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1992-1995 WATERBIRD AND RAPTOR RECORDS FOR CABELL MARSH,  
WILLIAM L. FINLEY NATIONAL WILDLIFE REFUGE, BENTON COUNTY, OREGON  
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ABSTRACT.--I conducted 14-22 waterbird and raptor censuses each year from 1992-1995 during late April or early May through October. I observed 44 waterbird and 13 raptor species, including hatch year individuals of seven waterbird species. The records for each census are given.  
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A. INTRODUCTION

The purpose of this article is to document waterbird and raptor occurrence at Cabell Marsh from April or May through October in 1992 through 1995. My 1992 results were previously published in Merrifield (1994) and are included here for the reader's convenience in making comparisons.

In the 1940's, before Finley Refuge was created, Fred Evenden, Jr. also studied waterbirds 0.7 mi (1.1 km) southeast of my study site in McFadden's Marsh (Evenden et al. 1950) and included McFadden's Marsh or a nearby marsh in Evenden (1949). Evenden's field notes are at the Museum of Vertebrate Zoology at the University of California, Berkeley (Bayer 1993). In 1952, Eddy (1953) also studied birds at McFadden's Marsh. Gullion (1951) summarized bird records from 1938 through 1949 for a southern Willamette Valley area containing Fern Ridge Reservoir in central Lane County from 12.0 mi (19.3 km) to 37.1 mi (59.7 km) south of Finley Refuge. Because of differing techniques and study areas, a rigorous comparison of results is not possible, except for some gross similarities and differences.  
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B. STUDY AREA

Approximate Center of Site: 44 24.9' N, 123 18.9' W  
Location: Township 13S, Range 5W, NE 1/4 of Section 29  
Oregon Natural Heritage Program Hexagon: 26,967  
Area studied: Main Marsh, 0.46 sq km; South Pond, 0.05 sq km.  
Habitat(s) Studied: Freshwater Marsh, Freshwater Lake  
Elevation: 259 ft (79 m).

B-1. GENERAL DESCRIPTION

William L. Finley National Wildlife Refuge contains 5,325 acres (2,157 ha) of forest, savannah, aquatic vegetation, and agricultural fields and is approximately 10 mi (16 km) south of Corvallis in Benton County, Oregon.

Cabell Marsh is an artificial impoundment within the Refuge formed by a dike constructed across northward-flowing Gray Creek (Figure 1). The Main Marsh is bordered on the east and west by swampy woodlands of Oregon ash and on the north by a dike. The road along the southern boundary is often inundated during winter and spring. The northern portion of the impoundment is open water, and the southern portion is dominated by emergent vegetation. Emergent vegetation south of the open water obscures the view of much of the southern part of the impoundment. During the 1992 census period, the seventh year of drought in the region, the Main Marsh water level was low, exposing extensive mudflats. In 1993, after heavy winter precipitation, higher water

covered bare mud and inundated most emergents. On 26 September 1994, Refuge personnel completely drained the Main Marsh, exposing the entire Marsh substrate as mudflats. In 1995, the water level was relatively high during the entire census period, and little mud was exposed. Low water levels during some years coincided with higher late summer shorebird occurrence, possibly due to an increase in exposed mudflats. The high water level of 1993 following low water during the previous season coincided with increased numbers of breeding grebes, dabbling ducks, and coots. Higher water levels may have enhanced food and cover production or availability for most breeding species but may have decreased resource access for post-breeding migrants (Merrifield and Naughton 1994).

The South Pond (which was censused only in 1995) is a seasonally inundated area supporting emergent vegetation approximately 0.2 mi (0.3 km) south of the Main Marsh. When open areas are available in the South Pond, waterbirds use it for feeding and resting, and they fly back and forth between the South Pond and the Main Marsh.

#### B-2. HUMAN DISTURBANCE

Cabell Marsh is open to human use from approximately April 15 through October 31. The exact opening date depends upon the departure of migratory Canada Geese. During much of this period, agricultural operations are performed in several adjacent fields. Hikers and birdwatchers enter the area, but most remain on roads. Refuge personnel conduct wildlife studies and other operations along roads and in the Main Marsh. According to Refuge regulations, no human entry is allowed between November 1 and approximately April 15, since human presence disturbs wintering waterfowl.

The south part of the Main Marsh, as well as the South Pond area (Figure 1) was overgrown with reed-canary grass, an introduced weedy species, during the 1992 through 1994 censuses. On 26 September 1994, Refuge personnel completely drained Cabell Marsh to control reed-canary grass and non-native fish and frog species. The Main Marsh was not fully drained during other census years. The draining resulting in extensive mudflat exposure, and, later that fall, the Main Marsh and South Pond were cleared by discing, which removed much reed-canary grass and opened up the area for both waterbird habitat and observation.

The clearing of the south part of the Main Marsh coincided with better visibility and/or more use of this area by several duck species and with decreased American Bittern observations.

Few waterbirds were visible in the South Pond during the 1992 through 1994 census periods except for occasional American Bitterns (pers. obs.), and I believe that few waterbirds except for bitterns actually used it. Thus, I did not include the South Pond area in 1992 through 1994 censuses, but I did include it during 1995 censuses, although the South Pond records are given separately in the text for each taxon. The South Pond dried up and was not used by waterbirds after early June 1995.

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#### C. OBSERVATION METHODS

In 1992 and 1993, I used a spotting scope with a 20X eyepiece during censuses, although I changed to a 40X eyepiece for some identifications. In 1994 and 1995, I used a spotting scope with a 15-45X zoom eyepiece. Scanning and most identifications were performed at about 20X, and the higher powers were used for some identifications.

In 1992, I censused nonflying waterbirds and flying and nonflying raptors early in the morning at approximately two-week intervals from 25 April through 30 October, except during July and August, when the longest interval between censuses was four weeks (Table 1).

In 1993, I did censuses in the early morning or evening at approximately one- to two-week intervals from April 24 through October 31. The longest interval between censuses was 16 days (between July 18 and August 3). On July 18, September 5, and September 19, I censused birds in both the morning and evening (Table 1).

In 1994, I counted birds in late afternoon or evening at approximately two-week intervals except during mid- to late October, when I censused weekly. The longest interval between censuses was 21 days (between August 10 and 31) (Table 1).

In 1995, I did censuses in the late afternoon or evening at approximately one-week intervals except for late August and early September. The longest interval between censuses was 17 days (between August 24 and September 10) (Table 1).

I followed the same route during each census from 1992 through 1994 (Figure 1). In 1992, I walked eastward along the north dike, then southward and westward on the gravel roads near the Main Marsh (Figure 1). In 1993, I also walked the same route except from August 3 through September 19, when, because of an injury, I censused from a Refuge vehicle that was driven along the same route. In 1994, I again walked the route. In 1995, I walked the same route and added the South Pond to the route, but South Pond records are only given in the text for each species and not in tabular form.

The times at the start and end of each census, census duration, and weather conditions at the start of most censuses are given in Table 1. The average duration of a census was 2.1 h in 1992, 1.6 h in 1993, and 1.5 h in 1994 and 1995. The length of censuses depended upon the time required to identify and count all birds present.

I usually counted each bird, but when over 100 birds of a species were present, I sometimes estimated species numbers by counting blocks of ten or fifty.

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#### D. SHORTCOMINGS OF OBSERVATIONS

Only birds that were visible were censused, so those hidden in vegetation would have been missed. In particular, breeding birds appeared to move to open water more after their young had hatched.

Inconsistent census duration may have resulted in varying results, since more birds may be seen during a longer census.

In 1993, the Refuge vehicle used during some censuses may have influenced birds differently than a person on foot.

The drainage of the Main Marsh in September 1994 increased exposed mud area and decreased open water, providing increased habitat for shorebirds and decreased habitat for swimming birds and possibly confounding comparison of 1994 fall waterbird data with those of other years.

E. FIGURE AND TABLE

FIGURE 1. Cabell Marsh at William L. Finley National Wildlife Refuge, Benton County, Oregon.

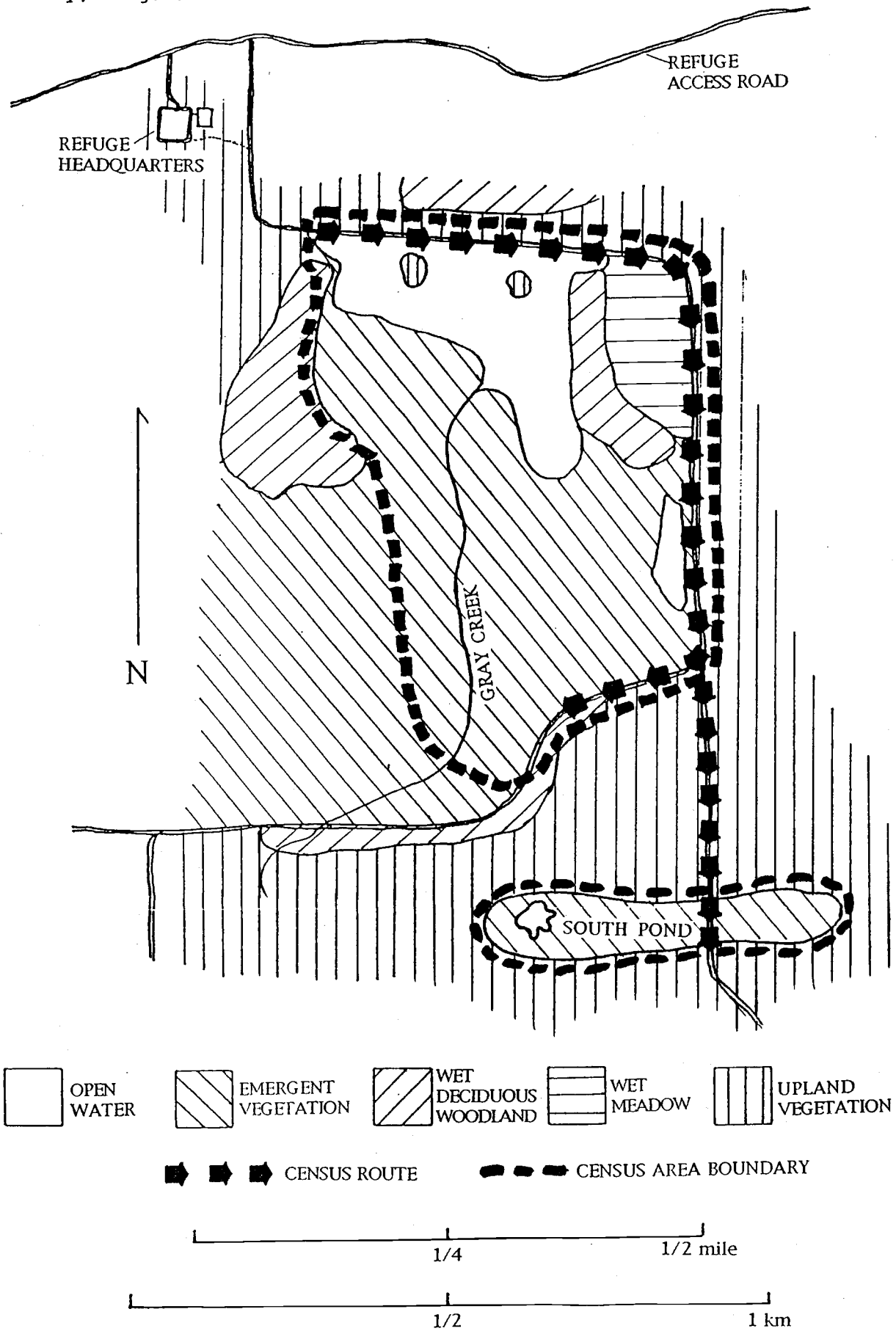


TABLE 1. Starting and ending times of censuses in 1992 through 1995 at Cabell Marsh, and weather conditions at the start of each census. Times are in Pacific Standard Time (PST). I measured air temperature with a hand-held thermometer or estimated temperature based on known conditions in Corvallis. I estimated wind speed in miles/h (mph) using the Beaufort Scale.

Codes:

Duration=duration of census, which is (End Time) - (Start Time)

?=no data

@=estimated temperature.

Date in 1992-->	4/25	5/10	5/25	6/7	6/21	7/5	7/19	
Start Time (PST)	0630	0530	0530	0510	0640	0850	0910	
End Time (PST)	0900	0650	0725	0740	0845	1015	1040	
Duration (h)	2.5	1.3	1.9	2.5	2.0	1.4	1.5	
Temperature (F)	65	54	65	47	65	70	75	
Wind Speed (mph)	<1	1-3	0-3	1-3	8-12	1-3	4-7	
Precipitation	none	none	none	none	none	none	none	
Cloud Cover (%)	80	90	70	40	5	95	0	
Date in 1992-->	8/23	9/7	9/20	10/4	10/11	10/25	10/30	
Start Time (PST)	0821	0740	0830	0610	0615	0545	0700	
End Time (PST)	1033	1010	1050	0805	0820	0845	0900	
Duration (h)	2.2	2.5	2.3	1.9	2.1	3.0	2.0	
Temperature (F)	65	70	65	52	38	?	53	
Wind Speed (mph)	1-3	1-3	1-3	4-7	<1	?	8-12	
Precipitation	none	none	none	none	none	none	rain	
Cloud Cover (%)	0	0	5	5	0	?	100	
Date in 1993-->	4/24	5/9	5/23	6/6	6/20	7/5	7/18	7/18
Start Time (PST)	0705	0550	0546	0550	0545	0535	0515	1809
End Time (PST)	0830	0710	0743	0740	0750	0742	0720	1940
Duration (h)	1.4	1.9	2.0	1.9	2.1	2.2	2.0	1.5
Temperature (F)	?	?	55	66	?	65@	55	?
Wind Speed (mph)	?	?	8-12	1-3	?	1-3	4-7	?
Precipitation	?	?	none	none	none	none	none	none
Cloud Cover (%)	?	?	0	60	?	80	5	?
Date in 1993-->	8/3	8/17	8/25	8/29	9/5	9/5	9/10	
Start Time (PST)	1812	1728	1708	0605	0613	1739	1710	
End Time (PST)	1925	1815	1841	0715	0832	1851	1820	
Duration (h)	1.3	0.75	1.6	1.2	2.3	1.3	1.2	
Temperature (F)	90	?	75@	65@	65@	70@	75	
Wind Speed (mph)	1-3	?	1-3	8-12	1-3	0	8-12	
Precipitation	none	none	none	none	none	none	none	
Cloud Cover (%)	0	?	15	0	100	0	10	
Date in 1993-->	9/19	9/19	9/24	10/3	10/9	10/18	10/26	10/31
Start Time (PST)	0631	1731	1644	0623	1638	1502	1525	1445
End Time (PST)	0755	1820	1812	0806	1752	1650	1724	1609
Duration (h)	1.4	0.9	1.5	1.7	1.3	1.8	1.0	2.4
Temperature (F)	55	?	70	50	70@	60@	70@	59
Wind Speed (mph)	1-3	?	1-3	0	0	0	8-12	1-3
Precipitation	none	?	none	none	none	none	none	none
Cloud Cover (%)	100	?	70	fog	20	50	60	10

(Table 1 continued on next page)

Date in 1994-->	4/25	5/4	5/18	6/1	6/15	6/29	7/12	7/27
Start Time (PST)	1407	1650	1540	1540	1831	1550	1717	1715
End Time (PST)	1556	1837	1715	1740	1905	1726	1839	1831
Duration (h)	1.8	1.8	1.6	2.0	1.5	1.6	1.4	1.3
Temperature (F)	65@	65@	65@	70@	65@	85@	80@	80@
Wind Speed (mph)	1-3	1-3	1-3	4-7	1-3	8-12	8-12	8-12
Precipitation	none	none	none	none	none	none	none	none
Cloud Cover (%)	50	80	70	40	40	0	0	5
Date in 1994-->	8/10	8/31	9/13	9/28	10/6	10/12	10/20	10/28
Start Time (PST)	1718	1728	1656	1547	1530	1549	1455	1440
End Time (PST)	1840	1838	1816	1720	1639	1718	1538	1624
Duration (h)	1.3	1.2	1.3	1.6	1.2	1.5	0.8	1.7
Temperature (F)	70@	70@	65@	65@	65@	65@	60@	60
Wind Speed (mph)	4-7	4-7	0	0	4-7	1-3	8-12	0
Precipitation	none	none	none	none	none	none	none	none
Cloud Cover (%)	5	0	5	50	100	40	100	70
Date in 1995-->	5/6	5/12	5/19	5/26	6/5	6/14	6/21	6/29
Start Time (PST)	1228	1455	1430	1518	1516	1604	1636	1731
End Time (PST)	1408	1634	1610	1643	1701	1803	1830	1906
Duration (h)	1.5	1.6	1.6	1.5	1.8	2.0	1.9	1.7
Temperature (F)	60	67	70@	75@	50	65@	70@	85@
Wind Speed (mph)	0	4-18	7-8	13-18	19-24	0	1-3	4-7
Precipitation	driz.	none	none	none	rain	rain	none	none
Cloud Cover (%)	100	55	0	40	100	100	50	0
Date in 1995-->	7/5	7/12	7/19	8/2	8/9	8/17	8/24	8/30
Start Time (PST)	1714	1652	1804	1750	1808	1520	1659	1700
End Time (PST)	1859	1827	1908	1908	1920	1625	1843	1815
Duration (h)	1.8	1.5	1.0	1.3	1.2	1.1	1.8	1.3
Temperature (F)	65@	70@	75@	80@	75	70@	70@	75@
Wind Speed (mph)	1-3	8-12	1-3	4-7	1-3	4-12	8-12	1-3
Precipitation	none	none	none	none	none	none	none	none
Cloud Cover (%)	95	5	95	0	60	70	0	20
Date in 1995-->	9/10	9/19	9/27	10/9	10/18	10/26		
Start Time (PST)	1646	1705	1400	1534	1509	1450		
End Time (PST)	1749	1804	1635	1658	1616	1631		
Duration (h)	1.1	1.0	1.6	1.6	1.1	1.6		
Temperature (F)	80@	75@	65	652	60@	65@		
Wind Speed (mph)	4-7	4-7	4-7	0	4-7	4-7		
Precipitation	none	-	rain	-	-	-		
Cloud Cover (%)	0	5	90	50	0	75		

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**F. SPECIES ACCOUNTS**

**F-1. INTRODUCTION**

The following records in tabular form are for nonflying waterbirds and flying and nonflying raptors observed at Cabell Marsh from mid-April to early May through late October 1992 through 1995. Some records of flying waterbirds are mentioned in the text. Records for South Pond are only given in the text for each taxon and not in the tabular format.

Note that blank spaces are placed in columns so that censuses from different years on the same row are closer to being on the same dates.

Codes:

N=estimated or counted number of nonflying waterbirds and flying and nonflying raptors.

. =zero; no nonflying waterbirds or no flying or nonflying raptors observed.

@=estimated number of birds.

P=species present, but the number was not counted or estimated.

HY=hatch-year birds (i.e., birds hatched during the same calendar year in which they were observed).

## F-2. RESULTS FOR NONFLYING WATERBIRDS AND FLYING AND NONFLYING RAPTORS

## PIED-BILLED GREBE (N=nonflying waterbirds seen at the Main Marsh)

1992.....		1993.....		1994.....		1995.....	
Date	N	Date	N	Date	N	Date	N
4/25	.	4/24	.	4/25	5		
				5/4	8	5/6	.
5/10	1	5/9	1			5/12	2
				5/18	6	5/19	.
5/25	.	5/23	2			5/26	.
6/7	3	6/6	3	6/1	5	6/5	2
				6/15	6	6/14	1
6/21	5	6/20	7			6/21	2
				6/29	6	6/29	2
7/5	2	7/5	7			7/5	.
				7/12	5	7/12	.
		7/18 AM	11				
7/19	1	7/18 PM	9			7/19	.
		8/3	14	7/27	4	8/2	2
				8/10	10	8/9	4
		8/17	16			8/17	2
8/23	.	8/25	15			8/24	2
		8/29	15	8/31	3	8/30	.
9/7	.	9/5 AM	13				
		9/5 PM	6				
		9/10	7	9/13	1	9/10	.
		9/19 AM	7			9/19	1
9/20	.	9/19 PM	6				
		9/24	7	9/28	1	9/27	.
10/4	.	10/3	4				
		10/9	2	10/6	1	10/9	.
10/11	.			10/12	1		
		10/18	7	10/20	.	10/18	.
10/25	.	10/26	4	10/28	.	10/26	.
10/30	.	10/31	3				

Perhaps because of higher water (section B-1), some waterbirds were much more common or abundant during part of 1993 than in other years; these species included Pied-billed Grebes and American Coots from late July through October; Wood Ducks and Mallards in late July and early August; and American Wigeon in September-October.

In 1992, I saw five HY Pied-billeds on June 21, two on July 5, and one on July 19.

In 1993, totals include HY grebes on all dates from June 20 through October 24; a minimum of three HY was observed on September 5 (PM), and the maximum of 13 was counted on August 17 (PM).

In 1994, totals include HY grebes on all dates from June 1 through August 31. One HY was observed on June 1, on June 15, and on June 29; the maximum of 10 HY was observed on August 10.

In 1995, HY grebes were observed on all August dates and also on September 19. The maximum of 4 HY was counted on August 9, and the minimum of 1 was observed on September 27. On June 21, I observed two adults performing a display resembling the circle display described by Palmer (1962), in which they rotated slowly and drifted together in the water, sometimes touching bills and sometimes parallel but facing opposite directions.

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DOUBLE-CRESTED CORMORANT

The only nonflying cormorants seen during censuses were an adult or subadult on 25 August 1993 and an adult on 24 August 1995 whose bill was fading from bright yellow-orange to buffy tan.

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AMERICAN BITTERN (N=nonflying waterbirds seen at the Main Marsh)

1992.....		1993.....		1994.....		1995.....	
Date	N	Date	N	Date	N	Date	N
4/25	1	4/24	.	4/25	1		
				5/4	.	5/6	1
5/10	1	5/9	.			5/12	.
				5/18	1	5/19	.
5/25	.	5/23	1			5/26	.
6/7	.	6/6	.	6/1	3	6/5	.
				6/15	2	6/14	.
6/21	.	6/20	.	6/29	1	6/21	.
7/5	.	7/5	3			6/29	.
				7/12	.	7/5	.
		7/18 AM	.			7/12	1
7/19	.	7/18 PM	.			7/19	.
		8/3	1	7/27	1	8/2	.
				8/10	3	8/9	.
		8/17	.			8/17	.
8/23	.	8/25	1			8/24	1
		8/29	2	8/31	1	8/30	.
9/7	.	9/5 AM	.				
		9/5 PM	3				
		9/10	2	9/13	.	9/10	.
		9/19 AM	.			9/19	.
9/20	.	9/19 PM	1				
		9/24	.	9/28	.	9/27	.
10/4	.	10/3	1				
		10/9	.	10/6	.	10/9	.
10/11	.			10/12	1		
		10/18	.	10/20	.	10/18	.
10/25	.	10/26	.	10/28	.	10/26	.
10/30	.	10/31	.				

In 1992, based on "pumping" calls, there were also two bitterns on April 25, three on May 10, and one each on May 25, June 7, and June 21; I also saw one in flight on July 19.

In 1993, based on "pumping" calls, there was also one bittern on May 9, a total of three on May 23, two on June 6 and on June 20, and a total of four in July 5. I also observed a bittern in flight during both July 18 censuses and on August 17, and two bitterns flying on August 25.

In 1994, based on "pumping" calls, there was also one bittern on May 4. I observed two bitterns giving the "pumping" call on June 1 and one bittern giving the "pumping" call on June 15. The June 15 individual had two fluffy white feather patches above the wrist on the folded wing, the appearance of which are described by Bent (1926) as part of the courtship display.

In the fall of 1994, the south part of the Main Marsh was cleared and this coincided with decreased American Bittern observations (section B).

In 1995, based on "pumping" calls, there was also one bittern on May 6.



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 GREAT BLUE HERON (N=nonflying waterbirds seen at the Main Marsh)

1992.....		1993.....		1994.....		1995.....	
Date	N	Date	N	Date	N	Date	N
4/25	10	4/24	3	4/25	7		
				5/4	4	5/6	4
5/10	5@	5/9	2			5/12	4
				5/18	4	5/19	3
5/25	4	5/23	3			5/26	2
6/7	3	6/6	1	6/1	4	6/5	2
				6/15	5	6/14	3
6/21	4	6/20	2			6/21	4
				6/29	5	6/29	4
7/5	2	7/5	4			7/5	4
				7/12	5	7/12	4
		7/18 AM	4				
7/19	4	7/18 PM	2			7/19	4
		8/3	2	7/27	2	8/2	5
				8/10	6	8/9	5
		8/17	6			8/17	4
8/23	3	8/25	5			8/24	4
		8/29	4	8/31	3	8/30	3
9/7	5	9/5 AM	4				
		9/5 PM	5				
		9/10	4	9/13	5	9/10	2
		9/19 AM	3			9/19	1
9/20	3	9/19 PM	3				
		9/24	2	9/28	5	9/27	4
10/4	3	10/3	2				
		10/9	4	10/6	3	10/9	3
10/11	5			10/12	2		
		10/18	3	10/20	2	10/18	2
10/25	11	10/26	2	10/28	1	10/26	4
10/30	2	10/31	1				

On 7 June and 20 September 1992, two Great Blue Herons performed the Upright display (Bayer 1984).

In 1995, an additional Great Blue Heron was at the South Pond on June 5, June 14, and July 5.

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GREAT EGRET (N=nonflying waterbirds seen at the Main Marsh)

1992.....		1993.....		1994.....		1995.....	
Date	N	Date	N	Date	N	Date	N
4/25	.	4/24	.	4/25	.		
				5/4	.	5/6	.
5/10	.	5/9	.			5/12	.
				5/18	.	5/19	.
5/25	.	5/23	.			5/26	.
6/7	3	6/6	.	6/1	.	6/5	.
				6/15	.	6/14	.
6/21	.	6/20	.			6/21	.
				6/29	.	6/29	.
7/5	.	7/5	.			7/5	.
				7/12	.	7/12	.
		7/18 AM	.				
7/19	.	7/18 PM	.			7/19	.
		8/3	1	7/27	.	8/2	.
				8/10	.	8/9	1
		8/17	.			8/17	1
8/23	1	8/25	3			8/24	1
		8/29	.	8/31	.	8/30	2
9/7	8	9/5 AM	.				
		9/5 PM	.				
		9/10	.	9/13	1	9/10	1
		9/19 AM	.			9/19	1
9/20	9	9/19 PM	.				
		9/24	.	9/28	3	9/27	2
10/4	2	10/3	1				
		10/9	.	10/6	3	10/9	1
10/11	1			10/12	.		
		10/18	.	10/20	.	10/18	.
10/25	1	10/26	.	10/28	.	10/26	.
10/30	.	10/31	.				

Great Egrets were first recorded in the Willamette Valley in 1947 (Evenden et al. 1950).

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 GREEN HERON (N=nonflying waterbirds seen at the Main Marsh)

1992.....		1993.....		1994.....		1995.....	
Date	N	Date	N	Date	N	Date	N
4/25	.	4/24	.	4/25	.		
				5/4	.	5/6	.
5/10	.	5/9	.			5/12	.
				5/18	.	5/19	.
5/25	.	5/23	.			5/26	.
6/7	.	6/6	.	6/1	.	6/5	.
				6/15	.	6/14	.
6/21	.	6/20	.	6/29	.	6/21	.
7/5	.	7/5	.			6/29	.
				7/12	.	7/5	1
						7/12	.
		7/18 AM	.				
7/19	.	7/18 PM	.			7/19	.
		8/3	.	7/27	.	8/2	.
				8/10	.	8/9	2
		8/17	1			8/17	.
8/23	.	8/25	.			8/24	.
		8/29	.	8/31	.	8/30	1
9/7	.	9/5 AM	.				
		9/5 PM	.				
		9/10	.	9/13	1	9/10	1
		9/19 AM	.			9/19	1
9/20	.	9/19 PM	.				
		9/24	.	9/28	.	9/27	1
10/4	.	10/3	.				
		10/9	.	10/6	.	10/9	.
10/11	.			10/12	.		
		10/18	.	10/20	.	10/18	.
10/25	.	10/26	.	10/28	.	10/26	.
10/30	.	10/31	.				

Green Herons were slightly more frequent in August-September in 1995 than in other years. They may be overlooked because of their secretive habits (Eddy 1953) and cryptic plumage.

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 BLACK-CROWNED NIGHT-HERON

The only nonflying night-herons seen during censuses were six HY birds on 10 August 1994 that stayed together as a loose flock.

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 GREATER WHITE-FRONTED GOOSE (N=nonflying waterbirds seen at the Main Marsh)

1992.....		1993.....		1994.....		1995.....	
Date	N	Date	N	Date	N	Date	N
4/25	.	4/24	.	4/25	2		
				5/4	.	5/6	.
5/10	.	5/9	.			5/12	.
				5/18	.	5/19	.
5/25	.	5/23	.			5/26	.
6/7	.	6/6	.	6/1	.	6/5	.
				6/15	.	6/14	.
6/21	.	6/20	.			6/21	.
				6/29	.	6/29	.
7/5	.	7/5	.			7/5	.
				7/12	.	7/12	.
		7/18 AM	.				
7/19	.	7/18 PM	.			7/19	.
		8/3	.	7/27	.	8/2	.
				8/10	.	8/9	.
		8/17	.			8/17	.
8/23	.	8/25	.			8/24	.
		8/29	.	8/31	.	8/30	.
9/7	1	9/5 AM	.				
		9/5 PM	.				
		9/10	.	9/13	.	9/10	.
		9/19 AM	.			9/19	.
9/20	.	9/19 PM	.				
		9/24	.	9/28	.	9/27	.
10/4	.	10/3	1				
		10/9	.	10/6	.	10/9	.
10/11	.			10/12	.		
		10/18	.	10/20	.	10/18	.
10/25	1	10/26	.	10/28	.	10/26	.
10/30	.	10/31	.				

Additionally, on 25 April 1992, 120 white-fronted geese flew east and then north over the Main Marsh.

The goose observed on 3 October 1993 was a HY bird.

-----  
 CANADA GOOSE (N=nonflying waterbirds seen at the Main Marsh)

1992.....		1993.....		1994.....		1995.....	
Date	N	Date	N	Date	N	Date	N
4/25	.	4/24	.	4/25	4		
				5/4	.	5/6	.
5/10	.	5/9	.			5/12	.
				5/18	.	5/19	5
5/25	.	5/23	.			5/26	.
6/7	.	6/6	.	6/1	.	6/5	.
				6/15	.	6/14	20
6/21	.	6/20	.			6/21	9
				6/29	1	6/29	6
7/5	.	7/5	.			7/5	14
				7/12	.	7/12	.
		7/18 AM	.				
7/19	.	7/18 PM	.			7/19	.
		8/3	.	7/27	.	8/2	.
				8/10	.	8/9	.
		8/17	.			8/17	.
8/23	.	8/25	.			8/24	.
		8/29	.	8/31	6	8/30	.
9/7	.	9/5 AM	.				
		9/5 PM	.				
		9/10	.	9/13	.	9/10	.
		9/19 AM	.			9/19	.
9/20	.	9/19 PM	.				
		9/24	.	9/28	.	9/27	.
10/4	.	10/3	2				
		10/9	3	10/6	.	10/9	.
10/11	.			10/12	.		
		10/18	137	10/20	.	10/18	17
10/25	1600	10/26	25	10/28	.	10/26	2490
10/30	5	10/31	290				

MIGRANTS.--In 1992, on April 25, 15 Cackling Canada Geese flew over. On October 25, the nonflying total included 1,200 Cacklers, 320 Duskie, and 80 Taverner's. On October 30, the nonflying total included one Dusky and four Cacklers.

In 1993, I heard distant Canada Goose calls on May 9. Two Duskie flew over on October 3, three Cacklers flew over on October 9, 90 Duskie and 32 Cacklers flew over on October 18, several flocks of 8-25 Duskie plus a flock of 30 Cacklers flew over on October 26, and 65 Cacklers flew over on October 31. On October 18 and 25, all non-flying Canada Geese were Duskie, and, on October 31, the total included 290 Duskie and one Taverner's.

In 1994, on April 25, 70 Cacklers flew over; on October 20, 57 Cacklers flew over; and, on October 28, 1063 Canada Geese flew over, of which 1055 were Cackling and eight were larger but were not Western. On August 31, the non-flying geese were a large subspecies that did not appear to be the Western subspecies.

In 1995, no flying geese were observed. On October 18, non-flying geese were Duskie, and on October 26, non-flying geese included about 1550 Cacklers while the remainder were mostly Duskie with a few Taverner's.

NESTING.--In the past, Canada Geese were only migrants or winter residents in this area (e.g., Evenden et al. 1950), but the Western subspecies of Canada Goose has been introduced into western Oregon and has started nesting.

In 1994, all non-flying geese on April 25 and June 29 were Westerns.

In 1995, all non-flying geese observed from May 6 through July 5 were the Western subspecies and included HY individuals on May 6 at South Pond and on June 14, June 29, and July 5 at Main Marsh. The maximum HY count of 14 occurred on June 14.

In 1995, additional Western Canada Geese at the South Pond included 13 on May 6, four on May 12, 21 on May 19, and 14 on May 26.

WOOD DUCK (N=nonflying waterbirds seen at the Main Marsh)							
1992.....		1993.....		1994.....		1995.....	
Date	N	Date	N	Date	N	Date	N
4/25	10	4/24	7	4/25	2		
				5/4	4	5/6	12
5/10	10	5/9	5			5/12	12
				5/18	5	5/19	7
5/25	47@	5/23	31			5/26	26
6/7	30@	6/6	21	6/1	25	6/5	9
				6/15	28	6/14	13
6/21	1	6/20	32	6/29	6	6/21	30
						6/29	18
7/5	6	7/5	38	7/12	57	7/5	14
						7/12	15
		7/18 AM	179				
7/19	8	7/18 PM	270			7/19	11
		8/3	147	7/27	40	8/2	9
				8/10	19	8/9	6
		8/17	44			8/17	.
8/23	.	8/25	16			8/24	26
		8/29	6	8/31	12	8/30	.
9/7	.	9/5 AM	12				
		9/5 PM	2				
		9/10	10	9/13	1	9/10	1
		9/19 AM	3			9/19	.
9/20	.	9/19 PM	2				
		9/24	4	9/28	6	9/27	.
10/4	3	10/3	11				
		10/9	3	10/6	.	10/9	.
10/11	.			10/12	.		
		10/18	2	10/20	.	10/18	.
10/25	4	10/26	4	10/28	.	10/26	.
10/30	.	10/31	.				

Perhaps because of higher water (section B-1), some waterbirds were much more common or abundant during part of 1993 than in other years; these species included Pied-billed Grebes and American Coots from late July through October; Wood Ducks and Mallards in late July and early August; and American Wigeon in September-October.

In 1992, I saw 14 HY Wood Ducks on May 25; I also saw three broods on June 7, one brood on June 21, two broods on July 5, seven broods on July 19, and one brood on October 4. In 1992, the first males in eclipse plumage were noted on July 5.

In 1993, I saw HY Wood Ducks on May 23, June 6, June 30, July 5, both July 18 censuses, August 17, September 19, and September 24. The maximum HY count was 28 on July 5, and the last date on which I observed downy young was August 17.

In 1994, I saw HY Wood Ducks in all censuses from June 1 through September 28. The maximum HY count was 41 on July 12. The first males in eclipse plumage were observed on August 31. On June 29, one female flew over.

In 1995, I saw HY Wood Ducks in all censuses from May 12 through August 9. The maximum HY count was 20 on June 21. The first males in eclipse plumage were observed on June 29.

In 1995, additional Wood Ducks at the South Pond included 12 on May 12, 15 adults on May 19, and one female on June 5.

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 GREEN-WINGED TEAL (N=nonflying waterbirds seen at the Main Marsh)

1992.....		1993.....		1994.....		1995.....	
Date	N	Date	N	Date	N	Date	N
4/25	56	4/24	260	4/25	147		
				5/4	.	5/6	2
5/10	#10	5/9	2			5/12	.
				5/18:	.	5/19	1
5/25	.	5/23	.			5/26	.
6/7	.	6/6	.	6/1	.	6/5	.
				6/15	.	6/14	.
6/21	.	6/20	.			6/21	.
				6/29	.	6/29	2
7/5	.	7/5	.			7/5	1
				7/12	.	7/12	1
		7/18 AM	.				
7/19	.	7/18 PM	.			7/19	.
		8/3	.	7/27	.	8/2	.
				8/10	.	8/9	.
		8/17	.			8/17	.
8/23	.	8/25	19			8/24	1
		8/29	20	8/31	.	8/30	2
9/7	4	9/5 AM	10				
		9/5 PM	.				
		9/10	11	9/13	.	9/10	60
		9/19 AM	1			9/19	3
9/20	15	9/19 PM	.				
		9/24	39	9/28	50	9/27	12
10/4	50	10/3	23				
		10/9	43	10/6	7	10/9	167
10/11	102			10/12	.		
		10/18	140	10/20	.	10/18	610
10/25	550	10/26	86	10/28	7	10/26	411
10/30	225	10/31	189				

In 1992, #10=less than 10 Green-winged Teal.

In 1995, on June 29, the individuals were both males capable of flight. The teal observed on July 5 and July 12 were both females standing on the same log; on July 12, the female limped as it walked along the log.

In 1995, additional Green-winged Teal at the South Pond included two on May 6 and three on May 19.

MALLARD (N=nonflying waterbirds seen at the Main Marsh)

1992.....		1993.....		1994.....		1995.....	
Date	N	Date	N	Date	N	Date	N
4/25	7	4/24	19	4/25	18		
				5/4	43	5/6	58
5/10	40@	5/9	8	5/18	56	5/12	57
5/25	.	5/23	20			5/19	26
6/7	25@	6/6	13	6/1	21	5/26	32
				6/15	13	6/5	45
6/21	5	6/20	2	6/29	7	6/14	13
7/5	3	7/5	16			6/21	12
				7/12	43	6/29	26
		7/18 AM	73			7/5	35
7/19	6	7/18 PM	67			7/12	19
		8/3	88	7/27	37	7/19	13
				8/10	33	8/2	13
		8/17	19			8/9	15
8/23	22	8/25	9	8/31	9	8/17	10
		8/29	1			8/24	41
9/7	35	9/5 AM	11			8/30	135
		9/5 PM	26				
		9/10	.	9/13	82	9/10	194
		9/19 AM	106			9/19	40
9/20	12	9/19 PM	101				
		9/24	49	9/28	97	9/27	85
10/4	130	10/3	220				
		10/9	109	10/6	315	10/9	199
10/11	615			10/12	.		
		10/18	296	10/20	.	10/18	1680
10/25	1450	10/26	1236	10/28	47	10/26	1397
10/30	2000@	10/31	1515				

Perhaps because of higher water (section B-1), some waterbirds were much more common or abundant during part of 1993 than in other years; these species included Pied-billed Grebes and American Coots from late July through October; Wood Ducks and Mallards in late July and early August; and American Wigeon in September-October.

In 1992, on May 25, 20 Mallards flew over. On June 7, there were at least four Mallard broods of various ages. The first Mallard males in eclipse plumage were noted on July 19. All males appeared to be in breeding plumage by October 11.

In 1993, I saw six HY Mallards on May 23 and on June 6 and seven HY Mallards on June 20 and on July 5. After July 5, HY birds could not be distinguished from adult females. On August 25, five Mallards flew over; on September 5 (PM), 19 flew over; on September 19 (AM), 75 flew over; and on September 24, 25 flew south.

In 1994, I saw five downy HY Mallards on June 29 and 12 on July 12. HY Mallards were no longer distinguishable from adult females by July 27. The first eclipse males were observed on September 13. On September 28, I saw one leucistic Mallard.

In 1995, I saw five HY Mallards on June 5, eleven on June 29, 19 on July 5, and some HY on July 12. After July 19, HY birds were no longer distinguishable from adult females. The first eclipse males were observed on August 2, and all were in eclipse plumage through September 27. By October 9, most males were in breeding plumage.

In 1995, additional Mallards at the South Pond included two to 12 adults during each visit from May 6 through June 14, but no HY Mallards were observed in the South Pond.



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 NORTHERN PINTAIL (N=nonflying waterbirds seen at the Main Marsh)

1992.....		1993.....		1994.....		1995.....	
Date	N	Date	N	Date	N	Date	N
4/25	12	4/24	.	4/25	.	5/6	25
5/10	1	5/9	.	5/4	.	5/12	.
5/25	.	5/23	.	5/18	.	5/19	.
6/7	.	6/6	.	6/1	.	5/26	1
6/21	.	6/20	.	6/15	.	6/5	.
7/5	.	7/5	3	6/29	.	6/14	.
				7/12	.	6/21	.
		7/18 AM	.			6/29	.
7/19	.	7/18 PM	.			7/5	.
		8/3	.	7/27	.	7/12	.
				8/10	.		
		8/17	.			8/2	.
8/23	2	8/25	.			8/9	.
		8/29	.	8/31	.	8/17	.
9/7	.	9/5 AM	.			8/24	8
		9/5 PM	.			8/30	8
		9/10	.	9/13	.		
		9/19 AM	.			9/10	19
9/20	.	9/19 PM	.			9/19	.
		9/24	.	9/28	5	9/27	2
10/4	6	10/3	.				
		10/9	.	10/6	9	10/9	4
10/11	3			10/12	.		
		10/18	10	10/20	.	10/18	160
10/25	20	10/26	44	10/28	2	10/26	245
10/30	.	10/31	3				

In 1992, one pintail on August 23 was probably an eclipse male. Two on October 11 were males in breeding plumage.

In 1994, pintails observed on September 28 and October 6 included eclipse males.

In 1995, a single male observed at South Pond on May 19 and one male at Main Marsh on May 26 had brownish scaled upperparts resembling female plumage with head and neck brown and white as in a typical male. Pintails observed on September 10 and 27 and October 9 did not include males in breeding plumage, but, on October 26, some males were developing breeding plumage.

In 1995, an additional pintail was at the South Pond on May 19.

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 CINNAMON OR BLUE-WINGED TEAL

The only nonflying Cinnamon or Blue-winged Teal seen during censuses were four during the 18 July 1993 (AM) census.

In 1993, considering the rarity of Blue-winged Teal, 25 flying on September 5 (PM) were probably Cinnamon Teal.

-----  
 CINNAMON TEAL (N=nonflying waterbirds seen at the Main Marsh)

1992.....		1993.....		1994.....		1995.....	
Date	N	Date	N	Date	N	Date	N
4/25	10	4/24	3	4/25	.		
				5/4	5	5/6	.
5/10	15	5/9	14			5/12	.
				5/18	6	5/19	10
5/25	7	5/23	8			5/26	8
6/7	.	6/6	5	6/1	7	6/5	4
				6/15	.	6/14	5
6/21	.	6/20	.			6/21	2
				6/29	.	6/29	.
7/5	1	7/5	.			7/5	.
				7/12	.	7/12	.
		7/18 AM	.				
7/19	.	7/18 PM	.			7/19	.
		8/3	.	7/27	6	8/2	2
				8/10	5	8/9	3
		8/17	.			8/17	.
8/23	.	8/25	1			8/24	6
		8/29	.	8/31	.	8/30	.
9/7	.	9/5 AM	.				
		9/5 PM	.				
		9/10	.	9/13	1	9/10	.
		9/19 AM	.			9/19	.
9/20	.	9/19 PM	.				
		9/24	.	9/28	.	9/27	.
10/4	.	10/3	.				
		10/9	.	10/6	.	10/9	.
10/11	.			10/12	.		
		10/18	.	10/20	.	10/18	.
10/25	.	10/26	.	10/28	.	10/26	.
10/30	.	10/31	.				

In 1992, two Cinnamon Teal flew over on June 21, and one flew over on July 19.

In 1993, four Cinnamon Teal flew over on June 20, and one male flew over on July 18.

In 1994, four Cinnamon Teal were paired on May 4. On May 18, all observed were males. On June 1, all were in male breeding plumage except for one female or eclipse male. On August 10, all were either females or eclipse males.

In 1995, on June 5, all Cinnamon Teal observed were males. On August 2 and 9, all were either females or eclipse males. Additional Cinnamon Teal at the South Pond included five on May 6 and May 12, two on May 19, one on May 26, and two males on June 5.

Also see the previous Cinnamon or Blue-winged Teal section.

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 BLUE-WINGED TEAL

The only nonflying Blue-winged Teal seen during censuses were a paired male and female who consistently swam close to each other on 5 June 1995. They did not interact with nearby Cinnamon Teal.

Also see the previous Cinnamon or Blue-winged Teal section.

NORTHERN SHOVELER (N=nonflying waterbirds seen at the Main Marsh)

1992.....		1993.....		1994.....		1995.....	
Date	N	Date	N	Date	N	Date	N
4/25	12	4/24	2	4/25	82		
				5/4	.	5/6	.
5/10	.	5/9	.			5/12	.
				5/18	.	5/19	3
5/25	.	5/23	.			5/26	.
6/7	.	6/6	.	6/1	1	6/5	3
				6/15	.	6/14	.
6/21	.	6/20	.	6/29	.	6/21	.
						6/29	.
7/5	.	7/5	.	7/12	.	7/5	.
						7/12	.
		7/18 AM	.				
7/19	.	7/18 PM	.			7/19	.
		8/3	.	7/27	.	8/2	3
				8/10	.	8/9	.
		8/17	.			8/17	.
8/23	.	8/25	.			8/24	.
		8/29	2	8/31	1	8/30	2
9/7	.	9/5 AM	.				
		9/5 PM	8				
		9/10	2	9/13	.	9/10	20
		9/19 AM	.			9/19	.
9/20	.	9/19 PM	.				
		9/24	.	9/28	1	9/27	.
10/4	3	10/3	.				
		10/9	.	10/6	3	10/9	.
10/11	.			10/12	.		
		10/18	.	10/20	.	10/18	.
10/25	.	10/26	.	10/28	.	10/26	2
10/30	.	10/31	31				

In 1992, one pair of shovelers was head-pumping (Johnsgard 1965) on April 25.

In 1995, two additional shovelers were at the South Pond on May 19.

GADWALL

The only nonflying Gadwall seen during censuses were one on 10 May 1992 and four on 26 October 1993.

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 AMERICAN WIGEON (N=nonflying waterbirds seen at the Main Marsh)

1992.....		1993.....		1994.....		1995.....	
Date	N	Date	N	Date	N	Date	N
4/25	7	4/24	.	4/25	2		
				5/4	6	5/6	4
5/10	1	5/9	.			5/12	.
				5/18	.	5/19	.
5/25	.	5/23	1			5/26	.
6/7	.	6/6	3	6/1	.	6/5	.
				6/15	.	6/14	1
6/21	.	6/20	.			6/21	.
				6/29	.	6/29	.
7/5	.	7/5	.			7/5	.
				7/12	1	7/12	.
		7/18 AM	.				
7/19	.	7/18 PM	.			7/19	.
		8/3	.	7/27	.	8/2	.
				8/10	.	8/9	.
		8/17	.			8/17	.
8/23	.	8/25	.			8/24	.
		8/29	6	8/31	1	8/30	5
9/7	.	9/5 AM	17				
		9/5 PM	20				
		9/10	8	9/13	.	9/10	32
		9/19 AM	8			9/19	4
9/20	.	9/19 PM	9				
		9/24	12	9/28	1	9/27	.
10/4	.	10/3	22				
		10/9	4	10/6	17	10/9	2
10/11	2			10/12	.		
		10/18	52	10/20	.	10/18	7
10/25	.	10/26	52	10/28	2	10/26	15
10/30	.	10/31	100				

Perhaps because of higher water (section B-1), some waterbirds were much more common or abundant during part of 1993 than in other years; these species included Pied-billed Grebes and American Coots from late July through October; Wood Ducks and Mallards in late July and early August; and American Wigeon in September-October.

In 1994, the wigeon observed on July 12 was a male in fading breeding plumage. All wigeons observed thereafter were females or eclipse males.

In 1995, the wigeon observed on June 14 was a female or eclipse male. All American Wigeons were in the Main Marsh.

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 CANVASBACK

The only nonflying Canvasbacks seen during censuses were four on 30 October 1992.

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RING-NECKED DUCK (N=nonflying waterbirds seen at the Main Marsh)

1992.....		1993.....		1994.....		1995.....	
Date	N	Date	N	Date	N	Date	N
4/25	.	4/24	22	4/25	16		
				5/4	4	5/6	18
5/10	.	5/9	1			5/12	3
				5/18	.	5/19	8
5/25	2	5/23	1			5/26	.
6/7	1	6/6	5	6/1	.	6/5	.
				6/15	.	6/14	1
6/21	1	6/20	5	6/29	.	6/21	1
						6/29	.
7/5	1	7/5	1	7/12	.	7/5	1
						7/12	.
		7/18 AM	2				
7/19	.	7/18 PM	1			7/19	.
		8/3	1	7/27	.	8/2	.
				8/10	.	8/9	.
		8/17	.			8/17	.
8/23	.	8/25	.			8/24	.
		8/29	.	8/31	.	8/30	.
9/7	.	9/5 AM	.				
		9/5 PM	.				
		9/10	.	9/13	.	9/10	4
		9/19 AM	.			9/19	.
9/20	.	9/19 PM	.				
		9/24	.	9/28	.	9/27	.
10/4	.	10/3	6				
		10/9	.	10/6	.	10/9	5
10/11	.			10/12	.		
		10/18	2	10/20	.	10/18	7
10/25	.	10/26	3	10/28	.	10/26	8
10/30	.	10/31	16				

In 1995, no Ring-necked Ducks were at South Pond.

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GREATER SCAUP

The only nonflying Greater Scaup seen during censuses was a female on 18 October 1993.

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LESSER SCAUP

The only nonflying Lesser Scaup seen during censuses were a male and two females observed on both 25 October 1992 and 9 October 1993.

-----  
BUFFLEHEAD

The only nonflying Bufflehead seen during censuses were two on 24 April 1993.

## HOODED MERGANSER (N=nonflying waterbirds seen at the Main Marsh)

1992.....		1993.....		1994.....		1995.....	
Date	N	Date	N	Date	N	Date	N
4/25	1	4/24	.	4/25	2		
				5/4	2	5/6	.
5/10	.	5/9	.			5/12	.
				5/18	1	5/19	7
5/25	1	5/23	1			5/26	1
6/7	.	6/6	.	6/1	.	6/5	2
				6/15	4	6/14	23
6/21	2	6/20	.			6/21	15
				6/29	1	6/29	6
7/5	.	7/5	2			7/5	7
				7/12	1	7/12	1
		7/18 AM	.				
7/19	.	7/18 PM	1			7/19	3
		8/3	1	7/27	.	8/2	4
				8/10	4	8/9	7
		8/17	.			8/17	1
8/23	.	8/25	.			8/24	6
		8/29	.	8/31	.	8/30	8
9/7	10	9/5 AM	.				
		9/5 PM	.				
		9/10	.	9/13	.	9/10	9
		9/19 AM	.			9/19	5
9/20	.	9/19 PM	.				
		9/24	.	9/28	.	9/27	3
10/4	.	10/3	.				
		10/9	.	10/6	.	10/9	1
10/11	.			10/12	.		
		10/18	.	10/20	.	10/18	.
10/25	.	10/26	.	10/28	.	10/26	.
10/30	.	10/31	3				

Hooded Mergansers were generally much more abundant in 1995 than in other years.

In 1992, on June 21, I saw one large HY merganser. On September 7, I saw nine smaller HY mergansers.

In 1993, the two Hooded Mergansers on July 5, one on July 18, and one on August 3 were HY birds.

In 1994, the June 15 total included three HY birds; the June 29 and July 12 individuals were HY, and all four observed on August 10 were HY.

In 1995, HY birds were observed from June 5 through August 24, after which HY individuals were no longer discernible from adult females. The maximum of 21 HY birds was counted on June 14, and the minimum of one was counted on July 12.

In 1995, additional Hooded Mergansers at the South Pond included two on May 6 and three on May 12.

TURKEY VULTURE (N=flying and nonflying raptors seen at the Main Marsh)

1992.....		1993.....		1994.....		1995.....	
Date	N	Date	N	Date	N	Date	N
4/25	.	4/24	2	4/25	4		
				5/4	.	5/6	1
5/10	.	5/9	.			5/12	1
				5/18	5	5/19	3
5/25	.	5/23	.			5/26	2
6/7	.	6/6	4	6/1	3	6/5	2
				6/15	.	6/14	1
6/21	.	6/20	.			6/21	.
				6/29	5	6/29	.
7/5	.	7/5	.			7/5	.
				7/12	2	7/12	6
		7/18 AM	.				
7/19	.	7/18 PM	.			7/19	1
		8/3	.	7/27	1	8/2	.
				8/10	1	8/9	1
		8/17	1			8/17	3
8/23	.	8/25	.			8/24	.
		8/29	.	8/31	1	8/30	1
9/7	.	9/5 AM	.				
		9/5 PM	.				
		9/10	.	9/13	2	9/10	.
		9/19 AM	.			9/19	.
9/20	.	9/19 PM	.				
		9/24	.	9/28	3	9/27	2
10/4	.	10/3	.				
		10/9	.	10/6	.	10/9	.
10/11	.			10/12	.		
		10/18	.	10/20	.	10/18	.
10/25	.	10/26	.	10/28	.	10/26	.
10/30	.	10/31	.				

Turkey Vultures were observed more frequently in 1993 and 1994 than in 1992-1993, possibly because of differing times of censusing.

-----  
 OSPREY (N=flying and nonflying raptors seen at the Main Marsh)

1992.....		1993.....		1994.....		1995.....	
Date	N	Date	N	Date	N	Date	N
4/25	1	4/24	2	4/25	2		
				5/4	1	5/6	3
5/10	1	5/9	2			5/12	1
				5/18	2	5/19	1
5/25	.	5/23	2			5/26	.
6/7	.	6/6	2	6/1	3	6/5	.
				6/15	1	6/14	1
6/21	.	6/20	2			6/21	.
				6/29	1	6/29	.
7/5	.	7/5	.			7/5	.
				7/12	.	7/12	1
		7/18 AM	.				
7/19	.	7/18 PM	.			7/19	.
		8/3	.	7/27	1	8/2	.
				8/10	.	8/9	.
		8/17	.			8/17	.
8/23	.	8/25	.			8/24	.
		8/29	.	8/31	.	8/30	.
9/7	.	9/5 AM	.				
		9/5 PM	.				
		9/10	.	9/13	.	9/10	.
		9/19 AM	.			9/19	.
9/20	.	9/19 PM	.				
		9/24	.	9/28	.	9/27	.
10/4	.	10/3	.				
		10/9	.	10/6	.	10/9	.
10/11	.			10/12	.		
		10/18	.	10/20	.	10/18	.
10/25	.	10/26	.	10/28	.	10/26	.
10/30	.	10/31	.				



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 WHITE-TAILED KITE (N=flying and nonflying raptors seen at the Main Marsh)

1992.....		1993.....		1994.....		1995.....	
Date	N	Date	N	Date	N	Date	N
4/25	.	4/24	.	4/25	.		
				5/4	.	5/6	.
5/10	.	5/9	.			5/12	.
				5/18	.	5/19	.
5/25	.	5/23	.			5/26	.
6/7	.	6/6	.	6/1	.	6/5	.
				6/15	.	6/14	.
6/21	.	6/20	.	6/29	.	6/21	.
						6/29	.
7/5	.	7/5	.	7/12	.	7/5	.
						7/12	.
		7/18 AM	.				
7/19	.	7/18 PM	.			7/19	.
		8/3	.	7/27	.	8/2	.
				8/10	.	8/9	.
		8/17	.			8/17	.
8/23	1	8/25	.			8/24	.
		8/29	.	8/31	.	8/30	.
9/7	3	9/5 AM	.				
		9/5 PM	.				
		9/10	.	9/13	.	9/10	.
		9/19 AM	.			9/19	.
9/20	2	9/19 PM	.				
		9/24	.	9/28	.	9/27	.
10/4	.	10/3	.				
		10/9	.	10/6	.	10/9	.
10/11	.			10/12	.		
		10/18	.	10/20	.	10/18	.
10/25	.	10/26	.	10/28	.	10/26	.
10/30	.	10/31	.				

Kites first started nesting in western Oregon in the late 1970's at Finley NWR (Henny and Annear 1978).

Kites were only noted during three counts in 1992. One of the three kites on September 7 had a faint rufous mottled band across the breast and may have been hatched in 1992.

-----  
BALD EAGLE (N=flying and nonflying raptors seen at the Main Marsh)

1992.....		1993.....		1994.....		1995.....	
Date	N	Date	N	Date	N	Date	N
4/25	.	4/24	.	4/25	.		
				5/4	.	5/6	.
5/10	.	5/9	.			5/12	.
				5/18	2	5/19	.
5/25	.	5/23	.			5/26	.
6/7	.	6/6	.	6/1	.	6/5	.
				6/15	.	6/14	.
6/21	.	6/20	.			6/21	.
				6/29	.	6/29	.
7/5	.	7/5	.			7/5	.
				7/12	.	7/12	.
		7/18 AM	.				
7/19	.	7/18 PM	.			7/19	.
		8/3	.	7/27	1	8/2	.
				8/10	.	8/9	.
		8/17	.			8/17	.
8/23	.	8/25	.			8/24	.
		8/29	.	8/31	.	8/30	.
9/7	.	9/5 AM	.				
		9/5 PM	.				
		9/10	.	9/13	.	9/10	.
		9/19 AM	.			9/19	.
9/20	.	9/19 PM	.				
		9/24	.	9/28	.	9/27	.
10/4	1	10/3	.				
		10/9	.	10/6	.	10/9	.
10/11	.			10/12	.		
		10/18	.	10/20	.	10/18	.
10/25	.	10/26	.	10/28	.	10/26	2
10/30	.	10/31	.				

In 1992, the eagle observed on October 4 was an adult (Basic V plumage) (Palmer 1988) and flushed duck flocks when it flew over them.

In 1994, the two eagles on May 18 were in Basic III plumage and the eagle observed on July 27 was in Basic III or IV plumage (Palmer 1988). Ducks flushed when the two eagles flew over them on May 18.

In 1995, one eagle observed on October 26 was an adult (Basic V plumage), and the other was in Basic II plumage (Palmer 1988).

NORTHERN HARRIER (N=flying and nonflying raptors seen at the Main Marsh)

1992.....		1993.....		1994.....		1995.....	
Date	N	Date	N	Date	N	Date	N
4/25	1	4/24	.	4/25	2		
				5/4	.	5/6	1
5/10	.	5/9	.			5/12	.
				5/18	1	5/19	.
5/25	.	5/23	.			5/26	.
6/7	.	6/6	.	6/1	.	6/5	.
				6/15	1	6/14	.
6/21	2	6/20	.	6/29	.	6/21	.
						6/29	.
7/5	.	7/5	.	7/12	1	7/5	.
						7/12	.
		7/18 AM	.				
7/19	1	7/18 PM	1			7/19	1
		8/3	.	7/27	2	8/2	1
				8/10	1	8/9	.
		8/17	.			8/17	.
8/23	1	8/25	.			8/24	1
		8/29	1	8/31	.	8/30	1
9/7	1	9/5 AM	1				
		9/5 PM	.				
		9/10	.	9/13	1	9/10	2
		9/19 AM	.			9/19	1
9/20	1	9/19 PM	.				
		9/24	.	9/28	3	9/27	1
10/4	.	10/3	1				
		10/9	1	10/6	1	10/9	1
10/11	1			10/12	1		
		10/18	2	10/20	.	10/18	.
10/25	1	10/26	1	10/28	.	10/26	.
10/30	1	10/31	1				

In 1994, on May 18, a flying male harrier harassed a flying Bald Eagle, and, on September 28, a flying male harassed a flying Common Raven.

SHARP-SHINNED or COOPER'S HAWK

The only flying or nonflying Cooper's or Sharp-shinned Hawk seen during censuses was one on 2 August 1995.

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 SHARP-SHINNED HAWK (N=flying and nonflying raptors seen at the Main Marsh)

1992.....		1993.....		1994.....		1995.....	
Date	N	Date	N	Date	N	Date	N
4/25	.	4/24	1	4/25	.		
				5/4	.	5/6	.
5/10	.	5/9	.			5/12	.
				5/18	.	5/19	.
5/25	.	5/23	.			5/26	.
6/7	.	6/6	.	6/1	.	6/5	.
				6/15	.	6/14	.
6/21	.	6/20	.			6/21	.
				6/29	.	6/29	.
7/5	.	7/5	.			7/5	.
				7/12	.	7/12	.
		7/18 AM	.				
7/19	.	7/18 PM	.			7/19	.
		8/3	.	7/27	.	8/2	.
				8/10	.	8/9	.
		8/17	.			8/17	.
8/23	.	8/25	.			8/24	.
		8/29	.	8/31	.	8/30	.
9/7	.	9/5 AM	.				
		9/5 PM	.				
		9/10	.	9/13	.	9/10	.
		9/19 AM	1			9/19	.
9/20	.	9/19 PM	1				
		9/24	.	9/28	.	9/27	.
10/4	.	10/3	.				
		10/9	.	10/6	.	10/9	.
10/11	.			10/12	.		
		10/18	.	10/20	.	10/18	.
10/25	.	10/26	1	10/28	.	10/26	.
10/30	.	10/31	.				

Also see the previous Sharp-shinned or Cooper's Hawk section.

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 COOPER'S HAWK (N=flying and nonflying raptors seen at the Main Marsh)

1992.....		1993.....		1994.....		1995.....	
Date	N	Date	N	Date	N	Date	N
4/25	.	4/24	.	4/25	.		
				5/4	.	5/6	.
5/10	.	5/9	.			5/12	.
				5/18	.	5/19	.
5/25	.	5/23	.			5/26	.
6/7	.	6/6	.	6/1	.	6/5	.
				6/15	.	6/14	.
6/21	.	6/20	.			6/21	.
				6/29	.	6/29	.
7/5	.	7/5	.			7/5	.
				7/12	.	7/12	.
		7/18 AM	.				
7/19	.	7/18 PM	.			7/19	.
		8/3	.	7/27	.	8/2	.
				8/10	.	8/9	.
		8/17	.			8/17	.
8/23	.	8/25	.			8/24	.
		8/29	.	8/31	.	8/30	.
9/7	.	9/5 AM	.				
		9/5 PM	.				
		9/10	.	9/13	.	9/10	.
		9/19 AM	.			9/19	.
9/20	.	9/19 PM	.				
		9/24	.	9/28	1	9/27	1
10/4	.	10/3	.				
		10/9	.	10/6	.	10/9	.
10/11	1			10/12	1		
		10/18	.	10/20	.	10/18	.
10/25	.	10/26	.	10/28	.	10/26	.
10/30	.	10/31	.				

Since Cooper's Hawks were only intermittently seen in late September and early October, these may have been fall migrants.

Also see the previous Sharp-shinned or Cooper's Hawk section.

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 RED-TAILED HAWK (N=flying and nonflying raptors seen at the Main Marsh)

1992.....		1993.....		1994.....		1995.....	
Date	N	Date	N	Date	N	Date	N
4/25	.	4/24	1	4/25	1		
				5/4	.	5/6	.
5/10	.	5/9	.			5/12	.
				5/18	1	5/19	.
5/25	.	5/23	.			5/26	.
6/7	.	6/6	.	6/1	.	6/5	.
				6/15	.	6/14	.
6/21	.	6/20	.	6/29	.	6/21	.
						6/29	.
7/5	.	7/5	.	7/12	.	7/5	.
						7/12	.
		7/18 AM	.				
7/19	1	7/18 PM	.			7/19	.
		8/3	.	7/27	1	8/2	.
				8/10	1	8/9	.
		8/17	.			8/17	.
8/23	.	8/25	.			8/24	.
		8/29	.	8/31	.	8/30	.
9/7	1	9/5 AM	.				
		9/5 PM	1				
		9/10	.	9/13	.	9/10	.
		9/19 AM	.			9/19	.
9/20	2	9/19 PM	.				
		9/24	.	9/28	1	9/27	1
10/4	2	10/3	.				
		10/9	.	10/6	2	10/9	.
10/11	.			10/12	1		
		10/18	1	10/20	2	10/18	1
10/25	1	10/26	.	10/28	2	10/26	.
10/30	3	10/31	.				

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## AMERICAN KESTREL

The only flying or nonflying kestrel seen during censuses were singletons on 5 July 1993 and 3 October 1993.

MERLIN (N=flying and nonflying raptors seen at the Main Marsh)

1992.....		1993.....		1994.....		1995.....	
Date	N	Date	N	Date	N	Date	N
4/25	.	4/24	.	4/25	.		
				5/4	.	5/6	.
5/10	.	5/9	.			5/12	.
				5/18	.	5/19	.
5/25	.	5/23	.			5/26	.
6/7	.	6/6	.	6/1	.	6/5	.
				6/15	.	6/14	.
6/21	.	6/20	.	6/29	.	6/21	.
						6/29	.
7/5	.	7/5	.	7/12	.	7/5	.
						7/12	.
		7/18 AM	.				
7/19	.	7/18 PM	.			7/19	.
		8/3	.	7/27	.	8/2	.
				8/10	.	8/9	.
		8/17	.			8/17	.
8/23	.	8/25	.			8/24	.
		8/29	.	8/31	.	8/30	.
9/7	.	9/5 AM	.				
		9/5 PM	.				
		9/10	.	9/13	.	9/10	.
		9/19 AM	.			9/19	.
9/20	.	9/19 PM	.				
		9/24	1	9/28	.	9/27	.
10/4	.	10/3	1				
		10/9	1	10/6	.	10/9	.
10/11	.			10/12	.		
		10/18	1	10/20	.	10/18	.
10/25	.	10/26	1	10/28	.	10/26	.
10/30	.	10/31	.				

In 1993, on September 2, one Merlin flew north, and on October 3, one flew south. On October 9, a Merlin repeatedly flew down from a snag perch to procure orange dragonflies near the ground, flew back to the perch, and ate all but the four wings, which fluttered separately to the ground. On October 26, a Merlin hawked dark dragonflies from a snag perch, returning to the snag to eat them.

PEREGRINE FALCON

The only flying or nonflying Peregrine seen during censuses was one that flew in wide circles to harass a flying White-tailed Kite on 23 August 1992.

VIRGINIA RAIL

The only nonflying Virginia Rails seen during censuses were singletons on 5 July 1992 and 18 May 1994.

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SORA (N=nonflying waterbirds seen at the Main Marsh)

1992.....		1993.....		1994.....		1995.....	
Date	N	Date	N	Date	N	Date	N
4/25	.	4/24	.	4/25	.		
				5/4	.	5/6	.
5/10	1	5/9	.			5/12	.
				5/18	.	5/19	.
5/25	.	5/23	.			5/26	.
6/7	.	6/6	.	6/1	.	6/5	.
				6/15	1	6/14	.
6/21	.	6/20	1	6/29	.	6/21	.
						6/29	.
7/5	.	7/5	1	7/12	.	7/5	.
						7/12	.
		7/18 AM	.				
7/19	.	7/18 PM	.			7/19	.
		8/3	.	7/27	.	8/2	.
				8/10	.	8/9	.
		8/17	.			8/17	.
8/23	.	8/25	.			8/24	.
		8/29	.	8/31	.	8/30	.
9/7	.	9/5 AM	.				
		9/5 PM	.				
		9/10	.	9/13	.	9/10	.
		9/19 AM	.			9/19	.
9/20	.	9/19 PM	.				
		9/24	.	9/28	.	9/27	.
10/4	.	10/3	.				
		10/9	.	10/6	.	10/9	.
10/11	.			10/12	.		
		10/18	.	10/20	.	10/18	.
10/25	.	10/26	.	10/28	.	10/26	.
10/30	.	10/31	.				

In 1992, on May 10, I also heard several Sora calls, and, on May 25, I heard two or three Soras.

In 1993, based on calls, two Soras were present on April 24, three on May 9, and two on May 23.

In 1994, on April 25, I heard calls of three Soras; on May 4 and May 18, I heard calls of two; and on June 1 and June 29, I heard the call of one.



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 AMERICAN COOT (N=nonflying waterbirds seen at the Main Marsh)

1992.....		1993.....		1994.....		1995.....	
Date	N	Date	N	Date	N	Date	N
4/25	25	4/24	4	4/25	43		
				5/4	10	5/6	6
5/10	.	5/9	11			5/12	12
				5/18	1	5/19	8
5/25	.	5/23	7			5/26	.
6/7	.	6/6	17	6/1	.	6/5	1
				6/15	1	6/14	.
6/21	1	6/20	2	6/29	.	6/21	.
						6/29	.
7/5	.	7/5	3	7/12	2	7/5	.
						7/12	.
		7/18 AM	19				
7/19	1	7/18 PM	44			7/19	.
		8/3	25	7/27	.	8/2	1
				8/10	6	8/9	1
		8/17	90			8/17	1
8/23	.	8/25	14			8/24	5
		8/29	41	8/31	9	8/30	4
9/7	.	9/5 AM	60				
		9/5 PM	15				
		9/10	36	9/13	3	9/10	3
		9/19 AM	11			9/19	1
9/20	.	9/19 PM	9				
		9/24	11	9/28	2	9/27	2
10/4	.	10/3	30				
		10/9	13	10/6	.	10/9	.
10/11	.			10/12	.		
		10/18	38	10/20	.	10/18	.
10/25	.	10/26	27	10/28	.	10/26	.
10/30	.	10/31	37				

Perhaps because of higher water (section B-1), some waterbirds were much more common or abundant during part of 1993 than in other years; these species included Pied-billed Grebes and American Coots from late July through October; Wood Ducks and Mallards in late July and early August; and American Wigeon in September-October.

The 19 July 1992 coot appeared to be a fully-fledged HY bird, but I did not see whether or not it could fly.

In 1993, I saw HY coots during all censuses from July 18 (AM) through September 5 (AM) and on September 19 (PM). The maximum of about 75 HY coots was observed on August 17, and the minimum of one was observed during the September 19 (PM) census. After September 19, age was too hard to distinguish and report accurately.

In 1994, five HY coots were observed on August 10, and one was observed on both June 29 and on July 12.

In 1995, five HY coots were observed on August 24, three on August 30, and two on September 10.

In 1995, no coots were observed in the South Pond.

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 SEMIPALMATED PLOVER

The only nonflying Semipalmated Plover seen during censuses was one on 7 September 1992.

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KILLDEER (N=nonflying waterbirds seen at the Main Marsh)

1992.....		1993.....		1994.....		1995.....	
Date	N	Date	N	Date	N	Date	N
4/25	.	4/24	.	4/25	.		
				5/4	.	5/6	.
5/10	.	5/9	1			5/12	.
				5/18	.	5/19	.
5/25	4	5/23	2			5/26	5
6/7	.	6/6	.	6/1	.	6/5	13
				6/15	.	6/14	7
6/21	.	6/20	2	6/29	.	6/21	15
7/5	.	7/5	2			6/29	.
				7/12	1	7/5	2
		7/18 AM	.			7/12	.
7/19	.	7/18 PM	.			7/19	.
		8/3	.	7/27	.	8/2	.
				8/10	.	8/9	.
		8/17	.			8/17	.
8/23	3	8/25	.			8/24	.
		8/29	.	8/31	.	8/30	.
9/7	2	9/5 AM	.				
		9/5 PM	.				
		9/10	.	9/13	.	9/10	.
		9/19 AM	.			9/19	.
9/20	32	9/19 PM	.				
		9/24	.	9/28	22	9/27	.
10/4	22	10/3	.				
		10/9	.	10/6	3	10/9	14
10/11	8			10/12	1		
		10/18	.	10/20	.	10/18	17
10/25	.	10/26	2	10/28	42	10/26	3
10/30	.	10/31	.				

In June, Killdeer were more abundant in 1995 than in other years.

In 1992, I also heard one Killdeer call on April 25.

In 1993, on August 25, a flock of 13 flew over. Based on calls, one Killdeer was present on August 29, three on September 5 (AM), three on September 5 (PM), one on September 10, one on September 19 (PM), and one on October 3.

In 1994, four Killdeer flew over on June 29, and one flew over on July 27. I also heard one Killdeer call on September 13.

In 1995, three Killdeer circled in flight on August 2, two flew over on August 17, and one flew over on August 24. I heard the call of one on May 12 and on May 19. Two additional Killdeer were at the South Pond on May 6, May 19, and June 14.

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#### AMERICAN AVOCET

The only nonflying avocets seen during censuses were three on 31 August 1994.

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 GREATER YELLOWLEGS (N=nonflying waterbirds seen at the Main Marsh)

1992.....		1993.....		1994.....		1995.....	
Date	N	Date	N	Date	N	Date	N
4/25	1	4/24	2	4/25	1		
				5/4	.	5/6	.
5/10	.	5/9	.			5/12	.
				5/18	2	5/19	.
5/25	.	5/23	.			5/26	.
6/7	.	6/6	.	6/1	.	6/5	.
				6/15	.	6/14	.
6/21	.	6/20	.	6/29	.	6/21	.
7/5	.	7/5	.			6/29	.
				7/12	.	7/5	.
		7/18 AM	.			7/12	.
7/19	.	7/18 PM	.			7/19	.
		8/3	.	7/27	.	8/2	.
				8/10	.	8/9	.
		8/17	.			8/17	.
8/23	.	8/25	.			8/24	.
		8/29	.	8/31	.	8/30	.
9/7	9	9/5 AM	.				
		9/5 PM	.				
		9/10	.	9/13	.	9/10	.
		9/19 AM	.			9/19	3
9/20	1	9/19 PM	.				
		9/24	.	9/28	28	9/27	.
10/4	.	10/3	.				
		10/9	.	10/6	2	10/9	.
10/11	.			10/12	.		
		10/18	.	10/20	.	10/18	.
10/25	.	10/26	.	10/28	3	10/26	1
10/30	.	10/31	.				

In 1993, I heard one Greater Yellowlegs call on October 3.

In 1994, two flew over on June 29.

In 1995, one additional Greater Yellowlegs was at the South Pond on May 12.

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LESSER YELLOWLEGS (N=nonflying waterbirds seen at the Main Marsh)

1992.....		1993.....		1994.....		1995.....	
Date	N	Date	N	Date	N	Date	N
4/25	.	4/24	.	4/25	.		
				5/4	.	5/6	.
5/10	.	5/9	.			5/12	.
				5/18	.	5/19	.
5/25	.	5/23	.			5/26	.
6/7	.	6/6	.	6/1	.	6/5	.
				6/15	.	6/14	.
6/21	.	6/20	.	6/29	.	6/21	.
7/5	.	7/5	.			6/29	.
				7/12	.	7/5	.
		7/18 AM	.			7/12	.
7/19	.	7/18 PM	.			7/19	.
		8/3	.	7/27	.	8/2	.
				8/10	.	8/9	.
		8/17	.			8/17	.
8/23	2	8/25	.			8/24	.
		8/29	.	8/31	.	8/30	.
9/7	9	9/5 AM	.				
		9/5 PM	.				
		9/10	.	9/13	.	9/10	.
		9/19 AM	.			9/19	.
9/20	.	9/19 PM	.				
		9/24	.	9/28	.	9/27	.
10/4	.	10/3	.				
		10/9	.	10/6	.	10/9	.
10/11	1			10/12	.		
		10/18	.	10/20	.	10/18	.
10/25	.	10/26	.	10/28	.	10/26	.
10/30	.	10/31	.				

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SPOTTED SANDPIPER

The only nonflying Spotted Sandpiper seen during censuses was one on 21 June 1995.

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WHIMBREL

No nonflying Whimbrels were seen during any censuses, but on 25 April 1992, one Whimbrel flew east over the Main Marsh.

-----  
 WESTERN SANDPIPER (N=nonflying waterbirds seen at the Main Marsh)

1992.....		1993.....		1994.....		1995.....	
Date	N	Date	N	Date	N	Date	N
4/25	.	4/24	.	4/25	6		
				5/4	.	5/6	.
5/10	.	5/9	.			5/12	.
				5/18	.	5/19	.
5/25	.	5/23	.			5/26	.
6/7	.	6/6	.	6/1	.	6/5	.
				6/15	.	6/14	.
6/21	.	6/20	.	6/29	.	6/21	.
						6/29	.
7/5	.	7/5	.	7/12	.	7/5	.
						7/12	.
		7/18 AM	.				
7/19	.	7/18 PM	.			7/19	.
		8/3	.	7/27	.	8/2	.
				8/10	.	8/9	.
		8/17	.			8/17	.
8/23	3	8/25	.			8/24	.
		8/29	.	8/31	.	8/30	.
9/7	52	9/5 AM	.				
		9/5 PM	.				
		9/10	.	9/13	.	9/10	.
		9/19 AM	.			9/19	.
9/20	17	9/19 PM	.				
		9/24	.	9/28	.	9/27	.
10/4	20@	10/3	.				
		10/9	.	10/6	.	10/9	2
10/11	.			10/12	.		
		10/18	.	10/20	.	10/18	.
10/25	.	10/26	.	10/28	.	10/26	.
10/30	.	10/31	.				

In 1992, on April 25 and October 30, I saw seven and five flying sandpipers, respectively, that were either Western or Least Sandpipers. In late August through early October, Western Sandpipers were more abundant in 1992 than in other years.

In 1995, an additional 67 Western Sandpipers were at the South Pond on May 6.

-----  
 LEAST SANDPIPER (N=nonflying waterbirds seen at the Main Marsh)

1992.....		1993.....		1994.....		1995.....	
Date	N	Date	N	Date	N	Date	N
4/25	.	4/24	.	4/25	.		
				5/4	.	5/6	.
5/10	.	5/9	.			5/12	.
				5/18	.	5/19	.
5/25	.	5/23	.			5/26	.
6/7	.	6/6	.	6/1	.	6/5	.
				6/15	.	6/14	.
6/21	.	6/20	.	6/29	.	6/21	.
						6/29	.
7/5	.	7/5	.	7/12	.	7/5	.
						7/12	.
		7/18 AM	.				
7/19	.	7/18 PM	.			7/19	.
		8/3	.	7/27	.	8/2	.
				8/10	.	8/9	.
		8/17	.			8/17	.
8/23	16	8/25	.			8/24	.
		8/29	.	8/31	.	8/30	.
9/7	19	9/5 AM	.				
		9/5 PM	.				
		9/10	.	9/13	.	9/10	.
		9/19 AM	.			9/19	.
9/20	20@	9/19 PM	.				
		9/24	.	9/28	.	9/27	.
10/4	9	10/3	.				
		10/9	.	10/6	.	10/9	.
10/11	.			10/12	.		
		10/18	.	10/20	.	10/18	.
10/25	.	10/26	.	10/28	.	10/26	.
10/30	.	10/31	.				

In late August through early October, Least Sandpipers were more abundant in 1992 than in other years.

For 1992 records, also see the comment for Western Sandpipers.

In 1995, additional Least Sandpipers at the South Pond included four on May 6 and five on May 12.

PECTORAL SANDPIPER (N=nonflying waterbirds seen at the Main Marsh)

1992.....		1993.....		1994.....		1995.....	
Date	N	Date	N	Date	N	Date	N
4/25	.	4/24	.	4/25	.		
				5/4	.	5/6	.
5/10	.	5/9	.			5/12	.
				5/18	.	5/19	.
5/25	.	5/23	.			5/26	.
6/7	.	6/6	.	6/1	.	6/5	.
				6/15	.	6/14	.
6/21	.	6/20	.			6/21	.
				6/29	.	6/29	.
7/5	.	7/5	.			7/5	.
				7/12	.	7/12	.
		7/18 AM	.				
7/19	.	7/18 PM	.			7/19	.
		8/3	.	7/27	.	8/2	.
				8/10	.	8/9	.
		8/17	.			8/17	.
8/23	.	8/25	.			8/24	.
		8/29	.	8/31	.	8/30	.
9/7	.	9/5 AM	.				
		9/5 PM	.				
		9/10	.	9/13	.	9/10	.
		9/19 AM	.			9/19	.
9/20	1	9/19 PM	.				
		9/24	.	9/28	4	9/27	.
10/4	10	10/3	.				
		10/9	.	10/6	.	10/9	.
10/11	2			10/12	.		
		10/18	.	10/20	.	10/18	.
10/25	.	10/26	.	10/28	.	10/26	.
10/30	.	10/31	.				

DUNLIN

The only nonflying Dunlin seen during censuses were 40 on 28 October 1994.

-----  
UNKNOWN DOWITCHERS (N=nonflying waterbirds seen at the Main Marsh)

1992.....		1993.....		1994.....		1995.....	
Date	N	Date	N	Date	N	Date	N
4/25	.	4/24	.	4/25	.		
				5/4	.	5/6	.
5/10	10@	5/9	.			5/12	.
				5/18	.	5/19	.
5/25	.	5/23	.			5/26	.
6/7	.	6/6	.	6/1	.	6/5	.
				6/15	.	6/14	.
6/21	.	6/20	.	6/29	.	6/21	.
						6/29	.
7/5	.	7/5	.	7/12	.	7/5	.
						7/12	.
		7/18 AM	.				
7/19	.	7/18 PM	.			7/19	.
		8/3	.	7/27	.	8/2	.
				8/10	.	8/9	.
		8/17	.			8/17	.
8/23	.	8/25	.			8/24	.
		8/29	.	8/31	.	8/30	.
9/7	.	9/5 AM	.				
		9/5 PM	.				
		9/10	.	9/13	.	9/10	.
		9/19 AM	.			9/19	.
9/20	P	9/19 PM	.				
		9/24	.	9/28	9	9/27	2
10/4	12	10/3	.				
		10/9	.	10/6	4	10/9	.
10/11	3			10/12	.		
		10/18	.	10/20	.	10/18	.
10/25	4	10/26	.	10/28	2	10/26	27
10/30	15	10/31	.				

I did not identify dowitchers to species.

In October, dowitchers were generally more common in 1992 than in 1993-1995.

In 1992, dowitchers were in breeding plumage on May 10. On October 30, I heard single-note flight calls of dowitchers.

In 1993, on July 18 (PM), a flock of seven dowitchers flew around the Main Marsh but did not land; no open shore was evident.

In 1994, on October 12, 22 flew around the Main Marsh but did not land.

In 1995, the September 27 and October 26 birds were in winter plumage.

In 1995, an additional five dowitchers were at the South Pond on May 19 and were in breeding plumage with rufous undertail coverts.



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 COMMON SNIPE (N=nonflying waterbirds seen at the Main Marsh)

1992.....		1993.....		1994.....		1995.....	
Date	N	Date	N	Date	N	Date	N
4/25	.	4/24	.	4/25	.		
				5/4	.	5/6	.
5/10	.	5/9	.			5/12	.
				5/18	.	5/19	.
5/25	.	5/23	.			5/26	.
6/7	.	6/6	.	6/1	.	6/5	.
				6/15	.	6/14	.
6/21	.	6/20	.	6/29	.	6/21	.
						6/29	.
7/5	.	7/5	1	7/12	2	7/5	.
						7/12	.
		7/18 AM	.				
7/19	.	7/18 PM	.			7/19	.
		8/3	.	7/27	.	8/2	.
				8/10	.	8/9	.
		8/17	.			8/17	.
8/23	.	8/25	.			8/24	.
		8/29	.	8/31	.	8/30	.
9/7	.	9/5 AM	.				
		9/5 PM	.				
		9/10	.	9/13	.	9/10	.
		9/19 AM	.			9/19	.
9/20	.	9/19 PM	.				
		9/24	.	9/28	9	9/27	.
10/4	.	10/3	.				
		10/9	.	10/6	4	10/9	.
10/11	.			10/12	1		
		10/18	.	10/20	.	10/18	.
10/25	.	10/26	.	10/28	.	10/26	.
10/30	.	10/31	.				

In 1992, I saw aerial drumming displays (Hayman et al. 1986) by one snipe on May 10, by four on May 25, and by two on June 7. I saw no snipes that were not flying.

In 1993, I saw three snipes in flight and aerial drumming displays by one on July 5; on October 18, one flew over while calling.

In 1994, I saw three snipes in flight, of which two were performing aerial drumming displays. Two of the three subsequently landed in the Marsh.

In 1995, I saw aerial drumming displays by two snipes on May 26 and by one on June 5 and 29.

The winnowing of snipe at MacFadden's Marsh was also reported by Evenden et al. (1950) and Eddy (1953).

-----  
 WILSON'S PHALAROPE

The only nonflying Wilson's Phalaropes seen during censuses were four on 10 May 1992.

-----  
 CALIFORNIA GULL

No nonflying California Gulls were seen during any censuses, but, in 1994, one flew over on July 27, and five flew over on October 28.

-----  
 BLACK TERN

No nonflying Black Terns were seen during any censuses, but, on 23 May 1993, one circled in flight around the Main Marsh and then flew away, and, on 9 August 1995, one flew west over the south part of the Main Marsh.

-----  
 GREAT HORNED OWL

None were seen during any censuses, but, based on calls, in 1993, one owl was present on August 25, two on September 19 (AM), two on October 9 (PM), two on October 18 (PM), one on October 26, and one on October 31.

\*\*\*\*\*

G. Alphabetized List of Common and Scientific Names of Plants and Animals

Ash, Oregon	<i>Fraxinus latifolia</i>
Avocet, American	<i>Recurvirostra americana</i>
Bittern, American	<i>Botaurus lentiginosus</i>
Bufflehead	<i>Bucephala albeola</i>
Canvasback	<i>Aythya valisineria</i>
Coot, American	<i>Fulica americana</i>
Cormorant, Double-crested	<i>Phalacrocorax auritus</i>
dowitcher spp.	<i>Limnodromus griseus/scolopaceus</i>
Duck, Ring-necked	<i>Aythya collaris</i>
Duck, Wood	<i>Aix sponsa</i>
Dunlin	<i>Calidris alpina</i>
Eagle, Bald	<i>Haliaeetus leucocephalus</i>
Egret, Great	<i>Ardea alba</i>
Falcon, Peregrine	<i>Falco peregrinus</i>
Gadwall	<i>Anas strepera</i>
Goose, Canada	<i>Branta canadensis</i>
Goose, " Cackling	<i>B. c. minima</i>
Goose, " Dusky	<i>B. c. occidentalis</i>
Goose, " Taverner's	<i>B. c. taverneri</i>
Goose, " Western (Great Basin)	<i>B. c. moffitti</i>
Goose, Greater White-fronted	<i>Anser albifrons</i>
Grass, reed-canary	<i>Phalaris arundinacea</i>
Grebe, Pied-billed	<i>Podilymbus podiceps</i>
Gull, California	<i>Larus californicus</i>
Harrier, Northern	<i>Circus cyaneus</i>
Hawk, Cooper's	<i>Accipiter cooperii</i>
Hawk, Red-tailed	<i>Buteo jamaicensis</i>
Hawk, Sharp-shinned	<i>Accipiter striatus</i>
Heron, Great Blue	<i>Ardea herodias</i>
Heron, Green	<i>Butorides striatus</i>
Kestrel, American	<i>Falco sparverius</i>
Killdeer	<i>Charadrius vociferus</i>
Kite, White-tailed	<i>Elanus leucurus</i>
Mallard	<i>Anas platyrhynchos</i>
Merganser, Hooded	<i>Lophodytes cucullatus</i>
Merlin	<i>Falco columbarius</i>
Night-Heron, Black-crowned	<i>Nycticorax nycticorax</i>
Osprey	<i>Pandion haliaetus</i>
Owl, Great Horned	<i>Bubo virginianus</i>
Phalarope, Wilson's	<i>Phalaropus tricolor</i>
Pintail, Northern	<i>Anas acuta</i>
Plover, Semipalmated	<i>Charadrius semipalmatus</i>
Rail, Virginia	<i>Rallus limicola</i>
Raven, Common	<i>Corvus corax</i>
Sandpiper, Least	<i>Calidris minutilla</i>
Sandpiper, Pectoral	<i>Calidris melanotos</i>
Sandpiper, Spotted	<i>Actitis macularia</i>
Sandpiper, Western	<i>Calidris mauri</i>
Scaup, Greater	<i>Aythya marila</i>
Scaup, Lesser	<i>Aythya affinis</i>
Shoveler, Northern	<i>Anas clypeata</i>
Snipe, Common	<i>Gallinago gallinago</i>
Sora	<i>Porzana carolina</i>
Teal, Blue-winged	<i>Anas discors</i>
Teal, Cinnamon	<i>Anas cyanoptera</i>
Teal, Green-winged	<i>Anas crecca</i>
Tern, Black	<i>Chlidonias niger</i>
Vulture, Turkey	<i>Cathartes aura</i>
Whimbrel	<i>Numenius phaeopus</i>
Wigeon, American	<i>Anas americana</i>
Yellowlegs, Greater	<i>Tringa melanoleuca</i>
Yellowlegs, Lesser	<i>Tringa flavipes</i>

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I. LITERATURE CITED

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