

Summary of the 2017 Howard County Fall Count
by Mike McClure and Chuck Stirrat [Revised 2017-10-01]

The twenty fourth annual Howard County Fall Count was conducted on Sept. 16th, 2017 with the count data shown in the table below. This count has turned out to be below average Countywide for the number of bird species but also for the number of birds. For the warblers, the species count was near average while the number of individual warblers continued their slow but sure decline.

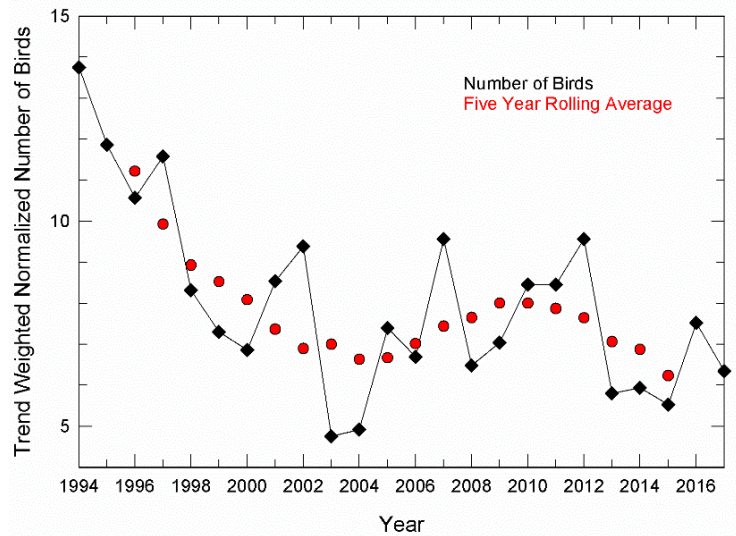
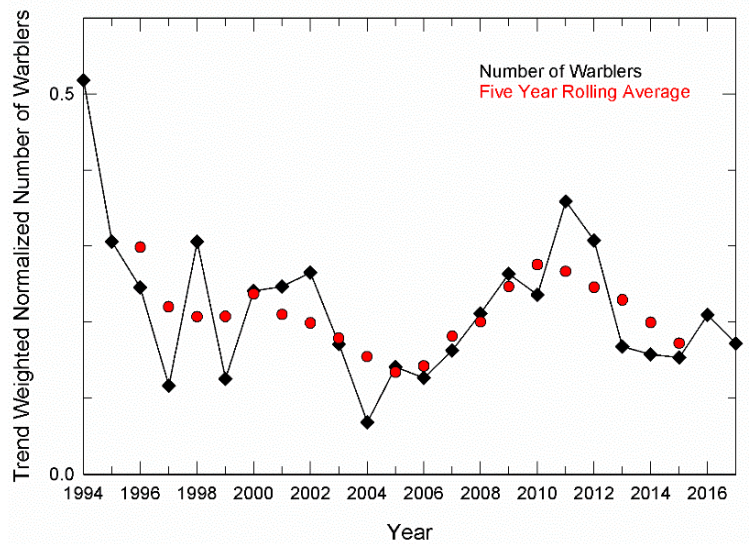
The number of participants, parties, and the overall effort as measured by the hours and miles continues to remain strong in spite of the occasional difficult season with few birds in the field, as was the case this year.

	Observed Birds Countywide		Observed Warblers Countywide		Statistics
	Species	Birds	Species	Birds	
2017 Numbers	123	11,776	22	319	
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	125.13	15,741.29	23.54	432.75	
2017 Counters : Parties					65 : 46
Counters : Parties Averages					54.6 : 33.3
2017 Counters Hours : Miles					229.1 : 524.4
Counters Hours : Miles Averages					195.6 : 404.6

Saturday's temperature started at 59 degrees at 6:00AM with scattered clouds, rising to 87 degrees in late afternoon with increasing cloud cover to total cloud cover until the evening. The morning was comfortable-ish (dew point: 68 degrees) at 6:00AM becoming marginally uncomfortable in the late morning and afternoon with the dew point rising to 74 degrees by late afternoon. Winds were calm during the day.

Counters continue to complain about the lack of birds. This problem is reflected in the data from 24 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. For how long is, of course, unknown. 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. However, this apparent decline [now ongoing for 5 years] may just be the normal variation as the resident local population declines with several difficult winters in a row. Only additional data will answer the question; are we seeing the beginning of another precipitous decline similar to that of the early Fall Count years?

There were 14 species for which there was only one bird sighted countywide and 11 species for which there were only two birds sighted countywide. The single bird sighting remains high but is down from a prior high of 19 in 2015 while the two bird sighting is down from 15 also in 2015. Species showing moderately high numbers (>500) are: European Starling, 1,251; Canada Goose, 1,123; Crows [American+Fish+species], 744; Doves



[Mourning + Rock], 574; Blue Jay, 631; Brown-headed Cowbird, 525; Northern Cardinal, 521; and American Goldfinch, 505.

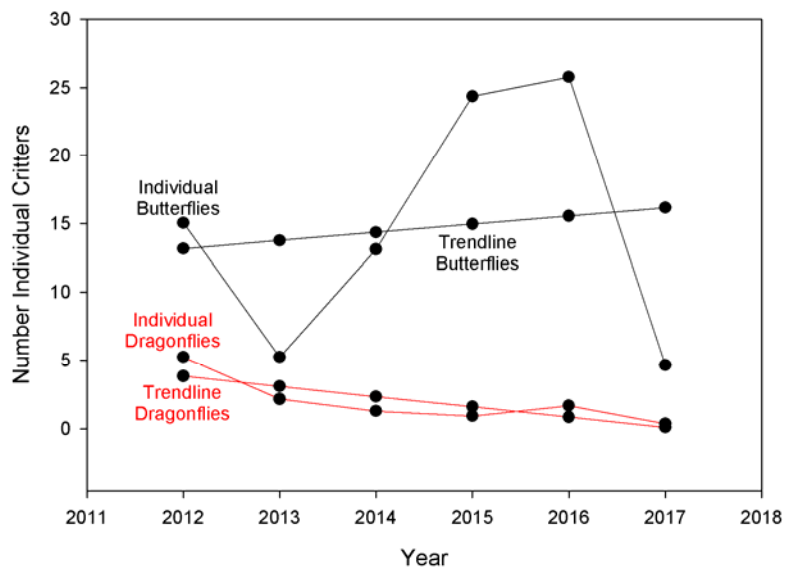
Birds count participants are: Christina Ayala, Jim & Marilyn Brinkley, Mary Lou Clark, Lisa Colangelo, Dennis Coskren, **Jeff Culler (Area 2 Coordinator)**, Ralph Cullison III, David Cummings, Susan & **Wes Earp (Area 1 Co-coordinator)**, Ward Ebert, John Finedore, Jeffrey Friedhoffer, Bryant Gesualdo, John & Meg Harris, **Karen & Kevin Heffernan (Area 3 Co-coordinators)**, Bill & Gayle Hill, Ed Huestis, Clayton Koonce, Della LeConte, Shashi Lengade, **Allen Lewis (Area 7 Coordinator)**, Kathie Lillie, Felicia Lovelett, Rosa Lubitz, Brigitte Lund, **Janet Lydon (Area 6 Coordinator)**, Nancy Mason, Grazina & **Mike McClure (County Co-coordinator & Area 4 Coordinator)**, Anne McEvoy, John McKitterick, Barry Miller, Sue Muller, Diane Nagengast, Sue Neri, Ben Newton, Heidi Osterman, Howard Patterson, Renee, Richard & Ryan Peters, Ron & Susan Polniaszek, Cari Price, Sarah Romero, Russ Ruffing, David & Karen Sandler, **Kurt Schwarz (Area 5 Coordinator)**, Jo Solem, Michelle Stewart, **Chuck Stirrat (County Co-coordinator)**, Eva Sunell, Robin Todd, Sherry Tomlinson, Anthony VanSchoor, **Mark Wallace (Area 1 Co-coordinator)**, Joshua Ward, Tex Wilkins, Michele Wright. **Lastly, a very special thanks to June Tveekrem, who hosted the evening tally.**

For the sixth year counters were given the option to list the species of butterflies, dragonflies and damselflies seen as they were counting birds. A total of 10 people turned in a list: Bill & Gayle Hill; Linda Hunt; Grazina & Mike McClure; Sue Muller; Jo Solem; Janet Lydon, Michele Wright, and Brigitte Lund;. See the table for greater detail.

	Obs. Butterflies Countywide		Obs. Dragonflies Countywide		Statistics
	Species	Butterflies	Species	Dragonflies	
2017 Numbers	27	1,106	11	83	
High:Low	43: 22	2,285: 305	16: 11	142 : 50	
Year 's of High : Low	2016 : 2013	2016 : 2013	2016 : 2017	2012 : 2015	
Averages for Ind. & Species	33.83	1,099.83	13.50	111.83	
2017 Counters : Parties					11 : 9
Counters : Parties Averages					15.7: 10.3
2017 Counters Hours : Miles					37.6 : 68.3
Counters Hours : Miles Averages					63.5 : 153.3

The Butterfly Count was below normal for both the number of species and individuals, respectively. There was only one species of butterflies with >100 individuals sighted; Sachem 798. This year's total sighted individuals, 1,106, is less than half of the 2,285 sightings on last year's count. This decrease is probably due to a combination of fewer counters and parties but also less countywide coverage with only 5 areas reporting results. Also of note, the butterfly trendline is increasing but with data of this variability, a rolling average is really required to properly represent the direction of the trend. At this point there's only six years of data and a five year rolling average would yield two data points or a straight line.

The Dragonfly Count was equally disappointing with even fewer participants then for the butterflies. This year also set a new low for number of species at 11, down from the prior low of 13. For dragonflies, the most abundant species [>10] were: Common White, 16; Common Green Darner, 15; Blue Dasher, 15; and finally, Twelve-spotted Skimmer, 11. Only two areas reported results! Unlike for butterflies, the Dragonfly trendline is decreasing. With only six years of data, it's difficult to draw too much from the graphics.



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

Plan now to join us on a future seasonal count and if possible attend the tally as well. Next year the 2018 Fall Count will be held on the 3rd Saturday of September which will be the 15th.

Howard2017WebTable County Totals

BIRD COUNT - HOWARD CO. Species / Area No.:	Season:		Type:		Area:		Date:		Totals
	1	2	3	4	5	6	7		
Canada Goose	105	163	225	316	218	8	88	1,123	
Wood Duck	13		1	4			2	20	
Mallard	15		26	6	34	8	26	115	
Wild Turkey	4							4	
Pied-billed Grebe						1		1	
Rock Pigeon	27	1		81	1			110	
Mourning Dove	67	91	65	38	8	51	144	464	
Yellow-billed Cuckoo	1		2			1	2	6	
Common Nighthawk	11							11	
Chimney Swift	17	9	5	55		7	23	116	
Ruby-throated Hummingbird	10	3	9	7	3	16	4	52	
Killdeer	31	1		9	8		1	50	
Least Sandpiper	1				1			2	
Spotted Sandpiper				3				3	
Solitary Sandpiper			1	1	1		4	7	
Ring-billed Gull					2	2		4	
<i>gull species</i>							3	3	
Caspian Tern					2			2	
Double-crested Cormorant			1	2	5	1	6	15	
Great Blue Heron	3	2	3	8	7	5	7	35	
Great Egret	1			2			1	4	
Green Heron	2		3	4	4		7	20	
Black-crowned Night-Heron					1			1	
Black Vulture	43	8	27	14	1	15	7	115	
Turkey Vulture	67	10	50	15	10	19	9	180	
Osprey						1	1	2	
Bald Eagle [ad/im/unk]	1						1	2	
Northern Harrier				1				1	
Sharp-shinned Hawk			1					1	
Cooper's Hawk	2	1		1		1	3	8	
<i>accipiter species</i>							2	2	
Red-shouldered Hawk	17	7	10	10	7	6	22	79	
Broad-winged Hawk	5		14		1		4	24	
Red-tailed Hawk	6	2	2	1		3	2	16	
Eastern Screech-Owl			3					3	
Great Horned Owl			6					6	
Barred Owl	3		1			3		7	
Belted Kingfisher	11	2	6	2	3	2	1	27	
Red-headed Woodpecker	1	3						4	
Red-bellied Woodpecker	54	17	35	32	31	11	53	233	
Downy Woodpecker	29	2	19	10	17	13	29	119	
Hairy Woodpecker	13	2	3	2	9	4	1	34	
Northern Flicker	24	5	9	11	10	12	20	91	
Pileated Woodpecker	16	9	6	1	4	4	13	53	
American Kestrel	3	1	4					8	
Eastern Wood-Pewee	13	6	15	3	7	4	8	56	
Yellow-bellied Flycatcher	1							1	
Least Flycatcher			1		1	1		3	
<i>Empidonax species</i>	8	1	1				1	11	
Eastern Phoebe	23	7	11	9	4	2	6	62	
Great Crested Flycatcher		2	1			2		5	
Eastern Kingbird					2			2	

Howard2017WebTable County Totals

BIRD COUNT - HOWARD CO. Species / Area No.:	Season:		Type:		Area:		Date:		Totals
	1	2	3	4	5	6	7		
White-eyed Vireo	1	1	7	1	2	10		22	
Yellow-throated Vireo		2			1		3	6	
Blue-headed Vireo						2		2	
Philadelphia Vireo			1			1		2	
Warbling Vireo						3	1	4	
Red-eyed Vireo	8	1	14	2	10	27	17	79	
Blue Jay	127	34	91	63	77	61	178	631	
American Crow	125	16	88	104	53	24	61	471	
Fish Crow	18		5	25	3		24	75	
<i>crow species</i>	3	1	91	22		34	47	198	
Common Raven			2					2	
Horned Lark		2						2	
Purple Martin	3							3	
Tree Swallow						13	35	48	
Barn Swallow	1							1	
Carolina Chickadee	68	14	34	34	28	50	71	299	
Tufted Titmouse	65	18	27	33	24	36	45	248	
White-breasted Nuthatch	48	15	24	22	19	10	25	163	
House Wren	3	4	6		6	10	8	37	
Marsh Wren					1			1	
Carolina Wren	92	28	43	40	62	33	85	383	
Blue-gray Gnatcatcher	2		6		2	12		22	
Ruby-crowned Kinglet			1	1		1		3	
Eastern Bluebird	128	20	67	23	18	65	25	346	
Veery		3			1			4	
Gray-cheeked Thrush							2	2	
Swainson's Thrush	3					2	5	10	
Wood Thrush	3		1	2	10		1	17	
American Robin	35	7	16	10	35	28	178	309	
Gray Catbird	47	11	81	46	46	63	95	389	
Brown Thrasher	3	4			2	6	2	17	
Northern Mockingbird	29	6	34	10	3	15	34	131	
European Starling	663	96	80	123	73	31	185	1,251	
Cedar Waxwing	35	3	27	1		78	11	155	
House Sparrow	56	6	81	33	46	53	192	467	
House Finch	27	9	42	27	5	54	43	207	
American Goldfinch	219	24	48	47	52	54	61	505	
Ovenbird		1	1			3	1	6	
Worm-eating Warbler					1			1	
Northern Waterthrush	1							1	
Blue-winged Warbler	2					1		3	
Black-&-white Warbler	1		2	2	6	6	5	22	
Prothonotary Warbler	1							1	
Nashville Warbler	1					2		3	
Common Yellowthroat	13	5	8	3	10	20	13	72	
American Redstart	5	4	6	2	4	18	9	48	
Northern Parula	1	3	3			4	5	16	
Magnolia Warbler	6	2	11	5	5	11	12	52	
Bay-breasted Warbler			1		1			2	
Blackburnian Warbler						2		2	
Yellow Warbler				1				1	
Chestnut-sided Warbler	1		4		3	5	1	14	

Howard2017WebTable County Totals

BIRD COUNT - HOWARD CO.	Season:		Type:		Area:		Date:	
Species / Area No.:	1	2	3	4	5	6	7	Totals
Blk.-throtd. Blue Warbler	3		1	1		4	2	11
Palm Warbler	1		2				1	4
Pine Warbler	2		1			1		4
Yel.-rump'd (Myrtle) Warbler							1	1
Prairie Warbler						2		2
Blk.-throtd. Green Warbler	1		6			7	2	16
Wilson's Warbler						1		1
<i>warbler species</i>	20	1	10			3	2	36
Eastern Towhee	15	1	12	3	8	9	6	54
Chipping Sparrow	197	15	66	32	11	13	3	337
Field Sparrow	3	4	3					10
Savannah Sparrow		1	14					15
Grasshopper Sparrow			1					1
Song Sparrow	27	3	7	11	9	18	5	80
Lincoln's Sparrow	1							1
<i>sparrow species</i>	6							6
Scarlet Tanager	2		3			3	1	9
Northern Cardinal	78	20	71	59	85	64	144	521
Rose-breasted Grosbeak			1			1		2
Blue Grosbeak	1					3	3	7
Indigo Bunting	13		2		8	2	6	31
Red-winged Blackbird				3		9	2	14
Eastern Meadowlark			7					7
Brown-headed Cowbird	503	6	10	1		4	1	525
Baltimore Oriole		1	1					2
Area Total Birds:	3,365	747	1,737	1,440	1,132	1,195	2,160	11,776
Area Total Species:	83	58	80	60	64	78	74	123
Area No.:	1	2	3	4	5	6	7	Totals
Supplemental Data								
Time Start:	6:30 a	7:00 a	6:50 a	5:25 a	6:40 a	6:20 a	6:49 a	5:25 a
Time Stop:	8:15 p	12:40 p	6:00 p	5:10 p	3:35 p	3:00 p	11:00 p	11:00 p
Hours on Foot:	37.0	12.3	28.5	23.2	21.2	10.8	35.2	168.2
Hours by Car:	20.3	1.5	2.9	2.3	.4		8.0	35.4
Hours by Boat:								
Hours Other:								
Miles on Foot:	18.0	7.5	23.5	16.6	15.3	8.3	37.6	126.8
Miles by Car:	141.0	40.0	41.5	23.1	44.0		108.0	397.6
Miles by Boat:								
Miles Other:								
Hours Feeder Watching:	3.0			.3		.5	2.0	5.8
Hours Stationary:	11.0			.2	4.0	2.0	.5	17.7
Hours "Owling":	.5		.3			.3		1.1
Miles "Owling":	.3		.3			.3		.9
County Weather	Temperature		%Clouds		Wind (Speed & Dir.)		Precip.(Type & Amt.)	
Dawn	59 ° F		10%		Calm		None	
AM	61 ° F		10%		Calm		None	
Noon	87 ° F		30%		Calm		None	
PM	84 ° F		100%		Calm		Rain in far east	
Dusk	62 ° F		60%		Calm		None	
Comments on Weather:	Dewpoint was in 68-74 degree range during the day; stuffy & uncomfotable.							
(.e.g amount of ice, fog, etc.)								

Howard2017WebTable County Totals

BIRD COUNT - HOWARD CO.	Season: Fall		Type: Regular		Area: Howard		Date: 9/16/2017	
Species / Area No.:	1	2	3	4	5	6	7	Totals
Area Code:	1	2	3	4	5	6	7	Totals
Deer Seen:	25	3	19	NA	5	11	20	83
Total Observers in Area:	12	7	12	5	11	8	15	65
Total Parties in Area:	8	3	6	4	7	7	11	46
Total Party-Hours (Reg.):	57.3	13.8	31.4	25.5	21.6	10.8	43.2	203.6
Tot. Party Hours (Feeder Watch):	3.0			.3		.5	2.0	5.8
Total Party-Hours (Station'y):	11.0			.2	4.0	2.0	.5	17.7
Total Party-Hours (Owling):	.5		.3			.3		1.1
Total Party-Hours:	71.8	13.8	31.7	25.9	25.6	13.6	45.7	228.1
Total Party-Miles:	159.3	47.5	65.3	39.7	59.3	8.6	145.6	525.3
Area No.:	1	2	3	4	5	6	7	Totals

Fall Count Butterfly Dragonfly Results, September 16, 2017

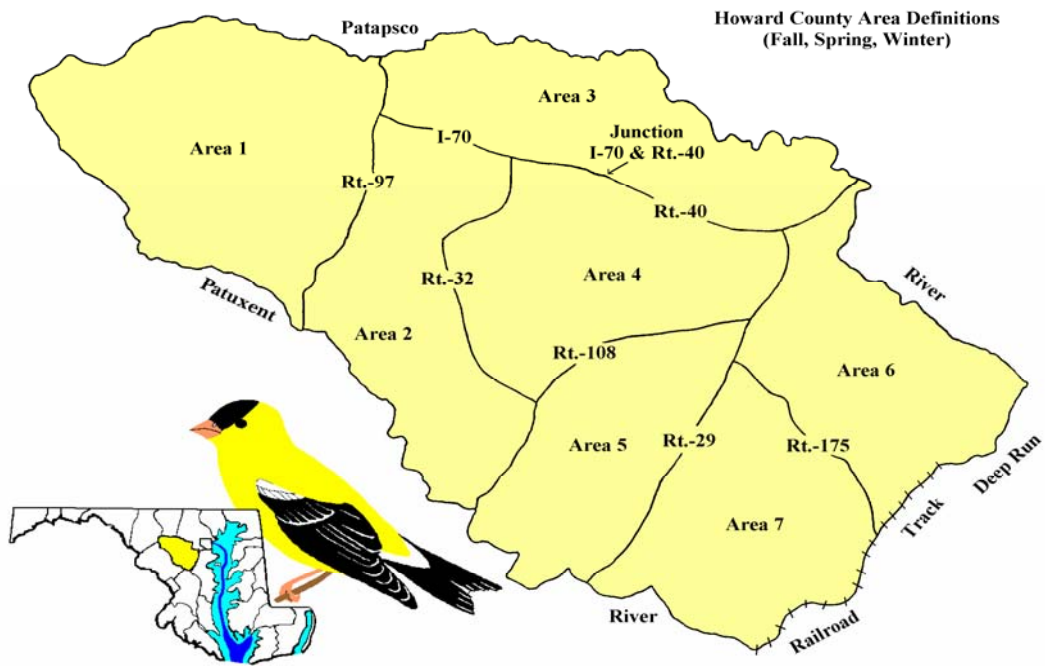
Butterflies & Moths*	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Totals
Admiral, Red								
Azure, Summer				3	1		1	5
Buckeye, Common	6			11				17
Checkered-Skipper, Common								
Checkerspot, Silvery								
Cloak, Mourning								
Comma, Eastern								
Copper, American								
Crescent, Pearl				27	1		2	30
Duskywing, Horace's								
Duskywing, Wild Indigo								
Fritillary, Great Spangled				1				1
Fritillary, Meadow								
Fritillary, Variegated	1			1		1	1	4
Geometer, Chickweed								
Glassywing, Little				1				1
Hairstreak, Gray	1			2			2	5
Hairstreak, Red-banded								
Hairstreak, White M								
Lady, American	1						1	2
Lady, Painted	1			4	1			6
Mark, Question								
Monarch	5			3		3	1	12
Moth, Ailanthus Webworm								
Moth, Fall Webworm [Caterpillar]								
Moth, Henry's Marsh [Caterpillar]							2	2
Moth, Salt Marsh [Catapillar]								
Moth, Yellow-striped Armyworm								
Orange, Sleepy							1	1
Pearly-eye, Northern								
Purple, Red-spotted	1							1
Sachem	200			530	30		38	798
Skipper, Clouded								
Skipper, Dun								
Skipper, Fiery					1			1
Skipper, Least	1			45			4	50
Skipper, Long-tailed								
Skipper, Ocola								
Skipper, Peck's				9	10		4	23
Skipper, Silver-spotted	2			3				5
Skipper, Swarthy								
Skipper, Tawny-edged								
Skipper, Zabulon								
Snout, American								
Sulphur, Clouded	2				3		3	8
Sulphur, Cloudless					1			1
Sulphur, Orange	2			7			1	10
Swallowtail, Black	1							1
Swallowtail, Eastern Tiger	2			2				4
Swallowtail, Giant								
Swallowtail, Pipeline								
Swallowtail, Spicebush	1			11			1	13
Swallowtail, Zebra								
Tailed-Blue, Eastern	5			5			3	13
Viceroy	1			1				2
White, Cabbage	10			59			6	75
Wood-Nymph, Common								
unidentified species				15				15
Total Individuals	243	0	0	740	48	4	71	1,106
Total Species	18	0	0	19	8	2	16	27

Fall Count Butterfly Dragonfly Results, September 16, 2017

Dragonflies & Damselflies*	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Totals
Amberwing, Eastern				3				3
Bluet, Familiar				3				3
Bluet, Skimming				1				1
Dancer, Blue-fronted								
Dancer, Seepage								
Darner, Common Green				15				15
Darner, Shadow								
Darner, Fawn								
Dasher, Blue				14			1	15
Forktail, Eastern								
Forktail, Fragile								
Glider, Spot-winged								
Glider, Wandering								
Meadowhawk, Autumn				4				4
Meadowhawk, Blue-faced								
Pennant, Halloween								
Pondhawk, Eastern				7			1	8
Saddlebags, Black				6				6
Saddlebags, Carolina								
Skimmer, Twelve-spotted				11				11
Skimmer, Slaty				1				1
Skimmer, Widow								
Whitetail, Common				16				16
<i>unidentified species</i>								
<i>Total Individuals</i>				81			2	83
<i>Total Species</i>				11			2	11

Fall Count Butterfly Dragonfly Results, September 16, 2017

Information [Required]	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Totals
Hours by Foot	7.5			15.7	0.2	3.6	6.5	33.5
Hours by Car	1.6			1.5		0.5	0.5	4.1
Miles by Foot	3.0			9.5	0.3	2.5	3.5	18.8
Miles by Car	15.0			15.0		1.5	18.0	49.5
Total Observers in Area	2			2	1	3	3	11
Total Parties in Area	2			2	1	2	2	9
Names of Observers	Address						Phone Number	



*Comments/Write-ins	
Area 1	Hill, Bill & Gayle
Area 2	
Area 3	
Area 4	Grazina & Mike McClure
Area 5	Hunt, Linda
Area 6	Lydon, Janet; Wright, Michele; Lund, Brigitte
Area 7	Hunt, Linda; Muller, Sue; Solem, Jo

2012-2017 Fall Count, Cumulative Results

Butterflies & Moths*	2012	2013	2014	2015	2016	2017	Sum	Max	Min	Misses	Average
Admiral, Red	6			2	2		10	6	2	3	1.7
Azure, Summer	2			6	11	5	24	11	2	2	4.0
Buckeye, Common	18	3	96	98	140	17	372	140	3	None	62.0
Checkered-Skipper, Common	4	1	1	12	5		23	12	1	1	3.8
Checkerspot, Silvery	2						2	2	2	5	.3
Cloak, Mourning			2				2	2	2	5	.3
Comma, Eastern	1	9	1	2	2		15	9	1	1	2.5
Copper, American				1	1		2	1	1	4	.3
Crescent, Pearl	69	10	70	114	395	30	688	395	10	None	114.7
Duskywing, Horace's	1			1	2		4	2	1	3	.7
Duskywing, Wild Indigo		1	13	5	18		37	18	1	2	6.2
Fritillary, Great Spangled	2		4	8	1	1	16	8	1	1	2.7
Fritillary, Meadow	3		2	21	3		29	21	2	2	4.8
Fritillary, Variegated	14	14	26	92	59	4	209	92	4	None	34.8
Geometer, Chickweed	1		4	1			6	4	1	3	1.0
Glassywing, Little					1	1	2	1	1	4	.3
Hairstreak, Gray	2		3	4	5	5	19	5	2	1	3.2
Hairstreak, Red-banded	5		2		5		12	5	2	3	2.0
Hairstreak, White M	2	1			2		5	2	1	3	.8
Lady, American			3	2	3	2	10	3	2	2	1.7
Lady, Painted	6		4	1	1	6	18	6	1	1	3.0
Mark, Question			1				1	1	1	5	.2
Monarch	47	7	67	49	75	12	257	75	7	None	42.8
Moth, Ailanthus Webworm	1		1	2	1		5	2	1	2	.8
Moth, Fall Webworm [Caterpillar]		7					7	7	7	5	1.2
Moth, Henry's Marsh [Caterpillar]		2				2	4	2	2	4	.7
Moth, Salt Marsh [Catapillar]		8					8	8	8	5	1.3
Moth, Yellow-striped Armyworm	1				30		31	30	1	4	5.2
Orange, Sleepy				1	4	1	6	4	1	3	1.0
Pearly-eye, Northern	1	2		1	2		6	2	1	2	1.0
Purple, Red-spotted	8		2	4	13	1	28	13	1	1	4.7
Sachem	11	21	216	210	240	798	1,496	798	11	None	249.3
Skipper, Clouded	2			1			3	2	1	4	.5
Skipper, Dun			1				1	1	1	5	.2
Skipper, Fiery	5			7	5	1	18	7	1	2	3.0
Skipper, Least	11	28	103	30	152	50	374	152	11	None	62.3
Skipper, Long-tailed	1						1	1	1	5	.2
Skipper, Ocola				7	3		10	7	3	4	1.7
Skipper, Peck's	4		4	111	82	23	224	111	4	1	37.3
Skipper, Silver-spotted	2		8	20	13	5	48	20	2	1	8.0
Skipper, Swarthy					1		1	1	1	5	.2
Skipper, Tawny-edged			1	9			10	9	1	4	1.7
Skipper, Zabulon			4	2			6	4	2	4	1.0
Snout, American					2		2	2	2	5	.3
Sulphur, Clouded	21	47	38	134	47	8	295	134	8	None	49.2
Sulphur, Cloudless	2		5	3	10	1	21	10	1	1	3.5
Sulphur, Orange	12	33	113	68	60	10	296	113	10	None	49.3
Swallowtail, Black			1	1	2	1	5	2	1	2	.8
Swallowtail, Eastern Tiger	15	4	4	23	22	4	72	23	4	None	12.0
Swallowtail, Giant			1				1	1	1	5	.2
Swallowtail, Pipeline										6	.0
Swallowtail, Spicebush	2	2	3	1	13	13	34	13	1	None	5.7
Swallowtail, Zebra					1		1	1	1	5	.2
Tailed-Blue, Eastern	11	12	111	56	469	13	672	469	11	None	112.0
Viceroy	3	3	8	6	1	2	23	8	1	None	3.8
White, Cabbage	100	89	164	119	378	75	925	378	75	None	154.2
Wood-Nymph, Common	1	1			1		3	1	1	3	.5
unidentified species	8		124	50	2	15	199	124	2	1	33.2
Total Individuals	407	305	1,211	1,285	2,285	1,106	6,599	2,285	305	None	1,099.8
Total Species	37	22	35	39	43	27	203	43	22	None	33.8

2012-2017 Fall Count, Cumulative Results

Dragonflies & Damselflies*	2012	2013	2014	2015	2016	2017	Sum	Max	Min	Misses	Average
Amberwing, Eastern				1	23	3	27	23	1	3	4.5
Bluet, Familiar		1	5		1	3	10	5	1	2	1.7
Bluet, Skimming		2		1		1	4	2	1	3	.7
Dancer, Blue-fronted					1		1	1		4	.2
Dancer, Seepage		12				0	12	12		4	2.0
Darner, Common Green	35	79	62	19	19	15	229	79	15	None	38.2
Darner, Shadow				1	1		2	1		3	.3
Darner, Fawn	2	3	1	1			7	3		1	1.2
Dasher, Blue	3	6	1	1	35	15	61	35	1	None	10.2
Forktail, Eastern					20		20	20		4	3.3
Forktail, Fragile	10	2	2	1	3		18	10		None	3.0
Glider, Spot-winged					5		5	5		4	.8
Glider, Wandering	4	1	4	4	2		15	4		None	2.5
Meadowhawk, Autumn	15	1	1	1		4	22	15	1	1	3.7
Meadowhawk, Blue-faced		1					1	1	1	5	.2
Pennant, Halloween	1						1	1		4	.2
Pondhawk, Eastern	21	2	8	3	5	8	47	21	2	None	7.8
Saddlebags, Black	20	9	12	6	27	6	80	27	6	None	13.3
Saddlebags, Carolina	1						1	1		4	.2
Skimmer, Twelve-spotted	4	1	8	7	1	11	32	11	1	None	5.3
Skimmer, Slaty					1	1	2	1	1	4	.3
Skimmer, Widow	10	2	1	1	1		15	10		None	2.5
Whitetail, Common	16	4	15	3	5	16	59	16	3	None	9.8
unidentified species										6	.0
Total Individuals	142	126	120	50	150	83	671	150	50	None	111.8
Total Species	13	15	12	14	16	11	81	16	11	None	13.5

Information [Required]	2012	2013	2014	2015	2016	2017	Sum	Max	Min	Misses	Average
Hours by Foot	54.7	46.7	39.1	54.4	84.4	33.5	312.8	84.4	33.5	None	52.1
Hours by Car	24.8	5.9	17.2	10.3	6.0	4.1	68.3	24.8	4.1	None	11.4
Miles by Foot	75.5	31.7	42.0	34.5	52.8	18.8	255.3	75.5	18.8	None	42.6
Miles by Car	211.5	129.8	100.5	110.2	62.8	49.5	664.3	211.5	49.5	None	110.7
Total Hours	79.5	52.6	56.3	64.7	90.4	37.6	381.1	90.4	37.6	None	63.5
Total Miles	287.0	161.5	142.5	144.7	115.6	68.3	919.6	287.0	68.3	None	153.3
Total Observers in Area	13	14	23	13	20	11	94	23	11	None	15.7
Total Parties in Area	10	8	12	8	15	9	62	15	8	None	10.3