

Pennsylvania Raptor Migration Summary - Spring 2017

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Winter temperatures were above-average across the state and through much of the eastern United States in early 2017 (www.ncdc.noaa.gov), which may have spurred early northward movement for some migrants. After a warmer than usual February, March brought an unwelcome surprise for migrants and for hawkwatchers, with notable snowfall and colder than normal temperatures. April and May rainfall was above-average across the state challenging migrants and migration watchers once again.

Migration Summary

Despite the weather, seven migration sites tallied an above-average 26,057 hawks statewide in 1792 hours and 301 days (Table 1). Counts ran from 18 February to 23 May across the state with numbers peaking in April at 17,899. Higher counts were recorded, in part, due to additional sites as well as higher numbers for some sites. Stone Mountain and Bucktoe Creek Preserve expanded their hours in 2017 while Millersville University in Lancaster County launched a new migration watchsite on campus, recording their data in real time using tablet apps, (dunkadoo.org and trektellen.org). With the additional spring coverage and the new site, statewide hours of effort swelled in 2017 by 35% over prior years.

Total migrant raptors were 24% higher than the ten-year average, although the rate of 14.6 hawks per hour was near the ten-year average of 15.7 (Table 1). Only three species were below-average statewide: Cooper's Hawk, with 213 tallied compared to an average of 238; Northern Goshawk, with 4 counted compared to an average of 8.6; and Rough-legged Hawk, 10 recorded compared to the average of 24.2 (Table 1). The Turkey Vulture total of 14,690 was 27% above the ten-year average. The count of 574 American Kestrels was 58% above-average and the Northern Harrier total of 185 was 31% above-average (Table 1). The bump in the latter two species was a spot of hope as both farmland-associated raptors have shown declines in recent years. Merlin also had a strong showing with 40 tallied, 45% above the average of 25.3. Broad-winged Hawks were 21% above-average with 5538 counted compared to the average of 4584 (Table 1).

Bald Eagle counts continued their amazing ascent across the state with 321 migrants sighted in spring 2017, setting a new spring record statewide; the ten-year average is 198. The record came despite a below-average 101 Bald Eagles at Presque Isle, a stronghold for this species. The total of 321 Bald Eagles was particularly notable when compared to the recent decade's statewide totals that ranged from 98 to 263. The Golden Eagle statewide count, 296, was near the ten-year average, 302, but well above last year's low count of 226.

Kite sightings increased in 2017 due to increased coverage at Bucktoe Preserve in *Chester*, a known kite hot spot. Presque Isle counted a single high-flying Mississippi Kite on 17 May. Bucktoe

ten-year average of 22 (Table 1) contrasting with a below-average count of Turkey Vulture, 76; Red-shouldered Hawk, 2; and American Kestrel, 8 (Table 1). The total of 160 Ospreys was especially

Table 2. Peak One-day Counts

Site	Br-winged Hawk		Bald Eagle		Golden Eagle	
	Count	Date	Count	Date	Count	Date
Allegheny Front	195	4/14	9	4/27	16	2/24
Bucktoe Creek	64	4/14	4	several	-	-
Hawk Mountain	302	4/23	15	4/8	2	4/1
Jack's Mountain*	-	-	-	-	-	-
Millersville U	3	4/13	3	4/28	-	-
Presque Isle	1419	4/27	19	4/27	1	4/3
Stateline Woods*	1	4/22	-	-	-	-
Stone Mtn.	-	-	-	-	2	several
Tussey Mtn	216	4/27	4	3/28	44	3/20

*Only one day coverage.
(Peak two counts for season are bolded).

counted a peak of three Mississippi Kites on 18 May and singles flew past on 20 May, 1 June, and 2 June, bringing the statewide count to seven Mississippi Kites (Table 1). No other raptor rarities were recorded

Presque Isle recorded the highest spring numbers of any site, leading with 13,914 Turkey Vultures and 3475 Broad-winged Hawks (Table 1), while Allegheny Front and Tussey Mountain once again had impressive Golden Eagle tallies, with a combined total of 280 Golden Eagles (Table 1, 2). Allegheny Front also tallied more Ospreys in spring than other sites, 160, whereas Hawk Mountain had the second highest Bald Eagle count, 75, a new spring record for the site.

Site Highlights

Allegheny Front (Somerset/Bedford) – Allegheny Front hawkwatchers tallied 1324 hawks in 377.5 hours and 59 days from 18 February through 7 May. The count began earlier than some years due to the mild weather in February, which allowed counters to tally 140 hawks by month's end. The best early day was 24 February when 79 hawks, including 16 Golden and 4 Bald Eagles, mostly adults, glided north. The overall raptor count was slightly below average (Table 1), possibly affected by unfavorable March weather. A notable flight of 15 Golden Eagles passed on 13 March, on the eve of a snowstorm. Other highlights included the flight on 27 April when east winds ushered in one of the best days of the season. Counters tallied a record-setting 82 Ospreys, along with 9 Bald Eagles, 2 Peregrine Falcons, and 23 Broad-winged Hawks. The seasonal Bald Eagle count of 44 was double the

notable, the highest since 2008, when 185 were tallied.

Bucktoe Preserve's Southern Chester County Watch & Kite and Shorebird Watch (Chester)

Bucktoe Preserve watchers led by Larry Lewis conducted two separate counts at Bucktoe Preserve in Avondale during 2017: a hawk count during March and April for all raptors and a "kite watch" in May and June sponsored by the Delaware Nature Society (DNS). The numbers are presented together in Table 1, but could be viewed as two watch efforts. Overall, Bucktoe Preserve watchers tallied 1125 hawks in 74 days and 524 hours of effort among the two counts. Turkey Vultures and Broad-winged Hawks led the counts with 283 and 228, respectively (Table 1), highlighted by a peak one-day count of 64 Broad-wings on 14 April. Bucktoe tallied the second-highest Red-shouldered Hawk total statewide, 54, with 18 migrating north on 25 March among 88 total raptors. Light wind and cloudy skies on 14 April brought the highest one-day count, including 13 Turkey Vultures, 7 Red-tailed Hawks, 2 American Kestrels, and the afore-mentioned 64 Broad-winged Hawks.

The DNS May and June watch tallied 13 raptors for the period including 6 Ospreys, one Broad-winged Hawk, and 6 Mississippi Kites, with a peak of 3 sub-adult kites on 18 May.

Hawk Mountain Sanctuary (Berks/Schuylkill) –

Hawk Mountain recorded 1276 hawks in 40 days and 195 hours from 23 March to 15 May, for a rate of 6.6 hawks per hour. Effort was slightly below the ten-year average of 234 hours due to frequent rain and fog. Despite the weather, new records were set for both Bald and Golden Eagles, 75 and 8, respectively (Table 1). Hawk Mountain trainees and volunteers tallied 642 Broad-winged Hawks, the highest spring season count in over a decade and an impressive 77%

above the ten-year average of 361. A notable flight of 15 Bald Eagles migrated past on 8 April when winds turned steady from the northwest. The first migrant eagles were sighted soon after 8 am and most flew past before midday. The total of 15 eagles was the second highest Bald Eagle tally for 2017 spring season statewide (Table 2). Light north winds on 23 April ushered in the best day of the season with 302 Broad-wings as well as 13 Ospreys, 4 Bald Eagles, 9 Sharp-shinned Hawks, and 2 Northern Harriers among 342 total raptors (Table 2). Several Broad-wings put on a show through the day diving on the decoy owl atop the rocks. Flights slowed substantially in May with the best day bringing 4 Bald Eagles - 3 adult and one immature - on 9 May.

Millersville University (Lancaster) - Millersville University biology students and professor Dr. Aaron Haines launched this new watchsite from atop a science building on campus in Lancaster. Despite classes and other commitments and constraints they counted 116 hawks in 28 days and 155 hours (Table 1). They also took abundant notes on movements of local birds and embarked on a study of weather using special instrumentation available in the science facility. Count highlights include 4 Bald Eagles, with 3 on 13 April (Table 2). They also tallied 27 Black Vultures and 48 Turkey Vultures. South winds brought their highest one-day count including one Black and 15 Turkey Vultures as well as one unidentified *buteo* on 3 April, a peak migration date for vultures at Presque Isle as well. As students hone their skills in identification and detection we hope to see more reports from this new southern Pennsylvania site!

Presque Isle (Erie) - Presque Isle watchers counted 19,966 hawks in 40 days and 142 hours from 1 March through 23 May. Effort was slightly lower than average due to frequent north winds and inclement weather. Numbers were 20% above-average primarily due to increased Turkey Vultures, 13,914 compared to a ten-year average of 10,970 (Table 1). Birds per hour for the site continued strong with 140 birds per hour of observation. An increase in 2017 also was seen for Broad-winged Hawk, up 9% with 3475 tallied compared to a ten-year average of 3169. Other upswings were seen for Northern Harrier, 93 compared to a ten-year average of 68, and for Sharp-shinned Hawk, with 966 counted compared to the average of 855. Of particular note, American Kestrel numbers also were above-average with 473 counted compared to the average of 275. March days were slow as northerly and easterly winds kept birds off shore. The highest vulture count was recorded 3 April when 3683 flew by along with 10 other species that included both Rough-legged Hawk (2) and Golden Eagle. April 27 brought the highest count for Broad-winged Hawks, 1419; also that day saw the one-day peak count of 19 Bald Eagles (Table 2). Both were the highest one-day counts statewide for these

species. Twenty-five Ospreys and 192 Sharp-shinned Hawks also were counted helping bring the total raptor count for that day to 1948. The rarest raptor for the site was a Mississippi Kite sailing high above the site on 22 May. The watchsite shut down early due to rainy weather in May.

Southern Chester County Watch at Stateline Woods (Chester) - Stateline Woods Preserve in Kennett Square was the site of a one day hawkwatch on 22 April 22. Rain and clouds limited the hawk totals to one Broad-winged Hawk, however local Red-tailed and Red-shouldered Hawks kept watchers busy.

Stone Mountain (Huntingdon/Mifflin) - Stone Mountain counters covered five days during spring 2017, launching their count on 26 February and counting 50 hawks in 5 days and 15.5 hours of coverage through 3 April for 3.2 hawks per hour. This traditionally fall site tallied 7 north-bound Golden Eagles with a peak of 2 on several days (Table 2). With the early timing of the watch, Stone Mountain counts also included 16 Red-tailed Hawks, 19 Turkey Vultures, and 4 Sharp-shinned Hawks as well as single sightings of Osprey, Northern Harrier, Merlin, and Red-shouldered Hawk (Table 1). Light northwest winds brought the peak one-day count for the site, 30 hawks in 3.5 hours including 10 Red-tailed Hawks and 14 Turkey Vultures.

Tussey Mountain (Centre) - Tussey Mountain watchers counted an above-average 2285 raptors in 56 days and 375 hours from 24 February to 28 April for the 17th year of this renown spring site (Table 1). Counts were 21% above-average with higher than average counts for Turkey Vulture, Osprey, Bald Eagle, Northern Harrier, Sharp-shinned Hawk, Broad-winged Hawk, and American Kestrel. Notable lows were only 22 Cooper's Hawks, 54% below average, and 295 Red-tailed Hawks, 20% below average.

Golden Eagles are the highlight for this site with large flights often seen early in the spring. In 2017, Golden Eagle peak flights appeared delayed from the usual early March peak to later in the month. In late February and early March, Golden Eagles were seen nearly every day at Tussey, but no large numbers were detected. Raw cold and stormy weather in early March may have led to the delay in migration through the region and the lower counts of Red-tailed Hawks. The peak one-day count of 44 Golden Eagles was finally tallied at Tussey on 20 March, approximately 12 days later than usual, leading the state for one-day counts in 2017 (Table 2). The season peak eagle flight was foreshadowed on the afternoon of 19 March when 14 Golden Eagles streamed past between 2 pm and 5 pm. The next morning the first Golden sailed north at 8:43 am, and the parade continued through the day. On 25 March another 20 Golden Eagles were tallied

along with 4 Bald Eagles and 60 Turkey Vultures. April brought an above-average 869 Broad-winged Hawks (Table 1) with a peak of 216 on 20 April, the third highest one-day count in the state (Table 2). The last push of Broad-wings, 206, was on 27 April, the last day of the count, along with 83 Ospreys, setting a new one-day record for Osprey for the site.

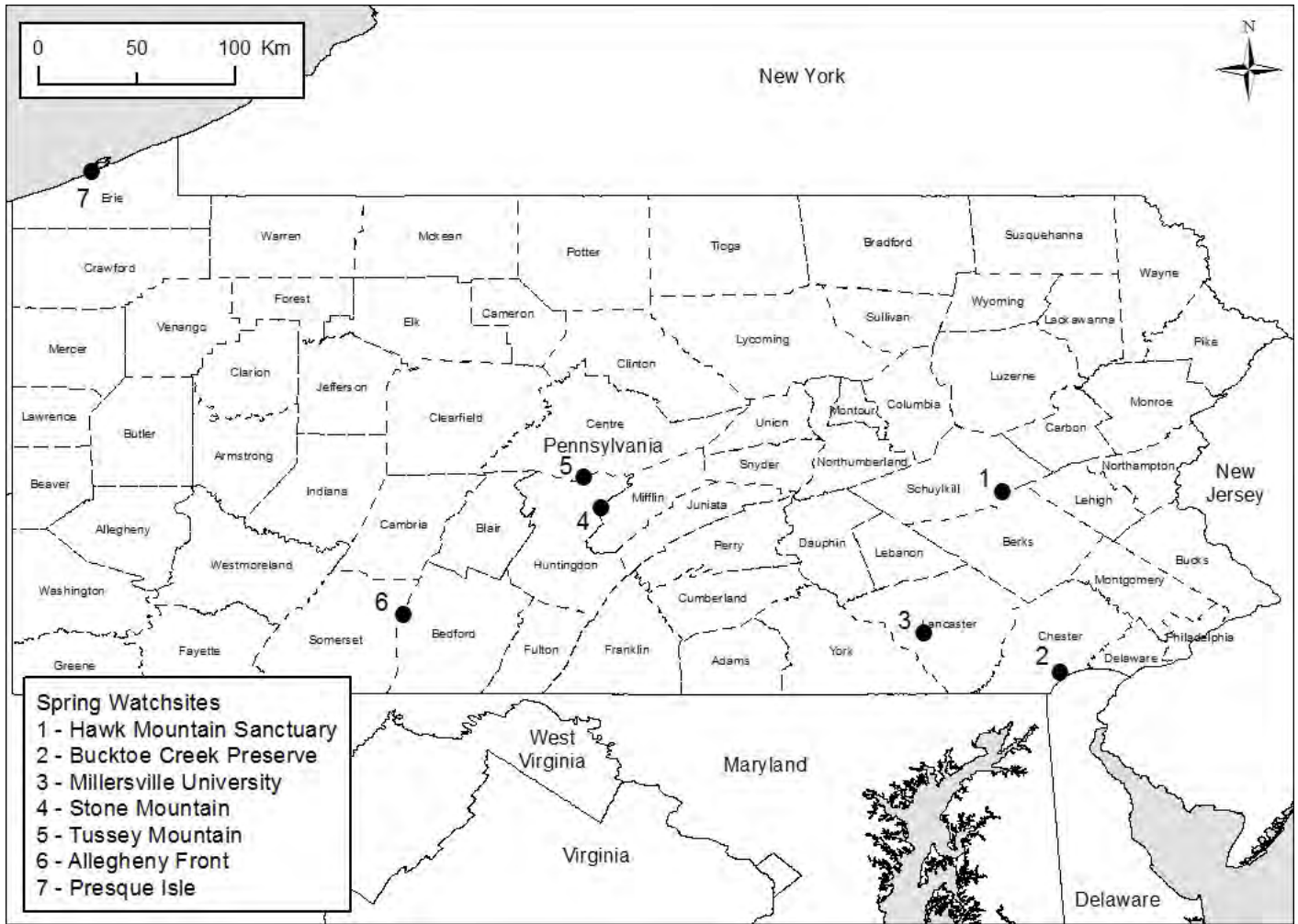
Conclusions

Spring hawk-watching is alive and well in Pennsylvania. In 2017, new sites and expanded coverage brought many opportunities for Pennsylvania birders to enjoy spring raptor flights across the state. Pennsylvania's diverse geography provides nearby opportunities to watch Golden Eagles parading north, Broad-winged Hawks kettling overhead, and Mississippi kites swooping aloft. Although raptors are the focus of this report, most of these same sites record amazing flights of other migrants (reports available on ebird.org or hawkcount.org) including waterfowl, passerines, wading birds, and shorebirds. If you are looking for an early spring birding activity, check out your nearest spring hawkwatch!

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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	2.5	0	45	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	50
March	12	37.0	0	4518	1	14	14	83	13	0	121	0	158	6	0	150	3	2	0	17	5100
April	21	82.3	0	8904	61	61	74	872	29	2	64	2662	386	3	1	323	11	4	1	26	13484
May	6	20.5	0	447	5	26	5	11	1	0	1	813	22	0	0	0	0	1	0	0	1332
Total	40	142.3	0	13914	67	101	93	966	43	2	186	3475	571	9	1	473	14	7	1	43	19966
Total per hr			0.00	97.81	0.47	0.71	0.65	6.79	0.30	0.01	1.31	24.43	4.01	0.06	0.01	3.33	0.10	0.05	0.01	0.30	140.36
% of flight			0.0	69.7	0.3	0.5	4.8	0.2	0.0	0.0	0.9	17.4	2.9	0.0	0.0	2.4	0.1	0.0	0.0	0.2	100.0
Average last 10 yrs		183.4	0.6	10970.0	75.5	103.8	67.9	855.7	74.7	0.9	200.7	3169	563.7	19.4	1.2	274.6	11.7	6.7	0.0	40.0	16523.4

STONE MOUNTAIN (Huntingdon/Mifflin) - Greg Grove, 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	3.0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	0	0	5
March	3	9.0	0	5	0	0	0	0	0	0	1	0	4	0	5	0	0	0	0	0	15
April	1	3.5	0	14	1	0	1	4	0	0	0	0	10	0	0	0	0	0	0	0	30
Total	5	15.5	0	19	1	0	1	4	0	0	1	0	16	0	7	0	1	0	0	0	50
Total per hr			0.00	1.23	0.06	0.00	0.06	0.26	0.00	0.00	0.06	0.00	1.03	0.00	0.45	0.00	0.06	0.00	0.00	0.00	3.23
% of flight			0.0	38.0	2.0	0.0	2.0	8.0	0.0	0.0	2.0	0.0	32.0	0.0	14.0	0.0	2.0	0.0	0.0	0.0	100.0
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	5	30.5	2	50	0	1	1	1	0	0	1	0	6	0	18	0	0	0	0	1	81
March	25	161.5	14	215	3	20	7	53	7	0	30	0	130	1	153	24	2	1	0	10	670
April	26	183.0	5	59	145	31	31	146	15	1	7	869	159	0	20	30	4	0	0	12	1534
Total	56	375	21	324	148	52	39	200	22	1	38	869	295	1	191	54	6	1	0	23	2285
Total per hr			0.06	0.86	0.39	0.14	0.10	0.53	0.06	0.00	0.10	2.32	0.79	0.00	0.51	0.14	0.02	0.00	0.00	0.06	6.09
% of flight			0.9	14.2	6.5	2.3	1.7	8.8	1.0	0.0	1.7	38.0	12.9	0.0	8.4	2.4	0.3	0.0	0.0	1.0	100.0
Average last 10 yrs		378.3	22.5	190.3	85.3	44.1	27.6	180.1	48.4	1.5	49.4	585.0	367.6	4.0	198.2	39.9	5.0	2.1	0.1	27.0	1878.1

2017 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	17	98.3	11	117	0	11	4	5	3	0	17	0	69	0	42	1	1	0	0	9	290
March	86	499.5	14	4882	20	71	32	234	50	1	191	0	465	7	196	185	8	4	0	32	6392
April	151	926.1	65	9244	455	203	143	1324	159	3	102	4709	968	3	58	388	30	7	1	137	17999
May	41	229.0	11	447	27	36	6	19	1	0	1	829	36	0	0	0	1	1	4	55	1474
June	6	39.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Total	301	1792	101	14690	502	321	185	1582	213	4	311	5538	1538	10	296	574	40	12	7	233	26157
Total per hr.			0.1	8.2	0.3	0.2	0.1	0.9	0.1	0.0	0.2	3.1	0.9	0.0	0.2	0.3	0.0	0.0	0.0	0.1	14.6
% flight			0.4	56.2	1.9	1.2	0.7	6.0	0.8	0.0	1.2	21.2	5.9	0.0	1.1	2.2	0.2	0.0	0.0	0.9	100.0
Average last 10 yrs		1225.5	81.0	10092.6	349.8	198.0	137.0	1228.8	237.6	8.6	290.0	4184.2	1335.0	24.2	302.3	326.1	25.3	12.9	1	214.0	18979.5

*Includes data from February 22 from Jack's Mountain including 2 Turkey Vultures, 9 Black Vultures, 3 Red-tailed Hawks.

**Includes data from April 22nd from StateLine Woods Preserve (Chester) with 1 Broad-winged Hawk.