

# WEYBURN SHOREBIRD STUDY: 1990-1992

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While it is well known that sewage cells are popular spots for many birds, especially waterfowl, it wasn't until the spring of 1988 that it was discovered that the Weyburn site was a spectacular stopping-off location for shorebirds. The Weyburn lagoon system, located some 11.5 km south of the city, features nine cells which are separated from each other by high dykes (Figures 1 and 2). The dykes are used as roads, thus serving birders well.

After several birding tours of the area, several members of the Weyburn Natural History Society (NHS)

felt that determining numbers and temporal distribution of each shorebird species was necessary to assess the role of the area as a shorebird staging site in southeastern Saskatchewan. Also, some of us felt that this habitat might be improved if it were generally recognized as an important shorebird sanctuary.

Ray Belanger agreed to spearhead the research, which consisted of conducting 13 counts between 31 March and 30 September. Results, discussions and recommendation are presented below.



Figure 1. Aerial view of the nine lagoon cells.

R. Gutfriend





Figure 2. Note the varying degrees of wetness.

R. Gutfriend

**1990, 22 May to 9 September:** The statistics for the initial year suggested that the Weyburn lagoon cells are truly an exceptional gathering place for shorebirds (Table 1). Of the 37 species in the 1990 *Field Checklist of Saskatchewan Birds*, 23 were observed during 13 separate counts. Three other species were seen at the cells but did not appear during the project visits. At this point we decided to extend the survey for two more years.

Several points of interest should be noted. Numbers of shorebirds decreased with increasing water levels. With higher water, there were fewer shorebirds and more ducks. Partially wet cells attracted more species and larger numbers of shorebirds. Completely dry cells resulted in few or no shorebirds.

The American Avocet numbers fluctuated in a curious way. During

the three weeks from 30 June to 24 July, their population diminished from 236 to 72 to 0 birds. (Chicks were seen before 24 July.) From 31 July to 13 August, they reappeared - 8, 7, and 3 birds. This led us to wonder what caused the sudden decrease to zero and then their return.

**1991, 19 April to 15 September:** Roughly the same number of species was observed in 1991 - 24 vs. 23 (Table 2). However, fewer individuals were counted in 1991, down 2,700 from 10,922. This may be accounted for by fewer counts in May and June and more in April and September, when fewer shorebirds were present. Another reason may have been the enormous increase in rain in 1991, leaving all cells with higher water levels and fewer sandbars.

The 1991 summer count period changed from 1990 out of necessity because of the availability of



<b>1990-1992: Based on the 39 counts:</b>	
Number of species:	29
Number of birds:	25,167
Number of nesting species:	7
Most frequent visitor:	American Avocet, 38 counts
Least frequent:	One count: Whimbrel, Long-billed Curlew, Lesser Golden Plover; Two counts: Dunlin
Most abundant:	Short-billed Dowitcher: 6,310; Wilson's Phalarope: 5,315
Rarest:	Whimbrel, Long-billed Curlew, Lesser Golden Plover, one bird
Longest period:	Avocet: 4 April-15 September, 1991

counters. It also gave us more complete seasonal coverage.

The most noticeable decrease was in yellowleg populations. Greateres were down 540 from the 1990 total of 593. There were 2,000 fewer Lesser Yellowlegs than 1990's 2,374. The most spectacular increase was in dowitchers, from 1,500 to 4,000 in 1991.

**1992, 5 May to 6 September:** Roughly the same number of species was observed in each of the three years — 23, 24, 24. The number of individuals diminished progressively during the three-year period by 4,000 birds. This might be related to count dates and habitat changes. Many of the lagoon cells were completely dry in 1992 and others, as a result, were completely filled, thus reducing suitable habitat.

The most unusual observations in 1992 were of Long-billed Curlew, Lesser Golden Plover and Western Sandpiper. The most notable decrease — over 2,000 birds — was in dowitchers. Significant increases over 1991 occurred in three species: Greater Yellowlegs (384 in 1992 from 53 in 1991); Stilt Sandpipers (747 from 24), and Baird's Sandpiper (141 from 73) (see Table 3).

The three-years' averages show that the Willet and avocet could be expected in every two-week period (Table 4). The highest species counts were during 16-31 July with 24 species and 1-15 and 16-31 August, with 19 each. Periods with the most individuals were 1-15 August with 1,151 sightings and 16-31 July with 860.

**Conclusions** (1) The Weyburn City Lagoon Cells have proven to be a major stopover for shorebirds in this part of Saskatchewan. Twenty-nine of the 37 shorebird species found in Saskatchewan were confirmed to use the lagoon and it is quite possible that several of the others also use it but were not present on survey days. The site also provides breeding habitat for seven kinds of shorebirds.

(2) Shorebirds are attracted to varying conditions of the lagoon habitat but seem to prefer those cells which are neither completely dry nor completely covered with water. When water is too deep, it seems to pose a foraging problem for most shorebirds and cells with no water seem to have none of the sought-after nutrients. Cells which contain both water and sandbars are the most popular gathering sites.

**Table 1. WEYBURN LAGOON SHOREBIRD SURVEY — 1990**

Species	# Seen	# Dates	First Date	Last Date	Observers*
Black-bellied Plover	116	3	22 May	2 Sep	BC LB NP RB
Semipalmated Plover	17	3	22 May	2 Sep	BC NP RB LB
Killdeer**	60	11	22 May	3 Aug	1LB NP RB
American Avocet**	812	12	22 May	2 Sep	LB NP BC RB
Greater Yellowlegs	593	7	17 Jun	2 Sep	LB NP RB BC
Lesser Yellowlegs	2,374	9	22 May	2 Sep	LB NP RB BC
Solitary Sandpiper	12	3	24 Jul	2 Sep	NP RG RB
Willet**	500	12	27 May	2 Sep	RB NP BC
Spotted Sandpiper**	78	12	22 May	13 Aug	LB NP RB
Upland Sandpiper**	4	2	24 Jul	30 Aug	NP RG RB
Whimbrel	1	1	27 May	—	RB NP
Hudsonian Godwit	1	1	22 May	—	LB NP RB
Marbled Godwit**	878	11	22 May	13 Aug	LB NP RB
Sanderling	257	6	22 May	2 Sep	LB NP RB BC
Semipalmated Sandpiper	657	9	22 May	2 Sep	LB NP RB BC
Least Sandpiper	24	2	22 May	24 Jul	LB NP RB
Baird's Sandpiper	34	1	13 Aug	—	RG NP
Dunlin	18	1	2 Sep	—	BC NP RB
Stilt Sandpiper	27	5	27 May	2 Sep	RB NP BC
Short-billed Dowitcher	1,471	7	22 May	2 Sep	LB NP RB BC
Long-billed Dowitcher	87	2	30 Jun	5 Jul	RB BC NP RG
Wilson's Phalarope**	2,692	12	22 May	5 Jul	LB NP RB BC
Red-necked Phalarope	209	3	22 May	13 Aug	RB NP RG
Total: 23 species	10,922	12			

Observation dates: 22, 27 May; 7, 12, 17, 30 June; 5, 24, 31 July; 13 August; 4 September

\* Observers: Bill Clark (BC); Leo Belanger (LB); Nick Postey (NP); Ray Belanger (RB); Richard Gutfriend (RG)

\*\* Nesting activity

(3) Shorebirds are only a small percentage of the birds using the area. Others include several species of ducks, grebes, terns, cranes, songbirds and raptors. Of special interest were Prairie Falcon, Peregrine Falcon, Merlin, Sandhill Crane, Water Pipit and Savannah Sparrow. One species — Baird's Sparrow — designated as Threatened by the Committee on the Status of Endangered Wildlife in Canada, nests around the lagoons.

(4) Projects such as this evaluation of a special habitat should attempt to undertake surveys during the same period each year.

### Recommendations (1) Members of

City Administration, responsible for upkeep and development of the lagoon cells, and the Weyburn Natural History Society should collaborate in an attempt to manage water levels so as to continue attracting birds to this special habitat. Depending on the contingencies of sewage treatment, it may be possible to manage the cells so as to increase use by shorebirds and other wildlife.

(2) Habitat enhancement, such as additional trees, should be discussed.

(3) The Weyburn lagoon cells should be publicized as a major gathering spot for shorebirds in Saskatchewan.



**Table 2. WEYBURN LAGOON SHOREBIRD SURVEY — 1991**

Species	# Seen	# Dates	First Date	Last Date	Observers*
Black-bellied Plover	90	4	10 May	24 Aug	NP LB RB RG
Semipalmated Plover	21	5	25 Apr	15 Sep	RG RB NP
Killdeer**	30	7	25 Apr	24 Aug	RG RB
American Avocet**	626	13	19 Apr	15 Sep	GB RG NP RB
Greater Yellowlegs	53	9	25 Apr	14 Sep	RG RB SS
Lesser Yellowlegs	279	8	25 Apr	15 Sep	RG RB NP
Solitary Sandpiper	11	1	10 May	—	NP LB RB
Willet**	140	9	25 Apr	14 Sep	RG RB SS
Spotted Sandpiper**	83	7	10 May	24 Aug	RG RB NP LB
Upland Sandpiper**	1	1	10 May	—	NP LB RB
Hudsonian Godwit	146	3	19 Apr	10 May	GB RG NP LB RB
Marbled Godwit**	280	9	19 Apr	29 Aug	GB RG NP RB
Red Knot	6	1	29 Aug	—	NP RG RB
Sanderling	268	4	25 Apr	15 Sep	NP RG RB
Semipalmated Sandpiper	373	9	10 May	5 Sep	LB RG NP RB
Least Sandpiper	125	3	25 Apr	14 Sep	SS RB RG
White-rumped Sandpiper	32	1	29 Aug	—	NP RG RB
Baird's Sandpiper	73	3	19 Apr	15 Sep	GB RG NP RB
Dunlin	67	4	24 Jul	29 Aug	RG RB NP
Pectoral Sandpiper	32	3	24 Jul	14 Sep	NP RB SS RG
Stilt Sandpiper	24	1	10 May	—	NP LB RB
Short-billed Dowitcher	3,118	10	10 May	15 Sep	LB NP RB
Long-billed Dowitcher	896	3	10 May	15 Sep	LB NP RB
Wilson's Phalarope**	1,432	9	1 Jun	9 Sep	SS RR RB
Total: 24 species	8,206	13			

Observation dates: 19, 25 April; 10 May; 1 June; 9, 13, 24 July; 22, 24, 29 August; 2, 14, 15 September

\* Observers: Leo and Ray Belanger (LB, RB); Nick Postey (NP); Richard Gutfriend (RG); Greg Bobbitt (GB), Ron Rumball (RR), Stew Stairmand (SS)

\*\* Nesting activity



*Black-bellied Plover*

*P.S. Taylor*



**Table 3. WEYBURN LAGOON SHOREBIRD SURVEY — 1992**

Species	# Seen	# Dates	First Date	Last Date	Observers*
Black-bellied Plover	8	2	5 May	31 Jul	NP RG
Lesser Golden Plover	1	1	31 Jul	—	RD CD PL GB RG
Semipalmated Plover	23	2	31 Jul	6 Aug	CD RD PL GB RG NP
Killdeer**	46	11	5 May	20 Aug	SS GS PL RB
American Avocet**	835	13	5 May	6 Sep	RB BL NP LB
Greater Yellowlegs	384	8	26 Jun	6 Sep	NP RB LB BL
Lesser Yellowlegs	584	8	26 Jun	20 Aug	RB NP LB BL
Solitary Sandpiper	3	1	20 Aug	—	RG GB
Willet**	91	10	5 May	6 Aug	PL BL NK HK RG
Spotted Sandpiper**	118	11	5 May	20 Aug	RB NP
Upland Sandpiper**	2	2	24 Jul	26 Jul	RB NP
Marbled Godwit**	175	10	5 May	13 Aug	RB NP SS GS
Long-billed Curlew	1	1	24 Jul	—	RB NP
Sanderling	16	2	20 May	23 May	NP RG GB PL
Western Sandpiper	20	1	13 Aug	—	RG NP
Semipalmated Sandpiper	602	10	5 May	20 Aug	RB SS PL NP RG
Least Sandpiper	2	1	20 Aug	20 Aug	RG NP
Baird's Sandpiper	141	5	24 Jul	13 Aug	LB NP RG
Pectoral Sandpiper	83	5	20 May	13 Aug	RG NP
Stilt Sandpiper	747	8	23 May	6 Sep	GB NP BL RB
Short-billed Dowitcher	1,721	10	20 May	20 Aug	RB NP BL RG
Long-billed Dowitcher	122	4	6 Jul	6 Sep	GB RG BL LB RB
Wilson's Phalarope**	1,191	11	20 May	20 Aug	NP RG
Red-necked Phalarope	121	4	20 May	6 Sep	RG NP BL RS LB
Total: 24 species	7,059	14			

Observation dates: 5, 20, 23 May; 2, 26 June; 6, 24, 26, 31 July; 6, 13, 20 August; 6, 8 September

\* Observers: Leo and Ray Belanger (LB, RB); Chris and Ross Douglas (CD, RD); Harry and Norma Kapusiany (HK, NK); Bob Luterbach (BL); Nick Postey (NP); Richard Gutfriend (RG); Greg Bobbitt (GB); Gord and Stew Stairmand (GS, SS); Bill and Phil Layh (BL, PL).

\*\* Nesting activity



*Spotted Sandpiper*

Frank A. Switzer



**Table 4. BIWEEKLY OCCURRENCE OF SHOREBIRDS AT WEYBURN SEWAGE LAGOONS — 1990-1992**

	Apr 15-30	May 1-15	May 16-31	Jun 1-15	Jun 16-30	Jul 1-15	Jul 16-31	Aug 1-15	Aug 16-31	Sep 1-15
Counts: 39	2	2	4	4	4	4	6	4	4	5
<b>AVERAGE NUMBER OF BIRDS PER COUNT</b>										
Black-bellied Plover		22	9				1		12	16
Lesser Golden Plover							L			L
Semi-palmated Plover	2	3					1	8	1	1
Killdeer**	3	5	5	2	10	6	3	1	2	
American Avocet**	43	112	62	50	164	69	38	13	2	
Greater Yellowlegs	6			L	18	2	64	108	9	17
Lesser Yellowlegs	29		1		46	52	121	389	53	59
Solitary Sandpiper		6					1	1	1	L
Willet**	9	13	11	7	24	9	35	64	3	3
Spotted Sandpiper**		31	8	9	8	2	9	8	4	
Upland Sandpiper**		1			L		1			
Long-billed Curlew							L			
Whimbrel			L							
Hudsonian Godwit	70	3	2							
Marbled Godwitt**	20	33	16	14	148	46	42	24	7	
Red Knot									2	
Sanderling	64	38	11	15			5	28		
Western Sandpiper								5		
Semipalmated Sandpiper		58	88	14	16	44	22	125	40	31
Least Sandpiper	33		2			13	2		1	
White-rumped Sandpiper					1				8	
Baird's Sandpiper	15	15					17	16	2	3
Dunlin							5		9	4
Pectoral Sandpiper			4				11	3	3	3
Stilt Sandpiper		12	100	8		5	12	3		39
Short-billed Dowitcher		175	63	6		137	133	181	204	526
Long-billed Dowitcher		8			4	18	106	20		50
Wilson's Phalarope**			241	83	140	106	228	103	153	25
Red-necked Phalarope			18		1		1	51		17
Total Birds	294	535	641	208	580	509	860	1151	516	794
Species (29)	11	16	17	11	13	13	24	19	19	16

L = average less than 0.5 birds



*Willet*

*Wayne Lynch*