

Pennsylvania Raptor Migration Summary - Spring 2018

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Weather is intimately influential on the hawkwatchers' quarry, the migrating hawk. Long-term climate patterns and air mass movements also have complex impacts, affecting winds and counts often in unanticipated ways. In spring 2018, Pennsylvania observed slightly below-normal temperatures while precipitation was above average for most of the state and regions south along the Appalachians (www.ncdc.noaa.gov). These patterns may have challenged north-bound migrating raptors and could have dispersed flights in both time and geographic extent. In contrast, warmer than usual temperatures and lower precipitation and storm frequency in Texas and nearby regions may have allowed faster than usual movement north for long-distance migrants such as the Broad-winged Hawk and Peregrine Falcon (www.nrcc.cornell.edu/regional).

Migration Summary

In spring 2018, eight Pennsylvania watch sites counted 23,607 hawks in 1604 hours and 247 days for 14.7 hawks per hour overall. With the new and traditional sites, statewide count hours were 28% above the average spring effort of 1245 hours. Pennsylvania welcomed one new site in Fayette County, the Summit Mountain watch site on Chestnut Ridge, a private, non-public site, while two traditionally fall watch sites added a few spring hours, Freedom Area Watch in Beaver County and Stateline Woods Preserve in Chester County.

Total spring raptors were 6% above the 10-year average of 22,336 hawks statewide (Table 1), primarily driven by an upswing in Turkey Vulture counts, 15,963 compared to a ten-year average of 12,844. The only other species showing well-above-average counts was Bald Eagle, with 381 counted compared to 237 for the ten-year average. Despite the increased statewide effort, counts of other raptors varied from about

average to 73% below the ten-year average (Table 2). Counts of the three most numerous migrants, Broad-winged (4075), Sharp-shinned (876), and Red-tailed Hawks (836), were 12%, 32%, and 36% below the ten-year averages for the state, respectively. The Northern Goshawk spring counts reflected the dearth of birds seen in Pennsylvania during autumn 2017, with only two spring sightings across the eight sites, compared to an average of 7.5 sightings. The Golden Eagle, a flagship species for spring watch sites, was 35% below the ten-year average, with 187 counted compared to the average of 292. The Golden Eagle count was the lowest statewide since 2006. Inclement weather on many days during peak Golden Eagle migration period is one possible reason for the dip in numbers.

On a positive note, two species showing long-term declines as migrants (see rpi-project.org) showed near-average counts, with 141 Northern Harriers and 381 American Kestrels counted across all sites; the latter was 3% above the average (Table 2).

Site Highlights

Allegheny Front (Somerset/Bedford) – Allegheny Front counters tallied 926 hawks in 285 hours on 50 days from 2/13 to 5/5, a rate of 3.3 hawks per hour (Table 1, 2). Total raptors were 27% below the ten-year average. The total of 477 Broad-winged Hawks was 41% above the ten year-average of 377 (Table 2). Golden Eagles also sailed north in lower than average numbers with 35 counted compared to the ten-year average of 67 (Table 2). Allegheny Front daily counts were low through mid-March. March 19th brought the first notable flight - 59 hawks including 10 Golden Eagles, 8 adults and 2 immature birds (Table 1). Another push occurred 3/24-25, with nine Golden Eagles counted during that two-day period along with a lone Bald Eagle. Daily

flights increased during the second week of April as Broad-winged Hawks were seen nearly every day. During 4/21-22, watchers counted season peak numbers of 141 and 291 total hawks, respectively. Southeast winds on 4/22 brought the highest one-day count and highest diversity for the season with 11 species heading north dominated by 242 Broad-winged Hawks and accompanied by 15 Osprey, 12 Sharp-shinned Hawks and the last Golden Eagle of the spring.

Delaware Nature Society Kite Watch at Bucktoe Preserve (Chester) - A second year for a special late spring watch for kites and shorebirds in southeastern Pennsylvania at Bucktoe Preserve recorded 3 hawks in 20 days and 164 hours of counts between 5/17 and 6/6 (Table 1, 2). Mississippi Kites were recorded 5/18 and 5/22, one age unknown and one adult. An Osprey was recorded 5/25. Counts were lower than in 2017 when 13 hawks were counted including 6 Mississippi Kites; however, the kite count was higher than any other site in the state.

Freedom Area Hawk Watch (Beaver) – A new site in Beaver County tallied 16 hawks in 2 hours over two days for 16 raptors per hour (Table 1). Totals included 13 Turkey Vultures, one Bald Eagle, one Osprey, and one Red-tailed Hawk--promising numbers suggesting great potential for this site in the future!

Hawk Mountain (Berks/Schuylkill) – Hawk Mountain counters tallied 569 hawks in 333 hours and 37 days between 3/19 and 5/5 for 1.7 hawks per hour (Table 1, 2). Despite rain, snow, and fog limiting coverage on 13 days, Hawk Mountain had above-average coverage. Total spring counts dipped 38% below the ten-year average with most species lower than average (Table 2). Light north winds brought the season-peak one-day count on 4/21 with 81 hawks of 10 species tallied by Hawk Mountain trainees. The days' highlights included 55 Broad-winged Hawks, 7 Ospreys, and a Merlin. On 4/28, south winds brought the second-highest one-day count, with 51 Broad-winged Hawks, 9 Ospreys, and a Peregrine Falcon among 66 total hawks.

Presque Isle (Erie) – Presque Isle counters recorded 20,326 hawks in 175 hours of counts between 2/27 and 5/31, for 116 hawks per hour (Table 1, 2). The Lake Erie watch site usually records the highest count statewide, and in 2018 it did not disappoint. Species counts were above-average for Turkey Vulture, Osprey, Bald Eagle, Northern Harrier, and American Kestrel, whereas counts of Sharp-shinned, Broad-

Table 1. Pennsylvania watchsites reporting in spring 2018

Site	Hours	Total Raptors	Raptors/Hour
Allegheny Front	285.3	926	3.3
DNS at Bucktoe	164.0	3	0.02
Freedom Area	1.0	16	16.0
Hawk Mountain	241.5	569	1.7
Presque Isle	175.0	20,326	116.2
Summit Mountain	18.8	85	8.5
TLCs at Stateline Woods Preserve	8.5	0	0
Tussey Mountain	408.5	1,301	3.2
State Total	1,604	23,607	14.7

Table 3. Peak One-day Counts for Spring 2018.

Site	Golden Eagle		Broad-winged Hawk	
	Peak Count	Date	Peak Count	Date
Allegheny Front	10	Mar 19	242	Apr 22
DNS at Bucktoe	-	-	-	-
Freedom Area	-	-	-	-
Hawk Mountain	1	Apr 1	55	Apr 21
Presque Isle	-	-	872	Apr 24
Summit	-	-	1	Apr 12
TLC at Stateline Woods Preserve	--	-	-	-
Tussey Mountain	15	Mar 30	94	Apr 23

winged, and Red-tailed Hawks were below-average (Table 2). Southwest winds on 3/31 brought a record one-day count with watchers tallying 4204 Turkey Vultures, along with 16 Bald Eagles, 50 Red-shouldered Hawks, 26 American Kestrels, and a total raptor count of 4365. Another push of vultures arrived on the lake shore 4/2 with 2425 parading north along with 3 Bald Eagles. Southeast winds on 4/23 brought Presque Isle watchers the highest total daily count for the season with 1408 hawks tallied including 512 Turkey Vultures, 615 Broad-winged Hawks, and 65 American Kestrels. The following day brought 872 Broad-winged Hawks, the highest one-day count for the site and the state (Table 3), and the highest one-day total for Sharp-shinned Hawks at 160, among a total of 1271 migrating hawks. The last big day for the season was 5/9 when southwest winds ushered 612 hawks over the watch site including 539 Turkey Vultures, 19 Bald Eagles, and 25 Broad-winged Hawks.

Summit Mountain (Fayette)-Summit Mountain recorded 85 hawks in 19 hours and 4 days of counts in March and April for 8.5 hawks per hour (Table 1). The highest one-day count occurred 3/31 when southeast winds brought 48 Turkey Vultures, 10 Red-tailed Hawks, and 2 Red-shouldered Hawks northbound past the site among a total of 69 hawks, a large proportion of the total tally (Table 2). Summit Mountain counts in 2018 suggest Pennsylvania’s southwestern ridges may reveal some untapped bounty for spring hawk-watching.

TLC’s Hawkwatch at Stateline Woods Preserve (Chester) - Stateline Woods Preserve watchers counted 0 hawks in 8.5

hours of counting on 6/5 although other birds were sighted. We wish them better luck in 2019’s raptor count!

Tussey Mountain (Centre) – Tussey Mountain hawk watchers counted 1301 hawks in 409 hours and 55 days of counting from 2/20 to 4/25, the second-highest season count in the state, resulting in 3.2 hawks per hour (Table 1). The count was 30% below the ten-year average of 1880 total hawks (Table 2), with above-average counts for Turkey Vulture (210) and Bald Eagle (84) but lower than average counts for most other species, including 150 Golden Eagles, compared to the ten-year average of 224 eagles. Broad-winged Hawks (381) were 37% below the ten-year average. The highest one-day count of Golden Eagles, 15, passed the site on 3/30 along with 6 Bald Eagles and 30 Turkey Vultures amid 74 total raptors. Overcast skies prevented aging six of the Golden on this day but the remainder was a mix of adults and immatures. Counters recorded four additional days in March with 10 or more Golden Eagles heading north. Tussey Mountain counted its highest one-day count of 117 hawks on 4/23 including 94 Broad-winged Hawks, 7 Ospreys, 8 Sharp-shinned Hawks, and a late Golden Eagle (Table 3).

Conclusions

In spring 2018, hawk-watchers extended their survey efforts to explore new sites, particularly in the western counties, suggesting possible new places for birdwatchers to explore in spring 2019. Hourly counts averaged above 14 birds per hour, a respectable count rate comparable to autumn totals. Lake shore and central ridges showed the highest counts, similar to prior

years. Counters statewide persevered through above-average rainfall to chronicle the north-bound migration and found eagles and other raptors pushing north in and around storms, sometimes showing delayed migration compared to other years. Although total counts were lower than average, hopeful highlights were found in American Kestrel numbers sighted returning north along Lake Erie and the continuing increase in Bald Eagles and vultures.

Acknowledgments

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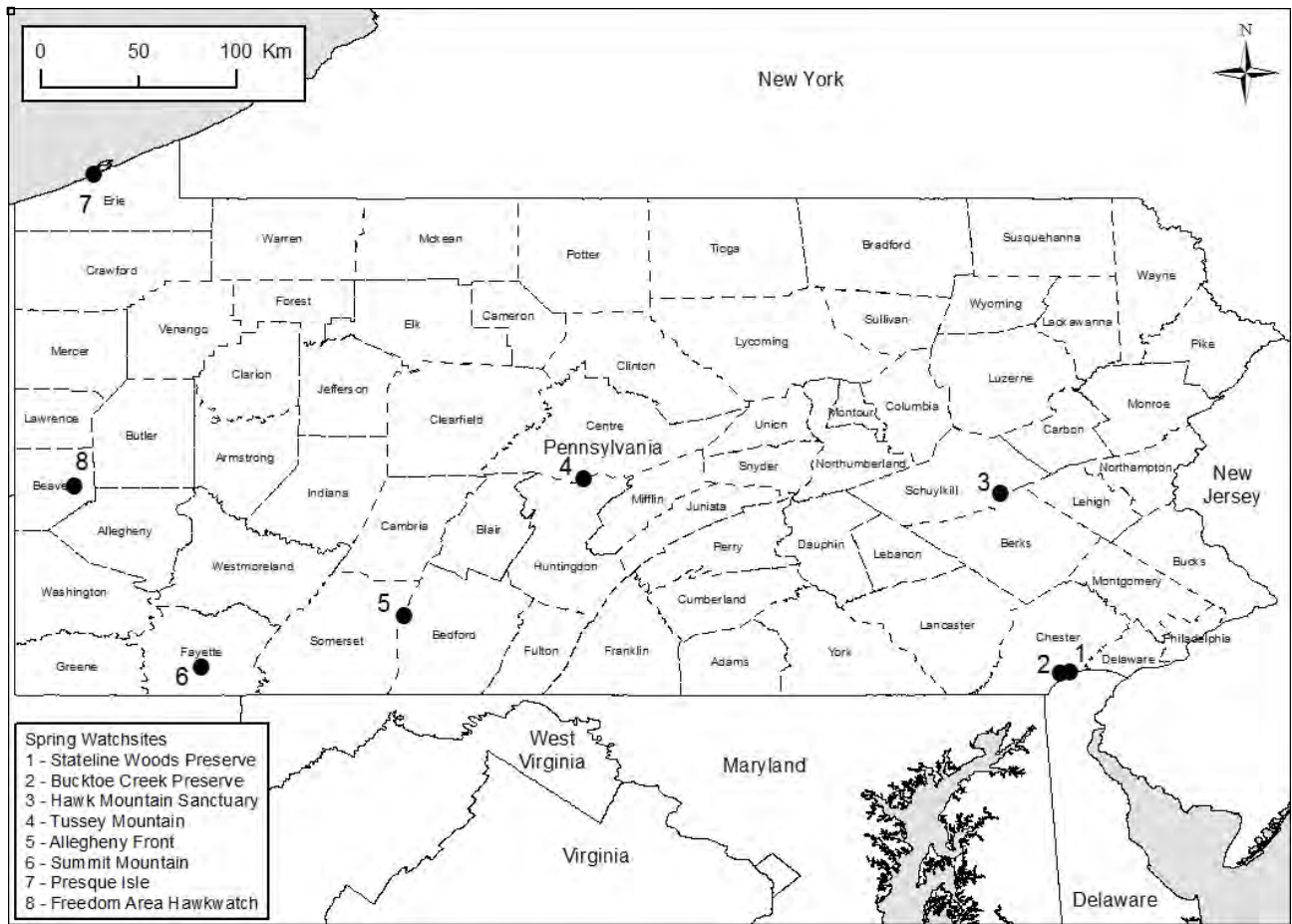


Table 2. Spring 2018 count results for Pennsylvania watchsites.

ALLEGHENY FRONT (Bedford) - Bob Stewart, compiler																						
Month	Days	Hours	BLVU	TUVU	OSPR	BAEA	NOHA	SSHA	COHA	NOGO	RSHA	BWHA	RTHA	RLHA	GOEA	AMKE	MERL	PEFA	MIKI	Unid	Total	
February	7	32.3	0	26	0	0	1	1	4	1	4	0	19	0	3	0	0	0	0	0	4	63
March	18	106.0	2	58	0	3	1	7	6	0	6	0	43	0	29	6	0	0	0	0	4	165
April	23	143.5	3	28	42	2	1	37	15	0	6	477	61	3	3	2	2	1	0	0	18	698
May	2	3.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	50	285.3	5	112	42	5	3	45	25	1	16	477	123	0	35	8	2	1	0	26	926	
Total per hr			0.02	0.39	0.15	0.02	0.01	0.16	0.09	0.00	0.06	1.67	0.43	0.00	0.12	0.03	0.01	0.00	0.00	0.09	3.25	
% of flight			0.5	12.1	4.5	0.5	0.3	4.9	2.7	0.1	1.7	51.5	13.3	0.0	3.8	0.9	0.2	0.1	0.0	2.8	100.0	
Average last 10 yrs	56.9	359.0	11.8	203.5	65.8	18.8	15.4	117.1	51.2	4.5	31.5	336.7	281.4	0.6	67.3	18.7	4.7	2.4	0.0	44.5	1279.9	

DELAWARE NATURE SOCIETY KITE WATCH AT BUCKTOE PRESERVE (Chester) - Larry Lewis, compiler																						
Month	Days	Hours	BLVU	TUVU	OSPR	BAEA	NOHA	SSHA	COHA	NOGO	RSHA	BWHA	RTHA	RLHA	GOEA	AMKE	MERL	PEFA	MIKI	Unid	Total	
May	15	124.0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	3
June	5	40.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	20	164	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	3	
Total per hr			0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.02	
% of flight			0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.7	0.0	100.0	
Average last 10 yrs																						

FREEDOM AREA HAWK WATCH (Beaver) - Brian Wargo, compiler																						
Month	Days	Hours	BLVU	TUVU	OSPR	BAEA	NOHA	SSHA	COHA	NOGO	RSHA	BWHA	RTHA	RLHA	GOEA	AMKE	MERL	PEFA	MIKI	Unid	Total	
April	1	0.5	0	1	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	4
May	1	0.5	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Total	2	1	0	13	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	16	
Total per hr			0.00	13.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.00	
% of flight			0.0	81.3	6.3	6.3	0.0	0.0	0.0	0.0	0.0	0.0	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	
Average last 10 yrs																						

HAWK MOUNTAIN (Berks/Schuylkill) - Luca Dehelean and Laurie Goodrich, compilers																					
Month	Days	Hours	BLVU	TUVU	OSPR	BAEA	NOHA	SSHA	COHA	NOGO	RSHA	BWHA	RTHA	RLHA	GOEA	AMKE	MERL	PEFA	MIKI	Unid	Total
March	2	4.4	0	4	0	1	1	2	2	0	0	0	5	0	0	1	0	1	0	4	21
April	23	131.4	14	9	38	18	13	35	19	0	1	252	31	0	2	9	2	2	0	47	492
May	12	197.4	3	1	10	4	3	5	3	0	1	16	6	0	0	2	0	0	0	2	56
Total	37	333.3	17	14	48	23	17	42	24	0	2	268	42	0	2	10	4	3	0	53	569
Total per hr			0.09	0.04	0.14	0.07	0.05	0.13	0.07	0.00	0.01	0.80	0.13	0.00	0.01	0.03	0.01	0.01	0.00	0.16	1.71
% of flight			3.0	2.5	8.4	4.0	3.0	7.4	4.2	0.0	0.4	47.1	7.4	0.0	0.4	1.8	0.7	0.5	0.0	9.3	100.0
Average last 10 yrs	42.8	241.5	38.7	37.6	83.8	37.2	23.2	90.2	39.5	0.5	7.5	348.3	92.8	0.3	2.2	18.6	4.2	1.9	0.0	84.1	910.8

PRESQUE ISLE (Erie) - Jerry McWilliams, compiler																					
Month	Days	Hours	BLVU	TUVU	OSPR	BAEA	NOHA	SSHA	COHA	NOGO	RSHA	BWHA	RTHA	RLHA	GOEA	AMKE	MERL	PEFA	MIKI	Unid	Total
February	1	0.8	0	6	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	8
March	16	48.3	0	6125	2	s	4	16	7	1	123	0	157	0	0	30	3	2	0	3	6504
April	20	74.3	0	7778	77	53	67	569	5	0	12	2270	183	0	0	263	8	3	0	7	11295
May	14	51.8	0	1522	23	130	10	70	3	0	0	678	53	2	0	17	1	1	0	9	2519
Total	51	175	0	15431	102	214	81	655	16	1	135	2948	394	2	0	310	12	6	0	19	20326
Total per hr			0.00	88.18	0.58	1.22	0.46	3.74	0.09	0.01	0.77	16.85	2.25	0.01	0.00	1.77	0.07	0.03	0.00	0.11	116.15
% of flight			0.0	75.9	0.5	1.1	0.4	3.2	0.1	0.0	0.7	14.5	1.9	0.0	0.0	1.5	0.1	0.0	0.0	0.1	100.0
Average last 10 yrs	59.8	194.5	0.6	12365.6	80.6	124.7	72.9	890.5	73.9	1.0	213.1	3297.9	582.6	18.8	1.2	291.7	12.2	7.4	0.0	40.3	18076.6

SUMMIT MOUNTAIN (Fayette) - Peter Everett Livengood, compiler

Month	Days	Hours	BLVU	TUVU	OSPR	BAEA	NOHA	SSHA	COHA	NOGO	RSHA	BWHA	RTHA	RLHA	GOEA	AMKE	MERL	PEFA	MIKI	Unid	Total
March	2	10.0	0	54	1	2	0	3	1	0	2	0	12	0	0	1	0	0	0	3	79
April	2	8.8	0	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	6
Total	4	18.75	0	57	1	2	0	3	1	0	2	1	12	0	0	1	0	0	0	5	85
Total per hr			0.00	3.04	0.05	0.11	0.00	0.16	0.05	0.00	0.11	0.05	0.64	0.00	0.00	0.05	0.00	0.00	0.00	0.27	4.53
% of flight			0.0	67.1	1.2	2.4	0.0	3.5	1.2	0.0	2.4	1.2	14.1	0.0	0.0	1.2	0.0	0.0	0.0	5.9	100.0
Average last 10 yrs																					

TLC's S. CHESTER COUNTY HAWKWATCH AT STATELINE WOODS PRESERVE (Chester) - Larry Lewis, compiler

Month	Days	Hours	BLVU	TUVU	OSPR	BAEA	NOHA	SSHA	COHA	NOGO	RSHA	BWHA	RTHA	RLHA	GOEA	AMKE	MERL	PEFA	MIKI	Unid	Total
June	1	8.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	8.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total per hr			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
% of flight																					
Average last 10 yrs																					

TUSSEY MOUNTAIN (Centre) - Nick Bolgiano, compiler

Month	Days	Hours	BLVU	TUVU	OSPR	BAEA	NOHA	SSHA	COHA	NOGO	RSHA	BWHA	RTHA	RLHA	GOEA	AMKE	MERL	PEFA	MIKI	Unid	Total
February	6	39.5	8	75	0	16	3	3	0	0	7	0	27	0	31	0	0	0	0	7	177
March	27	209.3	2	126	14	52	15	32	6	0	24	0	90	0	109	18	1	1	0	19	509
April	22	159.8	0	9	39	16	7	64	1	0	1	381	57	0	16	3	0	0	0	11	615
Total	55	408.5	10	210	53	84	25	99	7	0	32	381	174	0	150	34	4	1	0	37	1301
Total per hr			0.02	0.51	0.13	0.21	0.06	0.24	0.02	0.00	0.08	0.93	0.43	0.00	0.37	0.08	0.01	0.00	0.00	0.09	3.18
% of flight			0.8	16.1	4.1	6.5	1.9	7.6	0.5	0.0	2.5	29.3	13.4	0.0	11.5	2.6	0.3	0.1	0.0	2.8	100.0
Average last 10 yrs	55.2	394.4	22.3	196.9	87.3	41.8	27.2	182.0	46.5	1.5	47.6	603.8	348.4	3.1	223.6	34.6	5.2	2.2	0.0	26.9	1879.9

2018 TOTALS FOR ALL WATCHSITES

Month	Days	Hours	BLVU	TUVU	OSPR	BAEA	NOHA	SSHA	COHA	NOGO	RSHA	BWHA	RTHA	RLHA	GOEA	AMKE	MERL	PEFA	MIKI	Unid	Total**
February	14	72.5	8	107	0	16	4	4	5	1	11	0	47	0	34	0	0	0	0	11	248
March	92	587.2	6	6493	31	141	36	92	28	1	179	0	397	0	138	74	5	5	0	33	7659
April	91	518.2	17	7828	197	90	88	705	40	0	20	3381	333	0	15	290	15	6	0	85	13110
May	44	377.2	3	1535	34	134	13	75	6	0	1	694	59	2	0	17	3	1	2	11	2590
June	6	48.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	247	1604	34	15963	262	381	141	876	79	2	211	4075	836	2	187	381	23	12	2	140	23607
Total per hr.			0.0	10.0	0.2	0.2	0.1	0.5	0.0	0.0	0.1	2.5	0.5	0.0	0.1	0.2	0.0	0.0	0.0	0.1	14.7
% flight			0.1	67.6	1.1	1.6	0.6	3.7	0.3	0.0	0.9	17.3	3.5	0.0	0.8	1.6	0.1	0.1	0.0	0.6	100.0
Average last 10 yrs.	224.2	1244.5	73.6	12484	329.5	236.9	141.8	1295.3	214.3	7.5	301.3	4649.7	1317.9	22.8	291.5	369.5	26.7	13.9	0.5	198.4	22336.2

Summary of the 2018 PA Migration Count Chuck Berthoud

As we all know, bird migration is weather dependent and this year's PAMC had some remarkable impacts due to cool temperatures throughout the state and rain everywhere at some point during the 24-hour period of the count. Rain overnight in southern PA had stopped by daybreak but left cool temperatures in the low 50s.

Lancaster compiler Derek Stoner noted that the 'heavy thunderstorms in the pre-dawn hours are thought to have "put down" birds and great fall-out type conditions with concentrations of migrant songbirds'. However, in northern counties the rain and cold did not let up. Evan Mann noted "For the second year in a row, Susquehanna County's PAMC was essentially washed out by temperatures in the 40's and intermittent rain and showers for most of the day. Only one of two scheduled group walks was held, and it went from a planned full morning of birding to 45 minutes of dodging rain. A handful of stationary counts at wetlands were the only other inputs. We will try again next year!" Wayne Laubscher in Clinton County echoed the same sentiment.

This year a total of 163,738 birds of 228 species were reported from 65 of 67 counties. A summary Excel table of statewide species numbers is included with this report, and a much more extensive table, showing individual county results, will be posted to the PSO website.

Table 1 shows the ten most abundant species across the state and as usual was led by American Robin. Table 2 list the counties exceeding 120 species, led by Lancaster, with an impressive 175 species. Finally, Table 3 lists the top 10 counties with the highest counts of species, led by Juniata, which had the high counts for 43 species!

I wish to acknowledge the essential help of Annette Mathes in extracting the data from eBird, creating tables, and adding clarity to the project.

Table 2. Counties Above 120 Species

Lancaster	175
Juniata	157
Butler	156
Centre	151
Bucks	150
Chester	150
Lebanon	148
Huntingdon	143
Montgomery	142
Lycoming	141
Philadelphia	138
Cumberland	138
Crawford	136
Westmoreland	135
Mercer	135
Allegheny	130
Dauphin	128
York	123

Table 1. Ten Most Abundant Species

American Robin	9437
Red-winged Blackbird	7640
Gray Catbird	6926
Canada Goose	5318
European Starling	5313
Common Grackle	5024
Barn Swallow	4834
Tree Swallow	4527
Northern Cardinal	4094
Red-eyed Vireo	4050

Table 3. Number of Species High Counts Per County (Top 10)

Juniata	43
Philadelphia	32
Bucks	24
Montgomery	18
Erie	12
Lancaster	12
Centre	11
Greene	11
Huntingdon	7
Allegheny	6

COMMON NAME	High Ct	County	Totals	COMMON NAME	High Ct	County	Totals	COMMON NAME	High Ct	County	Totals
Snow Goose	31	Lebanon	49	Osprey	34	Philadelphia	154	Rock Pigeon	171	Juniaata	1238
Canada Goose	489	Montgomery	5507	Northern Harrier	2	Northumberland	11	Mourning Dove	313	Montgomery	2997
Mute Swan	51	Bucks	147	Sharp-shinned Hawk	6	Juniaata	24	Yellow-billed Cuckoo	28	Juniaata	131
Tundra Swan	1	Huntingdon	1	Cooper's Hawk	13	Montgomery	81	Black-billed Cuckoo	12	Juniaata	71
Wood Duck	70	Philadelphia	695	Bald Eagle	30	Juniaata	237	Barn Owl	9	Centre	10
Blue-winged Teal	2	Washington	3	Red-shouldered Hawk	12	butler	59	Eastern Screech-Owl	6	Bucks	26
Northern Shoveler	2	Crawford	2	Broad-winged Hawk	6	Franklin	65	Great Horned Owl	6	Bucks	25
Gadwall	2	Crawford	2	Red-tailed Hawk	43	Juniaata	436	Barred Owl	5	Chester	48
Mallard	169	Franklin	1609	Virginia Rail	9	Lebanon	27	Common Nighthawk	40	Luzerne	64
American Black Duck	3	Juniaata	4	Sora	6	Lebanon	17	Eastern Whip-poor-will	26	Centre	56
Green-winged Teal	1	Dauphin	1	Common Gallinule	382	Bucks	386	Chimney Swift	283	Juniaata	2259
Redhead	3	Lycoming	3	American Coot	1	Butler, Mercer	3	Ruby-throated Hummin	55	Juniaata	616
Ring-necked Duck	7	Erie	9	Sandhill Crane	6	Crawford	13	Belted Kingfisher	25	Juniaata	154
Greater Scaup	9	Erie	16	Black-bellied Plover	1	Dauphin	1	Red-headed Woodpeck	11	Juniaata	84
Lesser Scaup	18	Erie	33	Semipalmated Plover	40	Lancaster	91	Red-bellied Woodpeck	211	Montgomery	1809
Surf Scoter	6	Centre	7	Killdeer	46	Allegheny	380	Yellow-bellied Sapsuck	5	Luzerne	38
Black Scoter	2	Lycoming	2	Upland Sandpiper	3	Crawford	3	Downy Woodpecker	99	Juniaata	941
Bufflehead	57	Erie	73	Sanderling	1	Erie, Lancaster	2	Hairy Woodpecker	27	Montgomery	248
Common Goldeneye	3	Bucks	5	Dunlin	20	Westmoreland	42	Northern Flicker	108	Philadelphia	1040
Hooded Merganser	31	Juniaata	76	Least Sandpiper	365	Bucks	989	Pileated Woodpecker	42	Juniaata	382
Common Merganser	64	Juniaata	252	White-rumped Sandpip	2	Lawrence	4	American Kestrel	7	Bucks	72
Red-breasted Mergans	60	Erie	116	Pectoral Sandpiper	2	Erie	4	Merlin	3	Erie	4
Ruddy Duck	21	Erie	33	Semipalmated Sandpip	22	Lancaster	55	Peregrine Falcon	4	Philadelphia	10
Ring-necked Pheasant	10	Lancaster	28	Short-billed Dowitcher	470	Allegheny	492	Olive-sided Flycatcher	1	Union	3
Ruffed Grouse	4	Wyoming	15	American Woodcock	9	Centre	30	Eastern Wood-Pewee	49	Juniaata	565
Wild Turkey	100	Greene	348	Wilson's Snipe	3	Huntingdon	12	Yellow-bellied Flycatch	2	Westmoreland	4
Red-throated Loon	2	Lycoming	4	Spotted Sandpiper	246	Juniaata	828	Acadian Flycatcher	27	Greene	286
Common Loon	55	Bucks	195	Solitary Sandpiper	39	Montgomery	284	Alder Flycatcher	5	Butler	19
Pied-billed Grebe	1	Blair, Butler	4	Greater Yellowlegs	6	Lawrence, Luze	50	Willow Flycatcher	22	Chester	154
Horned Grebe	27	Erie	40	Lesser Yellowlegs	17	Bucks	98	Least Flycatcher	20	Centre	190
Double-crested Cormor	339	Bucks	1320	Bonaparte's Gull	7	Forest	27	Eastern Phoebe	59	Juniaata	645
American Bittern	2	Westmoreland	3	Laughing Gull	637	Bucks	916	Great Crested Flycatch	101	Montgomery	851
Great Blue Heron	69	Bucks	577	Ring-billed Gull	433	Lancaster	936	Eastern Kingbird	90	Montgomery	779
Great Egret	119	Philadelphia	230	Herring Gull	401	Bucks	483	White-eyed Vireo	32	Greene	152
Snowy Egret	1	Bucks	1	Lesser Black-backed G	8	Bucks	10	Yellow-throated Vireo	36	Juniaata	222
Green Heron	25	Juniaata	223	Great Black-backed Gu	8	Bucks	10	Blue-headed Vireo	34	Centre	289
Black-crowned Night-H	36	Lancaster	64	Caspian Tern	7	Erie	8	Philadelphia Vireo	4	Cumberland	23
Yellow-crowned Night-j	23	Dauphin	24	Black Tern	1	Snyder	1	Warbling Vireo	146	Philadelphia	749
Black Vulture	156	Lancaster	415	Common Tern	3	Erie	5	Red-eyed Vireo	563	Bedford	4383
Turkey Vulture	194	Greene	1590	Forster's Tern	7	Mercer	18	Blue Jay	389	Montgomery	3008

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American Crow	192	Juniata	2765	Golden-winged Warbler	7	Juniata	15	Lincoln's Sparrow	4	Juniata	23
Fish Crow	46	Bucks	364	Blue-winged Warbler	14	Bucks	134	Swamp Sparrow	21	Philadelphia	128
Common Raven	19	Juniata	127	Black-and-white Warbler	241	Philadelphia	1043	Eastern Towhee	195	Greene	2434
Horned Lark	63	Juniata	177	Prothonotary Warbler	16	Lancaster	31	Yellow-breasted Chat	13	Lancaster	45
Northern Rough-winged	287	Lycoming	1747	Tennessee Warbler	89	Allegheny	548	Scarlet Tanager	144	Juniata	1298
Purple Martin	253	Greene	1353	Orange-crowned Warb	2	Lancaster	5	Northern Cardinal	400	Montgomery	4238
Tree Swallow	689	Philadelphia	4599	Nashville Warbler	18	Centre	160	Rose-breasted Grosbe	92	Greene	845
Bank Swallow	79	Luzerne	294	Mourning Warbler	5	Cumberland	30	Blue Grosbeak	17	Chester	26
Barn Swallow	451	Lycoming	4990	Kentucky Warbler	11	Allegheny	42	Indigo Bunting	287	Juniata	1605
Cliff Swallow	90	Centre	558	Common Yellowthroat	368	Philadelphia	3157	Bobolink	264	Bucks	797
Carolina Chickadee	208	Montgomery	910	Hooded Warbler	67	Huntingdon	606	Eastern Meadowlark	32	Greene	286
Black-capped Chickadee	69	Centre	675	American Redstart	397	Philadelphia	2790	Orchard Oriole	58	Juniata	424
Tufted Titmouse	243	Montgomery	2010	Cape May Warbler	35	Cumberland	247	Baltimore Oriole	351	Juniata	2597
Red-breasted Nuthatch	3	Wyoming	11	Cerulean Warbler	18	Cumberland	140	Red-winged Blackbird	689	Greene	8036
White-breasted Nuthatch	74	Montgomery	717	Northern Parula	245	Philadelphia	926	Brown-headed Cowbird	195	Juniata	1695
Brown Creeper	5	Huntingdon	12	Magnolia Warbler	196	Philadelphia	1126	Common Grackle	1255	Juniata	5366
House Wren	188	Montgomery	1377	Bay-breasted Warbler	61	Philadelphia	334	House Finch	118	Montgomery	1178
Winter Wren	3	Butler	14	Blackburnian Warbler	42	Huntingdon	406	Purple Finch	28	Cambria	74
Marsh Wren	15	Philadelphia	21	Yellow Warbler	296	Philadelphia	2203	Pine Siskin	3	Tioga	5
Carolina Wren	186	Bucks	1649	Chestnut-sided Warbler	78	Philadelphia	741	American Goldfinch	341	Juniata	3826
Blue-gray Gnatcatcher	160	Philadelphia	1321	Blackpoll Warbler	183	Philadelphia	607	House Sparrow	368	Philadelphia	2392
Golden-crowned Kinglet	3	Centre	10	Black-throated Blue Warbler	148	Philadelphia	876	Fox Sparrow	4	Lancaster	8
Ruby-crowned Kinglet	7	Juniata	73	Palm Warbler	6	Erie	29	Black-necked Stilt	1	Bucks	1
Eastern Bluebird	119	Franklin	1007	Pine Warbler	11	Huntingdon	74	Iceland Gull	2	Bucks	2
Veery	78	Philadelphia	477	Yellow-rumped Warbler	226	Philadelphia	1520	American Tree Sparrow	2	Bedford, Bradford	4
Gray-cheeked Thrush	5	Philadelphia	26	Yellow-throated Warbler	9	Greene	30	Rusty Blackbird	2	Dauphin	3
Swainson's Thrush	93	Philadelphia	379	Prairie Warbler	43	Bucks	225	Clay-colored Sparrow	4	Lancaster	4
Hermit Thrush	9	Monroe	63	Black-throated Green Warbler	96	Montgomery	1148	Eurasian-collared Dove	20	Franklin	20
Wood Thrush	193	Montgomery	2396	Canada Warbler	76	Montgomery	392	Dickcissel	4	Franklin	4
American Robin	1326	Philadelphia	9772	Wilson's Warbler	29	Philadelphia	168				
Gray Catbird	1066	Philadelphia	7033	Grasshopper Sparrow	29	Allegheny	125				
Brown Thrasher	55	Juniata	441	Henslow's Sparrow	2	Allegheny	5				
Northern Mockingbird	65	Franklin	507	Chipping Sparrow	227	Juniata	2066				
European Starling	607	Philadelphia	5691	Field Sparrow	99	Juniata	989				
American Pipit	129	Bucks	209	Dark-eyed Junco	11	Westmoreland	85				
Cedar Waxwing	947	Juniata	2455	White-crowned Sparrow	14	Juniata	153				
Ovenbird	309	Juniata	2881	White-throated Sparrow	88	Philadelphia	366				
Worm-eating Warbler	27	Juniata	158	Vesper Sparrow	9	Franklin	23				
Louisiana Waterthrush	62	Juniata	260	Savannah Sparrow	28	Bucks	151				
Northern Waterthrush	78	Philadelphia	324	Song Sparrow	285	Juniata	2990				