

Raptor Migration Summary – Spring 2011

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Rain dominated spring 2011 migration, as the Northeast recorded one of its wettest springs in more than 100 years (<www.nrcc.cornell.edu>). In Pennsylvania, April and May received more rainfall than any year since 1895. The persistent rain left migrating raptors with fewer days to migrate, and challenged their usual timing and patterns. The timing of the raptor migration throughout the state appeared more spread out, with some species moving later than usual and exhibiting lower peak counts than in past years. The southern sites were particularly affected by rain, where both numbers and effort were reduced.

Despite the challenging weather, total number of migrating raptors recorded statewide was above average, due to the two northern sites recording above average counts (Table 1). Both sites also showed increased hours of coverage whereas the two southern sites reporting had decreased coverage, due to inclement weather.

Migration Summary

Four Pennsylvania watch-sites set a new combined record for the state spring counts, tallying 28,328 migrating raptors of 17 species between mid-February and late May. An adult Mississippi Kite gliding north past Hawk Mountain, *Berks/Schuylkill* on April 29 was the rarest raptor recorded.

Table 1: Pennsylvania watch-sites reporting for spring 2009

Site	Hours	Total
Allegheny Front	363	1436
Hawk Mountain	204	836
Presque Isle	223	23415
Tussey Mountain	461	2641
Total	1250	28328

Total hours increased slightly over 2010 (1250) (Table 1) due primarily to increased coverage at Tussey Mountain in *Centre* and Presque Isle in *Erie*. The number of sites reporting in 2011 was lower than recent years with only four watch-sites contributing spring counts. Overall, 22.7 migrants per hour of counting were recorded for the state, with Presque Isle leading with 105 birds per hour. Most counting effort occurred in March and April with

greater than 500 hours at the four sites combined each month.

April was the busiest month for raptor migration with 17,011 hawks counted (Table 3). March was second-most active month with 9321 northbound hawks tallied. The 2011 upswing in raptor numbers was largely due to increased coverage and high numbers recorded at Presque Isle, a major spring concentration point within Pennsylvania. New statewide peak counts were observed for Turkey Vulture (14,520), representing the most numerous migrant detected with 51% of total (Table 3). The second most numerous migrant was the Broad-winged Hawk (6731), representing 24% of the flight. New statewide peak counts were tallied for Sharp-shinned Hawk (2161) and Red-tailed Hawk, (1883).

Site Highlights

Allegheny Front (*Bedford*) – The Allegheny Front recorded 1436 hawks in 363 hours of counts from February 23 to May 7. The highest one-day count occurred 10 April when winds shifted to east and brought 146 Broad-winged and 56 Sharp-shinned hawks along with 40 Red-tailed Hawks and a Peregrine Falcon past the watch-site. The count was 21% below the long-term average, possibly due to the rainy weather. In contrast to other species, above-average counts were recorded for Golden Eagle (73) and American Kestrel (36). A record low count of only one Merlin was a surprise. Allegheny Front, once again, tallied the second-highest season total and one-day count for Golden Eagles among the watch-sites reporting (73, 9 respectively) (Table 2). The last Golden Eagles of the spring (3) soared north on 3 May. A single Broad-winged and Cooper's hawk passed on 6 May to close the season.

Hawk Mountain Sanctuary (*Berks and Schuylkill*) – Hawk Mountain counted a below-average 836 hawks in 203.5 hours of counts from 8 March through 15 May. Many count days were shortened by rain or fog, and eight days recorded a shutout due to all-day rain or snow. Peak flights occurred earlier than usual with 104 raptors on 14 April and 194 on 17 April. Both days were

dominated by Broad-winged Hawks, with 66 and 119 respectively. The rarest migrant was observed 26 April when a Mississippi Kite glided past on the north side giving the observers an excellent look. Because the Hawk Mountain daily coverage begins in April, this site rarely records many early season migrants, e.g. Golden Eagles and Rough-legged Hawks. However in 2011, a new season record was set for Golden Eagle (6) and two Rough-legged Hawks were sighted (Table 3). Above-average counts were tallied for Turkey Vulture (64) and Red-shouldered Hawk (16), whereas lower than average counts were recorded for most other species (Table 3). The late flights could be a result of the rainy spring weather.

Presque Isle (*Erie*) – Presque Isle set a new record in 2011 with 23,415 raptors counted from 1 March through 15 May (Table 1). In the fourth year of counts from this Lake Erie site, hours of coverage increased slightly (223) while total counts soared. Site leaders moved the site slightly inland this year, which might have allowed better detection of some soaring migrants. The site set new records for all species except Broad-winged Hawk (5231) and Northern Goshawk (3) (Table 3). The highest one-day count for Broad-winged Hawks occurred 26 April with 3863 soaring north, accompanied by 33 American Kestrels (Table 2). The Turkey Vulture was the most abundant migrant at the site with 14,108 recorded, more than double the prior season high count. Turkey Vulture counts peaked 10 April with 2220 vultures moving north. The same day saw a one-day season peak count of 792 Sharp-shinned and 198 Red-tailed hawks. Presque Isle counters also recorded two Short-eared Owls flying north, one 17 March and another 17 April. On 13 May, the last day of the count, 618 hawks were counted including more than 400 Broad-winged Hawks and two light-morph Rough-legged Hawks.

Tussey Mountain (*Centre*) – Tussey counters recorded an above-average 2641 hawks from 16 February to 27 April, in 461 hours of counts (Table 1). The highest one-day count occurred 11 April when 304 raptors including 195

Table 2. Peak count dates for selected species at selected Pennsylvania watch sites.

Site	Br.-winged Hawk		Golden Eagle	
	Count	Date	Count	Date
Allegheny Front	146	4/10	9	3/20
Hawk Mountain	119	4/17	2	3/8
Presque Isle	3863	4/26	2	4/10
Tussey Mountain	195	4/11	24	3/4

Broad-winged, 36 Sharp-shinned, and 25 Cooper's hawks, glided north. The second highest count for Tussey Mountain was made 20 April (258), including 194 Broad-winged Hawks. Early March was the peak period for Golden Eagles with 24 on 4 March and 12 on 5 March. Eagle peak daily counts were lower than observed in some recent years. Four Golden Eagles heading north along the mountain 25 April closed out the 2011 season with a season total of 180 eagles, slightly lower than the long-term average (Table 2, 3). A new site record was set for Bald Eagle (56) with a one-day high count of 5 on 15 April. New records also were set for Black Vulture (64), Osprey (166), Sharp-shinned and Cooper's hawks (261, 136), and all three falcons (Table 3). The Osprey numbers were notable for this inland ridge site, and higher than any other site in the state.

Conclusion

Spring 2011 brought an abundance of raptors to Pennsylvania despite the

rainy spring. Birds appeared to move in the greatest numbers through the central and the northwestern areas of the state. Presque Isle continued to lead the state in volume of migrants, whereas Tussey Mountain and Allegheny Front continued to lead in Golden Eagle numbers among all Pennsylvania spring sites, as well as others throughout the Northeast.

Early season migrants appeared more spread out with lower peak counts than usual. Late season migrants appeared to concentrate farther west than usual, perhaps avoiding the heavy fog and rain lingering in southeast and south-central counties. Of special note, two sites managed to increase coverage in spring 2011, allowing a better picture of migration patterns within the state. Because spring migration is much less monitored than autumn flights throughout the state, these four sites are especially important in providing a snapshot of raptor populations. I encourage birders to support these sites and other languishing spring sites to ensure they continue a healthy coverage of the spring raptor migration. To entice you further, remember most sites also record

thousands of other migrants, ranging from hummingbirds to loons. Besides, where else in Pennsylvania can you see 24 Golden Eagles in a day, or more than 3000 Broad-wings and more than 200 Sharp-shinned hawks over the course of a few hours? For more details on daily flights at any of these sites, please visit <www.hawkcount.org>. Join the fun!

Acknowledgments

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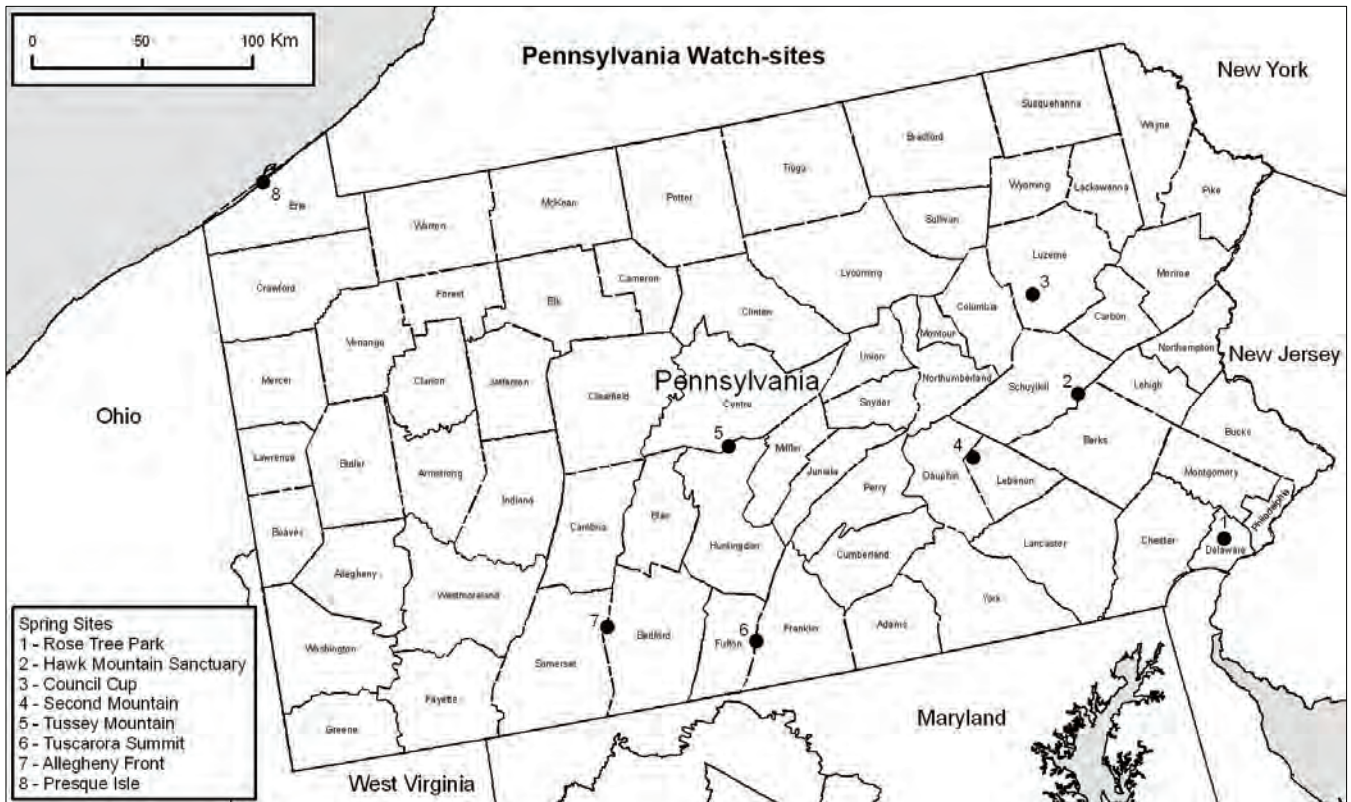


Table 3. Spring 2011 count results for Pennsylvania watch sites.

ALLEGHENY FRONT (Bedford) - Bob Stewart, compiler

Month	Hours	BLVU	TUVU	OSPR	BAEA	NOHA	SSHA	COHA	NOGO	RSHA	BWHA	RTHA	RLHA	GOEA	AMKE	MERL	PEFA	UNID.	SK	MK	TOTAL
February	17.5	0	8	0	1	0	0	0	1	1	0	16	0	5	0	0	0	2	0	0	34
March	170.5	10	152	0	9	4	3	21	3	25	0	181	0	47	7	0	1	15	0	0	498
April	140.3	0	2	36	3	8	119	45	5	334	179	1	18	27	1	1	1	43	0	0	822
May	34.8	0	0	20	0	4	9	6	2	0	20	16	0	3	2	0	0	0	0	0	82
Total	363	10	162	56	13	16	131	72	6	31	354	392	1	73	36	1	2	60	0	0	1436
Total/hr.		0.03	0.45	0.15	0.04	0.04	0.36	0.20	0.02	0.09	0.98	1.08	0.00	0.20	0.10	0.00	0.01	0.17	0.00	0.00	3.96
% flight		0.70	11.28	3.90	0.91	1.11	9.12	5.01	0.42	2.16	24.65	27.30	0.07	5.08	2.51	0.07	0.14	4.18	0.00	0.00	100.00
Average	407.0	13.0	331.5	101.5	19.5	29.3	172.2	68.4	5.5	58.3	417.7	446.1	2.2	72.8	25.6	6.0	3.7	90.10	0.00	0.0	1864.60

HAWK MOUNTAIN (Berks/Schuylkill) - Camille Conception, compiler

Month	Hours	BLVU	TUVU	OSPR	BAEA	NOHA	SSHA	COHA	NOGO	RSHA	BWHA	RTHA	RLHA	GOEA	AMKE	MERL	PEFA	UNID.	SK	MK	TOTAL
March	4.5	0	31	0	0	2	0	0	0	7	0	2	0	2	0	0	0	1	0	0	45
April	133.3	12	33	75	12	11	86	15	0	7	295	55	2	3	7	2	1	138	0	1	755
May	65.8	0	0	11	7	1	2	0	0	2	0	5	0	1	0	0	0	6	0	0	36
Total	203.5	12	64	86	19	14	88	15	1	16	295	62	2	6	7	2	1	145	0	1	836
Total/hr.		0.06	0.31	0.42	0.09	0.07	0.43	0.07	0.00	0.08	1.45	0.30	0.01	0.03	0.03	0.01	0.00	0.71	0.00	0.00	4.11
% flight		1.44	7.66	10.29	2.27	1.67	10.53	1.79	0.12	1.91	35.29	7.42	0.24	0.72	0.84	0.24	0.12	17.34	0.00	0.12	100.00
Average	278.6	19.6	26.1	102.9	18.1	18.4	97.6	35.6	0.9	9.6	346.4	106.3	0.3	2.1	22.1	4.1	0.6	69.0	0.0	0.1	879.9

PRESQUE ISLE (Erie) - Jerry McWilliams, compiler

Month	Hours	BLVU	TUVU	OSPR	BAEA	NOHA	SSHA	COHA	NOGO	RSHA	BWHA	RTHA	RLHA	GOEA	AMKE	MERL	PEFA	UNID.	SK	MK	TOTAL
March	96.8	3	7134	1	28	8	49	33	0	302	0	462	32	1	28	2	4	53	0	0	8140
April	100.8	0	5964	87	37	87	1565	89	2	44	4756	377	21	3	482	21	8	19	0	0	13562
May	25.5	0	1010	10	50	12	47	3	1	2	475	81	2	0	8	3	3	6	0	0	1713
Total	223	3	14108	98	115	107	1661	125	3	348	5231	920	55	4	518	26	15	78	0	0	23415
Total/hr.		0.01	63.26	0.44	0.52	0.48	7.45	0.56	0.01	1.56	23.46	4.13	0.25	0.02	2.32	0.12	0.07	0.35	0.00	0.00	105.00
% flight		0.01	60.25	0.42	0.49	0.46	7.09	0.53	0.01	1.49	22.34	3.93	0.23	0.02	2.21	0.11	0.06	0.33	0.00	0.00	100.00
Average	153.1	1.0	7089.5	64.8	55.0	56.8	859.0	74.0	1.8	170.5	3668.5	484.0	23.3	1.0	258.5	12.0	5.8	66	0	0	12878.5

TUSSEY MOUNTAIN (Centre) - Dan Ombalski, compiler

Month	Hours	BLVU	TUVU	OSPR	BAEA	NOHA	SSHA	COHA	NOGO	RSHA	BWHA	RTHA	RLHA	GOEA	AMKE	MERL	PEFA	UNID.	SK	MK	TOTAL
February	48.8	14	37	0	1	2	1	0	0	5	0	43	2	24	0	0	0	2	0	0	131
March	235.8	38	89	6	24	10	40	25	2	49	0	205	0	120	20	3	1	6	0	0	638
April	176.3	12	60	160	31	32	220	111	0	12	851	261	0	36	44	4	4	34	0	0	1872
Total	460.8	64	186	166	56	44	261	136	2	66	851	509	2	180	64	7	5	42	0	0	2641
Total/hr.		0.14	0.40	0.36	0.12	0.10	0.57	0.30	0.00	0.14	1.85	1.10	0.00	0.39	0.14	0.02	0.01	0.09	0.00	0.00	5.73
% flight		2.42	7.04	6.29	2.12	1.67	9.88	5.15	0.08	2.50	32.22	19.27	0.08	6.82	2.42	0.27	0.19	1.59	0.00	0.00	100.00
Average	400.6	30.9	252.8	76.4	28.9	37.6	151.9	81.4	2.2	55.7	394.3	490.9	5.7	133.0	42.3	3.2	1.2	50.8	0.0	0.0	1889.2

TOTAL FOR ALL PENNSYLVANIA WATCHSITES

Month	Hours	BLVU	TUVU	OSPR	BAEA	NOHA	SSHA	COHA	NOGO	RSHA	BWHA	RTHA	RLHA	GOEA	AMKE	MERL	PEFA	UNID.	SK	MK	TOTAL
February	66.3	14	45	0	2	2	1	0	1	6	0	59	2	29	0	0	0	4	0	0	165
March	507.6	51	7406	7	61	24	92	79	5	383	0	850	32	170	55	5	6	75	0	0	9321
April	550.6	24	6059	358	83	138	1990	260	2	68	6236	872	24	60	560	28	14	234	0	1	17011
May	126	0	1010	41	57	17	58	9	4	4	495	102	2	4	10	3	3	12	0	0	1831
Total	1250.4	89	14520	406	203	181	2141	348	12	461	6731	1883	60	263	625	36	23	325	0	1	28328
Total/hr.		0.07	11.61	0.32	0.16	0.14	1.71	0.28	0.01	0.37	5.38	1.51	0.05	0.21	0.90	0.03	0.02	0.26	0.00	0.00	22.66
% flight		0.31	51.26	1.43	0.72	0.64	7.56	1.23	0.04	1.63	23.76	6.65	0.21	0.93	2.21	0.13	0.08	1.15	0.00	0.00	100.00
Average	1181.3	71.3	4645.1	319.0	103.9	120.1	927.7	234.6	9.4	223.4	3340.6	1317.0	21.3	257.6	241.4	20.00	8.40	248.10	0.10	0.30	12102.9