Autumn Raptor Migration Summary 2007

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Ten hawkwatches reported counts for autumn 2007 (Table 1). The number of hours ranged from 190 to 1,160, for a total of 6,515. The number of days at all sites ranged from 29 to 151, for a total of 917. A total of 108,462 raptors representing 19 species were reported. Highlights included a single Swallow-tailed Kite reported at Hawk Mountain Sanctuary, and two Mississippi Kites reported at Second Mountain (Table 2). Data are available for all watchsites at the Hawk Migration Association of North America's *Hawk Count* website <http://hawkcount.org/>.

Composition of the flight

Overall, the three most numerous migrants were Broad-winged Hawk (*Buteo platypterus*), Sharp-shinned Hawk (*Accipiter striatus*), and Red-tailed Hawk (*Buteo jamaicensis*) (Table 2). Broad-winged Hawk (37% overall) ranged from 22% of the flight at Stone Mountain to 66% at Militia Hill; Sharp-shinned Hawk (28.5% overall) ranged from 14% of the flight at Militia Hill to 37% at Waggoner's Gap; and Red-tailed Hawk (13% overall) ranged from 2% of the flight at Militia Hill to 36% at Stone Mountain. Of the remaining regular migrants, only Turkey Vulture (*Cathartes aura*), Osprey (*Pandion haliaetus*), and Cooper's Hawk (*Accipiter cooperii*) made up at least 3% of the flight.

Compared to 2006, passage rates increased by 17% for Osprey, 33% for Northern Harrier (*Circus cyaneus*), 13% for Sharp-shinned Hawk, and 50% for Northern Goshawk *(Accipiter gentilis)*. Passage rates decreased by 38% for Broad-winged Hawk, 19% for Red-tailed Hawk, and 50% for Golden Eagle (*Aquila chrysaetos*). Peak counts of Bald Eagle, Osprey, and Broad-winged Hawk occurred on similar dates among several sites (Table 3). In addition, peaks for Sharp-shinned Hawks were comparable among six sites (6 to 28-Oct), and Golden Eagles peaked on similar dates (28-Oct to 7-Nov) for Bake Oven Knob (8), Hawk Mountain (12), Little Gap (7), Second Mountain (8).

Seasonal highlights

Bake Oven Knob (Lehigh County) – The total count reached 15,687 raptors this season. New single-season record counts included Osprey (839), beating the previous season high of 794 recorded in 2002 and making for the highest count for this species in the state, and Peregrine Falcons (76), beating the previous record set in 2002 of 63 birds. Three species fell just short of their respective single-season records, but did set new marks for their second highest counts recorded: Cooper's Hawk (490), Bald Eagle (204), and Merlin (145). Northern Harriers (267) had the highest count since 1977, and Sharp-shinned Hawk (4,146) was above its 5-year and 10-year averages. Some species were below average numbers, including Red-tailed Hawk (2,014), which was down for the second year in a row, and American Kestrel (162), which was well below the 5-year average.

Hawk Mountain Sanctuary (Berks/Schuylkill Counties) – During Hawk Mountain's 71st annual count, 19,397 hawks were counted, which was right on par with the 10-year average of 19,262. A count of 231 Merlins broke last year's single-season record of 204, and was the highest for this species in the state. Other season records include Turkey Vulture (636), Black Vulture (140), and Bald Eagle (230). Counts were higher than the 10-year average for Sharp-shinned Hawk (17%), Northern Harrier (18%), and Osprey (14%), whereas counts were lower than the 10-year average for Northern Goshawk (-35%), Cooper's Hawk (-10%), Red-tailed Hawk (-34%), Red-shouldered Hawk (-20%), Rough-legged Hawk (-50%), Golden Eagle (-19%), and Peregrine Falcon (-26%). A Swallow-tailed Kite was photographed 18-Aug. On 15-Sep, peak flights occurred for both Osprey (73) and Bald Eagle (19). Between 12 and 14-Oct, 1,285 Sharp-shinned Hawks (25% of the season's total) and 144 Cooper's Hawks (19% of the season's total) passed through. Other peak flights included Broad-winged Hawk (3,175 on 18-Sep), Turkey Vulture (91 on 18-Oct), Red-tailed Hawk (351 on 28-Oct), Red-shouldered Hawk (33 on 25-Oct), and Golden Eagle (12 on 7-Nov). American Kestrel (season total of 525) was above its 10-year average (397) and on par with its long-term average.

Jack's Mountain (Mifflin County) – Hours of effort at Jack's Mountain have been low in the past few years and again this year, with just 190 hours in 2007. This resulted in below-average counts for all species. The majority of Broad-winged Hawks passed through between 13 and 20-Sep, with the biggest day being 17-Sep when 792 birds were recorded. Other peak counts this year included Turkey Vulture (94 on 27-Oct), Red-tailed Hawk (88 on 27-Oct), and Sharp-shinned Hawk (238 on 6-Oct).

Little Gap (Northampton County) – A single-season record high was set for Turkey Vulture (579), besting last year's record of 555. Many other species had higher counts this season than their long-term averages since 1990, including Broad-winged Hawk, Northern Goshawk, Merlin, Peregrine Falcon, Sharp-shinned Hawk, Northern Harrier, Bald Eagle, Osprey, and Black Vulture. Peak counts included Turkey Vulture (141 on 21-Oct), Bald Eagle (11 on 12-Oct), American Kestrel (13 on 23-Sep), Osprey (85 on 15-Sep), Red-tailed Hawk (218 on 28-Oct), Red-shouldered Hawk (10 on 21-Oct), and Golden Eagle (7 on 7-Nov).

Militia Hill (Montgomery County) – The total number of raptors counted during Sep and Oct was 7,248. Broad-winged Hawk numbers were back up from last year, reaching 4,787 this year. Peregrine Falcon (24) tied a single-season record that was set in 1990. Considering trends since 1988, it was an above average year for Black Vulture, Osprey, Bald Eagle, Golden Eagle, Northern Harrier, Sharp-shinned Hawk, Cooper's Hawk, and Merlin. Red-tailed Hawk and Broad-winged Hawk were below their long-term averages. Broad-winged Hawk peaked on 15 and 16-Sep, when 4,422 were counted. 28-Oct produced peak flights for Sharp-shinned Hawk (105), Turkey Vulture (125), and Red-shouldered Hawk (22). Other one-day peak flights included Northern Harrier (10 on 30-Sep) and American Kestrel (25 on 16-Sep).

Rose Tree Park (Delaware County) – At Rose Tree Park, it was an above average year for Bald Eagle (224) and Peregrine Falcon (23). Species numbers that were below their 9-year average included American Kestrel (199), Turkey Vulture (310), and Broad-winged Hawk (1,504). The Broad-winged Hawk flight peaked on 15 and 16-Sep (1,275 birds; 85% of total flight). Other peak counts in Sep were Osprey (20 on 15-Sep) and Bald Eagle (14 on 16-Sep). October saw peak counts for Red-shouldered Hawk (17 on 28-Oct), Sharp-shinned Hawk (98 on 14-Oct), American Kestrel (20 on 9-Oct), and Turkey Vulture (46 on 17-Oct). Red-tailed Hawk (41 birds) peaked on 7-Nov.

Second Mountain (Lebanon County) – Several new single-season records were set at Second Mountain, including Bald Eagle (161, which was the seventh time in nine years that this species set a new single-season record at this location), Osprey (273) and Cooper's Hawk (433). Sharp-shinned Hawk (3,286) had its highest count since 1987. The majority of Broad-winged Hawks passed through from 13 to 21-Sep (1,791 birds; 74% of total flight). Other peak flights included Osprey (30 on 14-Sep), Sharp-shinned Hawk (340 on 21-Oct), Turkey Vulture (88 on 14-Oct), Red-tailed Hawk (70 on 25-Oct) and Black Vulture (45 on 24-Dec). Two Mississippi Kites were seen on 5-Sep, and a total of four Swainson's Hawks were seen throughout the season.

Stone Mountain (Huntingdon County) – A total of 4,497 birds were counted this season. It was an above average season compared to the long term average since 1991 for all species except Broad-winged Hawk (986), American Kestrel (74), and Peregrine Falcon (16). The majority of Broad-winged Hawks (905 birds; 92% total flight) flew through from 12 to 19-Sep. Other peak counts included Sharp-shinned Hawk (131 on 20-Oct), Cooper's Hawk (25 on 12-Oct), Red-shouldered Hawk (15 on 28-Oct), Red-tailed Hawk (260 on 28-Oct), Golden Eagle (12 on both 16-Nov and 1-Dec), and American Kestrels (21 on 12-Sep).

Tuscarora Summit (Fulton County) – Some species were below their 10-year average, including Black Vulture (2 vs. 30), Turkey Vulture (195 vs. 301), Northern Goshawk (3 vs. 6), Red-tailed Hawk (631 vs. 713), and Golden Eagle (20 vs. 39). Seventy-eight percent of the Broad-winged Hawk flight (562 birds) passed between 15 and 21-Sep (peak count was on 15-Sep). Osprey also had its peak count on 15-Sep (8 birds). Other peak counts included Turkey Vulture (48 on 30-Sep), Northern Harrier (10 on 21-Oct), Sharp-shinned Hawk (148 on 22-Oct), Cooper's Hawk (15 on 22-Oct), and Peregrine Falcon (5 on 10-Oct).

Waggoner's Gap (Cumberland County) – The total number of raptors counted for the season was 26,126, the highest total in the state this year. Overall, this site recorded more Bald Eagles (328), Golden Eagles (211), Northern Harriers (446), Sharp-shinned Hawks (9,726), Cooper's Hawks (1,113), Red-shouldered Hawks (264), and Turkey Vultures (1,404) than any other site in Pennsylvania. All species counts were close to or above their 10 year average, except for Red-tailed Hawk (3,967 vs. 4514) and Red-shouldered Hawk (264 vs. 322). Most (76%) of the 6,957 Broad-winged Hawks that passed Waggoner's Gap did so between 12 and 22-Sep. Other peak counts included Osprey (59 on 15-Sep), Bald Eagle (30 on 12-Sep), Merlin (15 on 12-Oct), Black Vulture (28 on 24-Dec), Turkey Vulture (143 on 21-Oct), Sharp-shinned Hawk (876 on 12-Oct), Cooper's Hawk (90 on 22-Oct), American Kestrel (44 on 23-Sep), Red-shouldered Hawk (36 on 25-Oct), Red-tailed Hawk (340 on 28-Oct), and Northern Harrier (24 on 25-Oct).

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[**Editor's Note:** After authoring the Spring and Fall Raptor Migration Summaries found on these pages for the past 2 years, Lindsay Zemba moved on from her position at Hawk Mountain (and from her responsibility for this report) on 15-Feb-2008. On behalf of PSO, I would like to thank Lindsay for her outstanding contributions to this journal, and to wish her the best of luck in the future. Lindsay followed along in a seamless tradition of concise and informative Raptor Summaries written for *Pennsylvania Birds* by the staff at Hawk Mountain. Lindsay has passed the torch to Laurie Goodrich, Senior Biologist at Hawk Mountain, beginning with the Spring 2008 report. Thanks Lindsay and Laurie!]