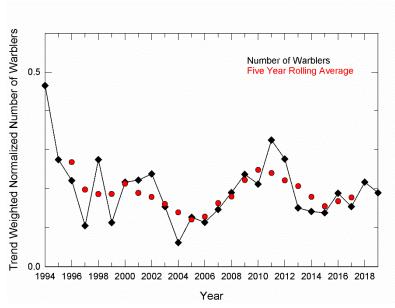
Saturday's temperature started at 51 degrees [dew point 49] at 6:00AM with scattered clouds, rising to 86 degrees [dew point 65] in late afternoon Winds were light during the early morning but slowly changed to intermittent 3-5 mph with the afternoon.

Counters continue to complain about the lack of birds. This problem is reflected in the data from 26 years of Fall Counts. The graphics for the total number of individual birds and warblers observed countywide is represented by their Rolling Five Year Average [RFYA] data. The RFYA's seems to support that the numbers had reached their lows during the mid 2000's, began to rise, and now seem to be in decline It is worth noting that the RFYA is by design slow to change direction and requires several years of sighting increases or decreases to respond.

There were 16 species for which there was only one bird sighted countywide and 20 species for which there were only two birds sighted countywide. Species showing moderately high numbers (>500) are: European Starling, 1,277; Canada Goose, 1,183; Crows [American+Fish+species], 568; and Blue Jay, 656.

Birds count participants are: Karan Blum, Jim & Marilyn Brinkley, Mary Lou Clark, Dennis Coskren, Jeff & Karen Culler, Ralph Cullison III, Susan & Wes Earp (Area 1 Coordinator), Lynn Greg, Joe Hanfman, Nick & John Harris (Area 6 Compiler), Karen & Kevin Heffernan (Area 3 Cocoordinators), Bill & Gayle Hill, David Holmes, Clayton Koonce, Mike Leumas, Allen Lewis (Area 7 Coordinator), Kathie Lillie, Felicia Lovelett, Rosa Lubitz, Brigitte Lund, Janet Lydon, Mike McClure (County Co-coordinator & Areas 4 Coordinator), John McKitterick (Area 7 Compiler), Barry Miller, Sue Muller, Sue Neri, Ben Newton, Cyndy & Steve Parr, Howard Patterson, Suzanne Probst, Mary Prowell,





Russ Ruffing, Kurt Schwarz (Area 5 Coordinator), Jay Sheppard, Jo Solem, Michelle Stewart, Chuck Stirrat (County Cocoordinator), Tom Strikwerda, Tim Thompson, Eric & Kristin Trouton, Anthony VanSchoor, Mark Wallace, Kelsey Wellons, Michele Wright, and Lilly Zuberi. Lastly, a very special thanks to Mary Lou Clark, who hosted the evening tally.#

For the eight year counters were given the option to list the species of butterflies, dragonflies and damselflies seen as they were counting birds. A total of 16 people turned in a list: John & Meg Harris; Karen & Kevin Heffernan; Bill & Gayle Hill; David Holmes; Clayton Koones; Grazina & Mike McClure; Sue Muller; Suzanne Probst; Jo Solem. See the table for greater detail.

	Obs. Butterflie	s Countywide	Obs. Dragon	flies Countywide	Statistics
	Species	Individuals	Species	Individuals	Statistics
2019 Numbers	27	395	4	32	
Historical High : Low	43:22	2,285 : 305	16:4	150:32	
Year 's of High : Low	2016 : 2013	2016 : 2013	2016 : 2019	2016 : 2019	
Averages for Ind. & Species	32.88	1,044.50	11.383	92.75	
2019 Counters : Parties					14:9
Counters : Parties : Averages					15.5 : 10.0
2019 Counters Hours : Miles					30.5 : 89.5
Counters Hours : Miles Averages					56.8:136.6

The Butterfly Count was below normal for both the number of species and individuals, respectively. There were no species of butterflies with >100 individuals sighted. This year's total sighted individuals, 395, was the second lowest recorded. This decrease is probably due to a combination of fewer counters and parties but also less countywide coverage with 6 areas reporting results. Also of note is the butterfly trendline which is decreasing.

The Dragonfly Count was equally disappointing with only one field sheet received thus setting new lows for both the number of species and individuals critters. For dragonflies, the only species [>10] was: Halloween Pennant at 11. Similar to the butterflies, the dragonfly trendline is decreasing.

. Complete bird, butterfly, and dragonfly results are posted on the HCBC's website at <u>http://howardbirds.org/howard/counts.htm</u>.

25 20 Individual Number Individual Critters Butterflies 15 10 Trendline Butterflies 5 Trendline Dragonflies 0 Individual Dragonflies -5 2010 2012 2014 2016 2018 2020 Year

Plan now to join us on a future seasonal count and if possible attend the tally as well. Next year the 2020 Fall Count will be held on the 3rd Saturday of September which will be the 19th.

BIRD COUNT - HOWARD CO.	Season:	Fall	Type:	Regular	Area:	Howard	Date:	9/21/2019
Species / Area No.:	1	2	3	4	5	6	7	Totals
Canada Goose	434	83	77	116	90	230	151	1,181
Wood Duck	28		4		2			34
Mallard			5	19	24	14	13	75
Wild Turkey	1							1
Pied-billed Grebe					1	1		2
Rock Pigeon	50			26		65	9	150
Mourning Dove	138	67	19	20	19	32	36	331
Yellow-billed Cuckoo	6	5	2	1	2	4	5	25
Black-billed Cuckoo		1				1		2
Common Nighthawk			6			4		10
Chimney Swift	36	55	106	39	3	30	37	306
Ruby-throated Hummingbird	3	1	2	3	1	7	4	21
Killdeer	7		15	5			1	28
Spotted Sandpiper			1					1
Solitary Sandpiper	1			1				2
Ring-billed Gull						2		2
Double-crested Cormorant	1			2	3	3	5	14
Great Blue Heron	2	1	4	3	6	6	7	29
Great Egret				2		1	2	5
Green Heron	1		2	2	2	5	5	17
Black-crowned Night-Heron					1		1	2
Black Vulture	46	68	80	29	7	41	7	278
Turkey Vulture	93	28	59	8	18	19	63	288
Osprey					2	1		3
Northern Harrier	1	1				1		3
Sharp-shinned Hawk	1		4		1	1		7
Cooper's Hawk	4	1	2			3		10
Bald Eagle [ad/im/unk]	3	2			1	1		7
Red-shouldered Hawk	15	6	12	6	5	8	8	60
Broad-winged Hawk	5	25	99			8	6	143
Red-tailed Hawk	5	3	1	3		3	2	17
Eastern Screech-Owl	4		2					6
Great Horned Owl						1		1
Barred Owl						3		3
Belted Kingfisher	7	3	3	2	3	1	5	24
Red-headed Woodpecker	3	1						4
Red-bellied Woodpecker	54	18	19	19	32	43	37	222
Downy Woodpecker	28	10	8	13	18	19	27	123
Hairy Woodpecker	5	4	3		2	4	5	23
Northern Flicker	18	7	18	2	10	29	23	107
Pileated Woodpecker	23	16	1	1	2	5	10	58
American Kestrel	13	3		2				18
Merlin	1							1
Peregrine Falcon	1							1
Eastern Kingbird	1					5		6
Olive-sided Flycatcher						1		1
Eastern Wood-Pewee	8	7	6		6	4	9	40
Least Flycatcher						1		1
Empidonax species	7							7

BIRD COUNT - HOWARD CO.	Season:	Fall	Type:	Regular	Area [.]	Howard	Date:	9/21/2019
Species / Area No.:		2	3	4	5	6	7	Totals
Eastern Phoebe	. 11	- 4	9	8	1	2	6	41
White-eyed Vireo	11	4	8	0		6	1	16
Yellow-throated Vireo		I	0		1	0	1	10
Red-eyed Vireo	2	4	10	5	3	11	9	44
Blue Jay	135	73	76	52	61	144	115	656
American Crow	72	27	32	14	17	44	59	265
Fish Crow	92	21	40	14	4	44		145
crow species	47		40 50	31	4	14	16	143
Common Raven	10		50	51		14	10	10
Horned Lark	5							5
Tree Swallow	5			8			3	
Barn Swallow				0 11			3	11
Carolina Chickadee	16	5	8	10	15	30	46	130
Tufted Titmouse White-breasted Nuthatch	19	9	6	4	10	20	23 18	91
House Wren	30 5	15 3	8 5	9	15 8	10 9	18	105
Carolina Wren		40		20	51		75	45
-	85		38	32	51	48		369
Blue-gray Gnatcatcher		2	4			8	3	17
Ruby-crowned Kinglet	77	10	00	00	4.4	3	10	3
Eastern Bluebird	77	18	29	28	14	32	13	211
	1	1	X-NFC					2
Swainson's Thrush			2		4	4		2
Wood Thrush	2				1	4		/
American Robin	89	55	39	8	13	29	89	322
Gray Catbird	73	31	104	63	48	83	76	478
Brown Thrasher	4	1	4		-	3	3	15
Northern Mockingbird	18	3	27	2	2	19	13	84
European Starling	352	85	532	23	103	17	165	1,277
Cedar Waxwing	15	6	1	31		17	13	83
House Sparrow	68		10	14	3	25	213	323
House Finch	42		16	7	4	50	11	130
American Goldfinch	24	4	15	18	25	30	53	169
Eastern Towhee	13	7	12		5	8	4	49
Chipping Sparrow	61	3	25		1	15	1	106
Field Sparrow	1		2			2		5
Savannah Sparrow			8					8
Grasshopper Sparrow		_	1			-		1
Song Sparrow	10	7	12	22	1	8	10	70
Lincoln's Sparrow			1		1	-		2
White-throated Sparrow						2		2
unidentified sparrow	9					1		10
Yellow-breasted Chat						1		1
Bobolink			1			4		5
Eastern Meadowlark	1		1					2
Baltimore Oriole						2		2
Red-winged Blackbird	2		12	4		2	16	36
Brown-headed Cowbird	13					2	4	19
Common Grackle							1	1
Ovenbird	1		1					2

BIRD COUNT - HOWARD CO.	Season:	Fall	Type:	Regular	Area:	Howard	Date:	9/21/2019
Species / Area No.:		2	3	4	5	6	7	Totals
Worm-eating Warbler							2	2
Northern Waterthrush	1							1
Blue-winged Warbler	· ·					2		2
Black-&-white Warbler	5	4	4	1	2	7	16	39
Tennessee Warbler	•	1	•		-		10	1
Nashville Warbler		1					1	2
Connecticut Warbler		•				1		1
Mourning Warbler	1					1		2
Common Yellowthroat	23	10	16	1	15	8	8	81
Hooded Warbler	20	10	10	1	10	1	1	2
American Redstart	6	13	12	4	4	13	23	75
Northern Parula	0	3	12	<u>т</u>	<u>т</u>	6	5	26
Magnolia Warbler	7	3	7		2	4	6	20
Bay-breasted Warbler	'	5	1		2		0	23
Blackburnian Warbler			1		1			1
Yellow Warbler							2	2
Chestnut-sided Warbler		1	4			2	2 1	2
Blkthrtd. Blue Warbler	5	1	4		1	2	1	8 11
	5	1	2		I	2	2	
							2	3
Yelrump'd (Myrtle) Warbler	1	1				4	3	5
Prairie Warbler	1					1	-	2
Blkthrtd. Green Warbler	1	-				3	3	/
Canada Warbler		2		1		1		4
Wilson's Warbler		1				1		2
warbler species	18			6	2	1	10	37
Scarlet Tanager	1				3	3	1	8
Northern Cardinal	103	29	43	64	36	73	90	438
Rose-breasted Grosbeak			4			1		5
Blue Grosbeak			7			1		8
Indigo Bunting	42	9	VNEO		5	7		63
Dickcissel			X-NFC					X-NFC
Area Total Birds:	2,675	899	1,811	805	739	1,451	1,735	10,115
Area Total Species:	81	61	71	49	57	90	69	124
Area No.:	1	2	3	4	5	6	7	Totals
		Supplem	ental Da	ta on Pag	je 4			

BIRD COUNT - HOWARD CO.	Season:	Fall	Type:	Regular	Area:	Howard	Date:	9/21/2019
Species / Area No.:	1	2	3	4	5	6	7	Totals
		Supplen	nental Da	ta				
Time Start:	6:30 a	6:30 a	12:01 a	7:30 a	6:54 a	12:01 a	6:45 a	12:01 a
Time Stop:	8:00 p	12:20 p	2:30 p	6:30 p	5:15 p	11:30 p	4:50 p	11:30 p
Hours on Foot:	37.0	10.3	13.6	9.5	16.6 23.6		25.3	135.9
Hours by Car:	17.8	1.8	3.5	.6	1.3	3.8	11.7	40.5
Hours by Boat:								
Hours Other:								
Miles on Foot:	14.5	12.1	12.9	10.1	14.1	20.1	29.0	111.6
Miles by Car:	156.2	47.0	22.5	14.8	22.8	32.2	115.5	396.7
Miles by Boat:								
Miles Other:								
Hours Feeder Watching:	1.0			1.4			.5	2.9
Hours Stationary:	6.0	3.4	.6					10.0
Hours "Owling":	.6					.5		1.1
Miles "Owling":	.3					.1		.4
County Weather	Tempe		%Clo	ouds	Wind (Sp	eed & Dir.)	Precip.(Гуре & Amt.)
Dawn	51	° F	clear		1.0 W		None	
AM	60.1	° F	5%		1.0 WNW	/	None	
Noon	81.8	° F	5%		3.0 N		None	
PM	86.1	° F	15%		5.0 WSW	1	None	
Dusk	80.9	° F	5%		4.0 ENE		None	
Comments on Weather:	Cool in a	m [Dewpo	oint 49.4],	warm wit	h pm [Dev	vpoint: hi	gh 65.5]	
(.e.g amount of ice, fog, etc.)								
Area No.:	1	2	3	4	5	6	7	Totals
Deer Seen:	25	3	19		5	11	20	83
Total Observers in Area:	10	6	8	2	4	11	11	52
Total Parties in Area:	8	8	6	3	5	7	7	44
Total Party-Hours (Reg.):	54.8	12.1	17.1	10.1	17.9	27.4	37.0	176.4
Tot. Party Hours (Feeder Watch):	1.0			1.4			.5	2.9
Total Party-Hours (Station'y):	6.0	3.4	.6					10.0
Total Party-Hours (Owling):	.6					.5		1.1
Total Party-Hours:	62.4	15.5	17.7	11.5	17.9	27.9	37.5	190.4
Total Party-Miles:	171.0	59.1	35.4	24.9	36.9	52.4	144.5	524.2
Area No.:	1	2	3	4	5	6	7	Totals

Fall Count Results, September 21, 2019

Admiral Red 1 1 1 1 1 Buckeye, Common 1 31 2 8 3 45 Checkeres-Spit, Silvery 1 1 1 2 8 3 45 Checkeres-Spit, Silvery 1 1 1 1 2 6 Checkeres-Spit, Silvery 1 1 1 1 1 2 Comma, Eastern 1 16 2 19 0 19 0 19 0 10 1		Fall Coun						A	
Azure, Summer 1 1 1 1 1 1 Backeye, Common 1 31 2 8 3 45 Checkerspot, Silvery 1 1 1 2 8 3 45 Checkerspot, Silvery 1 <td< th=""><th>Butterfies & Moths*</th><th>Area 1</th><th>Area 2</th><th>Area 3</th><th>Area 4</th><th>Area 5</th><th>Area 6</th><th>Area 7</th><th>Totals</th></td<>	Butterfies & Moths*	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Totals
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Hairstreak, Gray Image: Constraint of the second seco							1		Į.
Hairstreak, Red-banded Image: Constraint of the second secon									
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Lady, American Image: Constraint of the second									
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Moth, Fall Webworn [Caterpillar] Image: Second		2			1		1	5	9
Moth, Henry's Marsh [Caterpillar] Image: Caterpillar] Image: Caterpillar] Image: Caterpillar] Moth, Salt Marsh [Catapillar] 9 9 9 Orange, Sleepy 9 9 9 9 Orange, Sleepy 9 1 1 1 Pearly-eye, Northern 1 1 24 1 24 Skipper, Red-spotted 1 20 1 24 24 Skipper, Clouded 1 22 2 2 2 Skipper, Dun 20 20 20 20 20 20 Skipper, Long-tailed 20									
Moth, Salt Marsh [Catapillar]	Moth, Fall Webworm [Caterpillar]								
Moth, Yellow-striped Armyworm 9 1 1 1 1 24 1 <th1< th=""> 1 1 <th1< td=""><td>Moth, Henry's Marsh [Caterpillar]</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th1<></th1<>	Moth, Henry's Marsh [Caterpillar]								
Orange, Sleepy 9 9 9 Pearly-eye, Northern 1 1 1 Super, Red-spotted 1 1 24 Skipper, Clouded 1 24 24 Skipper, Dun 20 1 24 Skipper, Least 20 2 2 Skipper, Least 20 2 2 Skipper, Coola 20 2 2 Skipper, Coola 1 1 1 Skipper, Silver-spotted 1 1 1 Skipper, Zabulon 1 1 1 1 Skipper, Zabulon 1 1 1 1 Sulphur, Cloudeds 1 8 21 30 Sulphur, Cloudeds 1 1 1 1 Swallowtail, Black 1 1 4 11 Swallowtail, Giant 2 2 4 33 Swallowtail, Spicebush 2 2 4 3 Suplent, Cloudess 1 1 2 32 32	Moth, Salt Marsh [Catapillar]								
Pearly-eye, Northern Image: Constraint of the system o	Moth, Yellow-striped Armyworm								
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Purple, Red-spotted 1 1 1 1 Sachem 3 20 1 24 Skipper, Clouded 1 24 24 Skipper, Clouded 1 24 24 Skipper, Dun 2 2 2 Skipper, Dun 20 2 2 Skipper, Least 20 20 20 Skipper, Cocla 20 20 20 Skipper, Ocola 1 1 1 Skipper, Sliver-spotted 1 1 1 Skipper, Tamy-edged 1 1 1 Skipper, Zabulon 1 1 1 Sulphur, Cloudleds 1 8 21 30 Sulphur, Cloudleds 1 8 21 30 Sulphur, Cloudled 1 8 21 1 Swallowtail, Black 1 1 2 32 Swallowtail, Giant 2 2 4 3 Swa	Pearly-eye, Northern								
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Swallowtail, Giant Image: Constraint of the system of					~~	=		_	
Swallowtail, Pipeline Image: Constraint of the system Imag		1			20	6	3	2	32
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White, Cabbage 3 2 53 3 10 9 80 Wood-Nymph, Common 1 1 1 19 unidentified species 15 0 19 285 17 31 28 395	Viceroy								
Wood-Nymph, Common Image: Common state of the system Image: Common state of the system <t< td=""><td>White, Cabbage</td><td>3</td><td></td><td>2</td><td>53</td><td>3</td><td>10</td><td>9</td><td>80</td></t<>	White, Cabbage	3		2	53	3	10	9	80
unidentified species 18 1 19 Total Individuals 15 0 19 285 17 31 28 395	Wood-Nymph, Common	1							
Total Individuals 15 0 19 285 17 31 28 395	unidentified species				18	1			19
	-	15	0	19		17	31	28	
	Total Species	9	0	7	20	7	12	7	27

Dragonflies & Damselflies*	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Totals
Amberwing, Eastern								
Bluet, Familiar								
Bluet, Skimming								
Dancer, Blue-fronted								
Dancer, Seepage								
Darner, Common Green				10				10
Darner, Shadow								
Darner, Fawn								
Dasher, Blue								
Forktail, Eastern								
Forktail, Fragile								
Glider, Spot-winged								
Glider, Wandering								
Meadowhawk, Autumn								
Meadowhawk, Blue-faced								
Pennant, Halloween				11				11
Pondhawk, Eastern								
Saddlebags, Black				7				7
Saddlebags, Carolina								
Skimmer, Twelve-spotted				4				4
Skimmer, Slaty								
Skimmer, Widow								
Whitetail, Common								
unidentified species								
Total Individuals				32				32
Total Species				4				4

Information [Required]	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Totals
Hours by Foot	4.8	0.0	0.5	4.7	5.3	5.5	2.0	22.8
Hours by Car	0.2	0.0	0.4	0.5	1.2	0.9	4.5	7.7
Miles by Foot	2.3	0.0	0.9	4.6	5.9	2.8	2.0	18.5
Miles by Car	1.2	0.0	2.3	13.8	22.3	3.4	28.0	71.0
Total Observers in Area	2		2	4	3	1	2	14
Total Parties in Area	1		1	3	2	1	1	9

Buckeye, Common 18 3 96 98 140 17 64 45 441 3 None € CheckerdsSigner, Common 4 1 12 5 - 23 12 1 3 Checkergot, Silvery 2 1 1 1 4 2 2 2 7 Cocke, Mouring 1 1 1 1 4 6 4 1 1 Comma, Eastern 1 9 1 2 1 1 6 4 1 1 1 2 1 1 1 1 1 1 2 3 1 1 1 1 1 1 1 2 1 1 2 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				Fall	Count,	Cumula	tive Res	ults						
Azure, Summer 2 - 6 11 5 18 1 43 18 1 2 Buckeye, Common 4 1 1 12 5 - - 2 2 2 2 2 2 2 2 2 7 - - 2 4 1 <		2012	2013	2014	2015	2016	2017	2018	2019	Sum	Max	Min	Misses	Average
Buckeye, Common 16 3 96 98 140 17 64 45 441 3 None € Checkardes Shyney 2 1 1 12 5 1 2 2 2 7 Comma, Eastern 1 9 1 2 2 4 2 2 6 Comma, Eastern 1 9 1 1 1 4 6 4 1 5 Capper, American 09 10 70 114 395 30 158 19 861 39 10 None 1 Duskymng, Wild Indigo 1 1 3 2 1 1 2 38 14 45 5 11 30 11 2 3 4 45 5 11 30 11 2 3 4 5 5 1 7 5 1 6 3 2 5 1		-						-			-	1		
Checkersoph, Shivery, Common 4 1 1 1 12 5												1		
Cinederspot, Silvery 2 2 2 2 2 2 2 2 2 7 Coaw, Mourning 1 9 1 2 2 1						-	17	64	45			3		60.1
Cloak. Mourning P			1	1	12	5				-		1		2.9
Comma Eastern 1 9 1 2 2 1 <		2												.3
Copper, American C T T L 4 6 4 1 6 Crescent, Pearl 69 10 70 114 395 30 158 395 18 1 4 6 Darkyung, Wild Indigo 1 13 5 18 2 30 18 1 4 6 Filliary, Great Spangled 2 4 8 1 1 2 18 8 1 3 Geometer, Chickwed 1 4 1 - 1 1 2 1 7 4 1 5 Garswyng, Uttle 2 3 4 5 5 11 13 2 2 1 1 1 2 1 1 7 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1														
Crescent, Pearl 69 10 70 114 395 30 158 19 865 395 10 None 1 Duskywing, Wild Indigo 1 1 13 5 18 2 18 5 18 2 18 8 1 4 Trillary, Meadow 3 2 2 1 1 2 2 18 8 1 3 Frillary, Meadow 3 2 2 1 1 1 2 2 2 6 Geometr, Chickweed 1 4 4 5 5 11 30 11 2 3 Hairtreak, Resb-banded 5 2 1 6 5 11 30 11 2 3 2 3 2 16 17 7 16 16 3 2 1 6 1 7 1 4 Haintreak, Kray 1 2 <td></td> <td>1</td> <td>9</td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td>1</td> <td></td> <td>-</td> <td></td> <td></td> <td>2.1</td>		1	9	1					1		-			2.1
Duskywing, Horace's 1 1 1 2 1 5 2 1 5 Filliary, Great Spangled 2 4 8 1 1 2 18 8 1 3 Filliary, Maregated 14 14 26 92 59 4 45 22 74 1 7 4 1 5 Geometer, Chickweed 1 4 1 1 1 2 1 1 77 4 1 5 2 6 6 1 7 1 7 7 7 1 7 7 7 1 7 7 7 1 6 3 2 1 6 1 3 2 3 2 3 2 1 6 1 3 1 6 1 3 1 6 1 3 1 1 2 1 6 3 21 6 <		<u> </u>	10	70			20		10		-	-	-	.8
Duskywng, Wiel Indigo 1 1 3 5 18 2 3 16 1 4 Fittilary, Meadow 3 2 21 3 1 2 28 21 3 1 2 29 21 2 5 Fittilary, Meadow 1 4 4 1 2 18 6 1 3 Geometr, Chickweed 1 4 4 1 2 1 1 2 3 4 5 5 11 30 11 2 3 Gassyving, Litle 1 2 5 1 12 5 2 1 2 3 4 1 1 2 2 1 3 2 3 2 3 2 1 1 2 3 16 1 3 3 16 3 3 16 1 3 3 2 1 4 1 4 <td></td> <td>-</td> <td>10</td> <td>70</td> <td></td> <td></td> <td>30</td> <td></td> <td>19</td> <td></td> <td></td> <td>10</td> <td></td> <td>108.1 .6</td>		-	10	70			30		19			10		108.1 .6
Fituliary, Great Spangled 2 4 8 1 1 2 18 8 1 3 Fituliary, Mandgated 14 14 26 92 59 4 45 22 92 2 5 Genemetr, Chickweed 1 4 1 1 1 1 2 11 1 7 4 1 5 Gassyming, Little 2 3 4 5 5 11 30 11 2 3 2 3 2 3 2 3 2 3 2 3 2 3 2 3 2 3 2 3 2 3 2 3 2 3 2 10 3 3 Lady, American 6 4 1 1 2 4 3 6 1 3 0 1 4 1 2 1 4 1 2 1		-	1	13	-							1		4.9
Fittillary, Meadow 3 2 21 3 2 21 3 20 29 29 21 2 5 Geometr, Chickweed 1 1 4 1 99 59 4 45 22 27 92 4 1 5 2 1 1 7 4 1 5 2 1 1 7 4 1 5 2 6 1 1 7 4 1 7 4 1 7 4 1 1 2 3 4 5 5 1 6 1 1 2 3 2 3 2 1 6 1 1 3 2 3 2 1 6 1 1 3 2 1 1 1 3 1 1 1 3 1 1 1 3 1 1 1 1 1 3 3		2					1				-			2.3
Frittlary Variegated 14 14 20 92 69 4 45 22 276 92 4 1 5 Generer, Chickweed 1 1 1 1 1 1 2 1 1 7 4 1 5 Glassyndrg, Little 2 3 4 5 5 11 30 11 2 3 Hairstreak, Reab-banded 5 2 1 2 5 2 16 Lady, American 3 2 3 2 3 2 10 3 2 5 Lady, Painted 6 4 1 1 6 3 2 7 7 1 6 1 3 4 3 1 4 1 2 1 6 2 1 4 1 2 1 6 3 1 3 1 1 1 1 3 1					-			-						3.6
Geometer, Chickweed 1 4 1 1 1 1 1 7 4 1 5 Glassyving, Utile 2 3 4 5 5 11 30 11 2 3 Hairstreak, Red-banded 5 2 6 11 5 2 6 Lady, Anerican 3 2 3 2 5 10 3 2 5 Lady, Anerican 1 1 6 3 21 6 1 3 Lady, Anerican - 1 - 5 1 7 5 1 6 Monarch 4 7 7 7 8 7 7 7 8 Moth, Fail Webworn (Cateprillar) 7 - 2 4 1 2 7 7 7 8 Moth, Sait March (Cateprillar) 2 1 4 1 2 1 4 2		-	14			-	4	45	22					34.5
Glassywing, Little 1 1 1 2 1 1 7 Hairstrak, Gray 2 3 4 5 5 5 11 30 11 1 7 Hairstrak, White M 2 1 2 5 2 6 2 6 2 6 2 6 2 6 2 6 2 6 2 6 2 6 2 6 2 6 1 3 2 5 2 1 6 1 1 1 2 5 2 1 5 1 6 1 1 1 2 7 7 7 7 7 7 7 7 7 7 7 7 7 7 8 1 1 1 1 1 2 1 1 1 1 1 1 1 1 1 1 2 1					-		-							.9
Hairsteak, Gray 2 3 4 5 5 11 30 11 2 3 Hairsteak, Reck-banded 5 2 5 1 12 5 2 6 Lady, American 2 1 2 3 2 3 2 2 10 3 2 5 Lady, American 1 3 2 3 2 2 10 3 2 5 Lady, American 4 7 67 49 75 12 61 9 3 4 6 Mon, Alanthus Webworn 1 1 2 1 2 4 2 2 7 7 7 8 Moth, Fail Webworn Caterpilar 2 1 4 1 20 4 2 1 2 4 2 1 3 3 1 7 7 7 8 8 8 8 8		-				1	1			2	1	1		.3
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Mark, Question 47 7 67 49 75 12 61 9 327 75 7 1 4 Mohn, Ailanthus Webworm 1 1 2 1 5 2 1 5 2 1 5 Moth, Fail Webworm (Caterpillar) 7 7 8 7 7 7 8 Moth, Hain Wash (Caterpillar) 8 8 8 8 8 8 8 8 Moth, Salt Marsh (Caterpillar) 8 1 4 1 29 9 44 29 1 4 Paranty-eye, Northern 1 2 1 2 1 41 1 43 14 1 2 1 7 Skipper, Clouded 2 1 1 1 1 1 2 1 7 Skipper, Long-tailed 1 7 5 1 2 2 1 1 1 1 1 1 1				3	2	3	2			-	3	2		1.3
Monarch 47 7 67 49 75 12 61 9 327 75 7 1 4 Moth, Ailanthus Webworm [Caterpillar] 1 1 2 1 5 2 1 5 Moth, Henry's Marsh [Caterpillar] 2 2 2 4 2 7 7 7 8 Moth, Sati Marsh [Caterpillar] 2 1 4 1 29 9 4 2 7 7 Orange, Sleepy 1 1 4 1 29 9 4 29 1 4 Parly-ey, Northern 1 2 1 2 1 2 1 2 1 4 29 1 4 2 2 1 1 1 2 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1	Lady, Painted	6		4	1	1	6			21	6	1		2.6
Noth, Alanithus Webworm 1 1 2 1 2 1 7 7 7 7 7 8 Moth, Fall Webworm [Caterpillar] 7 7 7 7 8 7 7 7 8 Moth, Sait Marsh [Catepillar] 8 2 4 2 2 4 2 2 7 7 7 8 Moth, Sait Marsh [Catepillar] 8 2 1 4 1 29 9 44 29 1 4 Orange, Sleepy 1 2 1 2 6 2 1 5 Purple, Red-spotted 8 2 4 13 1 14 1 43 14 1 2 Skipper, Couded 2 1 1 7 5 1 2 1 7 7 1 4 5 5 1 7 5 1 2 1 1 7								_						.9
Moth, Fall Webworm [Caterpiliar] 7 7 7 7 7 7 7 7 7 7 7 7 8 Moth, Henry's Marsh [Caterpiliar] 2 2 2 4 2 2 7 Moth, Satt Marsh [Caterpiliar] 8 2 1 2 1 1 1 2 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 <t< td=""><td></td><td></td><td>7</td><td>-</td><td>-</td><td>-</td><td>12</td><td>61</td><td>9</td><td></td><td></td><td>-</td><td></td><td>40.9</td></t<>			7	-	-	-	12	61	9			-		40.9
Noth, Henry's Marsh [Caterpillar] 2 2 2 4 2 2 4 2 2 7 Moth, Salt Marsh [Catapillar] 8 - - 8 7 9 44 22 1 4 1 4 1 4 1 4 1 <td></td> <td>1</td> <td></td> <td>1</td> <td>2</td> <td>1</td> <td></td> <td></td> <td></td> <td>5</td> <td></td> <td></td> <td></td> <td>.6</td>		1		1	2	1				5				.6
Moth, Salt Marsh [Catapillar] 8 1 30 1 30 1 31 30 1 7 Orange, Sleepy 1 4 1 2 9 44 29 1 4 Pearly-eye, Northern 1 2 1 2 6 2 1 5 Purple, Red-spotted 8 2 4 13 1 14 1 43 14 1 2 Skipper, Red-spotted 8 2 4 13 1 14 1 43 14 1 2 Skipper, Red-spotted 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 1 1			-							7				
Moth, Yellow-striped Armyworm 1 1 30 31 30 1 7 Orange, Sleepy 1 1 4 1 29 9 44 29 1 4 Pearly-eye, Northerm 1 2 1 2 6 2 1 4 Purple, Red-spotted 8 2 4 13 1 14 1 43 14 1 23 Skipper, Clouded 2 1 1 1 33 2 1 7 Skipper, Dun 1 1 1 2 1 7 5 1 2 20 7 1 4 25 Skipper, Least 11 28 103 30 152 50 19 20 413 152 11 1 5 5 15 7 3 5 15 7 3 6 320 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1		-					2							.5
Orange, Sleepy Image:			8							-	-			
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			205											
														1,044.50

Dragonflies & Damselflies*	2012	2013	2014	2015	2016	2017	2018	2019	Sum	Max	Min	Misses	Average
Amberwing, Eastern				1	23	3			27	23	1	5	3.4
Bluet, Familiar		1	5		1	3	8		18	8	1	3	2.3
Bluet, Skimming		2		1		1			4	2	1	5	.5
Dancer, Blue-fronted					1				1	1	1	7	.1
Dancer, Seepage		12							12	12	12	7	1.5
Darner, Common Green	35	79	62	19	19	15	6	10	245	79	6	None	30.6
Darner, Shadow				1	1				2	1	1	6	.3
Darner, Fawn	2	3	1	1					7	3	1	4	.9
Dasher, Blue	3	6	1	1	35	15	5		66	35	1	1	8.3
Forktail, Eastern					20				20	20	20	7	2.5
Forktail, Fragile	10	2	2	1	3				18	10	1	3	2.3
Glider, Spot-winged					5				5	5	5	7	.6
Glider, Wandering	4	1	4	4	2				15	4	1	3	1.9
Meadowhawk, Autumn	15	1	1	1		4	14		36	15	1	2	4.5
Meadowhawk, Blue-faced		1							1	1	1	7	.1
Pennant, Halloween	1							11	12	11	1	6	1.5
Pondhawk, Eastern	21	2	8	3	5	8	3		50	21	2	1	6.3
Saddlebags, Black	20	9	12	6	27	6	3	7	90	27	3	None	11.3
Saddlebags, Carolina	1								1	1	1	7	.1
Skimmer, Twelve-spotted	4	1	8	7	1	11		4	36	11	1	1	4.5
Skimmer, Slaty					1	1			2	1	1	6	.3
Skimmer, Widow	10	2	1	1	1				15	10	1	3	1.9
Whitetail, Common	16	4	15	3	5	16			59	16	3	2	7.4
unidentified species												8	.0
Total Individuals	142	126	120	50	150	83	39	32	742	150		None	92.75
Total Species	13	15	12	14	16	11	6	4	91	16	4	None	11.38

Information [Required]	2012	2013	2014	2015	2016	2017	2018	2019	Sum	Max	Min	Misses	Average
Hours by Foot	54.7	46.7	39.1	54.4	84.4	33.5	38.1	22.8	373.6	84.4	22.8	None	46.7
Hours by Car	24.8	5.9	17.2	10.3	6.0	4.1	4.6	7.7	80.6	24.8	4.1	None	10.1
Miles by Foot	75.5	31.7	42.0	34.5	52.8	18.8	21.9	18.5	295.7	75.5	18.5	None	37.0
Miles by Car	211.5	129.8	100.5	110.2	62.8	49.5	62.2	71.0	797.5	211.5	49.5	None	99.7
Total Hours	79.5	52.6	56.3	64.7	90.4	37.6	42.7	30.5	454.2	90.4	30.5	None	56.8
Total Miles	287.0	161.5	142.5	144.7	115.6	68.3	84.1	89.5	1,093.2	287.0	68.3	None	136.6
Total Observers in Area	13	14	23	13	20	11	16	14	124	23	11	None	15.5
Total Parties in Area	10	8	12	8	15	9	9	9	80	15	8	None	10.0