Some Aspects of Bird Migration at Caribou Island (Lake Superior), Ontario

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Published and unpublished data concerning the various aspects of birds migrating across Lake Superior are almost unknown¹. Due to its small size and extremely isolated nature, Caribou Island is in a strategic location to sample the migrant birdlife crossing the lake. In this paper we present some observational data which pertain to Caribou Island specifically, and the Lake Superior region generally, gathered during our three expeditions to the island.

Prior to our visits, no ornithological observations had ever been conducted on Caribou Island; previous natural history investigations of any description are apparently limited to a botanical survey conducted during the summer of 1976 by Dr. John K. Morton of the University of Waterloo (Roys A. Ellis, Jr., pers. comm., 1979).

Island Description

Caribou Island is in Thunder Bay District, located in east-central Lake Superior at 47° 22′ north latitude, 85° 49′ west longitude (Figure 1). The island is oval shaped, with a north/south axis forming distinct points at each end. It is about 6 km in length and 2.5 km at its widest point. In terms of ornithological significance. Caribou Island might well be described as Ontario's only "offshore" island: Michipicoten Island is 38 km to the north, the Ontario mainland 63 km to the east, and the Michigan mainland 72 km to the south. From Caribou Island these lands are rarely visible.

Although within the Great Lakes-St. Lawrence Forest Region of Rowe (1972), Caribou Island appears to be more characteristic of the Boreal Forest Region. Most

¹ One notable exception, however, is the observations made and published in a popular format in *Audubon* magazine by J.P. Perkins (1964–65). For many years, as former Chief Officer of the U.S. Steel Corporation (Pittsburgh Fleet), he recorded the numerous birds which regularly landed on ship while he traversed the Great Lakes, including Lake Superior.

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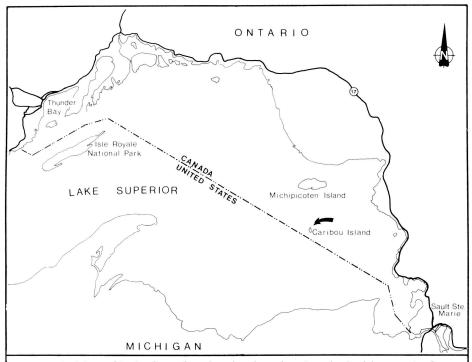


Figure 1: Map of Lake Superior showing location (marked with arrow) of Caribou Island.

of the island consists of low-lying spaghnum bogs interspersed by an intricate system of dry sand ridges. On the higher ground, white spruce (Picea glauca) and white birch (Betula papyrifera) predominate, while stands of black spruce (P. mariana) are widespread in the bogs (Figure 2). Inland pools and large ponds are numerous. The shoreline, however, is quite different, with long, wide stretches of low sand dunes covered in coarse grasses and the occasional mountain ash (Sorbus sp.) and white spruce (Figure 3). Generally, the flora is more typical of the south shore of Lake Superior (J.K. Morton, pers. comm., 1979) and lacks the arctic-alpine elements especially characteristic of the

north-central shorelines (as described by Given and Soper 1981).

Additional information on Caribou Island, which principally details historical aspects and human history, can be found in an account published by Carter (1979) in *Inland Seas*.

Methods and Observations

A cumulative total of 58 days were spent on Caribou Island by the three authors, comprising 25 days during spring migration and 33 days during the fall. The dates of our three visits were: 18 September to 20 October 1979 (Wormington and Finlayson); 6 to 20 May 1981 (Nisbet); and 23 May to 1 June 1984 (Nisbet).

The 1979 and 1981 expeditions to Caribou Island made base camp on the southwest corner of the island (South Bay), while in 1984 base camp was on the eastern shore. On a regular basis (2-4 times/week) observations of the entire circumference of the island (shoreline, dunes, beach/forest interface, etc.) were made on foot. as this was where migrant birds tended to concentrate. On an irregular basis (less than once/ week) the interior forest and bogs were randomly explored; here the concentrations of migrants were much less in evidence. We found that concentrations occurred regularly on the island's south tip, so this area was investigated almost daily; stationary observations of two to four hours duration were sometimes carried out here, particularly when there were heavy movements of either

passerines or waterbirds. For short periods of time, on an irregular basis, incidental observations were made on the tiny Caribou Light island lying just offshore from the south tip (Figure 3); also, kills from the lighthouse here were gathered by the lightkeepers for our examination.

Concentration of Migrants

The concentration of migrant landbirds on Caribou Island was found to be much in evidence. As expected, inclement weather generally produced higher counts. Concentrations during the fall (Table 1) were more regular than spring concentrations (Table 2), perhaps reflecting the general lack of adverse weather encountered during the spring visits. A spectacular concentration of birds on 25 September 1979 gave us some indication of the potential of

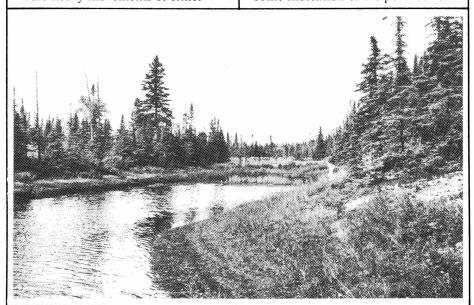


Figure 2: Typical inland scene on Caribou Island showing a shallow pond and spruce forest. Photo by *Alan Wormington*.

the island; on this day the south end of the island was literally swarming with birdlife, as illustrated by some of the examples we give in Table 1.

We consider the numbers recorded on Caribou Island to be not particularly overwhelming, but do suspect that additional visits could well produce some astonishing counts under the proper conditions. Furthermore, compared to shoreline areas of the mainland, we feel the maxima recorded at Caribou Island to be more or less similar, despite the fact that some of our numbers have been cited by Baxter (1985) as the maxima recorded for various species for the Ontario portion of eastern Lake Superior.

Common Loon Migration

During the fall (1979) visit, substantial numbers of migrating Common Loons² were observed on a daily basis. On the two days of maximum counts (62 in one half hour of watching on 2 October and 129 in two hours on 6 October) birds were south of the island, flying in a southeasterly direction. Stormy weather (with associated northerly winds) predominated on these dates.

The spring visits also recorded migrating Common Loons on a daily basis, but in considerably fewer numbers in comparison to fall. Birds approached from a southeast direction, generally veering north upon reaching the island. The maximum recorded was 28 birds on 8 May 1981.

² For scientific bird names, refer to 'Ontario Bird Records Committee, Checklist of the Birds of Ontario' in *Ontario Birds* 2:13–23, 1984.



Figure 3: Typical shoreline habitat of Caribou Island. Note tiny Caribou Light island in the background. Photo by Robert Finlayson.

Table 1: Selected fall (1979) maxima at Caribou Island. An asterisk (*) indicates a single flock attempting to leave the island via the south tip.

# of Birds	Species	Date	# of Birds	Species	Date
(105)*	American Crow	6 Oct.	(180)	Yellow-rumped Warbler	25 Sept.
(250)	Golden-crowned Kinglet	25 Sept.	(210)	Palm Warbler	25 Sept.
(80)	Gray-cheeked Thrush	25 Sept.	(22)	Blackpoll Warbler	25 Sept.
(40)	Swainson's Thrush	25 Sept.	(45)	Savannah Sparrow	3 Oct.
(50)	Hermit Thrush	25 Sept.	(30)	Lincoln's Sparrow	25 Sept.
(70)	Water Pipit	22 Sept.	(450)*	Rusty Blackbird	2 Oct.

These observations indicate that large numbers of Common Loons regularly pass through the central corridor of eastern Lake Superior, migrating southeast in fall and northwest in spring.

The Presence of Unexpected Diurnal Migrants

Several species were recorded during our visits whose appearance in the middle of Lake Superior was unexpected. Like various species of hawks, these species are normally considered to be diurnal migrants which prefer to avoid crossing large bodies of water and are, as such, more typically observed as shoreline migrants.

Below are listed those species which seemed to be the most unexpected. In addition to these species we recorded several other diurnal migrants, but their appearance was considered less unusual since they are species previously known to us to show little or no hesitation in crossing large bodies of water (e.g., Mourning Dove, Horned Lark. Cedar Waxwing, Lapland Longspur, Snow Bunting, Rusty Blackbird, Common Grackle, Pine Siskin, and Evening Grosbeak, etc.) or they are also regular nocturnal migrants in varying degrees (e.g., Red-headed Woodpecker, Redbreasted Nuthatch, American Robin and Purple Finch, etc.). (We should note here, however, that published data pertaining to which North American bird species are diurnal and/or nocturnal in their migrations is very limited.)

Hawks—see separate discussion below.

Sandhill Crane—Two birds were flying over the south point on 9 May 1981.

Black-backed Woodpecker—Fall (1979): one male was observed on 29 Sept. and probably the same bird 9 Oct.; one female was recorded 13 Oct. Not recorded on the spring visits.

Three-toed Woodpecker—Fall (1979): one bird on 1 Oct. and four birds on 9 Oct.; these and several others thereafter indicate active migration. Spring (1981): one on 11 May.

Blue Jay—Spring (1981): several pairs on territory; migrant flocks of 49 on 9 May and 60 on 20 May; spring (1984): observed regularly with maximum of 13 on 25 May. Fall (1979): a single bird remained throughout the period; this sighting may, in fact, pertain to a (summer and/or winter) resident.

Clark's Nutcracker—see 'Rare and Extralimital Species.'

Table 2: Selected spring (1981 and 1984) maxima at Caribou Island.

1981 # of Birds	Species	Date	1984 # of Birds	Species	Date
(60)	Blue Jay	20 May	(14)	Yellow-bellied Flycatcher	31 May
(91)	Yellow-rumped Warbler	19 May	(100)	Swainson's Thrush	31 May
(77)	Palm Warbler	19 May	(40)	Cape May Warbler	29 May
(63)	Chipping Sparrow	9 May	(27)	Common Yellowthroat	31 May
(24)	Lincoln's Sparrow	19 May	(31)	Lincoln's Sparrow	31 May

Black-capped Chickadee—Probable migrants were observed on the fall (1979) visit with one on 30 Sept. and a group of three from 1 to 9 Oct.; two birds were recorded on 24 May 1984.

White-breasted Nuthatch—One bird on 24 Sept. 1979.

Northern Shrike—Spring (1981): one unusually late migrant on 9 May. Fall (1979): first observed on 7 Oct.; several others thereafter.

Eastern Meadowlark—see 'Rare and Extralimital Species.'

Western Meadowlark—One bird on 8 May 1981.

White-winged Crossbill—Spring (1984): seven on 24 May. Fall (1979): two on 26 Sept. and four on 9 Oct.

Several factors are probably responsible for the appearances of the above-listed species. For some, such as Sandhill Crane, Blue Jay, Black-capped Chickadee and Whitewinged Crossbill, the appearances on Caribou Island are probably the result of rare, random (probably wind and/or weather related) wanderings over the lake. For others, such as Black-backed and Three-toed Woodpeckers, Whitebreasted Nuthatch, and Eastern and Western Meadowlarks, limited nocturnal migration by the species generally may explain their presence.

The Presence of Hawks

It is well known that many species of Falconiformes (vultures, hawks and falcons) prefer to avoid crossing large expanses of water. Although the degree of reluctance varies among species (with Rough-legged Hawk, Northern Harrier, Osprey, Peregrine Falcon and Merlin often showing little or no reluctance), the presence of the following diverse and numerous selection in the middle of Lake Superior seems worthy of note. Of the species listed below, Turkey Vulture and Broad-winged Hawk were the most unexpected.

Turkey Vulture—One was present on 26 May 1984.

Northern Goshawk—A single adult was present 13 Oct. 1979.

Sharp-shinned Hawk—Observed almost daily on all visits. Spring (1981) maximum: 12 on 7 May; spring (1984) maximum: seven on 23 May. Fall (1979) maxima: 20 on 26 Sept., 20 on 30 Sept., 12 on 4 Oct. and 13 on 6 Oct.; almost all birds were adults.

Cooper's Hawk—Single birds were present 9 May 1981 and 26 May 1984.

Red-tailed Hawk—Spring (1981): single immatures on 7 and 12 May and single adults on 8, 12 and 13 May; spring (1984): observed on four days with a

total of five birds. Fall (1979): single immature 8 Oct., same adult 21 Sept. to 6 Oct. and five adults on 13 Oct.

Broad-winged Hawk—Spring (1981): eight on 12 May, one on 14 May and five on 15 May; spring (1984): regularly observed with a maximum of 12 on 26 May.

Rough-legged Hawk—Spring (1981): observed daily, maximum of 12 on 7 May; spring (1984): observed on five days with a maximum of four on 25 May. Fall (1979): first recorded 26 Sept. (one bird), regular thereafter with maxima of nine on 6 Oct. and 12 on 13 Oct. Bald Eagle—Fall (1979): single

immature 13–14 Oct.; on the 13th it attempted to leave the island via the south tip between snow squalls.

Northern Harrier—Spring (1981): individuals observed daily; maximum of three on 11 May. Spring (1984): singles recorded on 26 and 27 May only. Fall (1979): regularly observed to 6 Oct.; maximum of three per day.

Osprey—Spring (1981): one bird 10–11 May. Fall (1979): one bird on 4 Oct. and the same or another on 6 Oct. when it left the island via the south tip.

Peregrine Falcon—see separate discussion below.

Merlin—Spring (1981): observed daily; maximum of five on 7 May; spring (1984): single birds on 23 and 26 May. Fall (1979): a single bird throughout the period; two birds on 6 Oct.

American Kestrel—Spring (1981): maximum of five on 7 May. Fall (1979): observed regularly, maximum of three per day; the last individual was recorded on 13 Oct.

We do not believe the presence of raptors on Caribou Island to be a normal intentional movement of the birds involved, but rather a result of a collection of individual stray birds seeking refuge on the island. During the fall visit, for example, individual Sharp-shinned Hawks were regularly observed coming to shore low over the surrounding waters (and, in one instance, being harassed by a Peregrine Falcon). On the 1981 spring visit, several instances were noted where individual (presumably exhausted) Red-tailed and Roughlegged Hawks and Northern Harriers, upon nearing the shore and before reaching the safety of the island, were intercepted and harassed by numerous resident Herring Gulls. Why these birds would attempt a lake crossing is unknown, even in clear weather. but it is worth noting that most of the observed Sharp-shinned Hawks on the fall visit were adults rather than immatures, a ratio which is disproportionate to what would be normal for the mainland. It could be theorized that older birds "know" that land eventually lies ahead, whereas birds-of-theyear, having never previously made a southbound migration, would be unfamiliar with the situation and more likely to follow shorelines.

Once at Caribou Island, hawks clearly exhibited a reluctance to leave. On many days during the fall visit, birds "kettled" over the south point and flew a considerable distance south over Lake Superior, only to return several minutes later—probably

not confident in their attempt to leave. (One distinctively-marked adult Red-tailed Hawk, present for a minimum of 15 days, exhibited this behaviour several times.) This behaviour, in conjunction with the apparent lack of suitable prey on the island—we have been unable to confirm if small mammals. reptiles or amphibians (other than Blue-spotted Salamander. Ambystoma laterale and 'Boreal' Chorus Frog. Pseudacris triseriata maculata) are present—may leave several species in a precarious situation.

Staging and Feeding of Peregrine Falcons

The 1981 spring visit recorded Peregrine Falcons between 6 and 13 May, with one or two birds on several days. A total of four to six different birds was determined to have been present. In 1984, single birds were observed on 23 and 28 May.

On the fall (1979) visit, Peregrine observations were made during the short period from 22 Sept. to 5 Oct. Up to four birds were observed in a day (i.e., 27 and 28 Sept.). A minimum of eight different birds was determined to have been present.

Peregrine Falcons were observed actively hunting for migrant passerines along the beach/forest interface; several distinctly marked individuals remained for several days. The presence of a relatively high density of migrant Peregrine Falcons, on so small an area as Caribou Island, indicates that this site is an important migratory and feeding area for the species (Figure 4).

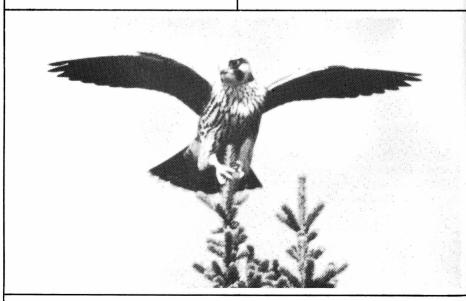


Figure 4: One of many Peregrine Falcons utilizing Caribou Island as a feeding and staging area. Photo (27 September 1979) by Alan Wormington.

Rare and Extralimital Species

Comments below pertaining to the status of species in Thunder Bay District and northern Ontario are primarily derived from Denis (1961), Newsletters of the Thunder Bay Field Naturalists Club (1962 to 1986), James *et al.* (1976), Baxter (1985), and the unpublished data of one of the authors (Wormington).

Where they apply (*i.e.*, the provincial 'Review List'), our records have been accepted by the Ontario Bird Records Committee (OBRC). To illustrate the regional status of species, we include additional records known to us; these have not necessarily been reviewed by the OBRC, but we consider them to be valid and include them here for the purposes of this paper.

Barrow's Goldeneye—A single female, in association with four Red-breasted Mergansers on 15 May 1981, is the second of three records for Thunder Bay District and one of very few for northern Ontario

Ontario. Harlequin Duck—A single femaleplumaged bird, on 11-12 Oct. 1979, is the fourth record for Thunder Bay District and one of only several for northern Ontario. Marbled Godwit—A single bird was present on 30 May 1984; this species is a rare, but regular, spring migrant on Lake Superior. Purple Sandpiper—A single bird, in association with Dunlin on 25 May 1984, is unique to Thunder Bay District and one of few spring records for all of Ontario. This bird, along with an

individual 14 May 1949 at Lake

Winnipeg, Manitoba (Norris-Elve

1950) and another 7 June 1980 in

Door County, Wisconsin (*American Birds* 34: 897), are probably the most westerly spring records for the interior of North America.

Long-billed Dowitcher—A single bird, calling as it flew over our camp on 29 Sept. 1979, is possibly the first definite record for Thunder Bay District.

Red-headed Woodpecker-Four singles were recorded as follows: 27 Sept. 1979 (found dead below the lighthouse); 27 Sept. to 1 Oct. 1979; 30 Sept. 1979; and 24-31 May 1984. This species is a regular, uncommon to rare. spring and fall vagrant to the north shore of Lake Superior, but nesting has not been suspected. Willow Flycatcher—A singing bird, recorded on 20 May 1981, was almost certainly an "overshooting" spring migrant. The only other records known for northern Ontario are the following: a territorial male 30 km north of Manitouwadge, Thunder Bay District, observed by Bob Gorman and Steve O'Donnell in early June 1979; another male recorded at Neys Provincial Park, Thunder Bay District, by Steve O'Donnell from 19-26 June 1983; and a male at Rainy River, Rainy River District recorded by Michael McEvoy and Joachim W. Floegel on 31 May 1984.

Northern Rough-winged Swallow— Three birds on 12 May 1981, and one on 28 May 1984, represent birds near the northern edge of the species' range in northern Ontario.

Clark's Nutcracker—A single bird on 9 May 1981, first observed as it

approached the south tip of the island from Lake Superior, is only the second record for Ontario (see *Ontario Birds* 3:10–11 for corrections pertaining to other records published for the province).

Blue-gray Gnatcatcher—A single bird, observed on 1–3 Oct. 1979, represents the first record for northern Ontario, although there have been three subsequent occurrences.

Townsend's Solitaire—A single bird, recorded on 2 Oct. 1979, represents the first record for Thunder Bay District, although the species has been recorded three times subsequently.

Northern Mockingbird—Two birds were observed daily from 23–29 May 1984; this species is a regular (rarely breeding) vagrant throughout northern Ontario.

Yellow-throated Vireo—One bird, found on 1 June 1984, was near the northern edge of its Ontario range; this individual was likely an "over-shooting" spring migrant, rather than an individual heading towards a breeding area.

Warbling Vireo—Individual birds were recorded on 8 May 1981 and 31 May 1984; like the above species, these birds were just north of the species' normal breeding range.

"Brewster's" Warbler—A single bird, observed on 20 May 1981, is the first northern Ontario record of this hybrid type.

Yellow-breasted Chat—Single birds were located on 25 Sept. 1979 and 17 May 1981; a prior record exists for Thunder Bay District (17 May 1964 in Paipoonge Twp.; observed by Howard Quackenbush) and only one other record for the remainder of northern Ontario (see *Ontario Birds* 2:62).

Indigo Bunting—On 12 Oct. 1979 one was feeding on birdseed placed near our tent; extralimital fall records of this species in northern Ontario have been shown by Wormington (1986) to invariably occur late in the season.

Dickcissel—One was observed at Caribou Light on 27 May 1984; this species is a very rare, but somewhat regular, vagrant to northern Ontario during both spring and fall migrations.

Field Sparrow—Single birds were recorded on 17 May 1981 and 24 May 1984; this species is a very rare, but regular (mostly fall), vagrant to northern Ontario.

Sharp-tailed Sparrow—One bird was located on 24 May 1984; although new to Thunder Bay District, the species was anticipated for the region due to the regular appearances of the prairie nesting subspecies nelsoni much farther east, including southern Ontario.

Harris' Sparrow—Observations of four on 25 Sept., three on 26 Sept. and one on 28 Sept. 1979 were thought to involve seven birds. These numbers indicate that Caribou Island lies on the extreme edge of the species' normal fall migration area; immediately east of here the species is considered very rare.

Smith's Longspur—A single female was observed on 9 May 1981 in association with Lapland Longspurs, Horned Larks and Snow Buntings. Although few migrant records exist for

northern Ontario, most are from Lake Superior (spring and fall) indicating probable regular status (Ryff, *in press*).

Eastern Meadowlark—One singing bird was recorded on 20 May 1981; although this species is clearly very rare in Thunder Bay District, its overall status in northern Ontario is not well known.

The above records indicate that vagrant birds are a definite component of the Caribou Island avifauna. In comparison to mainland areas of Lake Superior. the incidence of strays is about equal or perhaps slightly greater, although no detailed comparisons have been made. The high incidence of rare birds on Caribou Island is similar to that which has been documented for other isolated islands in North America such as Brier. Sable and Seal islands, Nova Scotia (McLaren 1981), and for the South Farallon Islands, California (DeSante and Ainley 1980). However, these islands have had a much longer history of bird observation and consequently, data on rarities are more numerous and diverse.

Lighthouse Kills

The kills of nocturnal migrants at Caribou Light occur mainly during the fall migration, when up to 500 birds per night have been recorded (Bert Hopkins, pers. comm., 1979).

During the fall visit two minor kills occurred. On the mornings of 27 Sept. (three individuals of three species) and 29 Sept. (71 individuals of 19 species) dead birds were found below the Light. The three Horned Larks and four

Lapland Longspurs recorded on the latter date seemed like unusual casualties to us, since these species are usually considered diurnal migrants. Also on the 29th, a single Scarlet Tanager and a single Le Conte's Sparrow were the only records of these two species obtained during the entire fall visit. On the 1984 spring visit, 56 dead birds representing 23 species were collected on the morning of 26 May; the single Chimney Swift and Lapland Longspur were likewise unexpected (mainly diurnal) migrants.

Permanent Residents

On Caribou Island we recorded the following landbird species which are regular permanent residents on the adjacent mainland: Downy Woodpecker, Hairy Woodpecker, Three-toed Woodpecker, Black-backed Woodpecker, Blue Jay, Common Raven, Black-capped Chickadee, Redbreasted Nuthatch, Purple Finch, Pine Siskin and Evening Grosbeak. However, most observations of these species probably involved transients, since the numbers of birds we recorded varied considerably between visits. It is therefore difficult to speculate on what species may be permanent residents on Caribou Island until more visits are made, particularly during the winter, but also during the breeding season.

Species that were *not* found on Caribou Island were particularly interesting. Despite extensive, suitable habitat, we did not record Spruce Grouse, Ruffed Grouse, Gray Jay or Boreal Chickadee on any visit. These year-round

residents of the adjacent mainland have clearly been unable to become established on Caribou Island.

Total Species

The three visits to Caribou Island recorded a cumulative total of 192 species. The fall (1979) visit revealed the presence of 133 species (131 observed plus the two lighthouse-killed additions); the 1981 spring visit 137 species (134 observed plus the remains of Shorteared, Long-eared and Snowy Owls); and the 1984 spring visit 126 species.

Acknowledgements

Our sincere appreciation goes to the Ellis family of New London, New Hampshire, for granting us permission to visit the island to conduct our studies.

Transportation to the island for the fall visit was made possible only through the generosity of the following individuals and agencies: Dan and Jim McDonald of Ferclad Fisheries (Mamainse Harbour) and the Canadian Coast Guard (Parry Sound). The spring 1981 expedition was assisted by funds from the Burlington and Ottawa offices of the Canadian Wildlife Service.

While on Caribou Island, lighthouse custodians Bert and Pearl Hopkins made our visits all the more enjoyable and comfortable by graciously assisting us in a great many ways.

Dr. N.G. Escott thoroughly reviewed a draft of the manuscript; his comments and suggestions added considerably toward the finalization of our paper.

This paper is dedicated to the

memory of Roys A. Ellis, Jr., retired senior pilot for American Airlines, and the one who probably loved and enjoyed Caribou Island more than anybody.

Literature Cited

Baxter, T.S.H. 1985. The Birding Handbook: Eastern Lake Superior. Superior Lore, Wawa. 133 pp.

Carter, J.L. 1979. A trip to lonely Caribou-island outpost of the lakes (in two parts). Inland Seas 35: 4–12, 95–103.

Denis, K. 1961. Birds of the Canadian Lakehead Area. Supplement No. 2, Thunder Bay Field Naturalists' Club. Mimeographed. 10 pp.

DeSante, D.F. and D.G. Ainley. 1980. The Avifauna of the South Farallon Islands, California. Cooper Ornithological Society, Studies in Avian Biology No. 4. 104 pp.

Given, D.R. and J.H. Soper. 1981. The Arctic-Alpine Element of the Vascular Flora at Lake Superior. Publications in Botany No. 10. National Museum of Natural Sciences, Ottawa. 70 pp.

James, R.D., P.L. McLaren and J.C. Barlow. 1976. Annotated Checklist of the Birds of Ontario. Royal Ontario Museum Life Sciences Miscellaneous Publications, Toronto. 75 pp.

McLaren, I.A. 1981. The incidence of vagrant landbirds on Nova Scotian islands. The Auk 98:243–257.

Norris-Elye, L.T.S. 1950. Purple Sandpiper in Manitoba. Canadian Field-Naturalist 64: 94. *Perkins, J.P.* 1964–65. 17 flyways over the Great Lakes (in two parts). Audubon 66: 294–299 and 67: 42–45.

Rowe, J.S. 1972. Forest Regions of Canada. Department of the Environment, Canadian Forestry Service Publication No. 1300. 172 pp. Ryff. A. 1987. Smith's Longspur: a case of neglect. Ontario Birds, in press.

Wormington, A. 1986. Fall vagrancy of the Indigo Bunting in northern Ontario. Ontario Birds 4:104-108.

Thunder Bay's Nesting Merlins

N.G. Escott

In Ontario, the nominate subspecies of the Merlin (Falco c. columbarius) breeds throughout the Boreal and Great Lakes-St. Lawrence Forest Regions, although actual documented nesting records are scarce (Peck and James 1983; Oliphant 1985). This species occasionally selects old American Crow (Corvus brachyrhynchos) or Common Raven (C. corax) nests near the tops of spruce (Picea spp.) and pine (Pinus spp.) trees, usually near water (Johnson 1982).

While generally considered to be an uncommon inhabitant of the boreal forest, and associated with uninhabited wilderness areas, the Merlin is both common, and urbanized, in the city of Thunder Bay, Thunder Bay District, Ontario.

Merlins have nested in Thunder Bay (known as the twin cities of Fort William and Port Arthur prior to 1970) for at least four decades. In an address to the Minnesota Ornithological Union in Duluth on 21 May 1949, Fort William's Dr. A.E. Allin (1949) stated: "Pigeon Hawks [Merlins] are often common—one year we located 4 pair; another year a pair occupied a crow's nest in a City park and 4 eggs were laid. In 1944 they were probably again nearby for I could imitate a mouse on a late summer afternoon and bring them to my bedroom window. . . ." Dr. Allin also found a nest in 1962 and parents with young in 1963 and 1964, all in Fort William (*Thunder Bay Field Naturalists Newsletter*, Vols. 16-18:1962-64).

The Merlins that nested in the city occasionally overwintered also. Prior to 1960, single Merlins were recorded on the Christmas Bird Counts of 1942, 1955, and 1959. Since 1960, at least one Merlin has been seen on the Count or during the count period every year except four, and two were counted in 1965, 1973, 1978, and 1985 (TBFN Newsletter and American Birds, various years).

Nesting Merlins are most easily found in April and May during their noisy courtship, and in July when the young fledge and stay

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