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# BLUE JAY

June 1981



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Associate Editors: Margaret Belcher, J. Bernard Gollop, Ronald Hooper, George F. Ledingham, Robert W. Nero, Carol A. Scott.

Editorial Assistants: Carman and Shirley Dodge.

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**Correction Note:** *The table of contents March 1981, 39(1). The article "History of Richardson's Merlin in Saskatchewan." was authored by C. S. Houston and A. P. Schmidt.*

# W. J. D. STEPHEN, 1930-1981

On 14 January 1981, during Canadian Wildlife Service Program reviews in Edmonton, William John Douglas Stephen died suddenly. Although Doug had not been feeling well for a few days, there appeared to have been no advance warning of the severe heart attack which felled him in mid-career.

Doug was born in 1930 in Sudbury, Ontario, earning his BSA in 1957 at the University of Toronto's Ontario Agricultural College in Guelph. It was three years later, also at OAC, that he received his MSA.

First employed as a seasonal Technical Officer with CWS in 1957, he joined CWS as a permanent employee in July 1959 in Saskatoon where he studied the effects of waterfowl predations on cereal crops in the prairies. From 1961 to 1963 Doug studied Sandhill Cranes, and this study led to his receiving the PhD degree from the University of Saskatchewan in 1965. Doug experimented with methods for controlling waterfowl depredations on grain and he investigated the effectiveness of experimental lure crops. The work resulted in contributions to the North American Wildlife Conference and to several other journals; some of his findings are still being applied.

In September 1966, Doug was transferred to Edmonton to become Supervisor of Lands with CWS. His new duties included the management of lands leased for waterfowl production and development of management plans on general Crown land. Three years later he took a one-year position in Ottawa with the Science Council of Canada, returning afterwards to Edmonton to become manager, Migratory Birds Division, Western Region. In 1974 he took on the

major job of Regional Director, Western Region. Because of personal problems and ill health, Doug relinquished the position in 1976 and returned to active field research conducted from the Saskatoon office. Here he again became involved in Sandhill Crane studies but now for the purpose of identifying a suitable population to serve as foster parents for whooping cranes as in the Grays Lake program in Idaho. Doug was also developing methods for the identification of Sandhill Crane breeding habitat using satellite imagery.

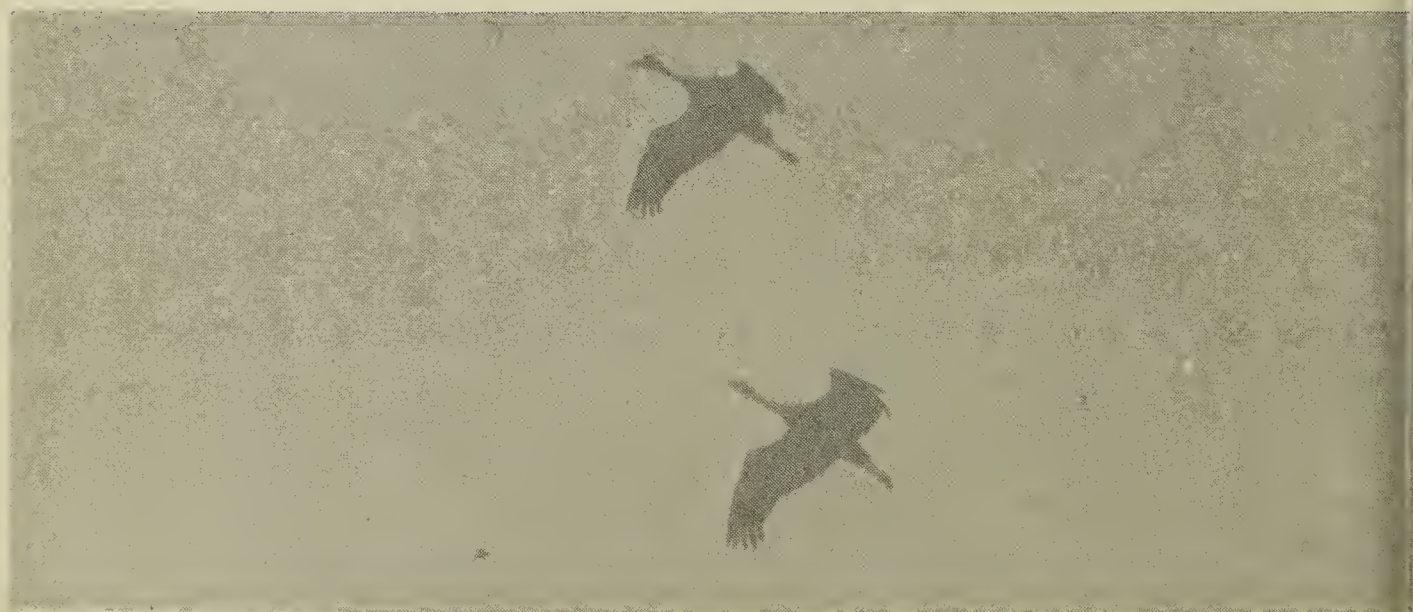
Doug, having a forceful approach to his work, was not the easiest person to work for. He could be a severe critic when being asked to referee or adjudicate papers or reports written by peers or juniors. Invariably, the changes he recommended made better scientific papers. As a research scientist he was greatly respected by his colleagues. I remember well the good discussions I had with Doug in 1977 when on my request he came north to Fort Smith to help with the tricky job of banding the first batch of young whoopers caught in Canada. Although we usually discussed our work, Doug also talked freely about his personal problems, and I have the highest admiration for the resolute manner in which he had already solved one of these problems.

Doug is survived by his wife Marge, daughters Anne and Elizabeth and son Orrin of Edmonton, son Brian in Australia, his parents of Capreol, Ontario, two brothers and three sisters. Funeral services were held at Edmonton on 17 January 1981, followed by cremation. The request was made that in lieu of flowers, donations be sent to the Saskatoon Alcoholism Society, 323 Avenue R South, Saskatoon, Saskatchewan. S7M 2Z2. — *Ernie Kuyt and*

Colleagues, Canadian Wildlife Service,  
9942 - 108th Street, Edmonton, Alberta.  
T5K 2J5.

## Publications

- STEPHEN, W. J. D. 1957. Apartment house for mallards. *Blue Jay* 15(4):148.
- \_\_\_\_\_. 1958. Swimming Hungarians. *Blue Jay* 16(1):15.
- \_\_\_\_\_. 1960. Waterfowl depredation on the prairies. *Trans. 24th Fed.-Prov. Wildl. Conf.* pp. 109-112.
- \_\_\_\_\_. 1960. The use of exploders in protecting crops against Sandhill Crane depredation. *Blue Jay* 18(1):23-24.
- \_\_\_\_\_. 1961. Experimental use of acetylene exploders to control duck damage. *Trans. 26th North Am. Wildl. Conf.* pp. 98-110.
- \_\_\_\_\_. 1963. Some responses of female mallards to disturbance by man. *J. Wildl. Manage.* 27:280-283.
- \_\_\_\_\_. 1963. Game management for outdoor recreation. Fifteenth Biennial Convention, Canadian Association for Health, Physical Education and Recreation, Saskatoon, Sask.
- \_\_\_\_\_ and E. L. PAYNTER. 1964. Waterfowl in the Canadian breadbasket. *In: Waterfowl tomorrow.* Ed. by J. Linduska. U.S. Bureau of Sport Fisheries and Wildlife, Washington, D.C. pp. 409-416.
- \_\_\_\_\_. 1965. Bionomics of the sandhill crane. PhD thesis, Dept. of Biology, U of Saskatchewan, Saskatoon. 176 p.
- \_\_\_\_\_. 1965. Implication of the Agricultural Rehabilitation and Development Act to wildlife and fisheries management. *Canadian Society of Wildlife and Fisheries Biologists Occasional Papers* Number 2, 7-13.
- \_\_\_\_\_. 1965. Migratory waterfowl damage in the Prairie Provinces. *Trans. 29th Fed.-Prov. Wildl. Conf.* pp. 82-91.
- \_\_\_\_\_. 1966. Acceptability of agreements for rental of rights to basins. *Trans. 30th Fed.-Prov. Wildl. Conf.* pp. 44-53.
- \_\_\_\_\_ and R. S. MILLER. 1966. Dispersion within flocks of sandhill cranes. *Ecology* 47:281-285.
- \_\_\_\_\_, R. S. MILLER and J. P. HATFIELD. 1966. Demographic factors affecting management of sandhill cranes. *J. Wildl. Manage.* 30:581-589.
- \_\_\_\_\_. 1967. Bionomics of the sandhill crane. *CWS Report Series, No. 2.* 48 p.
- \_\_\_\_\_. 1969. The Science Council of Canada. *Trans. 33rd Fed.-Prov. Wildl. Conf.* pp. 85-90.
- \_\_\_\_\_. 1979. Social values of deserted island birds. *Blue Jay* 37(2):108-109.
- \_\_\_\_\_. 1979. Whooping crane sightings, Prairie Provinces 1977 and 1978. *Blue Jay* 37(3):163-168.
- \_\_\_\_\_. 1980. Where do sandhill cranes raise their young? *Blue Jay* 38(2):115-116.



*Sandhill Cranes at dawn.*

Wayne C. Harris



# BUR OAK, NANNYBERRY, SANDCHERRY AND OTHER INTERESTING PLANTS IN EAST- CENTRAL SASKATCHEWAN

DONALD F. HOOPER, Box 40, Somme, Saskatchewan. S0E 1N0.

A few years ago I heard about native Bur Oak (*Quercus macrocarpa*) present at a place near Porcupine Plain, Saskatchewan, but thought there must have been some mistake, as the only oak I was aware of around here was a row of trees planted north of Somme in 1933 by Ernie Geddes. Last spring when I again heard of the oak near Porcupine Plain, I decided to investigate. At the old George Love homestead, seven miles northeast of Porcupine Plain, there were five oak trees in the old yard. I was told by the Love family that these had been transplanted there from the wild in the early days, and that there had been a number of native oak trees growing along the nearby lake when George Love first came there in the 1930's. Scattered along the north shore of the lake up to one-quarter mile from the yard, I found six, apparently native, oak trees, and two more near another lake east to the south. The trees were all old, mostly with a clump-form, looking more like willows than oak trees (this would seem the reason that "Bur Oak" is often called "Scrub Oak" in the more northern part of its range). It was here on high, well drained, poplar ground among hazelnut, Chokecherry, Pincherry and Saskatoon bushes, that the oak was growing on a southern slope.

I wrote about these trees to Dr. Vernon L. Harms (Curator of the W. P. Fraser Herbarium at the University of Saskatchewan, Saskatoon), and he was quite interested, replying that he did not

know of any verified scientific records of the native Bur Oak in Saskatchewan from north of the Qu'Appelle valley (where it is found only as far west as Round Lake). This surprised me as my brother Ron, while collecting insects for the Provincial Museum over ten years ago, had seen oak in two places farther north in Saskatchewan; these were along the north bank of the Assiniboine River valley near Togo, and on the southwest slope of Thunder Hill, north of Arran. We did not realize that these native oak localities were either unsubstantiated by scientific collections or unknown to botanists.

When Vern Harms came to our place on June 19, 1980, I with Les Baker, a friend of mine who is interested in plants, took him to the oak site near the Porcupine Plain where habitat information and voucher specimens were obtained to document the locality record. He agreed there seemed no reason to question their native status here, based on the historical information and the fully natural-wooded habitat of the plants. We followed this by several days of botanizing in the Pasquia Hills mainly along the Waskwei and Pasquia Rivers, where we helped, and tried to learn from, Vern Harms as he collected plants for the Fraser Herbarium. Some of the interesting plant records that we found high in the Pasquia Hills were Lady-fern (*Athyrium filix-femina*) and Alpine Bistort (*Polygonum viviparum*). Also collected here were some rarities



*Bur Oak*

*Ken Lumbis*



*Nannyberry*

*G. J. Smith*



*Sandcherry*

*Wayne C. Harrison*

previously found elsewhere in the Pasquia Hills mostly along the Fir River Road, north-northwest of Hudson Bay. These plants included Western Purple Virgin's-bower (*Clematis occidentalis* var. *grosseserrata*), Red-berried Elder (*Sambucus racemosa* ssp. *pubens*), and Red Alpine Bearberry (*Arctostaphylos rubra*). Also of interest were some plants that, although fairly common here, are quite restricted in Saskatchewan to the east-central region only. Among the latter were Bush Honeysuckle (*Diervilla lonicera*), Mountain Ash (*Sorbus decora*), and Mountain Maple (*Acer spicatum*).

On June 24, we rediscovered the rare native Sand Cherry (*Prunus pumila*) at Hudson Bay where it had previously been reported and represented the only native site north of the Lower Du'Appelle River Valley in Saskatchewan. But this stand has now been almost totally eradicated, with only a few low sprouts remaining, as a result of land developments just south of the present Hudson Bay Regional Park. Perhaps other native sites of the Sand Cherry may still be present in the general region and should be looked for, especially in sandy regions along the Red Deer River. Such sites, if found, would hopefully be protected from destruction.



Red-berried Elder

Wayne C. Harris

On June 24, we went to collect and make an inventory of the plants on Thunder Hill, north of Arran. Vern Harms will be preparing a complete checklist of the plants there. We learned from local farmers that the oak observed a decade ago on the southwest slope had been put in the brush-pile a few years previously. However, we did find some oak in two other places, high up on the southern slope of Thunder Hill on the Saskatchewan side, about one-half and one mile west of the Manitoba border respectively. The Bur Oak was also found on the eastern slopes of Thunder Hill in Manitoba, where it was more abundant and was growing at lower elevations. Interestingly, botanists from the University of Manitoba also collected native oak samples from the Manitoba side of Thunder Hill, for the first time last summer. This I learned through correspondence with G. M. Keleher of the University of Manitoba. She also said that they have a specimen of Bur Oak in the herbarium there from the Kettle Hills, near Swan Lake where they are growing on sandy ridges among Jack Pine (collected by G. M. Keleher, 1974).



Bush Honeysuckle

Wayne C. Harris

Before we went up on Thunder Hill, I wondered what the light-green patch was about three-quarters of the way up

the southern slope. Upon reaching it, we found quite an extensive natural grove of Nannyberry (*Viburnum lentago*). This was a good discovery, as Nannyberry is a rare species in Saskatchewan known from only four other sites and it had not previously been recorded from north of Tantallon, in the Qu'Appelle Valley. This is also beyond Manitoba's apparent northernmost record at Duck Mountain (Scoggan, H. G. 1950 *Flora of Manitoba*, p. 503).

Some other interesting plant discoveries made on Thunder Hill were Wake-Robin (*Trillium cernuum*) and Inland Wood Anemone (*Anemone quinquefolia* var. *interior*), the latter adding a fourth Saskatchewan locality record for this rare species to those known previously from Somme, Hudson Bay and Armit.

Voucher specimens of all the plants collected last summer in the Pasquia Hills, the Porcupine Plains and Hills, and at Thunder Hill are now filed in the Fraser Herbarium, University of Saskatchewan, at Saskatoon (SASK).



Mountain Maple

Wayne C. Harris

It is hoped that the northern outposts of Bur Oak and Nannyberry in Saskatchewan will be protected and not destroyed. Perhaps at least the oak can be found in other suitable localities, in east-central Saskatchewan. The oak at Thunder Hill is growing on a south-facing slope at about the 1700 foot level. The plants near Togo and Porcupine Plain are on a southern slope, but at an altitude of about 1500 feet. We did not revisit the latter site to collect samples but understand (pers. corr., V. L. Harms) that this Togo locality record has now been substantiated by a voucher collection made last summer by Lawrence Townley-Smith, a plant ecologist working with the Saskatchewan Environment Department, and to be filed in the Fraser Herbarium.

#### Acknowledgement

Appreciation is expressed to Dr. V. L. Harms for his interest in making a trip into this area to study the local flora. He also read the manuscript, offering helpful suggestions and additional information.



Mountain Ash

Wayne C. Harris



Cloning Trillium

G. J. Smith

## ADDITIONAL NOTES ON OAKS IN EAST-CENTRAL SASKATCHEWAN

RONALD F. HOOPER, Box 40,  
Lacombe, Saskatchewan. S0E 1N0.

On 7 April, 1981 while visiting a friend in Yorkton, I mentioned about the Bur Oak that we had found in our area. She then told me that a relative of theirs living near Willowbrook had a bluff of oaks on his farm. I immediately went out to check on it.

Mike Tereschuk who lives seven miles south and one mile east of Willowbrook took me about one-quarter mile west of his farm buildings to a hill which is the highest spot in the immediate area. On the hill is three acres completely covered with native oak

trees. There are about three more trees on the fenceline one-quarter mile south of there.

Mike, who is 65, has lived on this farm all his life. His father had left the bluff, while clearing in the early days as oaks are so deeply rooted and much harder to grub out than the poplar trees. Mike would have put the oaks on the brushpile, but his wife wouldn't let him. I complimented him on sparing the trees, and told him that they were very rare in this part of the province, and should be preserved not only because they are rare trees but also a western extension to the range of many species of insects that only live in oak forest.

If any reader knows of additional native oak records for Saskatchewan, than those which have been mentioned, could you please let me know as soon as possible, so that we can check them out this summer.

# ACCESS TO TWO DISTINCTIVE WETLANDS IN CENTRAL MANITOBA

FREDERICK W. SCHUELER, Herpetology Section, National Museum of Natural Sciences, National Museums of Canada, Ottawa, Ontario. K1A 0M8.

In the course of herpetological field work for the National Museum of Natural Sciences, R. M. Rankin and I encountered two distinctive wetlands in central Manitoba which are relatively easily accessible from Hwy. 6 along the hydroelectric powerline to Norway House. The purpose of this communication is to draw the attention of prairie naturalists to these sites.

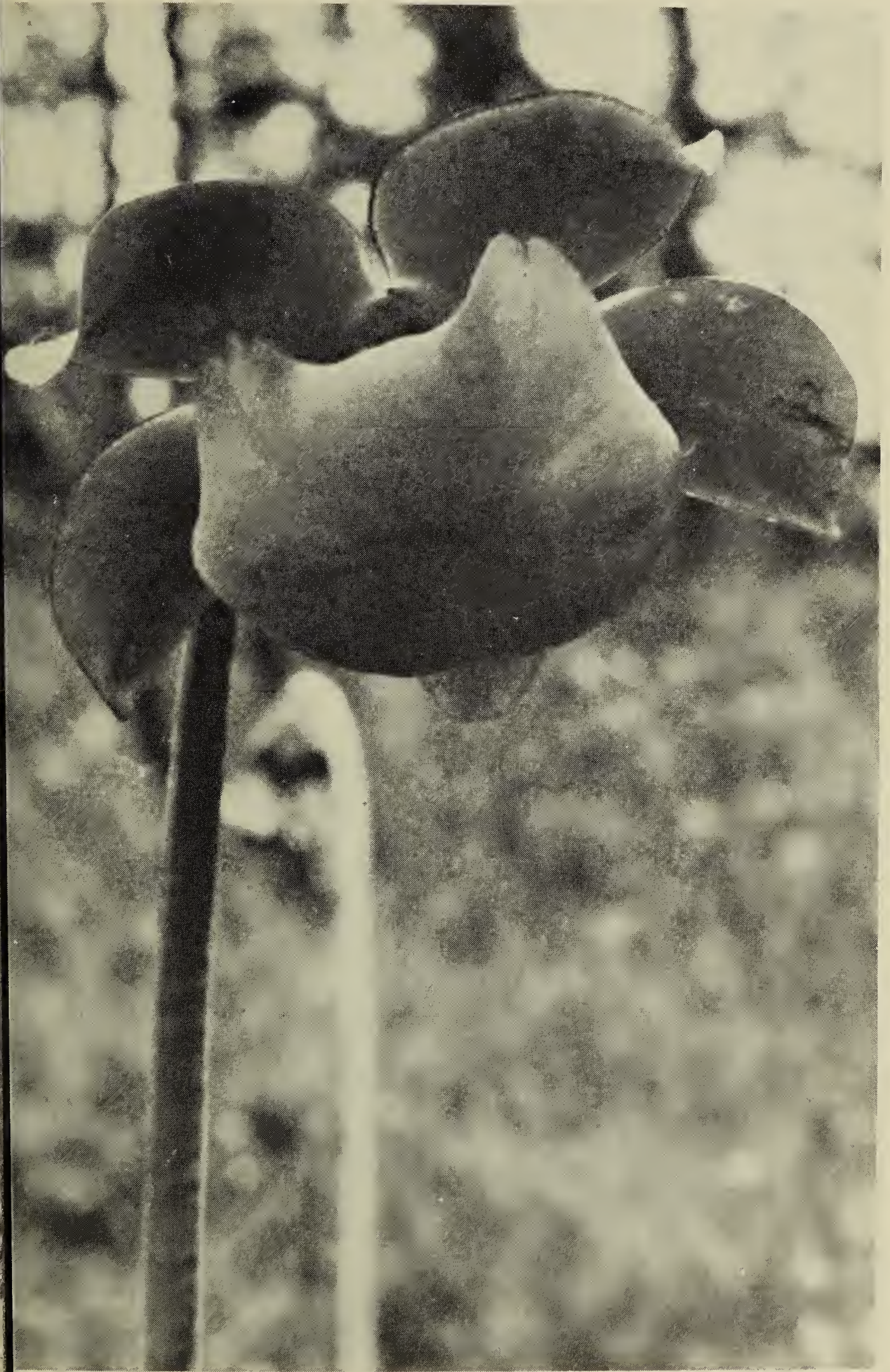
The powerline runs from a transformer station 2.5 km south of William River on Hwy. 6, east along the 15th Base Line to the shore of Playgreen Lake near Norway House (the Base Line is shown on the Grand Rapids 1:250,000 topographic map). The poles are 100 yards apart, which provides a convenient measure of distance along them, and every 10th pole is numbered.

On the evening of 9 June 1980 we drove about a kilometre west from the highway along the track which parallels the powerline, and came to a string bog which is an extension of the north end of Baker Lake. This looked much like bogs in southern Ontario or New England — a loose mat of herbaceous vegetation floating in deep (>1 m) water. We were impressed by the number of sandpipers, saw a pair of Sandhill Cranes (not noted as breeding here,<sup>5</sup>) and collected Narrow-leaved Sundews (*Drosera anglica*) and Pitcher Plants (*Sarracenia purpurea*), which were quite common. Scoggan lists no definite record of *Drosera anglica* for Manitoba.<sup>4</sup> Our specimens of these species have been deposited in the NMNS herbarium. Pitcher Plants are considered sporadic at this latitude in



*Pitcher Plant*

Ken Lumbis



cher Plant

Ken Lumbis



*Narrow-leaved Sundew*

*Ken Lumbis*



Saskatchewan.<sup>3</sup>

I planned to walk east towards the mouth of the William River at Limestone Bay, searching for toads, and set out before dusk, crossing the string bog on game trails north of the powerline. I went along the line across an area of sparse Jack Pine and into a broad sedge bog that extended about a kilometre to another upland area. Beyond this, spruce, muskeg and forest extends 15 km to the William River near Limestone Bay. The sedge bog was of solid peat 1-2 m deep over bedrock. There was no open water, and the uniform vegetation of short sedges and cottongrass reminded me of the shores of James Bay.<sup>3</sup> I disturbed about three pairs of cranes on my way east, and on the way back I saw a calling Yellow Rail. The latter species has been found in similar sites.<sup>3</sup> I heard several other Yellow Rails and Savannah Sparrows singing in the early dawn.

Unfortunately, this night was cold and we neither saw nor heard any amphibians and our time was limited, so

we could not remain any longer. The presence of Pitcher Plants<sup>2</sup>, sundew<sup>4</sup>, Sandhill Cranes<sup>5</sup>, and Yellow Rails<sup>3</sup> testifies to the botanical and ornithological interest of these bogs, and their herpetology, particularly any evidence of hybridization between Canadian Toads and American Toads, such as we found at Limestone Bay remains unknown.<sup>1</sup>

<sup>1</sup>COOK, F. R. *in press*; An analysis of toads of the *Bufo americanus* group in a contact zone in northern North America. NMNS Publications in Zoology.

<sup>2</sup>HARMS, V. L. 1978. The native carnivorous plants of Saskatchewan. Blue Jay 36:71-81.

<sup>3</sup>SCHUELER, F. W., D. H. BALDWIN and J. D. RISING 1974. The status of birds from selected sites in northern Ontario. Canadian Field-Naturalist 88:141-150.

<sup>4</sup>SCOGGAN, H. J. 1978. The flora of Canada, NMNS, Ottawa.

<sup>5</sup>STEPHEN, W. J. D. 1980. Where do Sandhill Cranes raise their young? Blue Jay 38:115-116.

## A REQUEST FOR INFORMATION ON PRIVATE HERBARIA IN SASKATCHEWAN

The Fort Qu'Appelle Herbarium is at present preparing a list of Saskatchewan Herbaria and wishes to know of the existence of private herbaria or plant collections, large or small. Additional information such as year founded, number of specimens, special interests, exchange of specimens, etc. will be greatly appreciated. — Bernard de Vries, Botanist, Fort Qu'Appelle Herbarium, Fort Qu'Appelle, Saskatchewan. SOG 150.



*Fungus on stump*

*Chris Adair*

# COMPARISON OF FISH POPULATIONS ABOVE AND BELOW A CULVERT

BRYAN J. TANNER and GERRY A. WILDE, Forest Technology School, P.O. Box 880, Hinton, Alberta. T0E 1B0.

Past culvert constructions have often been installed without consideration to fish movement such as the cement culvert located on Hardisty Creek near Hinton, Alberta (Figs. 1 and 2). Therefore, a fish comparison study was conducted on Hardisty Creek in October 1978, to determine effects on species, numbers, total lengths and weights of fish above and below this culvert.

The creek has an average width of 3.5 m, an average depth of 0.25 m and a velocity of 0.36 m/second.<sup>1</sup> The 5% gradient for this creek is steep as compared to other creeks in the area. Three 100-m sites on the creek (Fig. 2), one below and two above the culvert, were chosen. All three exhibited a similar stream gradient and close proximity to other culverts on the creek. Accessibility to the sites was another

consideration in their location. Each site was electrofished using a Smith Root V electrofisher<sup>2</sup>. Length, weight and number of each captured fish were recorded for each site. Previous electrofishing on creeks in the Hinton area indicated that September and October were the best months to obtain a good fish population sample.

One hundred twenty-six fish were captured at the three sites (Table 1). Below the culvert, the number of species and the total number of fish were greater than those above the culvert. Thirty-three Rainbow Trout (*Salmo gairdneri*) were captured above the culvert whereas, 76 Rainbow Trout, 11 Mountain Whitefish (*Prosopium williamsoni*), three Brook Trout (*Salvelinus fontinalis*), two Burbot (*Lota lota*) and one Pearl Dace (*Semotilus margarita*) were captured below the

**Table 1.** CATCH RECORD FOR THREE SITES ON HARDISTY CREEK.

Site	Species	No.	Length (cm)		Weight (gm)	
			Range	Mean	Range	Mean
1	Rainbow Trout	76	4.20-17.40	8.71	0.60- 61.50	8.50
	Mountain Whitefish	11	9.00-14.00	11.87	5.70- 20.00	12.63
	Brook Trout	3	18.60-30.00	24.10	68.20-330.30	174.17
	Burbot	2	25.00-26.00	25.50	76.80-108.10	92.45
	Pearl Dace	1	5.30	5.30	1.80	1.80
2	Rainbow Trout	20	8.40-20.20	14.08	6.50- 80.00	30.82
3	Rainbow Trout	13	8.00-21.60	15.67	5.30-118.60	43.89

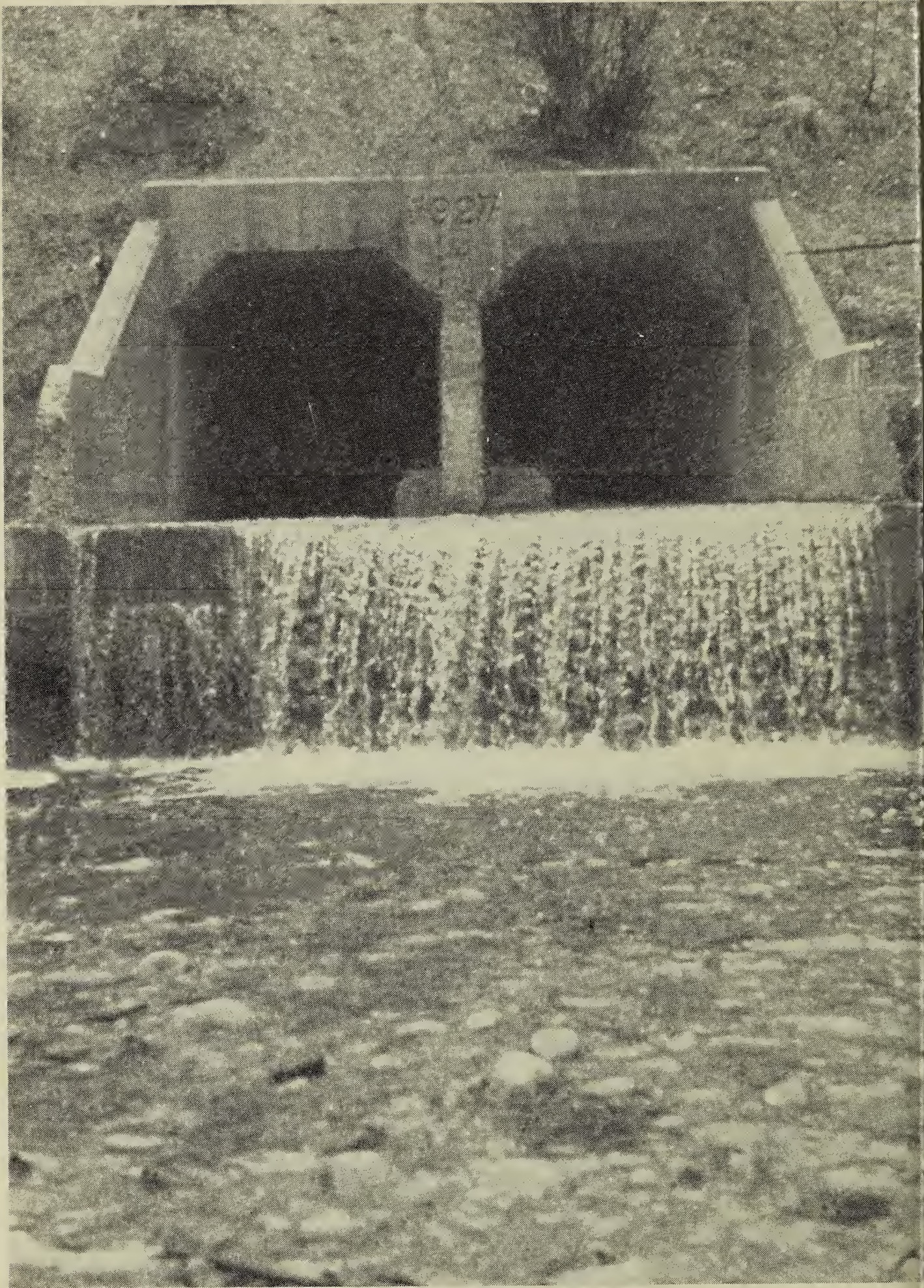


Figure 1. Cement culvert on Hardisty Creek.

G. A. Wilde

culvert. Average lengths and weights for each site indicated that Rainbow Trout above the culvert average longer and

heavier than trout below the culvert (Table 1).

We believe that this culvert acts as an

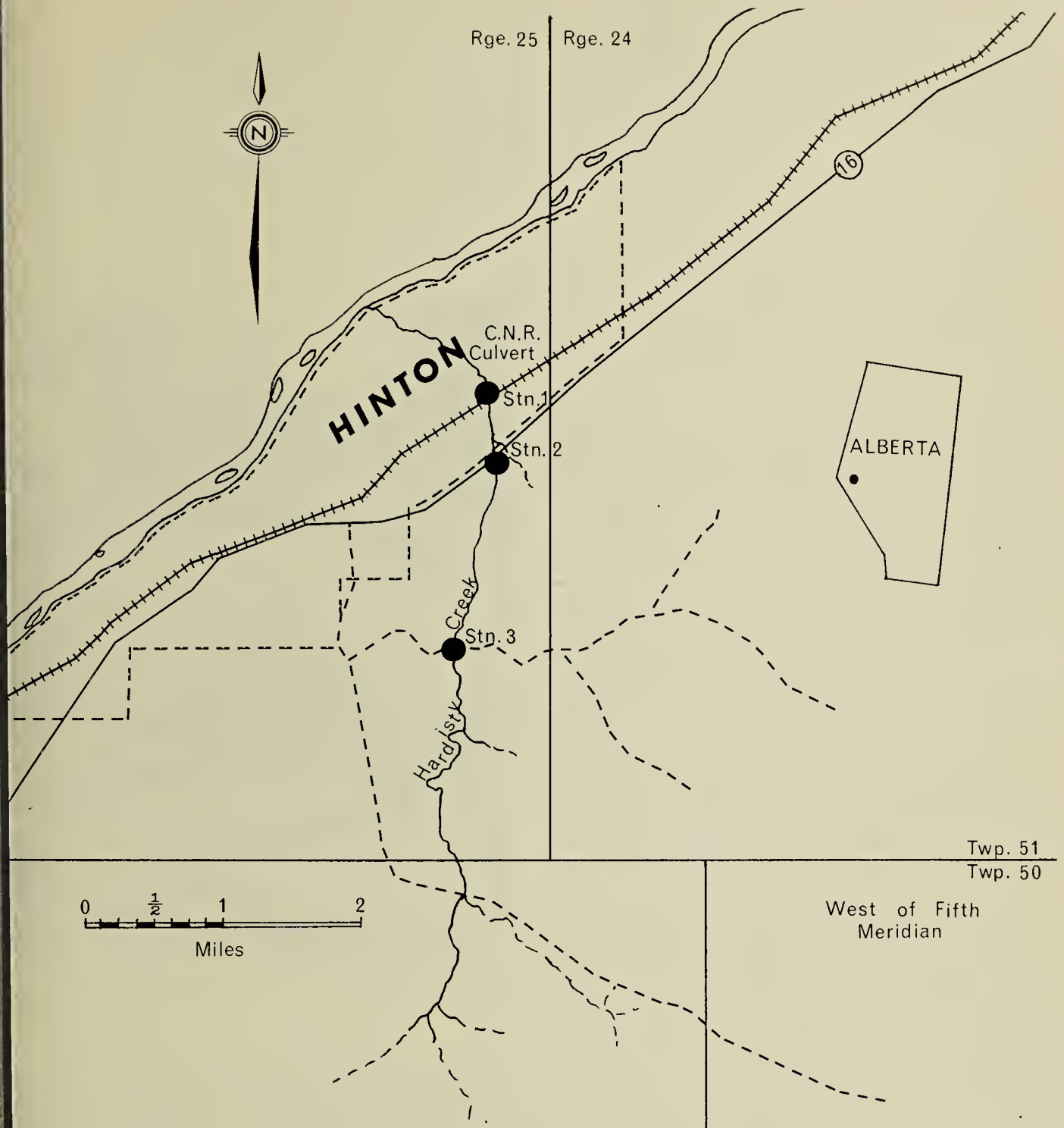


Figure 2. Site Locations on Hardisty Creek.

obstacle to upstream fish movement, therefore influencing species, numbers, lengths and weights of migrating fish. We suspect that the fish above the culvert have achieved a greater length and weight due to less competition for food among a smaller population of fish. We suggest that future creek and river crossings should provide for fish movement and where drop-off conditions occur, fishway or gabion

systems should be used<sup>3</sup>.

<sup>1</sup>DIXON, R. M. 1978. Stream survey report No. 1 — Hardisty Creek. Forest Technology School, P.O. Box 880, Hinton, Alberta.

<sup>2</sup>LAGLER, K. 1956. Freshwater fishery biology. Wm. C. Brown, Dubuque, Iowa.

<sup>3</sup>WATTS, F. J. 1975. Design of culvert fishways. U.S. Dept. Agric., Missoula, Montana.

# THE PEARLY EYE AT THE PAS, MANITOBA

WALTER KRIVDA, P.O. Box 864, The Pas, Manitoba. R9A 1K8.

Collectors and students of butterflies are often surprised to find that this species ranges this far north in Manitoba. Two species of the genus *Lethe* (= *Enodia*) occur as far south as the Virginias while others occur in more temperate Japan and into the mainland of Asia. It is therefore somewhat of a surprise that a species of this group has penetrated this far north in Manitoba.

My experience with the Pearly Eye (*Enodia portlandia borealis*) in The Pas area goes back to 1951 when the first local specimen was collected along the old abandoned railway going through a sphagnum swamp about a mile east of town. It's a scarce species locally and seems sporadic in its distribution elsewhere.

In 1962 a considerable but very local flight occurred at the Big Eddy Indian Reservation. The location was in the ravine across the road from the cemetery on the hill overlooking the series of lakes. It's a moist grassy spot with Hazelnut shrubs present. Here in the company of Stephen and Franklin Chermock, on their way to collect in Churchill, a good study series was collected. This series is at present in the writer's collection at The Pas. The Chermocks also took a good study series.

It was somewhat of a surprise to take a specimen of the Pearly Eye at Reader Lake this summer. Here the habitat is very different from the preceding two habitats from which the species is known locally. It is a sandy, Jack Pine-White Spruce association. It may well be



*Pearly Eye*

*D. Hooper*

that the Pearly Eye inhabits only the narrow moist band of grasses and sedges along Reader Lake.

The caterpillar of this butterfly is known to feed on grasses. This zone has good stands of lush grasses growing in the rich black peat rimming the edges of the lake. This is the third known colony of the Pearly Eye in The Pas area. More colonies will doubtless be found as the whole area is better explored. The Reader Lake colony is the most northern in Manitoba. This is about 12 miles north of The Pas. The species is rare locally; only three colonies have been discovered in 30 years of collecting in these parts.

# WILLIAM G. NEAVE (1874-1924), EVESHAM SASKATCHEWAN'S NATURE CORRESPONDENT

C. STUART HOUSTON and MARY I. HOUSTON, 863 University Drive, Saskatoon, Saskatchewan. S7N 0J8.

Among the few nature records from early settlers in west-central Saskatchewan are Will Neave's "Nature Notes from a Saskatchewan Farm." These appeared in the nature column edited by Ernest G. Ingersoll in the Montreal farm weekly, the *Family Herald and Weekly Star*, in 1922 and 1923.

Born at Leiston, Suffolk, England in March 1874, Will was described by his aunt as "a country boy of a sunny affectionate disposition whose instincts were all with the out-of-doors." Will attended school in the local Quaker meeting place and later went to the Quaker's Ackworth School in Yorkshire, where he joined the Natural History Society.

After apprenticeship in the Leiston engineering works, he worked on sheep stations at Poverty Bay, New Zealand, and Queensland, Australia, before returning to work at "uncongenial things" in business in Britain. He married Gulielma Fryer and the two emigrated in 1906 to homestead on good land, NW 16-41-22W3, north of Unity. Although Will had a creditable 93 acres broken by 1909 when his brother Hal arrived, Hal persuaded him to trek farther west. When they reached the Eye Hill Creek valley near the present site of Evesham and looked down on knee-high grass, the valley looked like a naturalists' paradise — and the sandy land looked misleadingly verdant. Will and Hal each filed on valley land, Will taking the SW 4 and NW 9-40-27W3.

Will worked in Macklin for a few winters and broke 12 acres on his new homestead in 1911 and 10 acres each in 1912 and 1913, cropping 12 acres in 1912 and 22 acres in 1913, by which time he also had 27 cattle. Gulielma, unfortunately, died of tuberculosis in 1919. Will then visited England and returned the next year with Ada Cullen as his new bride.

In his "Nature Notes from a Saskatchewan Farm," Will described many of his observations of the weather, plants, insects, mammals and birds. He described how "the time between 'freeze-up' and the coming of the snow is the bleakest of the year. Everything looks brown and bare . . . when the snow comes it takes the keen edge from the cold." As an all-round naturalist he thrilled to every sign of spring, such as the first Mourning Cloak butterfly, then called the "Camberwell beauty", which appeared on 9 April 1922 and 16 April 1923, the swallow-tailed butterflies on 30 May 1922, and the White Admiral, then called Banded Purple, on 18 June of that year.

He made remarkably few errors in identification, although the Song Sparrows he reported singing on 1 April 1922 were probably migrating Tree Sparrows, and the 30 April date for Mourning Warblers seemed improbably early.

A few of the interesting passages and a brief annotated list of additional bird observations have been culled as



*William G. Neave*

follows from the newspapers from 1 March 1922 through 26 June 1923. These contained Neave's dated observations, though obviously just a summary of what he felt most interesting, from January 1922 through 6 May 1923, a period of nearly 16 months.

#### JACK-RABBIT

January 1922: "In . . . sixteen years . . . I have never seen so many jack-rabbits before. . . . Each morning I walk down to the creek, a distance of about 300 yards, to chop a hole in the ice for the cattle to drink from and I seldom see less than six rabbits on my way — they quite understand that the thing over my shoulder is only an axe and not a gun, and they stand straight up on their hind legs to watch me pass. . . .

"My dog is the butt of the whole rabbit community. When they hop, sort of casually, just past his nose, he can never resist the temptation of giving chase. One would think that after dozens and dozens of attempts he would learn by experience that it is impossible for him to catch them but no,

the greater part of his life is spent in chasing elusive bunnies."

28 July 1922: "There can be no doubt whatever that rabbits do considerable damage to the grain. . . . This year all the grain fields have straight hard beaten tracks through them made by the feet of many rabbits, and as much of the wheat is short, their black-tipped ears can often be seen above it."

#### RICHARDSON'S GROUND SQUIRREL

22 March 1922: "The first gopher was seen today. Our feelings towards him are mixed, as a harbinger of spring he is welcome, but as the enemy of our crops we hope to poison him before long."

23 June 1922: "I saw a weasel leave a dead gopher and run across the road. As it was only a short distance from my henhouse I shot the weasel and then examined the gopher. It has been freshly killed and had a blood stain on the back of the neck, so I concluded that the weasel had killed it."

#### BADGER

21 August 1922: "I came upon a full grown badger in a remarkable predicament this afternoon. He was on his back underneath a barbed wire fence with the loose skin of his chest twisted round a barb of the bottom wire. Evidently in the first place he had caught on the barb while walking over it and in his struggles to get away had turned himself round the wire. If he had been the right way up or even if the wire had been tight probably he could have torn himself away, but lying on his back fixed to a wire that gave to every pull he made, he was quite helpless. I cut the skin that held him and he scuttled off down a hole in the bank."

#### COYOTE

9 October 1922: "Coyotes have ventured closer to the shack than usual; of all dreary sounds surely their howl is the most dreary."

19 October 1922: "I frequently see coyotes walking among the cattle. I think



probably in this way they find it easier to approach the jack-rabbits that sit browsing in the grass, than if they stalked them in the open. The cattle get quite used to the coyotes and resent their presence less than they would that of a dog. I have seen an old cow that chases every dog that comes in sight, yet this evening I found her peacefully feeding in a grassy hollow while ten yards away a large coyote sat eating a jack-rabbit."

#### AMERICAN BITTERN

22 July 1922: "I saw a bittern this evening, the first this summer. Bitterns were once very common here, I believe the reason that they are not so now is that they object to cattle and horses tramping round their nesting-places."

#### SWAINSON'S HAWK

6 August 1922: "Among the sandhills today I came upon two Swainson's hawk nests, built in small stunted poplar trees. From my position on the back of the pony I could look right into them. Both contained young ready to fly."

#### GYRFALCON

8 January 1923: "A distinguished visitor is here from the Arctic in the person of a white Gyrfalcon. My pony was plodding silently through the snow, when only a few yards in front of us rose what I took to be a snowy owl; but as it wheeled around showing its long pointed wings and shapely head I saw it was a magnificent hawk as large or larger than a Swainson's, as graceful as a sparrow hawk and as white as a snowy



American Bittern

Stan Shadick

owl. Surely a prince among hawks."

#### RUFFED GROUSE

26 April 1922: "Although I hear the grouse drumming very frequently, I saw him at it the first time this morning. He sat upright on his log, and his wings, after a few powerful strokes, vibrated very rapidly for several seconds. This evening I came across him again in a poplar tree; he was very active and graceful, running quickly along the boughs and reaching for the long tail-like catkins adorning the poplars just now."

#### GREATER PRAIRIE CHICKEN

15 April 1923: "Yesterday a neighbour brought me a very fine male Pinnated Grouse which had killed itself by flying against the wire."

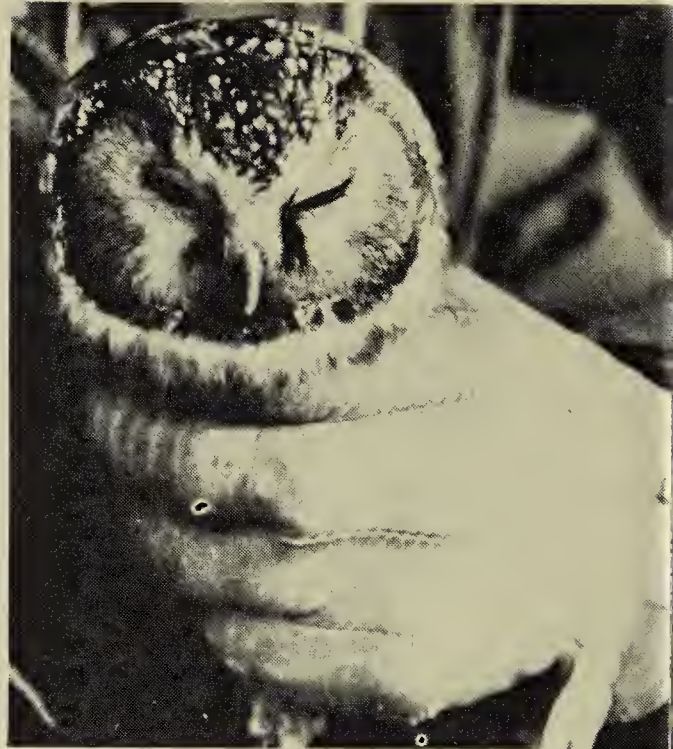
#### SNOWY OWL

13 April 1922: "First thing this morning I saw something that rather puzzled me — a small bunch of ducks flying high and close behind them, apparently chasing them, a large snowy owl."

#### BOREAL OWL

January 1922: "... a few evenings ago a very small owl sat on the top of my stack and watched me do the chores. . . . The next night I met him again in the thick willow bluff . . . when I tried to stroke him he fluttered off into the shadows as silently as a great moth."

17 March 1922: "I fear that I may be over-run with mice, as the little Richardson owl or "Richard" as we called him who has been hunting around the shed for the last two months, is dead. I found his frozen remains at the foot of a willow bush . . . I quite miss Richard; nearly every day he would sit on a fork-handle with his head on one side and watch me feed the cows, and once I picked him up and carried him into the shack. He was always alone, but a few days after his death another one appeared . . . timid in manner, slim of body, and with very elevated eyebrows which gave its face a questioning



*Boreal Owl*

*Ken Lumbr*

expression . . ."

8 February 1923: "There was Richardson's owl in the woods this morning, so intent on watching my dog that it did not notice me until I lifted it off the bough. When I let it go again it flew onto a tree twenty yards away, where it sat and watched us, with an expression of astonishment and indignation in its big brown eyes. Again in the dusk this evening it passed me, nearly brushing my coat in its swift, silent flight."

#### HAIRY WOODPECKER

26 March 1922: "I have just been watching a hairy woodpecker at work on a willow. What a tremendous energy he had and with what force he drove his sharp beak into the wood. After awhile he drove him away, and cut the bough off which he had been at work to pierce . . . At its very centre were two tiny maggots. If he has to peck his way through all the wood every time, for so small a reward he has need of all his energy."

#### DOWNY WOODPECKER

30 October 1922: "A lady tells me that while in the woods today a downy woodpecker lit on the skirt of her dress and hung there for several seconds (and really I can't blame the bird)."

## BLACK-BILLED MAGPIE

4 October 1922: "Last week I saw a magpie, the second only in fifteen years."

20 November 1922: "I thought the magpie, which still continues to favor us with its presence, was a solitary individual, that had in some way lost its bearings, but yesterday I saw two together."

15 December 1922: "I see the magpie nearly every day; a few mornings ago it came down and drank at the hole in the ice which I chop out for the cattle to drink from."

24 December 1922: "I rather think it is not only the water but the minnows and water beetles that attract it."

## COMMON CROW

29 March 1922: "Crows — crows — crows — a whole flock of the black pirates. Last year more than half of the wild birds' nests on my visiting-list were plundered by crows."

6 May 1923: "A very large proportion of the wild ducks' nests that I come across are afterwards robbed by crows. In some cases the eggs are spiked within a few hours of my first discovering them. The reason I think is this: when a duck leaves her nest in the ordinary way, she covers the eggs with grass and feathers, making them very difficult to see, even from a short distance. When, on the other hand, she is frightened from her nest she does not often stop to cover her eggs, but leaves them exposed. A nest full of duck's eggs is a very conspicuous object and must be easily seen from above by the crows flying past. Recently, when I noticed a duck fly from her eggs at my approach I have covered them up with the loose bits of grass and down from around the nest; and so far this plan has been quite satisfactory."

## MOUNTAIN BLUEBIRD

10 May 1922: "Several bluebirds were resting on the railroad fence. A

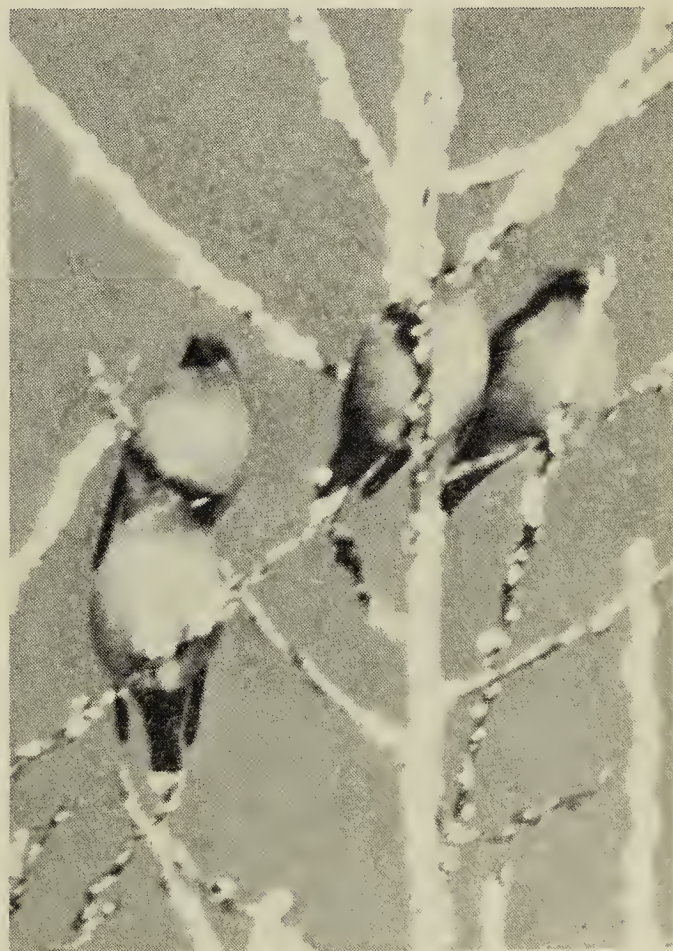
neighbour tells me that a pair of bluebirds nested in a disused pigeon-box in his yard last year. Personally I have only seen these birds in small flocks in spring and late summer."

28 August 1922: "A flock of about fifty bluebirds passed this afternoon working its way south in short flights from bluff to bluff."

4 April 1923: "I saw no robins during the first two years I was here, and bluebirds were only occasional visitors until last year, when they were quite plentiful."

## BOHEMIAN WAXWING

January 1922: "This is the first winter that I have seen waxwings. A flock of about forty have been visiting our woods at frequent intervals — jolly little crested things that look as if they had fluttered out of a design on a Japanese teacup. . . . Perhaps it was the ground-cedar berries in the sandhills that attracted them here; anyway I have not seen them since a fall of snow on the 17th of January covered the berries."



*Bohemian Waxwing*

*Juhachi Asai*

## NORTHERN (BALTIMORE) ORIOLE

24 May 1922: "Baltimore orioles! Surely we are honoured. Previous to this season I have only seen an occasional one, but this year there must be at least three pairs nesting in the neighborhood."

### **Annotated list of other bird species:**

(all dates 1922 unless otherwise stated)

Horned Grebe, nest in small slough at Evesham, 20 May, young hatched before June 30.

Great Blue Heron, wading in shallows 20 May, also 10 August.

Canada Goose, flocks on 6 and 20 April and 9 November, 1922; also 12 April 1923.

Snow Goose, large flocks 25 April and 14 May 1922 and 17 April 1923.

Mallard, first brood 2 June.

Pintail, first two drakes 4 April, nest with 8 eggs on neighbor's stubble 5 May, brood ready to fly 3 July 1922. Arrived 12 April 1923.

Green-winged Teal, female with 18 young of two sizes 3 July.

Blue-winged Teal, 7 May; 7 half-grown late young 8 September.

American Wigeon, a small bunch 2 May and nest with 8 eggs 14 May. Arrived 14 April 1923.

Northern Shoveler, one 7 April.

Lesser Scaup, a drake 7 July was the last drake of any duck species.

Bufflehead, one male and two females on slough at Evesham 17 April 1923, the first he had seen.

Goshawk, harrying jack-rabbit 10 August.

American Kestrel, hovering 4 April 1922 around tree in which they nested in 1921. Arrived 1 April 1923.

Sharp-tailed Grouse, nest with 7 eggs 5 feet from wheel-track of public road 15 May 1922, female sitting close on same nest 10 June. Another family "strong on wing" 1 July.

American Coot, 17 April 1923.

Killdeer, first pair 23 April 1923.

Common Snipe, quite plentiful in fall, one in mid-October.

Curlew (species?), one flew by me, a dreary call, the very voice of loneliness and desolation, 3 May.

Marbled Godwit, a pair at a slough 11 May.

Wilson's Phalarope, 25 May.

"Sea-gulls", flocks 13 May.

Bonaparte's Gull, one 27 April.

Long-eared Owl, 6 October.

Common Nighthawk, several catching insects over grassland in brilliant sunshine 19 July.

Belted Kingfisher, along creek 8 September.

Flicker, arrived 26 April; family parties flying by 18 July.

Downy Woodpecker, pair pecking holes in buildings in November 1921.

Eastern Kingbird, nest with 4 eggs 29 June.

Eastern Phoebe, one in woods 7 May.

Red-breasted Nuthatch, 23 May, 10 and 28 August.

American Robin, arrived 28 April 1922; nest 18 June (see note under bluebird above).

Cedar Waxwing, flock of 25 on 13 June.

Loggerhead Shrike, young out of nest 11 July.

Black-and-white Warbler, one 11 May.

Yellow Warbler, pair 11 May.

Magnolia Warbler, several 30 April, their black and yellow breasts looking very bright in the sunshine. (?misidentification-CSH)

Mourning Warbler, male seen closely 21 May.

Western Meadowlark, arrived 9 April 1922 and 15 April 1923.

Brown-headed Cowbird, young able to fly 26 June.

Red-winged Blackbird, large flock arrived 17 April.

Rose-breasted Grosbeak, male 12 May 1922; a few years earlier a pair stayed all summer.

Pine Grosbeak, a female for a few days 23 October; another six 9 November 1922; a small flock 22 January 1923. "Seldom seen" prior to this very mild winter.

Common Redpoll, a large flock 15 December, "a little unusual here, as more often I see them in small companies of about a dozen." Feeding around stacks for last few days 22 January 1923; last seen 12 April 1923.

Slate-colored Junco, arrived 13 April 1922; a flock 6 October, a few 17 October and one around stable 20 November 1922.

White-crowned Sparrow, a great many arrived 10 May through 14 May.

Fox Sparrow, a great many 14 May.

Lapland Longspur, a considerable flock 2 May.

Snow Bunting, 29 October.

After nearly a year of notes from Will Neave, Ernest Ingersoll commented that Mr. Neave "is furnishing a practical illustration of what I have been teaching. . . . Intelligent attention to what is going on in the natural world about you."

Six months after his notes had ceased, Betty L. North of Kalamazoo, Michigan, wrote to the *Family Herald and Weekly Star* (6 February 1924 issue) to enquire after Will Neave: "I have read his notes joyously for so long, as so many others must have been doing, that I feel quite certain I'm voicing the wish of nearly everyone when I ask you to stop and chat with us a few minutes about the man."

Neave's regular notes stopped, but he wrote a letter concerning the breast feathers of bitterns and herons, published in the 24 October issue, and three years after his death, Ingersoll used a Neave photo of young Long-eared Owls in the 10 August 1927 issue.

Posthumously, three nature stories written for young boys by Will Neave were published under the "Canadian



Yehill Creek

C. S. Houston



Will Neave farm — 1979

C. S. Houston

Scene" heading in the forty-eighth annual volume of *Young England*, published in 1927 by Pilgrim Press in London. These stories were titled "Musky" (pp. 198-199), "Snow in the West" (p. 103), and "A Canadian Bird Rendezvous" (p. 20).

In July 1924, while taking his daily swim at the community swimming-hole in the creek on the property just west across the road allowance, Will dove off the bank into deep water and ruptured his eardrum. A brain abscess and meningitis developed, and he died in a Saskatoon hospital on 10 August 1924.

## Epilogue

On the beautiful warm harvest day of 15 September 1979, Lisle Sumner helped us locate Will Neave's grave in the Macklin cemetery. A simple brass plaque made in England has been affixed to a simple fieldstone from the Neave farm. We also explored the beautiful property along Eyehill Creek, though the site of the shack, which had no foundation, could not be located. Except for one small corner of Will Neave's former farm, the soil was almost pure sand, and in two places there were open sand dunes among the rather scraggly aspen trees which have grown up since Will's death. We visited with 91-year-old Mrs. Margaret Kidd, Will's long-time

neighbor to the south, as well as with Lisle and Ritta Sumner.

We were pleased to see that Neave had not been forgotten when Evesham published a 75-page *Homecoming Booklet* in 1968, in which two pages were devoted to the Neave family. Although published in 1968, 46 years after Will's nature notes, they were not forgotten, for the booklet stated: "Will Neave will be remembered best for his Natural History column in the *Family Herald* where he wrote about the various birds and animals which came and went and stayed on his ranch."

No one today, not even a dedicated naturalist, would try to eke a living from a half section of such poor land. Yet we are grateful that Neave had the priorities he did, and left us a glimpse of what an observant settler could see nearly 60 years ago.

## Acknowledgements

We are grateful to Lloyd Rodwell of Saskatchewan Archives for access to both of Neave's original homestead records, and to Will's nephew, Hugh Neave, of Francois Lake, B. C., who provided information and photographs — and who carries on in the family tradition with a nature column, "Lakeshore Lines" in the *Lakes District News*, the newspaper for the Houston and Burns Lake region.

# A STUDY OF NESTING CANADA GEESE AT CONDIE NATURE REFUGE, SASKATCHEWAN, IN 1979.

ANN MARSHALL, Saskatchewan Museum of Natural History, Regina, Saskatchewan. S4P 3V7.

A study of Canada geese nesting at the Condie Nature Refuge northwest of Regina, was conducted during May and June 1978 to determine the number and locations of nests, the hatching success, and the survival of goslings.<sup>1</sup> In that study 25 nests containing 126 eggs were found in 11 locations. At least 79 (62.6%) eggs hatched but only 42 goslings were known to have survived to June 12, a success rate (based on the number of eggs laid) of only 35.7%.

The study was continued in 1979 to provide further observations on nesting and gosling production over an extended time period and to provide comparative information from a second breeding season.

## Methods

The survey was conducted from 20 April to 10 July. Nests were located by searching the area on foot and observing islands from shore with binoculars. After the reservoir was free of ice (May 14) a canoe was used to investigate island nesting areas more thoroughly.

Gosling counts began on May 23 when young birds were first sighted. Counts were made by searching the reservoir by canoe and upland on foot. Counts were usually made at mid-morning (1000), the same time as the nest surveys, but one count (8 June) was conducted at 0800.

## Results

### 1. NEST SURVEY

Table 1 summarizes the results of the nest survey. As the table shows, 21 nests containing 117 eggs (average 5.6 eggs per clutch) were located. The 18 (85.7%) successful nests hatched 85 (72.6%) eggs. Figure 1 shows the approximate locations of the nests.

Island "A" in the waterfowl sanctuary supported 3 nests containing a total of 16 eggs. One nest of 5 eggs was abandoned but the others hatched 6 eggs. The island vegetation consisted mainly of willow (*Salix* sp.) and rose (*Rosa* sp.) with little ground cover at the beginning of the survey but later the growth of grasses and leafing-out of bushes provided good concealment for the nests. The substrate was dry.

Roosting Island "B" is small, has banked edges and little vegetation cover. It supported one nest containing 5 eggs of which only 2 hatched.

Peninsula "D", an open area with rocky soil vegetated with willow and dock (*Rumex* sp.), contained one nest of 11 eggs of which 7 hatched.

Five of 6 eggs hatched in a nest located near the tree plantation on the north shore of the reservoir. Elsewhere on the north shore in areas of grass 3 nests contained a total of 17 eggs, all of which hatched.

Table 1. SUMMARY OF CANADA GOOSE NEST LOCATIONS, EGG PRODUCTION, CLUTCH SIZES, NESTING SUCCESS AND HATCHING SUCCESS AT CONDIE NATURE REFUGE, SUMMER OF 1979.

<i>Location</i>	<i>Number of nests</i>	<i>Number of eggs</i>	<i>Average number of eggs per clutch</i>	<i>Number of eggs hatched</i>	<i>% nests successful (hatched at least 1 egg)</i>	<i>% eggs hatched</i>
Island A	3	16	5.3	6	66.6	37.5
Island B	1	5	5.0	2	100	40.0
Peninsula C	—	—	—	—	—	—
Peninsula D	1	11	11.0	7	100	63.6
Picnic Area (Plantation)	1	6	6.0	5	100	83.8
Creek	3	16	5.3	16	100	100
Mainland—S. shore	8	44	5.5	32	87.5	72.7
Mainland—N. shore	3	17	5.6	17	100	100
Outside Refuge W. of headquarters	1	2	2.0	0	0	0
Total	21	117	5.6	85	85.7	72.6

Eight nests containing a total of 44 eggs were located in grassy areas on the high banks of the reservoir's south shore. Thirty-two eggs (72.7%) were hatched in 7 of these nests. The eighth nest was probably destroyed as there were no eggs or shells in the vicinity of the nest.

Three nests were located along the creek south-west of the reservoir. All 16 eggs hatched in these nests.

Outside of the refuge, west of the staff headquarters, one nest of 2 eggs was found. This nest was unsuccessful probably due to predation.

The first eggs (10) were hatched between 18 and 22 May and hatching appeared to peak between 25 and 30 May when 46 eggs were hatched. Only 12 eggs hatched after 4 June.

## 2. GOSLING COUNTS

The number of goslings seen was as follows: 23 May, 7; 25 May, 4; 30 May, 38; 4 June, 0; 8 June, 39; 11 June, 45;

26 June, 52; 3 July, 50; and 10 July, 35. The counts are believed to be an accurate record of gosling production as care was taken to avoid recounting broods.

Very young broods were observed in the shoreline vegetation of the sanctuary but as the young matured the majority were observed in the lure crop area (see Figure 1). Broods were also seen on lawns southwest of the staff headquarters and occasionally in a dugout on the north side of No. 11 highway.

Based on the highest gosling count (52 birds; 26 June) 44.4% (52/117) of eggs laid produced goslings. The comparison between number of eggs known to have hatched (85) and highest gosling count indicates an early mortality of about 39% of hatchlings.

Gosling counts were discontinued after 10 July because the high mobility of the maturing goslings made it impossible to obtain accurate counts.



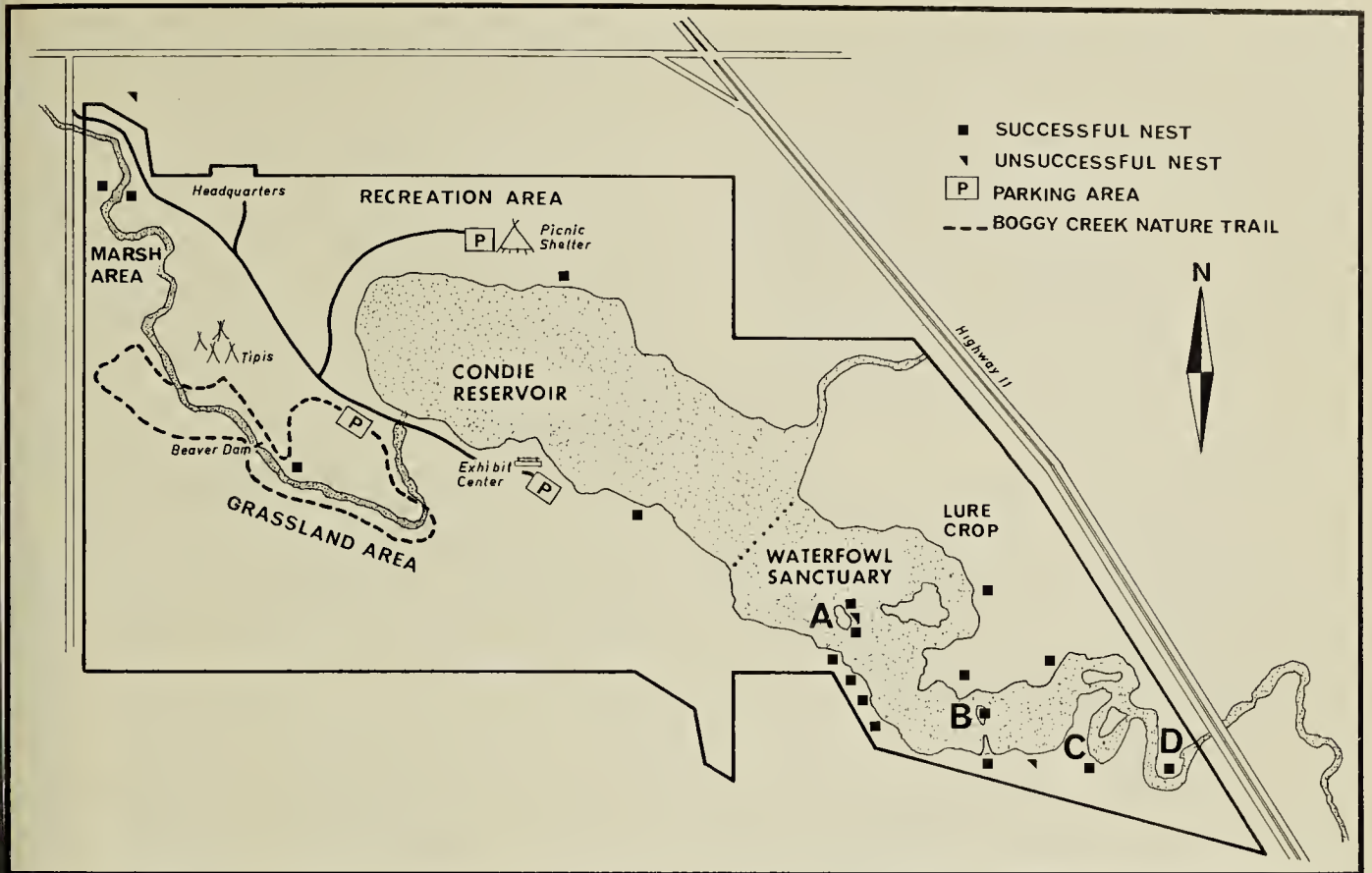


Figure 1. Map of Condie Nature Refuge.

## Discussion

The 1979 nesting season was delayed because snow and ice were still present until mid-May but the overall success rate of nests and gosling production appears similar to that of 1978.

As noted in the previous report of goose nesting at the Condie Nature Refuge the area offers a diversity of good nesting sites and brood rearing areas.<sup>1</sup>

Islands, usually preferred nesting areas, were the least successful nest sites in both 1978 and 1979. Island "A" supported eight nests containing 37 eggs in 1978 but only 10 eggs were hatched from the two successful nests at this location. It was concluded that crowding and interactions among pairs had led to the poor nesting success. In 1979 there were only three nests on the island possibly because of lingering

snow-cover. However, the success of two of these three nests is a relative improvement over 1978 (66.6% compared to 25%) as is the success ratio of eggs (37.5% hatched in 1979 compared to 27% in 1978). The greater success rate in 1979 may have resulted from the reduced nesting density. Island "B" held one nest in 1979 which successfully hatched two of five eggs (40%) as compared to two nests hatching a total of at least two eggs in 1978. This island is small, open, and slowly falling into the reservoir. The poor substrate may contribute to the poor hatching success at this site.

Mainland nesting sites were more productive with the north shore and creek areas being the most successful. North shore nests were well spaced in short grass and close to water while those along the creek banks were in grass and "weedy" vegetation. Two nests on the creek were in view of each other but separated by the creek. The

six nests in these areas successfully hatched 100% of their eggs. The south shore was also highly productive with eight well spaced nests located on the high banks. The sites provided good visibility for the geese with adequate vegetation to conceal the nests and to provide a buffer between nesting pairs. One nest was destroyed at this location but the overall hatching success, 72.7%, was good.

The picnic area on the north shore had only one nest which hatched five of six eggs (83.8%) as compared to two nests which hatched seven of eight eggs (87.5%) in 1978. The single nest was located in a tree plantation on a bank above the water.

Peninsula C was too wet for nesting in 1979; four nests were present in the area in 1978, two of which were successful.

Peninsula D was also less productive in 1979 as it held only one nest which hatched seven of 11 eggs (63.6%). In 1978 the area had supported two nests which hatched all of 10 eggs.

The production of goslings increased slightly over 1978. In 1979, 117 eggs produced 52 goslings, a success rate of 44.4%, as compared to 1978 in which 126 eggs produced about 45 goslings, a success rate of only 35.7%. The early loss of hatchlings appears about equal in the two years; 39% (52 goslings from 85 hatched eggs) in 1979 as compared to 43% (45 goslings from 79 hatched eggs) in 1978.

### Summary and Conclusions

In spite of the late spring, Canada Geese at the Condie Nature Refuge had good nesting success in 1979. There



*Canada Geese in nest*

Gary W. Seib



*Canada Goose with young*

*Gary W. Seib*

were fewer nests in 1979 than in 1978 but the average clutch size, percentage of successful nests, and percentage of eggs hatched were higher than in 1978 and consequently the number of goslings produced increased slightly. The nesting and hatching success at Condie in 1979 compares favourably with other prairie nesting areas.<sup>1</sup>

The shoreline areas of the waterfowl sanctuary appear to be the most important nesting areas while the islands, due to their substrate and small size, produce few successful nests. If interpretive and recreational development

at Condie are at any time expanded to include such a facility as a perimeter trail, access to the shoreline areas should be restricted during the April-to-June nesting period.

### **Acknowledgements**

The author wishes to acknowledge Wendy Vanderwel who assisted with the field study. Also thanks to Dave Baron for critical reading of the manuscript.

<sup>1</sup>MARSHALL, A. 1979. A study of nesting Canada Geese at Condie Nature Refuge, Saskatchewan. *Blue Jay* 37(3):158-162.

# ICELAND GULL AT KATEPWA LAKE, SASKATCHEWAN

FRANK BRAZIER, 2657 Cameron St., Regina, Saskatchewan. S4T 2W5.

On 24 April 1980, my wife, Marjie, Manley Callin and I drove to the west end of Katepwa Lake, which had considerable ice on it. About 1600 in brilliant sunshine, we searched the area with our binoculars but saw nothing unusual. However, I raised my 10x50's slightly and found in the field of view a large gull that had settled some distance from the edge of the ice, perhaps 200 m from me. I could see it was a very pale gull with no black in the plumage discernible. We had a 20-45X telescope on a car-window mounting and through this it was evident that the mantle was an off-white, not the dazzling white of a gull's breast plumage but still too pale to be termed gray. It was sitting with its back partly towards us but at such an angle that one folded wing tip could be seen but the head was not in profile and the bill was not visible. The legs and feet were hidden. Most importantly, no black could be seen on the wing tip.

I had forgotten to bring the tripod for the telescope so I walked to the lake edge with my binoculars, about half way to the gull. I had no sooner got my glasses on the gull that it turned its head to look at me, spread its tail, opened its wings and flew low over the ice to settle again, but this time out of sight, hidden by the ice hummocks.

The bird's take-off revealed three things: I saw the head profile and was struck by its peculiar rounded shape; the tail feathers were a brilliant white but the mantle did not show the marked contrast that would have been seen had it been gray as in a Ring-billed Gull; I could see no black at all on the wings.

We had two field guides with us, Peterson and Robbins *et al.*, so we looked at the three pale-mantled, white-winged gulls: Glaucous, Glaucous-winged, and Iceland<sup>7 8</sup>. I had seen a Glaucous Gull in Regina on 8 May 1979 (although in second-year plumage) and felt that this gull was too small to be of that species. Although estimating size at extreme range where a comparison standard is lacking is a chancy business, nevertheless I thought it too small also for the Glaucous-winged Gull as I remembered that species from the Pacific coast, and I thought its mantle was darker than this bird. I suggested to Manley that we had an Iceland Gull but I wanted to check the literature further.

At home that evening I looked over the literature I had at hand. Godfrey<sup>1</sup> confirmed that the Glaucous-winged Gull was indeed larger and darker than the Iceland Gull, and the illustrations in Tuck and Heinzel show the contrast very well.<sup>15</sup> But it was not until I picked up Snyder and read, under Iceland Gull "(it) has a higher forehead, thus a more rounded head profile," that I was certain of the identification.<sup>14</sup> Later, I found a reference to the rounded head in Jehl and Smith.<sup>5</sup>

On the next day, 25 April, David R. M. Hatch proceeded alone to the sighting location where he immediately found the gull, resting on the ice. The note he left for Manley said: "I had marvellous views of the Iceland Gull on Katepwa Lake. It is a typical adult. I was within 60 m and used my 20-45X telescope. There were Herring and Ring-billed Gulls to compare with it. The



Glaucous Gull

F. W. Lahrman

small bill size and round head are distinctive."

David was familiar with the species so we are content with his confirmation. This is the fourth occurrence of Iceland Gulls in Saskatchewan and the first for the Qu'Appelle region. Dr. R. W. Nero collected an immature male near Beaverlodge Lake on 9 June 1960, for the Province's first specimen (now in the University of Regina collection) and observed several others there, including adults.<sup>6</sup> The next sighting was Saskatoon's first: a group from the Saskatoon Natural History Society saw two immature birds on 23 and 24 September 1977.<sup>11</sup> The third occurrence was that seen by Wayne Harris on

the Christmas Bird Count of 23 December 1979, at Squaw Rapids.<sup>4</sup>

Godfrey notes that the breeding range of the subspecies that occurs in Canada, *Larus glaucooides kumlieni*, is coastal southern Baffin Island north of Hudson Strait, part of the island's eastern coast, and extreme north-western Quebec.<sup>1</sup> It winters mainly on the Atlantic coast in southern Labrador, Newfoundland, coasts of southern Quebec and the Maritimes; also in small numbers on the Great Lakes and upper St. Lawrence River and its drainage.

Apparently the migration routes of this gull in Canada are not well known but from the number of sightings at Churchill, Manitoba, it may very well be

on one. Jehl and Smith note that it is very uncommon in summer but may be commoner during migration early in May and October although there were no fall records at that time.<sup>5</sup>

That this is a rare gull in the interior is evident from the paucity of records. An adult was very carefully examined at Coeur d'Alene Lake, Idaho on 24 December 1967, and again on 14 January 1968<sup>9</sup>; an immature was observed at the Oak Hammock Marsh Wildlife Management Area north of Winnipeg on 23 May 1975, by George E. Holland, an experienced birdwatcher who has seen them in spring and fall in Ontario where he formerly resided (H. W. R. Copland, pers. comm.); Coeur d'Alene city dump had one in first-year plumage on 28 December 1977<sup>10</sup>; Skaar lists an immature at Canyon Ferry near Helena, Montana in February, 1978, when photographs were obtained.<sup>13</sup> However, it is interesting to find that Gosselin and David, after exhaustive examination of records and specimens, concluded that the sub-adults of the very similar Herring, Thayer's and Iceland Gulls cannot be reliably distinguished with black and white photographs.<sup>2</sup> A bird in first-year plumage was photographed at Oak Hammock Wildlife Management Area during the period 10 to 18 November 1979, which was reported by F. Koes and seen by many observers (H. W. R. Copland, pers. comm.).<sup>3</sup> A first-year bird was photographed at the Brownsville, Texas, city dump on 27 March 1978, but the state Check-list Committee had not accepted it when published.<sup>16</sup> An immature was photographed at Fort Peck Lake, Montana, on 4 December 1979, and North Dakota's first record, a first-year bird, was documented at Garrison Dam on 14 December 1979.<sup>12</sup>

- <sup>1</sup>GODFREY, W. E. 1966. The Birds of Canada. Nat. Mus. Canada Bull. 203. Ottawa.
- <sup>2</sup>GOSELIN, MICHEL, and NORMAND DAVID. 1975. Field identification of Thayer's Gull (*Larus thayeri*) in eastern North America. Am. Birds 29(6):1059-1065.
- <sup>3</sup>HARRIS, W. C. 1980. Prairie Provinces region. Am. Birds 34:172-174.
- <sup>4</sup>HOUSTON, M. I. 1980. 38th annual Saskatchewan Christmas Bird Count — 1979. *Blue Jay* 38(1):17-30.
- <sup>5</sup>JEHL, JOSEPH, Jr., and B. A. SMITH. 1970. Birds of the Churchill Region, Manitoba. Manitoba Mus. Man and Nat. Spec. Publ. 1. Winnipeg, Man.
- <sup>6</sup>NERO, R. W. 1963. Birds of the Lake Athabasca Region, Saskatchewan. Sask. Nat. Hist. Soc. Spec. Publ. 5.
- <sup>7</sup>PETERSON, R. T. 1961. A Field Guide to Western Birds. Houghton-Mifflin, Boston.
- <sup>8</sup>ROBBINS, C. S., BERTEL BRUUN and H. S. ZIM. 1966. Birds of North America. Golden Press, Racine, Wisc.
- <sup>9</sup>ROGERS, T. H. 1968. Northern Rocky Mountain-Intermountain region. Audubon Field Notes 22:460-463.
- <sup>10</sup>ROGERS, T. H. 1978. Northern Rocky Mountain-Intermountain region. Am. Birds 32:376-380.
- <sup>11</sup>SERR, E. M. 1978. Northern Great Plains. Am. Birds 32:220-223.
- <sup>12</sup>SERR, E. M. 1980. Northern Great Plains. Am. Birds 34:284-285.
- <sup>13</sup>SKAAR, P. D. 1980. Montana Bird Distribution. P. D. Skaar.
- <sup>14</sup>SNYDER, L. L. 1957. Arctic Birds of Canada. Univ. Toronto Press.
- <sup>15</sup>TUCK, GERALD, and HERMAN HEINZEL. 1978. A Field Guide to the Seabirds of Britain and the World. Collins, London.
- <sup>16</sup>WEBSTER, F. S. 1978. South Texas region. Am. Birds 32:1028-1031.

# NOTES ON BIRDS IN NORTHERN SASKATCHEWAN, SUMMER 1976

D. M. SECOY, Dept. of Biology, University of Regina, Regina, Saskatchewan. S4S 0A2.

There have been few reports on the bird fauna of northern Saskatchewan, given the vast size of the area.<sup>1-8</sup> A short field trip, 9-15 July 1976, to the vicinities of Spalding Lake (57°14' N; 103°20' W) and the Key Lake mine (56°18' N; 103°32' W) provided observations on the midsummer avifauna of the area.

The first days were spent at a Saskatchewan Department of Mineral Resources camp located between two small lakes, unofficially designated as Ski and Party lakes, about 40 km northwest of Spalding Lake. The vegetation was a mature forest of black spruce, balsam fir and aspen poplar, with bearberry, Labrador-tea, sphagnum and reindeer lichen as the major ground covers. On 11 July, there was a 4-km traverse between two small lakes about 24 km north of Spalding Lake in an area which included, variously, thick young spruce stands, open mature spruce on granite outcrops, speckled alder swamps and wet and dry muskeg. July 12 was spent observing along the shoreline of Spalding Lake. The shore vegetation consisted of stands of black spruce and fir with occasional groves of poplar in damper areas. This lake was the only one visited which had islands of any size or number. From the plane, rocky islands, which were scattered throughout the lake, were seen to have large populations of gulls and were assumed to be breeding areas. This lake was the only area where gulls were numerous. On 14 July I flew to another DMR camp on Seahorse Lake, about 2 km west of Key Lake. This area had been recently burned and the major

cover was well-spaced, partly burned spruce. The very sandy soil did not support many grasses or forbs. The area was locally disturbed by mineral exploration.

A total of 33 species of birds was observed during this period. Information on some other species was given me by people who had arrived in the area earlier in the season.

## Species List

- COMMON LOON. Pairs or single birds were seen feeding and swimming on each of the larger lakes.
- MALLARD. Three birds, a pair and a single female, were seen on Spalding Lake.
- RING-NECKED DUCK. A single female with two large downy young was seen on 12 July.
- RED-BREASTED MERGANSER. A female with nine small downy young was flushed from cover in shore brush (scrub willows) early on the morning of 10 July.
- RED-TAILED HAWK. Single adults were seen in trees along the shorelines of the lakes at both ends of the traverse.
- BALD EAGLE. An adult flew into a tall spruce near the edge of one of the small islands in Spalding Lake. Later in the day an immature was chased along the shoreline by a Herring Gull.
- SPRUCE GROUSE. A male was seen near Ski Lake. Several well-fledged young flew up from wet muskeg into small spruces on the traverse.
- SPOTTED SANDPIPER. Two adults were calling and bobbing on a fallen log on the shore of Party Lake on 10 July. On 12 July, on Spalding Lake, two adults

- and two large immatures were flushed from shore cover.
- SOLITARY SANDPIPER.** Single adults were seen in two wet muskegs. Both were giving alarm notes, one while flying and the other from the top of a solitary spruce.
- HERRING GULL.** Adults and immatures were seen at Spalding and Key Lakes. From the plane the birds at Spalding Lake were concentrated around several small, rocky islands with some cover of low vegetation. A single adult flew over the Ski Lake camp on 11 July.
- BONAPARTE'S GULL.** Several adults and immatures were seen on Spalding Lake. A single adult was seen feeding in the lake at the beginning of the traverse.
- TERN.** A white tern was seen fishing at Key Lake on 15 July but was too far away to identify. Both Common and Arctic Terns have been reported from the general area.<sup>6</sup>
- COMMON NIGHTHAWK.** Common Nighthawks were heard every night from early evening through the night near the camps at both Ski and Seahorse Lakes.
- BELTED KINGFISHER.** A female was seen flying over Spalding Lake.
- COMMON FLICKER.** These were heard at both Ski and Key Lakes.
- WOODPECKERS.** An engineer for the exploration and mining company at Key Lake who had been bird watching in the area from April through July reported seeing Yellow-bellied Sapsuckers, Hairy Woodpeckers, Downy Woodpeckers, and Black-backed Three-toed Woodpeckers in the burned areas.
- YELLOW-BELLIED FLYCATCHER.** One was heard calling in a dry muskeg on traverse.
- GRAY JAY.** Pairs of these birds were seen around the camps at both Ski and Seahorse Lakes. A pair at the Ski Lake camp was scolded by a mixed group of Yellow-rumped Warblers and Dark-eyed Juncos.
- RAVEN.** One was seen calling from a spruce in dry spruce-fir forest on top of an esker near Ski Lake. Two others were seen in the open spruce stand between Seahorse and Key Lakes.
- BLACK-CAPPED CHICKADEE.** Several were heard and seen in the shore vegetation at Spalding Lake and small spruce trees in the wet muskegs on traverse.
- RED-BREASTED NUTHATCH.** One was calling in spruce along the shoreline of the lake at the end of the traverse on 11 July.
- AMERICAN ROBIN.** This species was seen and heard at the Ski Lake camp and in a birch grove on the shore of Spalding Lake.
- HERMIT THRUSH.** Territorial singing by this species was heard in the birch groves along the shore of Spalding Lake and from a tall spruce in a dry muskeg along the traverse.
- RUBY-CROWNED KINGLET.** A singing male and a female with caterpillars in her mouth, apparently near a nest, were seen near Ski Lake.
- YELLOW-RUMPED WARBLER.** This species was common around Ski Lake in the birch and spruce. They were also heard and seen in the shore vegetation around Spalding Lake.
- BLACKPOLL WARBLER.** A male with insects in his beak called from a small spruce in a wet muskeg on traverse.
- COMMON YELLOWTHROAT.** A single male was heard at Spalding Lake. This is north and east of the breeding distribution as reported by Godfrey and was not seen in Nero's survey.<sup>3 6</sup>
- RED-WINGED BLACKBIRD.** A male was singing in the top of a spruce along the shoreline of the lake at the end of the traverse.
- RUSTY BLACKBIRD.** A single male and a pair were seen near Party Lake. Another pair with insects in their beaks gave alarm notes from a small spruce in a wet muskeg on traverse.
- COMMON GRACKLE.** One was seen at the dock at Key Lake.
- PINE SISKIN.** These birds were seen in small family groups at Ski, Spalding and Key Lakes. They were usually in more open areas, such as along the shore or in open brush.





*Common Loons*

F. W. Lahrman

**DARK-EYED JUNCO.** Adult and immature birds were seen around the Ski Lake camp and in the open brush near Key Lake.

**CHIPPING SPARROW.** On 9 July a pair was feeding fully fledged young among fallen trees along the shore of Ski Lake.

**HARRIS' SPARROW.** Males of this species were heard calling from the shore vegetation of both Ski and Spalding Lakes. This is south of the breeding range as indicated by Godfrey and Nero.<sup>3 6</sup>

**WHITE-THROATED SPARROW.** A single male was heard along the shore of Spalding Lake.

### Acknowledgements

I wish to thank Drs. J. Lewry and G. Parslow, Department of Geology, University of Regina, and the Saskatchewan Department of Mineral Resources for accommodation and transportation and R. Barsi for assistance in the field.

<sup>1</sup>DAVIS, D. W. and W. H. BECK. 1968. Additional bird species for Cree Lake. *Blue Jay* 26:179.

<sup>2</sup>ERSKINE, A. E. 1974. Off into the wet green yonder: birds and plants of a boreal bog. *Blue Jay* 32:33-37.

<sup>3</sup>GODFREY, W. E. 1966. The birds of Canada. *Nat. Mus. Canada, Bull.* 203. 428 pp.

<sup>4</sup>NERO, R. W. 1963. Birds of the Lake Athabasca region, Saskatchewan. *Spec. Pub. No. 5, Sask. Nat. Hist. Soc., Regina.* 143 pp.

<sup>5</sup>NERO, R. W. 1967a. Additional bird notes for Little Gull Lake, Saskatchewan. *Blue Jay* 25:11-14.

<sup>6</sup>NERO, R. W. 1976b. The birds of northeastern Saskatchewan. *Spec. Pub. No. 6, Sask. Nat. Hist. Soc., Regina.* 96 pp.

<sup>7</sup>SECOY, D. M. and E. MAW. 1978. Notes on summer birds at Waddy Lake, 1977. *Blue Jay* 36:207-209.

<sup>8</sup>WHITFIELD, D. W. A., J. M. GERRARD, W. J. MAHER, and D. W. DAVIS. 1974. Bald Eagle nesting habitat, density and reproduction in central Saskatchewan and Manitoba. *Can. Field-Nat.* 88:399-407.

# WHITE PELICANS AT A NUISANCE GROUNDS

WILLIAM KOONZ, 1495 St. James Street, Winnipeg, Manitoba. R3H 0W9.

White Pelicans have been known to feed in normal fashion downstream from a power dam on the Saskatchewan River at its mouth on Lake Winnipeg at Grand Rapids, Manitoba, since shortly after the dam's completion in 1964. The nearest known breeding colony is at Kawinaw Lake, some 50 km southwest of Grand Rapids (53°10'N, 99°98'W). It contains approximately 2000 pairs of pelicans.

In recent years, pelicans have adopted the unique habit of foraging for fish and fish parts at a Grand Rapids nuisance grounds located on the steep banks and flat area above a water-retaining gravel pit some 4 km north of town. The pond is at least 10 ha in size with water levels 10 m or more below the top of the bank. I observed 10-15 birds in mid-September 1980 feeding along the road, on the slope and in the flat area where fish refuse had been thrown some time previously. It was a peculiar sight. Groups of 5-20 pelicans were also seen swimming in the pond at various times of day.

According to local game officers and fish hatchery personnel, pelicans in 1980 often flew directly to the refuse rather than landing on the pond to swim and walk up the steep slope to the food source, as had been the procedure in past years. This behaviour appears to be learned, as the number of birds observed at the nuisance grounds had increased yearly since the first being recorded some 3-5 years ago. In 1980 it was reportedly not uncommon to see 30-40 birds at almost any time of day feeding on the piles of fish refuse. The activity was, of course, related to fishing

seasons, amounts of effort by fishermen and the dumping of fish within the nuisance grounds. Some birds still flew into the pond and proceeded to walk up to the feeding areas. Others flew directly to the food, landing on the road or ground nearby. After feeding, the birds loafed on the site, flew away, or wandered down to swim or loaf on the pond. These pelicans have little regard for the state of their food, readily downing well decomposed material.

Several local phenomena have contributed to this unusual pelican foraging behaviour. The nuisance ground is near the dyke and dam site and alongside a sizable water-retaining gravel pit. Several similar pits were used in previous years for fish-rearing ponds as part of a provincial research project in conjunction with the Grand Rapids fish hatchery. Hatchery personnel told me that they suspected pelicans of foraging on numerous pickerel fry in these ponds. Fisheries research in the area is related to the fact that Grand Rapids has an economy based upon commercial fishing.

The use of discarded fish parts for food by White Pelicans does not appear to be a new phenomenon for Manitoba. A. C. Bent writes of his 1913 observations: "In the breeding colonies on Lake Winnipegosis the ground around the nests was strewn with large numbers of heads of pike and jackfish of great size; many of these must have belonged to fish weighing between twenty and thirty pounds; these large pike are very abundant in this lake, but I cannot understand how the pelicans could have caught such large fish or have



*White Pelicans*

G. W. Beyersbergen

transported them to the islands, yet I cannot see what else could have brought them there."<sup>1</sup> Lake Winnipegosis is some 60 km southwest of Grand Rapids. It is traditional for Manitoba's commercial fishermen to deposit rough fish waste on islands. Regulations prohibit dumping such waste into the water, while burying it is difficult. Fishermen simply transport the waste by boat to an island or uninhabited peninsula some distance from camp and dump it. These sources of fish wastes were either visited by

pelicans from the colonies observed by Bent in 1913 or the island colonies themselves were used as dumping grounds.

Waste fish foraging by White Pelicans on islands is not far removed from the foraging behaviour observed at the Grand Rapids nuisance grounds.

<sup>1</sup>BENT, A. C. 1964 reprint. Life histories of North American petrels and pelicans and their allies. Dover Publ., Inc., New York.

# FLYCATCHER FAMILY

JEAN BANCROFT, 306 - 200 Tuxedo Ave., Winnipeg, Manitoba. R3P 0R3.

On many occasions during the past few years I have had an opportunity to observe the nests of several species of this interesting family. The season of 1980 proved to be no exception at Whytewold in the southeast corner of Lake Winnipeg.

To date I have been fortunate to observe six members of this family during a summer. For each species nest construction varies in size and materials used. However, one thing they do have in common is that they all get most of their food on the wing. They are quite acrobatic — diving up and down in the air and whirling around in order to catch insects such as midges, mosquitoes, fishflies, dragonflies, moths, etc.

A Great Crested Flycatcher has appeared in our yard for several years, but has always chosen to nest somewhere else in the immediate area. This past spring my hopes were high when I noticed two adults investigating a large old nesting box in our yard. But, after flying in and out of the opening, they chose another nesting site. However, later on both adults and their fledglings flitted about the wooded area surrounding our cottage for several days.

An Eastern Wood Pewee chose to build its nest on the lowest dead branch of an old oak just outside our back fence. I was able to view the nesting from our door. In my experience with several pewee nests, this bird always has chosen a horizontal lichen-covered limb of an old oak whereon to build. It is amazing how the female gathers, in her tiny beak, fragments of silken threads left hanging by caterpillars and/or spiders. Little pieces of the fine grasses are woven into the structure as well, and then she sheathes the outside with

lichens. It is a dainty nest, not quite 7.5 cm in diameter and blending in with its surroundings. To date I have found no variation in materials used. Construction of the nest is done with such infinite patience and artistry that it takes almost a whole week to accomplish.

The Eastern Wood Pewee can be recognized from the Empidonax Flycatchers by the fact that it is a bit larger, "lacks an eye-ring, and its longer wing extends halfway down the tail."<sup>1</sup> Its plaintive call of *pee-a-wee* (pause) *peea* clearly identifies it.

On 19 April 1980, I noticed a male and female Eastern Phoebe following each other from tree to tree about a block away from where a phoebe had built a nest in 1979. This bird is slightly larger than the pewee and is known for its tail wagging. I was disappointed that I did not find the nesting site in 1980. Due to the very dry spring, many birds which use wet mud for nest construction found it very difficult indeed. In 1979 I discovered the nest underneath the front canopy of a cottage, quite close to the front door, and on a 4x4 beam. The nest had been built some time before the owners of the cottage had arrived. They did not wish to disturb the birds so they did not use their front door during the whole nesting period. The nest was constructed mainly of mud so that it was readily visible on the white-painted beam.

On all occasions, when I stood outside the fence to make my observations the adults were very wary of my presence; the female kept perfectly still while huddled down in the nest, and the male concerned himself with foraging for insects in and around the yard, frequently giving his sharp *chip* call.



Western Kingbirds

Juhachi Asai

When the owners of the cottage had some construction work done, I thought that the birds might forsake the nest but they did not. On a subsequent occasion I was permitted to climb a ladder to investigate, and was delighted to see four fairly large nestlings. Although I was not present when the fledglings left the nest, later I did see and hear the adults and some of the young not far from the nesting site.

This past summer I had an interesting experience with a Least Flycatcher. I have generally been able to observe two or three nests of the Least per year and have always listened for the *chebec* call. As Godfrey states, it is "very similar to the call of the Prairie Flycatcher but its call identifies it instantly in spring and summer."<sup>1</sup> This past spring a male Least established his

territory in our yard. He just never ceased to give his emphatic call of *chebec, chebec, chebec* for many days. The *chebec* was repeated 25 times to the minute. I understand that this call has been known to have been repeated 50 times per minute. This particular male decided to make himself king of all he surveyed because he frequently flew to the very top of a dead poplar, approximately 12 m high, and continued off and on with his repetitive call. During this period I kept looking with my binoculars, wondering where the nest was. Suddenly, I found it about 7.5 m from the ground. It was saddled close to the end of a horizontal branch of an old oak and, although the limb was partly bare, the nest was protected by two leafy offshoots. The female sat so low in the nest that only her head was visible, permitting me to see the eye-ring.



*Empidonax Flycatcher*

*Sheina Wait*

The bird had used several pieces of white string and strips of yellow kleenex (which I had put out for nest building purposes) and had woven some plant fibres into these man-made materials. On numerous occasions I heard the warning call — *whit*. This call increased noticeably when the four young had been fledged, as they and the adults remained for several days in the wooded area surrounding our cottage.

Although I have seen the Western Kingbird every season in the vicinity of the Lake Winnipeg beaches, it has been

several years since I have been able to locate a nest here.

In 1980 the Eastern Kingbird was present in large numbers, and I should like to note a particularly interesting nest of this bird.

One day a friend came to me and asked if I would come to his yard and identify a bird he had observed nesting in a tall oak tree close to his sundeck. I hurried over with my binoculars and I was surprised to see an Eastern Kingbird sitting on a nest constructed mainly of wool-nylon yarn (4-ply medium blue, 3-ply pale blue and 3-ply white). These were materials I had originally put out in our yard as an experiment. It appeared that the nest had very few plant fibres, just enough to bind the 20-cm lengths of yarn together. At the base was a tangled clump of white yarn and around the top there was some more. There was a patch of the medium blue on either side of the nest, and the pale blue was woven into the nesting material and also wound around the tree limb which was about 9 m from the ground. I was particularly surprised to see the medium blue yarn because not a single bird of any kind had picked up this colour in 1979 (which was the first year I had put it in the yard).

I wondered how this nest would fare, in view of the various colours not blending in with the natural surroundings. But I was able to keep a record of the nesting and, to my delight, one morning I saw the four fledglings huddled very close to the nest, their snowy white breasts blending in perfectly with the white yarn around the top of the nest. What a beautiful picture they presented!

I feel fortunate that I have been able to observe the nesting habits of so many members of the Tyrannidae family at Whytewold.

<sup>1</sup>GODFREY, W. E. 1966. The birds of Canada. Nat. Mus. Canada Bull. 203. Ottawa.

# UNUSUAL NEST SITE FOR GRACKLES

WILLIAM H. KOONZ, Wildlife Branch, 1495 St. James Street, Winnipeg, Manitoba. R3H 0W9.

While checking island nesting colonies of Great Blue Herons, Black-crowned Night Herons and Double-crested Cormorants on some of Manitoba's major lakes in June 1979, I noticed several Common Grackles in the vicinity of tree-nesting cormorants and herons.

On 11 June I saw a grackle fly from the tree-nest of a Great Blue Heron on an island south of Hunter's Point, Lake Winnipegosis (53°00'N, 100°58'W). As I checked more islands I became more curious as to why the grackle was in a heron nest. On 19 June 1979, while checking St. Martin Island colonies on Lake Winnipeg, (52°17'N, 98°01'W), I noticed another grackle suddenly flying from a tree-nest. I eventually found grackles' nests built beneath and within the bottom structures of at least two cormorants' and as many as three Great Blue Herons' nests. The heron nests were 75 to 100 cm in diameter and often 15 to 30 cm or more thick. Double-crested Cormorants' nests were much less substantial, seldom more than 60 cm in diameter and often nearly thin enough to see through. The island had virtually no normal nesting sites for grackles, as trees had been killed by extensive bird use and ground vegetation was trampled by White Pelicans, gulls and terns. All nests used by grackles were between 150 and 300 cm above the ground in dead or nearly dead willows. They were anchored to the nesting material of cormorants and herons with grass. The grackle nests hung on the sides or just below the larger birds' nests.

On 26 June 1979 a colony of cormorants and Great Blue Herons was visited on Kawinaw Lake (52°50'N, 99°29'W). The island is over 10 ha in size and contains substantial areas of marsh vegetation and live willows, suitable for more traditional grackle nesting sites. Here, too, at least three active grackle nests were found anchored in the bottom material of heron nests. One of these nests, checked by Pat Rakowski (Canadian Wildlife Service Biologist), contained three live young herons on top and five dead young grackles below. This observation may indicate that the two species may not live in harmony or the nest could have been deserted for a number of other reasons. On 28 May 1980 the Kawinaw Lake island was visited by R. W. Nero and myself. We saw three pairs of grackles occupying nests located at the base of heron nests. Not all heron nests were checked for grackles and not all grackle nests observed were occupied, as some were clearly from previous years.

Common Grackles have been known to use a variety of nest habitats. Grackles have nested in bird houses, buildings and the bottom structures of Osprey nests.<sup>1</sup> In Texas, Great-tailed Grackles also use heron nests.<sup>2</sup> House Sparrows have been reported to build their nests on the underside of Red-tailed Hawk nests some distance from farm buildings.<sup>3</sup> There is an indication that House Sparrows derive some benefit from the arrangement. Success of grackle nests built beneath Great

Blue Heron or Double-crested Cormorant nests is unknown. Presumably, the use of such sites is related to the availability of alternative suitable nesting habitat. However, the occurrence of House Sparrows beneath nests far from buildings and the use by grackles of heron nests in the presence of apparently suitable habitat suggests that there may be a closer relationship. Grackles would certainly receive protection from avian predators, rain and sun exposure as well as being pro-

vided with a suitable anchor to support their nests in an inconspicuous location.

<sup>1</sup>BENT, A. C. 1958 reprint. Life histories of North American blackbirds, orioles, tanagers and their allies. Dover Publ. Inc., New York.

<sup>2</sup>HARRISON, C. 1978. A field guide to the nests, eggs and nestlings of North American birds. Collins, London.

<sup>3</sup>PETERSON, L. 1979. Wisc. Nat. Res. Tech. Bull. III, Madison, Wisc.



*Great Blue Herons nesting*

Gary W. Ser



# PRAIRIE FALCON HARASSES CANADA GOOSE

MURRAY M. GILLESPIE, Department of Natural Resources, 1495 St. James Street, Winnipeg, Manitoba. R3H 0W9.

On 31 October 1980, while at the Oak Hammock Managed Hunting Area, about 20 miles north of Winnipeg, I observed a Prairie Falcon pursuing a Canada Goose. It was approximately one-half hour after sunrise when I first heard the repeated calling of a single Canada Goose. As the call became louder, I noticed the goose, a medium-sized Canada, flying erratically approximately 50 yards above the ground and heading toward a stubble field. It was at this point that I first noticed the falcon pursuing the goose and actually striking at the bird in the air. As the two birds flew over the stubble field, the goose tried turning and side-slipping as a means of evading the falcon. The falcon remained close to the goose as the latter made two passes around the field before finally landing close to some hay bales 150 yards from me. The falcon landed on a large round bale 30 yards from the goose. For almost 10 minutes the falcon sat on the bale while the agitated goose called continually. Finally the falcon flew from the bale, sailed over the goose and landed on another bale in a far corner of the field, approximately 400 yards away. About 10 minutes later the goose flew in a direction away from the falcon and attempting to land in some hunters' decoys, was subsequently shot.

Twenty minutes after the goose had been shot I again noticed the falcon flying across the field about 3 feet above the ground, heading toward a spot in the field where approximately 250 Mallards

were feeding. When the falcon was within 75 yards of the ducks, they flushed and circled back into the centre of the field. Another hunter shot at the ducks and brought down two of them. As he was walking toward the ducks to pick them up, the falcon swooped down at one of the ducks and only moved away after the hunter repeatedly yelled and waved his arms. At this point I moved behind one of the bales in the field and waved my glove above the bale while hiding behind it. The falcon, noticing movement on the bale, flew toward me. I then pulled my glove down and watched with surprise as the falcon glided slowly above the bale within 20 feet of me. As it noticed me it swooped up and drifted off with the wind and eventually out of sight.

I had a brief look at the dead goose which the falcon had originally been pursuing and estimated its weight at approximately 7-8 pounds. Although the Prairie Falcon has been known to take prey as large as a Sharp-tailed Grouse and Mallard, it prefers much smaller birds and mammals.<sup>1</sup> Attempted predation on a large Canada goose must be extremely rare. Nevertheless, the persistency of the falcon in this case shows how audacious this species can be.

<sup>1</sup>BENT, A. C. 1938. Life histories of North American birds of prey. Part two. Dover Reprint, 1961. Dover Publ., Inc., New York.

# McCOWN'S LONGSPUR NEAR LAKE DAUPHIN, MANITOBA

BILL WALLEY, 19 Edgar Ave., Dauphin, Manitoba. R7N 0R4.

In the early evening of 22 May 1980, I was driving east from Highway 20 between sections 4 and 9-29-18-W1 and about 1.8 km north of the north end of Lake Dauphin, when a flock of small birds flew up from a ditch containing standing water. Suspecting that they were longspurs and would return, I stopped to identify them. Soon they came streaming back and approximately 40 Lapland Longspurs, about equal numbers of both sexes, lit at the water's edge to drink. From 12 to 16 m away, I closely observed these birds with the use of 7X binoculars and a 20X spotting scope from the front seat of my car. Viewing was excellent in bright sunlight that day.

After watching flocks come and go for about 15 minutes and with no birds at the water, a single bird flew in, lit and proceeded toward the water to drink. Immediately I recognized it as being different from the others. Although it was observed for only about 25 seconds and mainly in side view, most of the diagnostic traits of its species were seen. Its size, shape and manner of walking toward the water seemed identical to that of the Lapland Longspurs. The most striking feature of the bird was its general grey to very light grey coloration with a small but very prominent rich, rusty patch restricted to the shoulder of the folded wing. I knew instantly that it was a species I had never seen before in over 12 years of quite intensive birding.

The grey, which contrasted markedly with the buffy color of the female Lapland Longspur, was richest on the

head, nape and back of the neck. This gave way ventrally to a lighter grey on the sides of the upper breast to a near white on the abdomen. The wings, especially the primaries were darker, as was the back. The bird had a distinct black crown and a faint horizontal strip across the upper breast. The legs were dark and the bill was grey-black.

Realizing the importance of observing the pattern of white in the tails of longspurs, I attempted to note that trait, but in side view I could not identify any pattern, although white in the tail was evident. When the bird took off, I was unable to see the tail pattern because the bird remained in side view as it passed in front of the car. I had been observing from the passenger's front seat window and not only did I have to switch from spotting scope to binoculars, but I also had to slide across the seat and get the binoculars on the bird from the driver's window. When I did get focused on the bird it was flying directly away at such an angle that I was unable to see a tail pattern. However, from the traits observed, there was no question that it was a McCown's Longspur.

Herbert Krause includes Whitewater Lake in southwestern Manitoba in the breeding range of McCown's Longspur.<sup>1</sup> Godfrey shows its Canadian breeding range to be southeastern Alberta and southern Saskatchewan. He gives no breeding records for Manitoba, but does note that it has been identified in migration at Whitewater Lake. Knapton found this species in extreme southwestern Manitoba and gave

Table 1. WEATHER INFORMATION MAY 19 TO MAY 22, 1980 AT DAUPHIN, MAN.

Date	Temperature (high, C)	Wind Direction	Wind Speed
May 22	39°	S-SW	8 KM/H gusting to 65 KM/H
May 21	37°	SW-W	Variable, Calm to 56 KM/H
May 20	31°	SW	18 KM/H gusting to 56 KM/H
May 19	32°	SW	18 KM/H gusting to 56 KM/H

its status there as a casual spring migrant. He and John Murray identified a male McCown's Longspur among Chestnut-collared 5 km west of Lyleton, Manitoba, on 10 May 1974.<sup>4</sup> A Manitoba Department of Mines, Natural Resources and Environment pamphlet gives no records for the Delta Marsh at the south end of Lake Manitoba and it is the only longspur not listed for southeastern Manitoba.<sup>5 2</sup>

Explanations for the occurrence of this bird far northeast of its known breeding range and migration route were sought. Weather information obtained from the Dauphin weather office is given in Table 1.

The wind direction from the south and southwest on 22 May and from the southwest or west the 3 days prior to 22 May, may have been a factor in the disorientation of the bird. Volcanic ash in the air emanating from Mount St. Helens in southwestern Washington state may also have been an influence. However, the McCown's Longspur is, evidently, a great wanderer in dry springs. Roberts states that it visited western Minnesota only in dry seasons, when very dry it was most abundant, and in wet seasons was entirely absent".<sup>6</sup> In North Dakota, Dr. and Mrs. Gammell also found this

longspur to occur in that state mainly in dry years.<sup>1</sup> The spring of 1980 was probably the driest ever on the Canadian prairies, including Manitoba. Between 22 March and 22 May, the date the bird was seen, a total of 0.3 mm of precipitation was recorded at the Dauphin weather office. Perhaps the bird seen on 22 May 1980 was a wandering bird as well as an obviously disorientated one.

<sup>1</sup>BENT, A. C. 1968. Life histories of North American cardinals, grosbeaks, buntings, towhees, finches, sparrows and allies. Part 3. Dover, New York.

<sup>2</sup>CLEVELAND, N. J. ed. 1980. Birder's guide to southeastern Manitoba. Eco Series No. 1. Manitoba Naturalists Society, Winnipeg. 58 pp.

<sup>3</sup>GODFREY, W. E. 1966. The birds of Canada. Natl. Mus. Canada Bull. 203, Ottawa. 428 pp.

<sup>4</sup>KNAPTON, R. W. 1979. Birds of the Gainsborough-Lyleton Region. Spec. Publ. 10, Sask. Natural History Soc., Regina. 72 pp.

<sup>5</sup>Manitoba Department of Mines, Natural Resources and Environment. 1979. Birds of the Delta Marsh. Pamphlet.

<sup>6</sup>ROBERTS, T. S. 1932. The birds of Minnesota. Vol. 2.

# A WOOD THRUSH IN SOUTHERN SASKATCHEWAN

D. G. BOBBITT, Box 663, Weyburn, Saskatchewan. S4H 2K8.

Late in the afternoon of 21 September 1979, I was hiking to a large shelterbelt about 1 mi. southeast of Colgate, 18 mi. south of Weyburn, Saskatchewan, to learn whether a pair of Great Horned Owls were still present. As I entered the shelterbelt a bird flew up from the ground, about 8 feet from me. Call it the birder's "sixth sense", but something about that bird caught my attention. It had a russet, almost orangish head, in some ways reminiscent of the head of an immature Pine Grosbeak.

I was able to observe it for 10 minutes from distances of 1 to 10 feet. My notes indicated: an almost reddish head; whitish breast with round dark spots; black eye with white ring; pink legs; partial orange/yellow lower bill; it was approximately 6.5"; uniform brown, almost olive in complexion, except head.

The bird was neither afraid of my presence nor inclined to fly. It either stayed on the ground, among the fallen leaves, or on low twigs.

Obviously it was a thrush, obviously unusual and, suspecting it could be a Wood Thrush, I went home to check several bird guides. Returning at 1745, as dusk deepened, I obtained several photographs, unfortunately taken without flash (these photographs did not turn out).

The bird was still present 6 days later when I located it within 30 feet of its original location. In the better light of day, grey cheeks were visible, along with the earlier-noted field marks. Again I was able to approach within 10 feet, making me believe I was dealing with an ill or disorientated bird.

All guides indicated a Wood Thrush. There are previous records for Saskatoon, Regina and Biggar.<sup>1</sup> Finding the bird during a migratory period north and west of its anticipated range should be unexpected. However, it is interesting to note that the 2 previous days, 19 and 20 September, were marked by cool, overcast weather with light rain, the result of a low pressure front in Montana on the 19th which moved northeast into Saskatchewan on the 20th. Possibly this front, catching the thrush in the midst of its migration, may account for its appearance in southern Saskatchewan.

<sup>1</sup>BELCHER, M. 1980. Birds of Regina. Special Publ. No. 12, Sask. Nat. Hist. Soc.

## 99th ANNUAL A.O.U. MEETING

99th Annual Meeting of the American Ornithologists' Union, 24-27 August, University of Alberta, Edmonton. Symposia, a workshop, plenary, paper, poster, and film sessions, and post-conference field trips are planned. For information write D. A. Boag, Dept. of Zoology, University of Alberta, Edmonton, Canada T6G 2E9 (403-432-3633).

# CHANGING NESTING HABITS OF THE CATBIRD

JEAN BANCROFT, 306 - 200 Tuxedo Ave., Winnipeg, Manitoba. R3P 0R3.

Over the past few years I have noticed a change in the nesting habits of the Grey Catbird through watching many nests at Whytewold at the southern end of Lake Winnipeg.

In general, the nests have been rather bulky and have been made of twigs and grasses and lined with fine rootlets. They have been built about 1.2 m to 2.4 m above the ground in thick bushes and shrubs, such as Hazelnut (*Corylus*), Honeysuckle (*Lonicera tatarica*), and/or Caragana (*Caragana arborescens*).<sup>2</sup> As Hazelnut shrubs seem to flourish in abundance in this area the majority of the nests I have observed were built in clumps of these shrubs.

Two years ago I reported that I had observed two nests with pieces of plastic woven into them.<sup>1</sup> This past summer I discovered that one catbird had picked up strips of yellow kleenex and woven them into the nest while another had picked up a strip of thin plastic from a bread-wrapper, about 10 cm x 30 cm and had hung it on a branch directly up against the nest. Plastic had also been woven into part of the top of the nest and acted as a sort of screen. These man-made materials had been picked up from our garden. "String, cotton and rags" have been found in catbird nests but plastic was not mentioned.<sup>4</sup>

In 1980 I discovered, for the first time, a catbird sitting on a nest approximately 20 cm high. After the nest had been abandoned, for some reason or other, I was able to scrutinize it better in the hazelnut bushes and found it was two-toried. At first I thought that it might have been parasitized by a cowbird

(which I understand is a rarity), but upon examining it more closely I found nothing in the lower nest. I, therefore, came to the conclusion that the 1980 nest must have been built on top of a nest used previously.

Incidentally, I have found catbirds to be extremely wary when one is near the nest. Frequently the male gives out his loud mewing call, while the female sits motionless on the nest. In 1980 a pair of catbirds seemed to become aware of me when I was at least 7.5 m from the nest and commenced to give warning calls; in fact, on two occasions I thought that they were going to attack me. Many times I have been unable to establish the number of nestlings, far less see the eggs.

Godfrey does not mention trees as nesting sites for catbirds.<sup>3</sup> I was, therefore, particularly interested to find a nest in a scrub oak about 3 m from the ground during the first week of August, 1980. The limb was partly entwined with Virginia Creeper (*Parthenocissus inserta*) so that the nest was fairly well concealed from predators. I noticed that this nest was also different in another way: it was composed mostly of plant fibres, grasses, two small pieces of white paper and a little plastic. The neat inner cup was lined with fine rootlets. There were *no* twigs. The nest was comparable to the one shown in Hal Harrison's book (except for the man-made materials in it.)<sup>5</sup> Harrison mentions that the nest is "built in dense thickets, briars, vine tangles, shrubs, low trees. . . ." I found this nesting site and the composition of the nest even more interesting because Harrison deals only with birds' nests

east of the Mississippi River in the United States.

The nesting site was located between two properties and was close to a main sidewalk, so that I was able to make frequent observations until after the nesting period. Close to a fence and just below the nesting site were some honeysuckle bushes. These berries, as well as insects, provided the brood of three with all the food they required.

Contrary to my other experiences of the adults' giving out warning calls nearly every time I visited their nests, the only time this pair made any sound whatsoever was after the brood had fledged and were being fed in the honeysuckle bushes below the nesting site. Several days later I was gratified to see that all was well with the fledglings, as I noticed an adult feeding them on the sidewalk nearby.

My experiences in observing the nesting of catbirds have been very rewarding indeed!

<sup>1</sup>BANCROFT, JEAN. 1978. Variations in bird nesting habits. *Blue Jay* 36(2):120.

<sup>2</sup>BUDD, A. C., and K. F. BEST. 1964. Wild plants of the Canadian Prairies. Canada Dep. Agric. Pub. 983. Ottawa.

<sup>3</sup>GODFREY, W. E. 1966. The birds of Canada. Nat. Mus. Canada, Bull. 203. Ottawa.

<sup>4</sup>HARRISON, COLIN. 1978. A field guide to the nest, eggs and nestlings of North American birds. Collins, London.

<sup>5</sup>HARRISON, H. H. 1975. A field guide to birds' nests in the United States east of the Mississippi River. Houghton Mifflin Boston.

## PRAIRIE NEST RECORD SCHEME

The Prairie Nest Record Scheme report for 1980 will be available in early April. The scheme seeks data on nesting birds found in the prairie provinces and the northwest territories. Contributors write down information on a special card for every nest found. These cards are forwarded to the Prairie Nest Record Scheme at the end of the nesting season. Researchers, graduate students and government agencies make use of data on the nesting of species they are studying.

Every year some contributors who have taken part for one or more years are unable to continue. Therefore, new contributors would be appreciated for this interesting project. For information and blank nest record cards write to H. W. R. Copland, Prairie Nest Record Scheme, c/o Manitoba Museum of Man and Nature, 190 Rupert Avenue, Winnipeg, Manitoba. R3B 0N2.

## BLUE JAYS AND TENT CATERPILLARS

J. B. GOLLOP, 2202 York Avenue,  
Saskatoon, Saskatchewan. S7J 1J1.

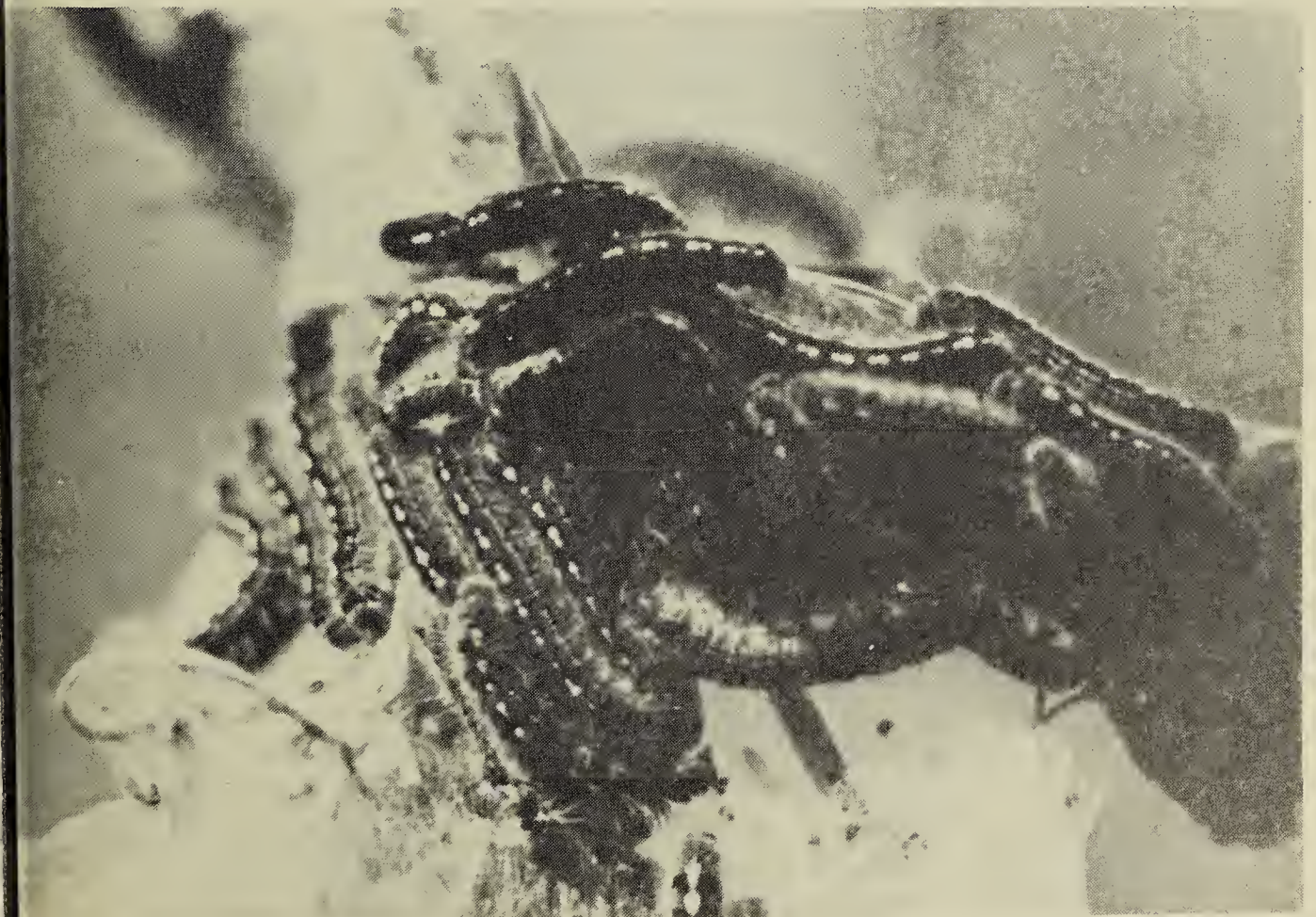
On 7 December 1980, two Blue Jays were first noticed in the Shubert Chokecherry outside our living room window at 1415. The farther jay, 3-4 m away, was pecking at a tent caterpillar egg case. The closer one, 1-2 m away, spent about 1 minute pecking at and eating another case. It then went to a nearby case which peeled off easily. Then it started pecking at another one but was apparently frightened by my movements. The entire observation lasted about 4 minutes.

At least two of the cases appeared to be full of eggs. The one that peeled off may have been the previous year's and nothing could be determined about the first one. There are probably enough

Blue Jays in the city that, if most of them spend part of each day feeding on tent caterpillar egg cases all winter, they may prove to be a biological control of considerable significance.

## CORRECTION NOTICE

The article "Wildlife Changes in Southeastern Saskatchewan" (Blue Jay 38(2):69-79) was prepared and submitted by Mr. Stelfox as an employee of the Wildlife Research Division (Sask. D.T.R.R.) in Saskatoon. Unfortunately this address was omitted from behind his name in the printed article and insufficient acknowledgement was therefore given to the Wildlife Research Division, which supported the research, writing and manuscript preparation.



Tent Caterpillars

G. J. Smith

# A WOLF KILLS A JUVENILE WHOOPING CRANE

E. KUYT, B. E. JOHNSON, Canadian Wildlife Service, Room 1000, 9942-108 Street, Edmonton, Alberta T5K 2J5 and R. C. DREWIEN, Idaho Cooperative Wildlife Research Unit, University of Idaho, Moscow, 83843.

Movements of pairs and family groups of Whooping Cranes are monitored by the Canadian Wildlife Service on the cranes' breeding range in Wood Buffalo National Park (WBNP). With the exception of removal of surplus eggs and the color banding of flightless young, all work is done from light aircraft.<sup>1 2</sup>

On 11 August 1979, the authors made an aerial survey to locate all family groups containing juvenile whoopers, in preparation for the banding planned for the following day. Seven of nine families (each with a single chick) still known to be intact on 29 July were located. One of the other two families lost its chick between 29 July and 11 August but the other family may have been overlooked as a pair of adults arrived in Texas at the Aransas National Wildlife Refuge (ANWR) with an unbanded chick.

Family 5/79 generally moved northeast after the young chick became strong enough to travel. After 16 June (Figure 1), the family moved a considerable distance to the southwest into an area bordering Preamble Creek, a small tributary of Sass River. The move to an area of somewhat more stable water conditions may have been in response to the rapid drying of feeding ponds or it may have been traditional as we have frequently seen a family group in the area in late summer.

On 11 August, family 5/79 was located about 600 m south of a large shallow lake. The three birds had been in this general area since 3 July. Our banding operation, planned for 12

August had to be postponed due to an accident which totally demolished the helicopter. Another machine was available on 13 August and the banding was carried out that day.

Families 2/79, 8/79, 17/79 and 9/79 in the Klewi River as well as Sass River families 7/79 and 6/79 were located without difficulty and the single young in each family banded. We were unable to find family 5/79 but we did see a pair of Whooping Cranes in the area (Figure 1). By backtracking this pair and some searching the area we located a large number of crane tracks and the track of a large mammal in a shallow lake to the west. On a point in the lake we spotted a pile of white feathers. The helicopter was landed nearby and the feathers proved to be those of a juvenile Whooping Crane. The mammal tracks were made by a single adult wolf. Backtracking revealed that the wolf had crossed the open woods (consisting of White Spruce and Black Spruce) bordering the lake. At the edge of the lake it would have seen the whoopers. At that point the wolf had dashed to the centre of the pond (as borne out by tracks) and had caught the flightless crane near the east side (Figure 2). The crane was carried to the shore and eaten. Blood spots in the moss were still wet, an indication that the killing had taken place recently. All that remained were feathers, a few fragments of bone and a small portion of a mandible. Head, neck, body, wing and legs had all been eaten. Even the soft feather pulp containing blood vessels had been consumed. Examination of the wolf's track away from



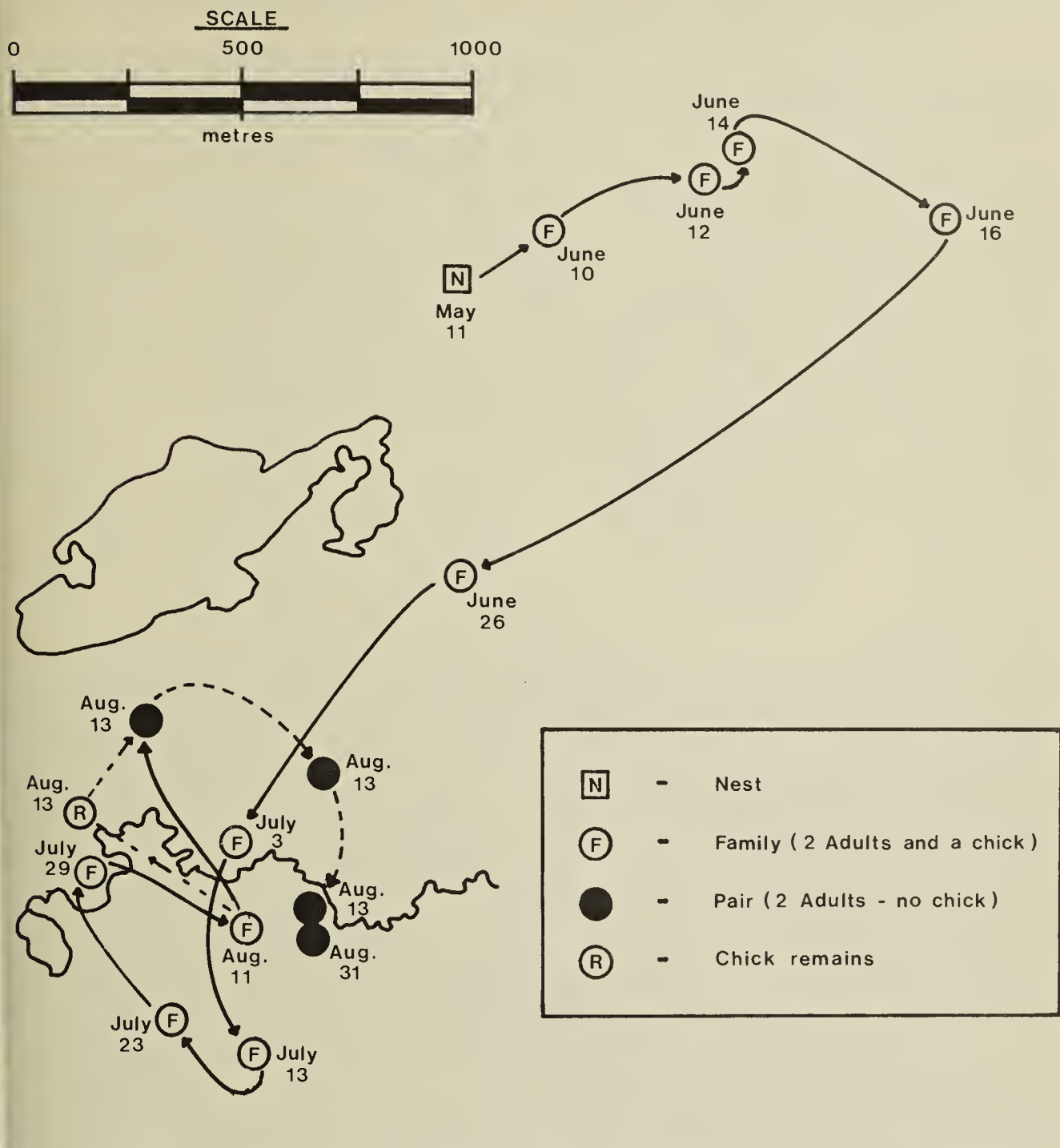


Figure 1. Movements of family 5/79, 11 May to 31 August.

The site of the kill did not show signs of food, feathers or other remains and it is likely that the young crane was eaten on the spot rather than carried away. The average live weight of six juvenile Whooping Cranes banded on 13 August was 4.4 kg (9.7 lb.).

Of the six young whoopers banded in 1979, only the juvenile from family 7/79 failed to arrive at ANWR. This family occupied the breeding territory adjoining that of family 5/79 and the young bird was banded 2.2 km due north of where

the other chick was killed. It is possible that chick 7/79 met a fate similar to that of chick 5/79.

A preliminary analysis of wolf food habits on Bison range in WBNP indicates that small mammals and waterfowl are an important part of wolf summer diets.<sup>4</sup> The only migratory bird remains (unidentified ducks) recovered from wolf droppings were collected in July, August and October.<sup>4</sup> There is no previous information on the incidence of predation on Whooping Cranes in the nesting area.

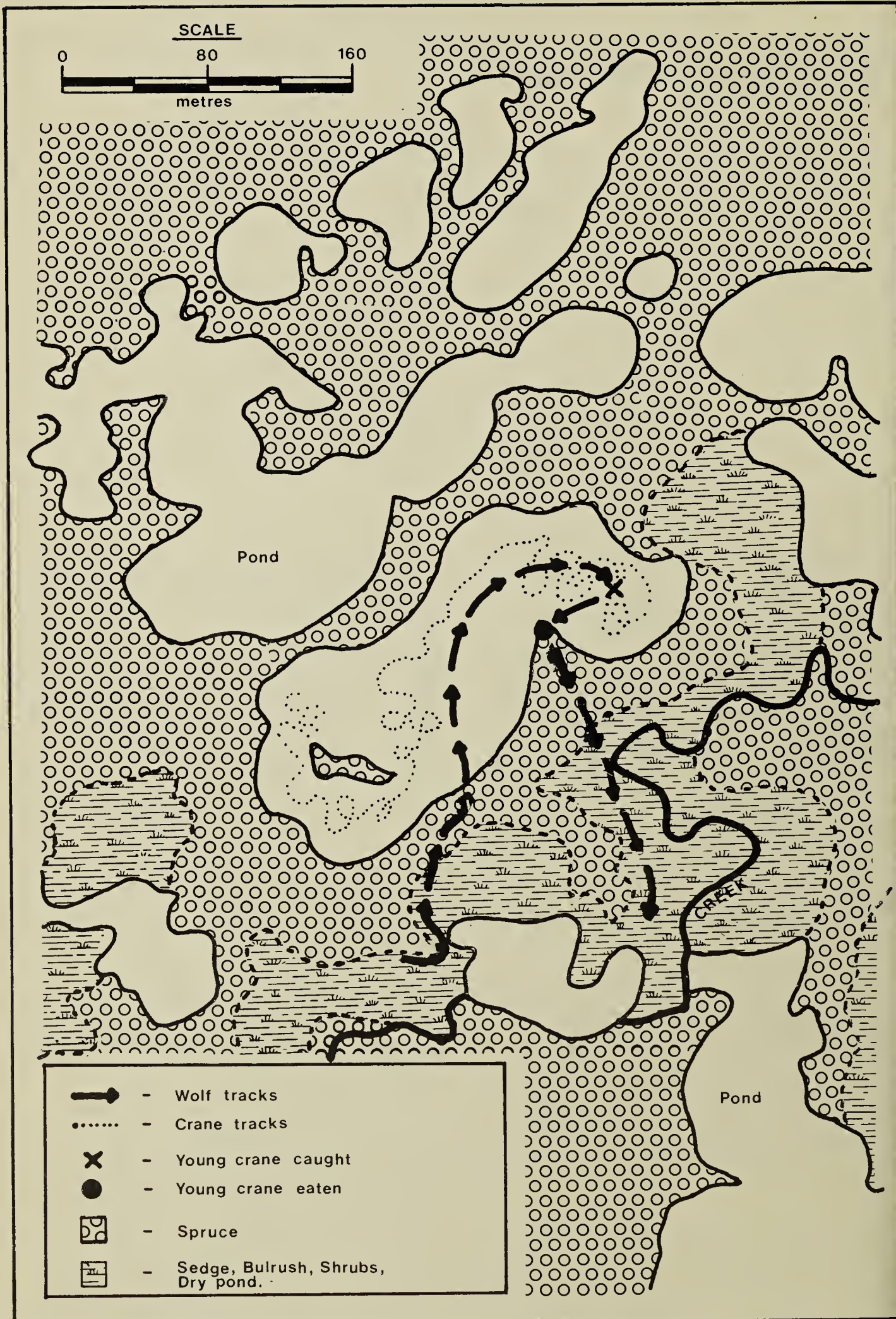
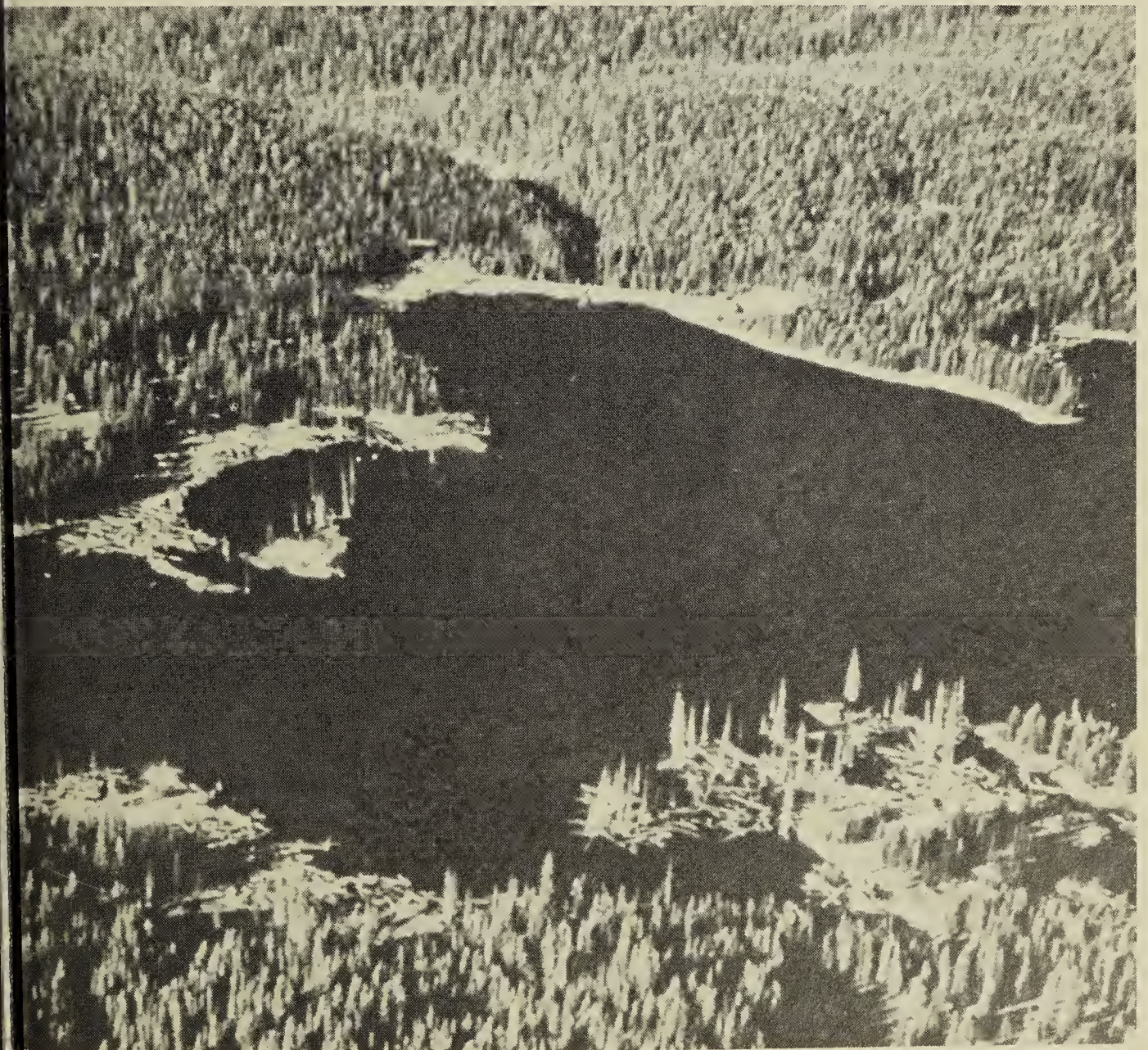


Figure 2. Movements of wolf before and after killing Whooping Crane.

In most years, mortality of whooper chicks in WBNP occurs chiefly before 20 June<sup>3</sup> and chicks still alive by the end of July generally arrive on the winter range at ANWR. From 1977-1980, chick mortality has increased in late summer, coinciding with a pronounced drop of pond water levels in the breeding range during those years. To offset the consequences of the drought conditions, crane families have been forced to travel farther afield to find suitable wetland feeding sites and in so doing they have become exposed to terrestrial predators, which in turn, would find the drying areas more accessible than usual.

- <sup>1</sup>KUYT, E. 1976. Whooping Cranes: the long road back. *Nature Canada* 5(2):2-9.
- <sup>2</sup>KUYT, E. 1979. Banding of juvenile Whooping Cranes and discovery of the summer habitat used by non-breeders. pp. 109-111 in *proc. 1978 Crane Workshop, Rockport, Texas*. Editor J. C. Lewis.
- <sup>3</sup>KUYT, E. 1980. Clutch size, nest success and chick survival of Whooping Cranes, Wood Buffalo National Park, Canada. *Proc. International Crane Symposium, Sapporo, Japan* (in press).
- <sup>4</sup>OSENBRUG, S., L. N. CARBYN and D. WEST. 1980. Wood Buffalo National Park wolf-bison studies. *Progress Rep. 1. CWS Report CWS-80-011*, 74 pp.



oreal Lake

J. B. Gollop

# NOCTURNAL AGGREGATIONS OF WHITE-TAILED JACK-RABBITS AT RIMBEY, ALBERTA

DANIEL F. BRUNTON, 2683 Violet Street, Ottawa, Ontario K2B 6X1.

The recent series of notes concerning concentrations of White-tailed Jack-rabbits (*Lepus townsendii*) in southern Saskatchewan<sup>3 4 5</sup> reminded me of similar observations that I made during the winter of 1976-1977 in southern Alberta. The major difference between the Saskatchewan observations and those reported herein is that my observations involve nocturnal activities.

Sightings were made at the northeastern edge of the village of Rimbey, Alberta (51° 39'N, 114° 14'W) about 50 km northwest of Red Deer. This is situated just west of the range of the species as illustrated by Banfield<sup>2</sup> but others have recorded the hare in this area before.<sup>1</sup> Observations were made during mid to late December 1976 (exact dates not recorded).

For about a 10 day period, large aggregations of jack-rabbits were observed daily in an open fallow field immediately adjacent to urban development. The observations were made from about 2000 hrs. to at least 2300 hrs. The number of animals present varied considerably, from a minimum of 30 to a maximum of 125 - 150. Typically, approximately 100 jack-rabbits were seen on any given night in this period. The hares were relatively evenly distributed over an open area of approximately 300 x 400 m. These estimates were arrived at by traversing the field by automobile. The snow depth was very low at the time (10 cm or less), which favoured vehicular access and apparently encouraged the presence of the animals as well.

Observations were not continued into January 1977 as increased snow depth prohibited vehicular access and hence full coverage of the field. Tracks in the snow suggested, however, that the night-time aggregations continued at least into mid-January.

With limited prior experience of the species (having just moved into the range of the animal), I was not aware at the time that this behaviour was particularly unusual. It seems reasonable to assume that the abundance of food provided sufficient appeal for many of the area's jack-rabbits. I was, nonetheless, surprised by the number of animals involved in these aggregations. These large numbers are even more surprising in light of Banfield's remark that the White-tailed Jack-rabbit "... seems to be one of the least sociable of the [hares]."<sup>2</sup>

The hares were very actively feeding — unlike those observed by Lahrman in Saskatchewan which spent most of the time sleeping.<sup>5</sup> Banfield<sup>2</sup> notes that the species is primarily nocturnal; although my home was adjacent to the "rabbit field", I did not see any hares during day-light hours. The animals were feeding primarily on Alfalfa (*Medicago sativa*) that was commonly exposed throughout the field. This is cited as an important summer food of White-tailed Jack-rabbits<sup>2</sup>, as are twigs, buds and bark in winter. There was no shrubbery at all in the Rimbey site.

Unlike the animals observed by Lahrman<sup>5</sup>, the Rimbey hares were not

wary. They would run to one side to permit the passage of the automobile but rarely moved farther than 20 m away and (after a brief period) would resume feeding. My use of high-beam headlights on the vehicle did not seem to affect the animals differently.

I was unable to observe any sign of conflict — or other social interaction — amongst the hares. Each seemed more intent on feeding than on the presence of observers or other jack-rabbits.

<sup>1</sup>ACORN, J. 1980. 83A-6 Gull Lake, in D. Spaulding (Editor), *A Nature Guide to Alberta*, Hurtig Publishers, Edmonton.

<sup>2</sup>BANFIELD, A. W. F. 1974. *The Mammals of Canada*, University of Toronto Press, Toronto.

<sup>3</sup>JACKSON, J. W. 1980. More Jack Rabbits. *Blue Jay* 38:267.

<sup>4</sup>KREBA, R. 1980. Fearless Jack Rabbits. *Blue Jay* 38:130-131.

<sup>5</sup>LAHRMAN, F. W. 1980. A Concentration of White-tailed Jack Rabbits. *Blue Jay* 38:130.

## RIVER OTTER SIGHTINGS IN SOUTHERN SASKATCHEWAN

GLEN SUGGETT, 235 Lockwood Street, Winnipeg, Manitoba. R3N 1S1 and BRIAN KEATING, Prairie Wildlife Interpretation Centre, P.O. Box 10, Webb, Saskatchewan. S0N 2X0.

Two separate sightings of River Otters were made in the prairies of southern Saskatchewan in summer 1980. Glen Suggett observed a single River Otter on August 25 at the north end of Moose Mountain Lake in the southeastern corner of the province. He and Brian Keating observed another on October 4 at the mouth of Swift Current Creek, where it enters the South Saskatchewan River. Otters are easily distinguished from mink, which they resemble in colouration, by their larger size and characteristic loping gait when running on land.

Banfield's *Mammals of Canada* suggests that the River Otter is extirpated in the prairie region of Canada, but otters have been known to travel great distances in search of suitable habitat. The north end of Moose Mountain Lake, where Moose Mountain

Creek enters, and the mouth of Swift Current Creek both provide habitat that fulfills the otter's needs. Moose Mountain Creek, interrupted by several Beaver dams, retained a good supply of water, in spite of the drought experienced last summer. The lake, creek, and adjoining marshlands provided an abundance of amphibians and fish, the mainstays of the otter's diet. Numerous White Pelicans, Double-crested Cormorants, and Great Blue Herons were also observed partaking of this source of protein rich food. Swift Current Creek similarly supplied a healthy population of Leopard Frogs, Minnows and other coarse fish, in addition to an assured supply of water. It lacks the concealment of the emergent vegetation found in Moose Mountain Creek, but it is an isolated spot characterized by steep valley sides, patches of dense brush, and a thin band

of trees along the length of the creek. Otters will utilize former Beaver and Muskrat lodges or bank burrows, available along both creeks, as denning sites. They are usually most active at night, but may be observed during the day in areas where they are seldom

disturbed. The two sightings this past summer were made in mid-morning.

If anyone has observed other River Otters on the prairies, or would like further information about the River Otter, please contact the junior author, Brian Keating.



*Lightning*

*F. W. Lahrm*

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## THE PEREGRINE FALCON

DEREK RATCLIFFE. 1980. Buteo Books, Box 481, Vermillion, South Dakota, U.S.A. 57069. \$42.50 U.S. funds plus \$1.00 per order for shipping.

Derek Ratcliffe is presently chief scientist of the Nature Council in England and has been a keen student of the peregrine in the U.K. since his boyhood years. During 1961-62 he acted as organizer of the British Trust for Ornithology's national enquiry into the alarming decline of the peregrine in that country.

This handsome and remarkable book consists of 416 pages divided into sixteen chapters, preamble, 23 tables, various appendices, comprehensive bibliography and index. It is well illustrated with sixteen pages of black-and-white photos, plus color paintings and line drawings by artist Donald Watson, which accurately convey the habits and habitat of the species.

Although at first glance the book appears somewhat esoteric in scope, the reader is soon captivated by Mr. Ratcliffe's ability to present his research as a direct and highly informative narrative. It stands as the most comprehensive publication on the species since Hickey's "Peregrine Falcon Populations: Their Biology and Decline".

The peregrine falcon is found throughout the world and in recent times several regional populations have experienced significant decline. Numerous investigations into this global

phenomenon have been conducted by many researchers. But because of the history of intense interest in this predator by the British, nowhere has the story pertaining to this decline been more completely reconstructed.

The author first establishes the propensity of the British peregrine to remain relatively stable through the ages despite relentless persecution from game keepers, bounty hunters, egg collectors and even the government during World War II. It seemed nothing could deter this resilient sub-species from returning eventually to its nesting cliffs until the final blow was dealt in the mid 1940's with the introduction of persistent organochlorine insecticides into the environment. These lethal chemicals quickly affected the peregrine's ability to produce sufficient offspring and the population began to diminish. Productivity prior to 1945 is dealt with district by district throughout Britain, thereby establishing a solid foundation on which to establish that a true decline was in process.

Basic breeding biology of the species is dealt with in great detail. Ratcliffe draws heavily on many other studies to describe fully virtually every aspect of the entire breeding cycle. Such topics include feeding habits, nesting habitat, pairing and courtship, incubation and production of young, breeding density and territory, population dynamics, migration and geographical variation.

Probably the most significant point these studies have documented is the peregrine's ability to recover from the toxic chemical problem. Ratcliffe and his many co-workers demonstrate that a major reduction in the use of various

pesticides in Great Britain is clearly correlated with a gradual resurgence of their non-migratory peregrines. In most of the districts they once again occupy their traditional nesting cliffs.

In North America the *anatum* subspecies has experienced a decline much more severe than that of the British race. Once scattered throughout the eastern half of the continent, the *anatum* can now only return with the aid of captive breeding and release programs.

In his final chapter Ratcliffe emphasizes the need to continue monitoring predator populations due to their value as barometers of environmental stability. He conclusively demonstrates that if the world-wide pesticide problem can be overcome, the peregrine and subsequent variety of life forms it represents will face a much brighter future. — Reviewed by Tom Donald, Box 99, Eastend, Saskatchewan S0N 0T0.

## THE HUMAN CONDITION. AN ECOLOGICAL AND HISTORICAL VIEW

WILLIAM H. McNEILL. Princeton Univ. Press, Princeton, N.J. viii + 81. pages. Index.

This little book is worthy of serious reading by the thoughtful naturalist, and by all persons concerned about man's present place in the natural world and how he should live in the next few decades. It is a capsule history of man's life on this planet. The author, William H. McNeill, examines the course of man's existence from prehistoric time up to the present in the light of two restrictions on his existence — microparasitism and

macroparasitism. *Microparasitism* is defined as the metabolic activities of bacteria, protozoans (and also viruses which either compete with man for food or invade the human body. This type of parasitism is "a sort of nether millstone perpetually abrading human efforts to assure individual and collective survival". *Macroparasitism*, in McNeill's definition, accepts the fact that from the earliest stages of the life of our ancestors on this planet, "no other species has been capable of feeding regularly on human bodies by killing and eating them". What McNeill considers as *macroparasitism* however, includes the acts involved "when one man or group of men seize goods or compel services from other human beings", i.e. the serfs of old slaves, and in fact any exploited classes or individuals are all victims of macroparasitism. The two chapters in which the author examines man's history on earth in the light of these two types of parasitism are revisions of two lectures which he delivered in the Bland-Lee Lecture Series at Clark University in September 1979. The first chapter follows the development of man up to about 1000 A.D., particularly in reference to trade between groups (tribes, nations, states). This interaction of groups of human beings which had hitherto existed as separate isolated populations rendered them vulnerable to microparasites. The development of disease resistance and checks on human population are handled concisely, giving us a sweeping view of the development of man relative to microparasitism. His treatment of macroparasitism includes an analysis of control by sovereigns and their bureaucracies, with further reference to the influence of religions on ethical systems.

In the second chapter (A.D. 1000 to the present) he reviews the development of control of disease. However, it is in his analysis of macroparasitism, o



the influence of trade developments, the invention of gunpowder, the Dark Ages, the Industrial Revolution, and the rise of European great powers that McNeill is outstanding, at once in his description and analysis. Probably his most discerning analysis is that of the rise of thought among Europeans, — "First of all, in intellectual matters, they could afford to be curious about the newly apparent diversity of earth — felt no immediate threat from the new contacts their seamanship opened up. Instead any useful novelty that came to their attention could be considered, wondered at, and, if it seemed worthwhile, appropriated to their use." "A systematic openness to new thoughts resulted, whereas in other civilized regions of the earth, when the alien presence seemed menacing to any aspect of inherited values — as happened sooner or later in each case of cultural encounter — a defensive mentality asserted itself that sought to close out everything unfamiliar and dangerous to established verities."

McNeill's lectures will not provide ready answers, but they do provide a basis on which to examine and ponder how man should strive to exist in the ecosystems of this planet, and how his sociological and religious perceptions may aid him in a sane and extended life in harmony with the natural world.

William McNeill is the Robert A. Millikan Distinguished Service Professor of History at the University of Chicago. Given by the nature of this chair he personifies a current in scientific persistence. His book, along with other such recent contributions to the study of man in the natural world as Barbara Ward's *Only One Earth*, John Platt's *The Step to Man* and Reuben Bellin's *The Mission of Urban Man*, should receive thoughtful consideration by all persons with a natural history interest as they look to the events of which we are a part which will have important consequences for the future. —

Reviewed by J. R. Jowsey, 2635 - 19th Avenue, Regina, Saskatchewan S4T 1X2.

## AUTOBIOGRAPHY OF JOHN MACOUN, CANADIAN EXPLORER AND NATURALIST, 1831-1920.

Ottawa Field Naturalists Club, Ottawa, Canada, 1979. Special Publication No. 1. xvii + 361 pages. Maps and illustrations. \$12.50 plus \$2.00 postage and handling.

Originally published as a memorial volume in 1922, the *Autobiography of John Macoun* has been re-published with a new introduction by Richard Glover and updated editorial notes and a biographical essay by W. A. Waiser. As presented, it is at once a brief history of Canadian development 1870 to 1920, a brief natural history of Western Canada with particular emphasis on botany and a collection of scattered natural history observations for Canada as a whole. It is well worth reading by any Canadian and is worthy of consideration as supplementary reading or reference for interested students in the prairie provinces (from about Grade X level) who would gain a wider perception of Western Canada from reading it.

At the first glance this work might seem to be a dry, ponderous chronicle of events, but Macoun's style, the contributions of the editors Glover and Waiser, and the urgency of the events of the years it spans, will soon dispel such an impression for those interested in

either the natural history or the social and political history of Canada.

John Macoun's autobiography is edited and arranged in such a fashion that it gives the reader a series of sweeping glances of the plains of Western Canada as the first explorers and early settlers found them. Although there are a few maps and black and white photographs, the main picture is painted in words by Macoun; this vivid description is his legacy to Canadians.

Since Macoun's travels were extensive in both distance and time (1872-1885), the book doesn't allow space for much detail of any plant or animal life, and the pace seems rushed in places. Macoun's eye for detail, steadfastness of purpose, and his organizing ability both as a reporter of facts and as a leader of field expeditions is evident throughout. There are, as the biographer (Waiser) notes certain inaccuracies and approximations in descriptions of plants. Considering the time the book was written and the number of plants described, such inaccuracies are understandable; refinements in taxonomy came later with the works of A. C. Budd and his later associates E. H. Moss and H. J. Scoggan.

Reference to two passages from the book may spark the reader's curiosity. The first is a description of the meadows of flowers on the slopes of Mt. Selwyn (p. 105).

"Where the heaviest drifts of snow had lain, and where much of it still remained one or two anemones and Boreal Buttercup (*Ranunculus hyperboreus*) were blooming and in fine condition. . . . A number of drabas and arenarias literally plastered the ground with multitudes of flowers. Five hundred feet below the summit, Mt. Selwyn stands first, in my imagination, as the highest type of nature's flower garden. None of the plants, except the pedicularis, rose above the general

level, which was about two inches or probably less, and all was a flat surface of expended purple, yellow, white and pinkish flowers."

The second example is a historical passage close to the interests of the S.N.H.S. and many others (p. 192). "After being at (Fort) Livingstone for a few days and examining the country, I made arrangements to cross the fourteen miles that lay between Livingstone and Fort Pelly. I hired a wagon which took over the two boats and the men walked. At Fort Pelly we were now on the Assiniboine and, from it, we intended to go down to Winnipeg. After a few days at Pelly we made our arrangements and obtained some provisions and started on our way to Fort Ellice, three hundred miles to the east."

The major events in this book took place within the last 110 years. For a man who was largely self taught, Macoun has an amazing judgement of the developing Canadian scene, which he looks at from the geographical, biological and political points of view. Waiser's editorial notes expand the reader's contact with the scene but would be more useful to the average reader if they had appeared at the ends of the chapters.

Macoun's family, and particularly his wife, obviously shared the cost (in time and isolation, and in low salaries) of his dedicated travels. It is interesting to note that once the railway was complete Mrs. Macoun could for the first time share some of his travels and experience some of the scenes he saw. His children and his near relatives particularly his son and his nephew (p. 192) on the 1881 expedition to what is now Manitoba and Saskatchewan, were also able to share his experiences as an explorer. The family sharing of these experiences and the involvement of his daughters (p. 196) in preparation of his early book *Manitoba and the Great*

North West add further interest to this remarkable autobiography. — reviewed by J. R. Jowsey, 2635 - 19th Avenue, Regina, Saskatchewan S4T 1X2.

## STRICTLY FOR THE CHICKENS

FRANCES HAMMERSTROM. 1980. Iowa State University Press, South State Avenue, Ames, Iowa. 50010. 136 pp., 6 x 9, cloth \$11.95.

During the 1930's a young husband and wife team, Frederick and Frances Hammerstrom, embarked on a project to study and save the seriously endangered Greater Prairie Chicken in central Wisconsin. Perhaps unknown to them then, this fascinating project was to become a lifetime career. Because of the knowledge gained over the years and their unflagging dedication the Greater Prairie Chicken has been brought back from the brink of extinction. Although scarcely mentioned in her book, for this is a story of the chickens, Fran has also contributed greatly to the study of raptors.

One of the earliest woman biologists, Fran received a B.S. degree from Iowa State College under Paul Errington, an M.S. from the University of Wisconsin under Aldo Leopold and an honorary doctorate from Carroll College.

During their pioneering studies the Hammerstroms shared a common love of wildlife and of roughing it in the Wisconsin wilds. To learn the ways of the prairie chicken, they had to work for long hours in the cold of winter, capturing and banding the prairie chickens and building blinds, and during the spring booming season of the prairie chicken it meant getting up at about 3:00

a.m. every morning to enter the blinds before the chicken left their roosts.

I don't doubt but that it was Fran's irrepressible sense of humour that enabled them to persevere despite the hardships and inevitable disappointments they must have experienced at times.

This warm sense of humour comes to the fore in the lighthearted account of their study. The author has chosen, as she says, to reveal "what lies back of scientific work", what "seldom shows in a technical paper or book: the viewpoints of the public, the adventures of the investigators and the fascinating struggle to find out more."

In my own experience with this bird, I recall my father telling me that when he came to the Mortlach district in 1912 he found both Sharp-tailed Grouse and the more abundant Greater Prairie Chicken. But when I grew up on my parent's farm there during the 1930's the prairie chickens were gone. My dad pointed out the chickens' dancing grounds on the old homestead (on a piece of still virgin prairie) where they used to dance year after year. He noted that their dancing grounds were separate from those of the sharptails. As I recall, during the winter of 1944-45 I was fortunate to see a few. I came upon a flock of about 20 sharptails feeding on a great patch of snowberries and rose briar which was exposed over the deep snow. Then I noticed prairie chickens within the group, their barred breasts and the pinnated feathers of the neck clearly visible. Then they flew and I could see the fanned black tails of four or five chickens in the flock as they quickly faded away.

I did not see any prairie chickens again until March 1957 when I had the thrill of observing and photographing these birds from one of the Hammerstrom's blinds. *Strictly for the Chickens* has brought back many happy memories of my brief visit with the Hammerstroms and will provide very

enjoyable reading and inspiration to all.

The photographs and the delightful illustrations by the Hammerstrom's daughter Elva, add a touch of presence

to the book which words alone cannot convey. — Reviewed by *Fred W. Lahrman*, Saskatchewan Museum of Natural History, Regina, Saskatchewan. S4P 3V7.



*Rock Hill, Signal Point,  
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