

THE PELHAM BAY HAWKWATCH, 1988-1989

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During the fall of both 1988 and 1989, the New York City Department of Parks and Recreation, Natural Resources Group sponsored a hawkwatch in Pelham Bay Park, The Bronx, New York. The park is located on the Long Island Sound in the northeasternmost section of the city, southeast of the Butler hawkwatch at Mt. Kisco, Westchester County, and west of the Fire Island hawkwatch on south-central Long Island (Figure 1). Raptors moving southward in migration over the park are counted from an observation area (lookout) in the parking lot adjacent to Orchard Beach. Approximately 18,000 raptors of 17 species were tallied in migration in the first two years of organized hawkwatching from this locale. In addition, Pelham Bay Park proved to be an important foraging area for migrating Osprey (*Pandion haliaetus*), as these hawks were often seen diving into the waters of the park in pursuit of fish.

RAPTOR MIGRATION 1988-1989

Totals of the numbers and species of raptors seen in migration in 1988 and 1989 are in Table 1. Although raptors were counted in migration on most days from late August through the end of November, days when northwest winds prevailed brought the highest total number of hawks as well as the greatest diversity of species. Winds from the north or west also brought good numbers of migrants. In both years, the second day of consecutive northwest winds brought the best flights of hawks. This was especially apparent for the Broad-winged Hawk (*Buteo platypterus*) in the month of September. For example, on 15 Sep 1988, 6030 Broad-winged Hawk were counted on the second day of consecutive northwest wind days. Large flights of Broad-winged Hawk also occurred on 11 September 1988 (1169 total) and 24 September 1989 (2004 total). Both of these large flights also took place on the second day of consecutive northwest winds. These observations of Broad-winged Hawk at Pelham Bay conform to the wind drift hypothesis for migrating raptors proposed by Mueller and Berger (1967), as well as to Single's (1980) ideas concerning the migration of the Broad-winged Hawk in the New York City region (see also Kerlinger, 1989).

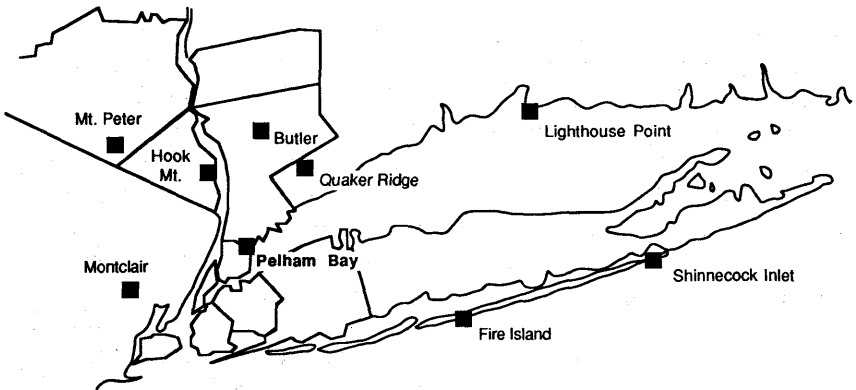


Figure 1. Hawkwatches in the New York City area.

Overall, northwest winds were so critical to the migration of raptors in Pelham Bay Park that there was a decline in the counts of migrating Osprey, Bald Eagle, Northern Harrier and Broad-winged Hawk in September 1989 as compared with the same period of the previous year. September 1989 was marked by long periods of overcast skies with southerly or northeast winds, whereas a series of high pressure systems with associated northwest winds had moved through the region during September 1988. Similarly, the first half of October 1989 was dominated by a series of high pressure systems and northwest winds. October totals of Osprey, Bald Eagle, Northern Harrier, Sharp-shinned Hawk, American Kestrel and Merlin exceeded the totals for these species the entire month of October 1988, a month of intermittent days of northwest winds.

Other important trends observed at the Pelham Bay hawkwatch in both years were that the vast majority of the migrants passed the lookout between 9 AM and 2 PM Eastern Standard Time, and that the American Kestrel flight peaked earlier in the day than the Sharp-shinned Hawk flight. In the month of September in both years, 21% of the American Kestrel flight had passed the lookout from 6 AM to 8 AM EST, as opposed to only 5% of the Sharp-shinned Hawk flight.

Table 1. Two year totals of all raptor species observed at the Pelham Bay hawkwatch, 1988-1989

Species	1988	1989	Mean
Turkey Vulture	25	17	21
Osprey	1447	1620	1533
Mississippi Kite	0	1	0
Bald Eagle	20	8	14
Northern Harrier	213	301	257
Sharp-shinned Hawk	983	1438	1210
Cooper's Hawk	44	43	43
Northern Goshawk	2	1	1
Red-shouldered Hawk	9	10	9
Broad-winged Hawk	8366	2233	5299
Swainson's Hawk	1	0	0
Red-tailed Hawk	372	269	320
Rough-legged Hawk	1	3	2
Golden Eagle	0	2	1
American Kestrel	510	652	581
Merlin	23	67	45
Peregrine Falcon	28	20	24
Unidentified raptors	21	18	19

Species of note counted in migration in 1988 and 1989 were a Swainson's Hawk (*Buteo swainsoni*) seen on 24 September 1988; a Mississippi Kite (*Ictinia mississippiensis*) on 27 August 1989 (details filed with the New York State Avian Records Committee); and two immature Golden Eagle (*Aquila chrysaetos*) on 22 October 1989. The sighting of each of these species represent new records for New York City (Bull, 1964), although all have been recorded from the surrounding area.

OSPREY FORAGING

The Pelham Bay hawkwatch has counted the third highest total of migrating Osprey in all of North America in each of the last two years, surpassed only by the Cape May hawkwatch in New Jersey and the Lighthouse Point hawkwatch in New Haven, Connecticut. Migrating Osprey are often seen diving into the waters of Pelham Bay Park in pursuit of fish, most often the Mossbunker (*Brevoortia tyrannus*), a

plankton feeding member of the herring family which travels in large schools (Bigelow and Schroeder 1953). Groups of up to 14 Osprey were recorded feeding on Mossbunker and resting in the same tree in Sep 1988. Osprey also have been observed occasionally capturing 8-14 inch Bluefish (*Pomatomus saltatrix*), and on one occasion a Winter Flounder (*Psuedoolueronectes americanus*).

Osprey foraging activity in the park is summarized in Table 2. The number of foraging attempts (dives) recorded by migrating Osprey during 1987-1989 in Pelham Bay Park has not been reported in the literature for any other location in North America. The decline in the number of foraging attempts in 1989 was attributed to the paucity of Mossbunker in the park and throughout the Long Island Sound.

Table 2. Summary of Osprey Foraging Attempts, 1987-1989

HRS. - Number of hours of observations made; ATT. - number of foraging attempts observed; SUC. = number of successful attempts; PCT. - percent successful; PEAK DAY - the day with the most number of hunting attempts for the month; ATT/SUC. - total and successful hunting attempts on peak day.

	HRS.	ATT.	SUC.	PCT.	PEAK DAY	ATT/SUC.
1987						
August	21	7	7	100%	21 Aug	3/3
September	35	37	22	60%	3 Sep	6/5
October	24	2	1	50%	- —	—
Total	80	46	30	65%	- —	—
1988						
August	28	32	15	47%	30 Aug	7/4
September	223	99	36	36%	26 Sep	26/10
October	192	30	10	33%	3 Oct	18/6
Total	443	161	61	39%	- —	—
1989						
August	92	14	6	43%	25 Aug	6/3
September	170	5	1	20%	8 Sep	4/1
October	148	5	4	80%	6 Oct	2/2
Total	410	24	11	46%	- —	—

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