

Spring Raptor Migration Summary 2004

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Five watchsites reported counts for spring 2004 (Tables 1 and 2). There was no count conducted this year at White Deer Ridge (*Lycoming County*). Count effort (hours of observation) for the five watchsites ranged from 122 to 372 hours for a total of 1352 hours. A total of 5,471 raptors representing 18 species was reported. The passage rate for all species for five sites ranged from 3.2 to 5.2 raptors per hour (average 4.0). Two Mississippi Kites (*Ictinia mississippiensis*) were seen at Hawk Mountain Sanctuary, and a Swallow-tailed Kite (*Elanoides forficatus*) was seen at Rose Tree Park.

Comparing data among watchsites is difficult because of differences in count efforts. Allegheny Front and Tussey Mountain counted throughout all of March, whereas Rose Tree Park and Tuscarora Summit counted only during late March, and Hawk Mountain counted only two days that month. All the sites had good coverage in April, however only Allegheny Front and Hawk Mountain extended the counts into May.

Composition of the flight

Broad-winged Hawks (*Buteo platypterus*) appeared at watchsites beginning in early April, peaking in the second half of the month, and making up 22% of the overall flight (range of 1-45%). Broad-winged Hawk numbers were followed closely by those Red-tailed Hawks (*Buteo jamaicensis*), which peaked in late March-early April and made up 21%

of the overall flight (range 10-35%). Broadwings were the most common species at Hawk Mountain, Rose Tree Park, and Tuscarora Summit, whereas Redtails were the most abundant species at Allegheny Front and Tussey Mountain.

Turkey Vultures (*Cathartes aura*) were the third most abundant species overall, making up 14% of the total count (range of 4-24%). Vultures were seen as early as February, with most individuals passing in March (Table 2). Sharp-shinned Hawks (*Accipiter striatus*), which were seen in March and April, were the only other species that made up at least 10% of the overall flight.

At all sites, Ospreys (*Pandion haliaetus*) were first seen in late March, with the earliest sighting at Rose Tree Park on March 18. Osprey numbers peaked in the middle of April. For watchsites that also conduct autumn counts (i.e., all except Tussey Mountain), Ospreys and Northern Harriers (*Circus cyaneus*) are relatively more common overall in spring than they are in autumn, whereas Sharp-shinned Hawks are relatively less common overall in spring.

Eleven of the twelve Peregrine Falcons (*Falco peregrinus*), and thirteen of the fifteen Merlins (*F. columbarius*) reported, were seen between April 9 and 24. More than a third of the American Kestrels (*F. sparverius*) migrated in March. Among the earliest migrants to arrive in spring, more than 20% of the Golden Eagles (*Aquila chrysaetos*) were seen in February, with Allegheny Front and Tussey Mountain accounting for all of these.

Seasonal Highlights

Allegheny Front (Bedford) – The count started in late February and ended in early May. Two-thirds of the overall flight was made up of Turkey Vultures (peak count 23 on March 7 and 20), Sharp-shinned Hawks (17 on March 28 and April 17), Broad-winged Hawks (85 on April 17), and Red-tailed Hawks (34 on March 29). Season record counts included 10 Black Vultures (*Coragyps atratus*) (4 on March 28), 55 Northern Harriers (9 on April 16), 71 Cooper's Hawks (*Accipiter cooperii*) (12 on March 28), and 6 Rough-legged Hawks (*Buteo lagopus*) (2 on March 7). The Golden Eagle count (39; peak count of 5 on March 1 and 5) dropped from last spring, when 124 were counted. Other peak flights by species and date include Osprey (9 on April 18), Bald Eagle (*Haliaeetus leucocephalus*) (2 on March 1), Northern Goshawk (*A. gentilis*) (1 on five different dates) Red-shouldered Hawk (*Buteo lineatus*) (13 on March 7), American Kestrel (5 on April 16), and Merlin (3 on April 16).

Hawk Mountain Sanctuary (Berks and Schuylkill) – The peak of the spring flight was a 287-bird count (29% of the season's total) on April 18. Included in that day's count were season-high counts of 9 Turkey Vultures, 4 Bald Eagles (a record single-day count), 18 Ospreys, 20 Sharp-shinned Hawks, 7 Cooper's Hawks, and 212 Broad-winged Hawks. The peak period of migration during the official count (April 1 – May 15) was April 17 - 24, when nearly 90% of the season's Broad-winged Hawks passed, as did more than half the Ospreys and Northern Harriers, half the Bald Eagles, half the Sharp-shinned, and 80% of the Peregrines. The Red-tailed Hawk flight peaked April 6 - 10. Mississippi Kites were seen on April

Table 1. Watchsites reporting for spring 2004

Watchsite	County	Hours of observation
Allegheny Front	Bedford	372
Tussey Mountain	Centre	347
Rose Tree Park	Delaware	275
Hawk Mountain	Berks-Schuylkill	241

17 and April 23; the second and third spring records for the site. Season records (since 1998) were set for Bald Eagles (18), Northern Harriers (45; peak count of 7 on April 24), and Peregrine Falcons (5).

Rose Tree Park (Delaware) – The count began on March 15 and ended April 30 (with one day in February) and was highlighted by a Swallow-tailed Kite on April 23, a rare bird for the state and the first record for the site. According to site coordinator Jim Lockyer, count effort was below average because of many snowy and rainy days, and resulted in the lowest total count and rate of passage (4.7 birds per hour versus average 9.5 birds per hour) in six years. The passage rate of American Kestrels (peak count 35 on April 9) was more than 6 times that of the average for all other sites. Twenty-seven Red-tailed Hawks, a season high, were counted on April 7. On April 20, observers saw five Bald Eagles and 102 Broad-winged Hawks.

Tuscarora Summit (Fulton) – The count was the highest since spring counting began in 1994. Total counts for Osprey, Bald Eagle, Red-tailed Hawk, and Peregrine Falcon were well above average. This was the only site at which Ospreys (at 21%) made up more than 10% of the overall flight. Two days accounted for nearly 60% of the total Osprey count, with 55 of them on April 23 and 22 more on April 27. Season highs for Turkey Vultures (31 birds) and Red-tailed Hawks (25) came on March 26.

(Note a correction to Tuscarora Summit autumn 2003 data reported in *Pennsylvania Birds* 17:269-276: On November 3, 2003 there were 7 Turkey Vultures counted, not 7 Ospreys.)

Tussey Mountain (Centre) – Species that migrate late in autumn tend to arrive early in spring and these species, particularly Turkey Vultures, Red-tailed Hawks, and Golden Eagles, were predominant at

Tussey Mountain. Peak flights of Golden Eagles occurred on February 29 (22 eagles) and March 6 (a record-tying 32 eagles), and the site averaged more than 4 Golden Eagles per day in March, totaling 162 for the season. The peak period of migration for several species was March 24 – 30, including season high counts on March 26 of 50 Turkey Vultures, 15 Sharp-shinned Hawks, 9 Cooper's Hawks, 112 Red-tailed Hawks, and 12 American Kestrels. Few Broad-winged Hawks were seen, but counts ended before peak migration occurred for the species.

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Table 2. Count Results for Spring 2004 in Pennsylvania.

ALLEGHENY FRONT (Bedford)
Angelo Mincone, compiler

Month	Days	Hours	BLVU	TUVU	OSPR	BAEA	NOHA	SSHA	COHA	NOGO	RSHA	BWHA	RTHA	RLHA	GOEA	AMKE	MERL	PEFA	Unid	Total*
February	7	38.5	0	10	0	0	0	0	0	1	3	0	14	2	7	0	0	0	1	39
March	28	188.0	4	137	1	5	18	56	29	2	50	0	156	3	28	11	0	0	28	528
April	23	148.5	6	9	45	2	38	56	42	2	6	252	118	0	4	10	4	2	39	635
May	3	17.0	0	0	2	1	1	0	0	0	0	0	1	0	0	0	0	0	0	5
Total	61	372	10	156	48	8	55	112	71	5	61	252	289	8	39	21	4	2	68	1,207
Total per hr			0.03	0.42	0.13	0.02	0.15	0.30	0.19	0.01	0.16	0.68	0.78	0.02	0.10	0.08	0.01	0.01	0.18	3.2
% of flight			0.8	12.9	4.0	0.7	4.6	9.3	5.9	0.4	5.1	20.9	23.9	0.5	3.2	1.7	0.3	0.2	5.6	100

HAWK MOUNTAIN SANCTUARY (Berks & Schuylkill)
Laurie Goodrich, compiler

Month	Days	Hours	BLVU	TUVU	OSPR	BAEA	NOHA	SSHA	COHA	NOGO	RSHA	BWHA	RTHA	RLHA	GOEA	AMKE	MERL	PEFA	Unid	Total*
March	2	6.5	3	2	1	0	0	9	5	0	5	0	6	0	0	0	0	0	5	36
April	28	157.3	8	39	69	14	41	107	26	1	2	435	95	0	0	33	4	5	28	909
May	14	77.5	2	3	10	4	4	5	4	0	0	19	3	0	0	2	1	0	1	58
Total	42	241.3	13	44	80	18	45	121	35	1	7	454	104	0	0	35	5	5	34	1,003
Total per hr			0.05	0.18	0.33	0.07	0.19	0.50	0.15	0.00	0.03	1.88	0.43	0.00	0.00	0.15	0.02	0.02	0.14	4.2
% of flight			1.3	4.4	8.0	1.8	4.5	12.1	3.5	0.1	0.7	45.3	10.4	0.0	0.0	3.5	0.5	0.5	3.4	100

*Total includes two Mississippi Kites, one on April 17 and one on April 23.

ROSE TREE PARK (Delaware)
Jim Lockyer, compiler

Month	Days	Hours	BLVU	TUVU	OSPR	BAEA	NOHA	SSHA	COHA	NOGO	RSHA	BWHA	RTHA	RLHA	GOEA	AMKE	MERL	PEFA	Unid	Total**
February	1	2	0	2	0	1	1	2	0	0	0	0	2	0	0	0	0	0	0	8
March	15	101.8	6	88	13	12	14	48	24	1	6	0	46	0	1	18	0	1	6	284
April	26	184.5	7	58	96	24	55	157	42	0	4	298	76	0	0	131	4	1	23	976
Total	42	268.25	13	148	109	37	70	207	66	1	10	298	124	0	1	149	4	2	29	1,268
Total per hr			0.05	0.55	0.41	0.14	0.26	0.77	0.25	0.00	0.04	1.11	0.46	0.00	0.00	0.68	0.01	0.01	0.11	4.7
% of flight			1.0	11.7	8.6	2.9	5.5	16.3	5.2	0.1	0.8	23.5	9.8	0.0	0.1	11.8	0.3	0.2	2.3	100

**Total includes one Swallow-tailed Kite seen April 23.

TUSCARORA SUMMIT (Fulton)
Dale Gearhart, compiler

Month	Days	Hours	BLVU	TUVU	OSPR	BAEA	NOHA	SSHA	COHA	NOGO	RSHA	BWHA	RTHA	RLHA	GOEA	AMKE	MERL	PEFA	Unid	Total*
March	8	38.0	3	67	1	0	1	4	3	0	0	1	35	0	2	1	0	0	1	119
April	19	67.3	14	40	132	6	20	32	10	0	0	154	93	0	2	4	0	3	9	519
Total	27	122.25	17	107	133	6	21	36	13	0	0	155	128	0	4	5	0	3	10	638
Total per hr			0.14	0.88	1.09	0.05	0.17	0.29	0.11	0.00	0.00	1.27	1.05	0.00	0.03	0.04	0.00	0.02	0.08	5.2
% of flight			2.7	16.8	20.8	0.9	3.3	5.6	2.0	0.0	0.0	24.3	20.1	0.0	0.5	0.8	0.0	0.5	1.5	100

TUSSEY MOUNTAIN (Centre)
Dan Omalski, compiler

Month	Days	Hours	BLVU	TUVU	OSPR	BAEA	NOHA	SSHA	COHA	NOGO	RSHA	BWHA	RTHA	RLHA	GOEA	AMKE	MERL	PEFA	Unid	Total*
February	7	42.75	4	13	0	1	0	1	1	0	0	0	31	3	38	0	0	0	2	94
March	28	228.5	9	305	4	17	21	69	46	1	44	0	350	1	122	38	1	0	59	1,087
April	13	77.25	1	5	11	1	6	11	11	0	0	18	84	0	2	3	1	0	10	174
Total	49	348.5	14	323	15	19	27	81	58	1	44	18	475	4	162	41	2	0	71	1,355
Total per hr			0.0402	0.91	0.04	0.05	0.08	0.23	0.17	0.00	0.13	0.05	1.4	0.01	0.46	0.12	0.01	0	0.20	3.9
% of flight			1.0	23.8	1.1	1.4	2.0	6.0	4.3	0.1	3.2	1.3	35.1	0.3	12.0	3.0	0.1	0.0	5.2	100

TOTAL FOR ALL WATCHSITES 2004

Month	Days	Hours	BLVU	TUVU	OSPR	BAEA	NOHA	SSHA	COHA	NOGO	RSHA	BWHA	RTHA	RLHA	GOEA	AMKE	MERL	PEFA	Unid	Total*
February	15	83.25	4	25	0	2	1	3	1	1	3	0	47	8	45	0	0	0	3	141
March	82	539.75	25	599	20	34	54	188	107	4	105	1	593	4	153	68	1	0	98	2,054
April	107	634.8	36	151	353	47	156	363	131	3	14	1,157	476	0	8	181	13	11	109	3,213
May	17	94.5	2	3	12	5	5	5	4	0	0	19	4	0	2	2	1	0	1	63
Total	221	1352.3	67	778	385	88	218	557	243	8	122	1,177	1,120	10	206	251	15	12	212	5,471
Total per hr			0.05	0.58	0.28	0.07	0.16	0.41	0.18	0.01	0.09	0.87	0.83	0.01	0.15	0.19	0.01	0.01	0.18	4.0
% of flight			1.2	14.2	7.0	1.6	4.0	10.2	4.4	0.1	2.2	21.5	20.5	0.2	3.8	4.6	0.3	0.2	3.9	100

*Total includes 2 Mississippi Kites and 1 Swallow-tailed Kite.