

THE 1982 FALL SHOREBIRD SEASON AT JAMAICA BAY WILDLIFE REFUGE

THOMAS H. DAVIS

Thirty-four species of shorebirds were noted at Jamaica Bay Wildlife Refuge, Queens County, during the period 26 June to 24 October, 1982. I visited the Refuge 37 times during this period and endeavored to census every species present on nearly every trip, to note the arrival dates of adults and juveniles of 17 migrant species, and to add to my photographic collection.

I have previously published a description of my techniques, census areas, shorebird historical data, and National Park Service management policy in *The Kingbird* (32: 85-96, 1982). One additional area surveyed this year, labeled "F" on Table 3, includes the north shore of the West Pond and adjacent salt marsh. This *spartina* salt marsh attracts the largest concentrations of roosting birds in the spring when the grasses are dead and flattened. Over 4000 shorebirds gathered here at high tide on 23 May, 1982. This area was surveyed with disappointing results, a maximum of about forty birds was noted in four visits.

Owing to the lack of rainfall, the water level of the East Pond was about three to four inches lower than in recent years. Whether this affected the September and October totals is difficult to say. What does affect the late September and October totals are strong northerly winds and the hawk migration. The high winds that often accompany cold-front passages lower the number of birds roosting at the East Pond. They probably take shelter in salt marshes scattered about Jamaica Bay. On windy days those birds roosting at the East Pond tend to concentrate along the north side of the pond and at a cove near its southwest corner, both areas sheltered from the wind.

The hawk migration, especially that of the Peregrine Falcon, exerts a strong influence on the number of birds roosting at the East Pond. When the first southbound Northern Harriers and Merlins appear in early September, the shorebirds begin to grow nervous and flighty, often peering at the sky, taking flight at the approach of these hawks but usually returning to the same spot. The appearance of Peregrine Falcons in late September alters some shorebirds' roosting habits altogether, especially those of the Black-bellied Plover. This fall, numbers of Black-bellieds ranged from 490 to 780 birds during the period 22 August to 19 September. The season's first Peregrine Falcon was noted 20 September, with several more during the following week;

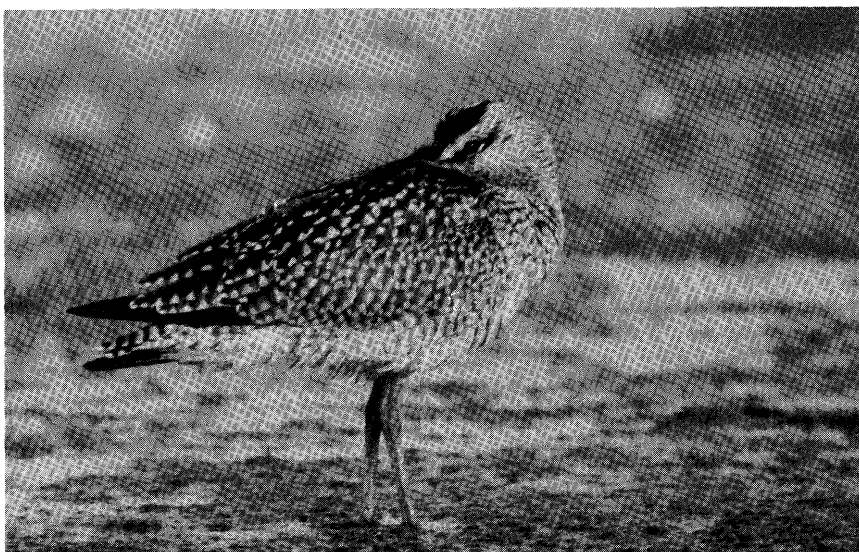
on the next weekend (25-26 September), not a single Black-bellied was observed! Apparently the Black-bellieds shifted to a new roosting location elsewhere at Jamaica Bay (see below). Numbers at the East Pond were erratic after 19 September. A vivid example of the Peregrine Falcon's influence on roosting population was obtained the weekend of 16-17 October. On the 16th a Peregrine was observed hunting at the East Pond and only 135 shorebirds of 11 species were noted; on the 17th the Peregrine was not seen and 257 individuals of 15 species were tallied.

On 23 October 1597 shorebirds of five species were discovered roosting east of the railroad tracks at the base of a bridge ¼-mile north of the northeast corner of the East Pond. When flushed, these birds flew across Grassy Bay to roost at the mouth of Bergen Basin and along the southwest shoreline of JFK Airport. These roosting places at the periphery of Grassy Bay afford greater visibility to the horizon, giving shorebirds earlier warning of a falcon's approach. Grassy Bay is heavily disturbed by pleasure boaters until early September (D. Riepe, verb. comm.). Further investigation is needed to determine its significance to roosting shorebirds and whether some species shift to this location in response to migrant hawks.

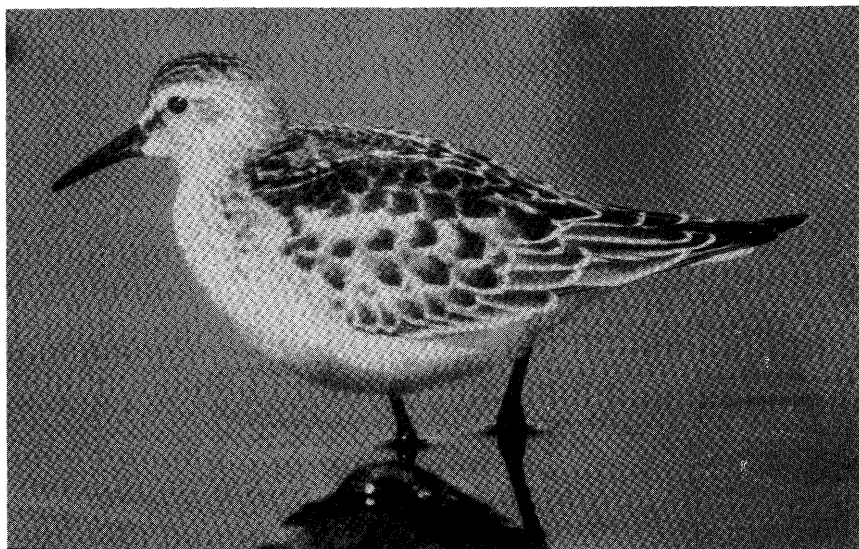
Comparisons With 1981

This season's species total was two less than last year's yet the species diversity was greater from late August through early October (see Table 1). This difference of up to five species per half-month period was due to the greater frequency of occurrence of less-common species, including American Oystercatcher, American Avocet, Lesser Golden-Plover, Marbled Godwit, Whimbrel, Willet, and Wilson's and Red-necked Phalaropes. The peak count of 27 species 18 September would be an enviable day's total at any North American location, and it lacked American Woodcock and several other species. Given exceptional circumstances, 30 or more shorebird species might be observed in a day at the Refuge!

The adults and juveniles of most migrant species arrived a week or more later than usual (see Table 2), and there was a tendency to linger later in numbers. This probably reflects a late nesting season in the Arctic, not the absence of meteorological conditions that favor migration. In describing the 1981 migration at Jamaica Bay Wildlife Refuge (*loc. cit.*) I expressed surprise at the low ratio of juveniles to adult birds and cited several possible explanations. In subsequent conversations with Brian Harrington of Manomet Bird Observatory, Massachusetts, he stated that shorebirds are rather long-lived birds, offsetting their poor average annual production of juveniles. Indeed,



Whimbrel *Juvenile*
 12 Sept 1982 *Jamaica Bay* *Tom Davis*



White-rumped Sandpiper *Juvenile*
 4 Oct 1981 *Jamaica Bay* *Tom Davis*

R. B. Clapp, M. K. Klimkiewicz, and J. H. Kennard (*Journ. Field Ornith.* 53: 81-124, 1982) cite longevity records of 12 years and a month for a Semipalmated Sandpiper and 11 years and 3 months for a Least Sandpiper, both small-sized migrant species.

Several species of shorebirds were noted in lower numbers than last year, all but one breeding exclusively west of Hudson Bay. They are: Western, White-rumped, Pectoral, and Stilt Sandpipers, and Long-billed Dowitcher. A number of species, American Oystercatcher, Black-bellied Plover, Red Knot, Semipalmated and Least Sandpipers, Greater and Lesser Yellowlegs, and Willet, were noted in increased numbers this year. The numbers of American Oystercatchers (219 birds on 26 dates this year compared to 40 birds on nine dates last year) and Willets (63 birds on 28 dates this year against nine birds on eight dates last year) probably reflect increases in local breeding populations. Two other uncommon species registered marginal increases: Lesser Golden-Plover (33 birds on 14 dates this year against 19 birds on eight dates last year) and Whimbrel (12 birds on seven dates this year against two birds on two dates last year).

Selected Species Accounts

American Avocet: Two or three birds noted, an adult male 10-21 August (same bird throughout?) and an adult female 27 August-2 October.

Black-bellied Plover: Individuals noted prior to 31 July were non-breeding summering birds.

Curlew Sandpiper: Only one individual, a fading adult 28 July-12 August.

Dunlin: An extremely small-sized fading adult studied by the author and other observers 4-5 September; its body size was between that of Western and White-rumped Sandpipers. This bird's small black belly patch and heavily streaked throat suggested it was the race *schinzii*, found breeding in Iceland and Europe. One observer commented that had this Dunlin been in winter plumage he would likely have identified it as a Western Sandpiper! The author once before saw a similar bird at Jamaica Bay on 9 July 1978, a very early date for this species.

Ruff: Females noted 30 June (J. Blass) and 10 July (M. Sohmer, B. Baker)—same bird?

Hudsonian Godwit: The season total was about eight individuals.

Marbled Godwit: The season total was four individuals.

Wilson's Phalarope: The season total was three to five individuals.

9446 85 Road, Woodhaven, New York 11421

TABLE 1. SPECIES DIVERSITY

(American Woodcock is understood to be present throughout the season whether observed in a given period or not)

Period	Late June Early July	Late July	Early Aug.	Late Aug.	Early Sept.	Late Sept.	Early Oct.	Late Oct.
Number Visits	6	6	5	3	5	4	4	4
Total Species	13	24	25	29	31	30	26	19
1981 Totals	14	25	25	26	26	27	23	21

TABLE 2.
1982 Arrival Dates of Adults and Juveniles Plus Four Year Average Time of Arrival

	1982		Average Time of Arrival	
	Adult	Juv.	Adults	Juveniles
Plover, Black-bellied	7/31	9/11	3rd or 4th week July	1st or 2nd week Sept.
Golden-Plover, Lesser	8/14	9/11	2nd or 3rd week Aug.	1st or 2nd week Sept.
Plover, Semipalmated	(7/ 9)	8/22	2nd week July	2nd or 3rd week Aug.
Yellowlegs, Greater	(6/30)	8/15	4th week June	3rd week Aug.
Yellowlegs, Lesser	(6/30)	8/ 1	4th week June	1st or 2nd week Aug.
Turnstone, Ruddy	(7/21)	8/28	4th week July	4th week Aug.
Knot, Red	(7/22)	8/22	3rd week July	4th week Aug.-1st week Sept.
Sanderling	(7/22)	8/28	2nd or 3rd week July	4th week Aug.
Sandpiper, Semipalmated	7/10	8/14	4th week June-1st week July	2nd week Aug.
Sandpiper, Western	7/24	(8/22)	2nd or 3rd week July	3rd or 4th week Aug.
Sandpiper, Least	6/26	8/ 1	4th week June	4th week July-1st week Aug.
Sandpiper, White-rumped	7/31	10/ 2	3rd or 4th week July	3rd or 4th week Sept.
Sandpiper, Pectoral	7/17	(8/22)	2nd week July	4th week Aug.
Dunlin	8/28	9/18	2nd-4th week Aug.	1st or 2nd week Sept.
Sandpiper, Stilt	7/18	8/22	2nd week July	2nd or 3rd week Aug.
Dowitcher, Short-billed	6/26	8/ 8	4th week June	2nd week Aug.
Dowitcher, Long-billed	7/23	10/ 3	3rd or 4th week July	4th week Sept.

TABLE 3. JAMAICA BAY WILDLIFE REFUGE FALL SHOREBIRD CENSUSES
(All counts were taken at high tide)

	<u>6/26</u>	<u>7/3</u>	<u>7/4</u>	<u>7/5</u>	<u>7/10</u>	<u>7/11</u>	<u>7/17</u>	<u>7/18</u>	<u>7/23</u>	<u>7/24</u>
Plover, Black-bellied	1					2		(1)	1	(1)
Golden-Plover, Lesser										
Plover, Semipalmated						8	10	22	165	190
*Killdeer	10	14	6	8	7	22	8	14	15	16
*Oystercatcher, American	1	8	3	3	(4)	4	18	18	9	4
Avocet, American										
Yellowlegs, Greater		21	20	10	13	5	35	37	102	128
Yellowlegs, Lesser		18	17	15	34	40	38	74	50	90
Sandpiper, Solitary										
*Willet						1	(1)	2	2	
*Sandpiper, Spotted	2	5	3	7	4	5	5	8	6	6
Whimbrel										
Godwit, Hudsonian							(1)		3	3
Godwit, Marbled										
Turnstone, Ruddy									1	5
Knot, Red									29	110
Sanderling									5	(20)
Sandpiper, Semipalmated					11	50	142	225	960	800
Sandpiper, Western										1
Sandpiper, Least	2		6	3	2	65	82	315	115	135
Sandpiper, White-rumped										
Sandpiper, Baird's										
Sandpiper, Pectoral							1		1	2
Dunlin										
Sandpiper, Curlew										
Sandpiper, Stilt								1	(6)	6
Sandpiper, Buff-breasted										
Ruff					(1)					
Dowitcher, Short-billed	3	75	20	58	220	173	535	560	620	680
Dowitcher, Long-billed									1	1
Snipe, Common										
*Woodcock, American	(1)				(1)					
Phalarope, Wilson's										
Phalarope, Red-necked										
No. Species	7	6	7	7	10	11	12	13	18	18
No. Individuals	20	137	75	101	297	375	876	1278	2086	2198
Coverage: East Pond		CD	CD		ABCD	CD	ABCD	BCD	BCD	ABCD
West Pond	EF	EF	E	E	E	EF	E	E	E	E

*=breeds locally ()=reported by others ✓=numbers not counted

TABLE 3. JAMAICA BAY WILDLIFE REFUGE FALL SHOREBIRD CENSUSES

(All counts were taken at high tide)

	7/25	7/31	8/1	8/6	8/8	8/14	8/15	8/22	8/28	8/29
Plover, Black-bellied		35	28	82	25	420	460	640	615	✓
Golden-Plover, Lesser						1			2	
Plover, Semipalmated	160	660	716	515	460	697	680	665	561	✓
*Killdeer	9	9	12	9	9	7	7	6	7	✓
*Oystercatcher, American	11	24	20		4	25	20	3	(5)	
Avocet, American									1	1
Yellowlegs, Greater	87	137	113	137	127	154	228	175	233	✓
Yellowlegs, Lesser	20	80	102	66	57	36	50	45	46	✓
Sandpiper, Solitary										
*Willet		4		1	1	2	1	1	(1)	1
*Sandpiper, Spotted	2	6	4	6	4	3	7	3	2	(1)
Whimbrel		1				(1)	3			1
Godwit, Hudsonian	(1)	2	3	3	1	1				✓
Godwit, Marbled		(1)							1	
Turnstone, Ruddy	6	47	40	43	25	52	115	34	50	✓
Knot, Red	90	170	114	356	135	360	470	250	90	✓
Sanderling	44	100	120	35	53	102	145	280	247	✓
Sandpiper, Semipalmated	840	1900	2000	1345	1650	1275	1210	1130	740	✓
Sandpiper, Western	1	1	1	2	4		1	2	1	1
Sandpiper, Least	64	64	109	40	38	81	88	68	61	✓
Sandpiper, White-rumped		1	1	4	5	4	6	10	10	✓
Sandpiper, Baird's								(1)	1	
Sandpiper, Pectoral	(1)	3	1		1			(4)	5	✓
Dunlin									(2)	
Sandpiper, Curlew		1	(1)	1	1					
Sandpiper, Stilt	5	7	11	14	15	12	16	9	19	✓
Sandpiper, Buff-breasted										
Ruff										
Dowitcher, Short-billed	742	720	805	490	427	293	465	110	82	✓
Dowitcher, Long-billed	5	6	10	3	7	7	22	5	8	12
Snipe, Common			1						(1)	
*Woodcock, American									(1)	
Phalarope, Wilson's								1	1	
Phalarope, Red-necked										3
No. Species	17	23	21	19	21	20	19	21	27	21
No. Individuals	2088	3969	4212	3152	3049	3533	3994	3442	2793	
Coverage: East Pond	ABCD	ABCD	ABCD	ABCD	ABCD	ABCD	ABD	ABCD	ABCD	ABCD
West Pond		E	E	E		E	E		E	E

*=breeds locally

()=reported by others

✓=numbers not counted

TABLE 3. JAMAICA BAY WILDLIFE REFUGE FALL SHOREBIRD CENSUSES
(All counts were taken at high tide)

	9/4	9/5	9/6	9/11	9/12	9/18	9/19	9/25	9/26	10/2
Plover, Black-bellied	730	780	550	490	✓	600	✓			160
Golden-Plover, Lesser		2	(1)	2	7	4	4	(1)	(1)	3
Plover, Semipalmated	235	154	130	55	✓	28	28	12	15	14
Killdeer	6	14	5	17	15	13	4	12	16	10
Oystercatcher, American	5	5	(1)	9	8	8		1		
Avocet, American	1		1	1	(1)	1	1	1	(1)	1
Yellowlegs, Greater	320	424	519	455	✓	500	✓	168	45	120
Yellowlegs, Lesser	18	24	20	35	✓	21	12	20	12	15
Sandpiper, Solitary					(1)	1	(1)			
Willet	4	4	4	5	4	5	5	3	4	1
Sandpiper, Spotted	2	1	1	1	1	1				
Whimbrel					3	2				
Godwit, Hudsonian				1	(1)	(1)	1	2	2	2
Godwit, Marbled	2	2	2	2	2	1	1			
Turnstone, Ruddy	20	20	15	6	11	7	8	2		1
Knot, Red	80	90	90	48	66	72	✓			1
Sanderling	60	75	112	2	1	2	1	(1)	1	
Sandpiper, Semipalmated	330	290	180	130	✓	141	95	79	50	108
Sandpiper, Western	9	7	7	3	(2)	3		1		1
Sandpiper, Least	45	86	50	61	✓	15	18	15	12	8
Sandpiper, White-rumped	2		(1)			2	2	(2)	(1)	6
Sandpiper, Baird's	(1)			(1)			1			
Sandpiper, Pectoral	1	(1)		4	6	9	1	8	1	15
Dunlin	1	1	1	1	1	27	✓	32	60	35
Sandpiper, Curlew										
Sandpiper, Stilt	10	9	10	7	14	12	1	13	4	17
Sandpiper, Buff-breasted		1					(1)			
Ruff										
Dowitcher, Short-billed	50	40	45	50	✓	26	20	29	20	12
Dowitcher, Long-billed	9	6	8	1	1	10		(1)		
Snipe, Common										(1)
Woodcock, American	(1)	(1)		(1)						
Phalarope, Wilson's		1								
Phalarope, Red-necked	2	2	2							
No. Species	25	25	23	25	25	27	23	20	16	20
No. Individuals	1944	2040	1755	1388		1513		403	245	531
Coverage: East Pond	ABCD	ABCD	ABCD	ABCD	ABCD	ABCD	BCD	ABCD	BCD	ABCD
West Pond		EF		E	E	E		E	E	

*=breeds locally ()=reported by others ✓=numbers not counted

TABLE 3. JAMAICA BAY WILDLIFE REFUGE FALL SHOREBIRD CENSUSES

(All counts were taken at high tide)

	<u>10/3</u>	<u>10/9</u>	<u>10/11</u>	<u>10/16</u>	<u>10/17</u>	<u>10/23</u>	<u>10/24</u>
Plover, Black-bellied	196	1	13	3	44	425	143
Golden-Plover, Lesser	1			1		3	
Plover, Semipalmated	14	22	18		8	12	8
*Killdeer	10	8	9	4	12	7	6
*Oystercatcher, American	2						
Avocet, American							
Yellowlegs, Greater	235	30	82	97	85	12	10
Yellowlegs, Lesser	22	12	15	7	14	6	5
Sandpiper, Solitary							
*Willet	1	1	1		1	1	(1)
*Sandpiper, Spotted							
Whimbrel							
Godwit, Hudsonian	2	2	3	2	2	2	2
Godwit, Marbled	1						
Turnstone, Ruddy	1	1					
Knot, Red	1		1			6	1
Sanderling	2					142	
Sandpiper, Semipalmated	107	116	48	3	18	25	18
Sandpiper, Western	1		1		1		
Sandpiper, Least	12	1	2		2	1	
Sandpiper, White-rumped	9	5	3	1	6	6	4
Sandpiper, Baird's							
Sandpiper, Pectoral	10	7	8	2	5	4	1
Dunlin	85	56	50	4	48	1306	250
Sandpiper, Curlew							
Sandpiper, Stilt	16	17	9	6	6	7	1
Sandpiper, Buff-breasted							
Ruff							
Dowitcher, Short-billed	24	12	5				
Dowitcher, Long-billed	2		4	10	5	1	1
Snipe, Common							
*Woodcock, American							
Phalarope, Wilson's		1					1
Phalarope, Red-necked							
No. Species	22	16	17	12	15	17	15
No. Individuals	754	292	272	140	257	1960	452
Coverage: East Pond	ABCD	ABCD	ABCD	ABCD	ABCD	ABCD	BCD
West Pond	E	E	E	E			E

Footnote: October 23 count includes 3 Lesser Golden-Plovers, 350 Black-bellied Plovers, 4 Red Knots, 140 Sanderlings, and 1100 Dunlins at the North Railroad bridge— see remarks in article. *=breeds locally ()=reported by others √=numbers not counted