

OFO Bird Finding Guide #6

A Birder's Guide to Southern James Bay, Including Moosonee and Moose Factory

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Introduction

This guide is intended to introduce experienced birders and naturalists, as well as casual visitors, to the birding opportunities available in the southern James Bay area. It provides directions to, and descriptions of, different locations and habitats that may be of interest to birders and naturalists. It also describes some of the trail systems which, though not intended for birding, offer easily accessible walks through a variety of habitats in the area. The main attractions of the Moosonee area to birders are the wide diversity of habitats, many of which are uncommon or non-existent in other parts of the province, and the relatively easy access considering the northern location. Habitat types include boreal forest on coastal beach ridges and well-drained river banks, bogs and fens in the lowland interior, coastal habitats such as freshwater and salt marsh, mud flats, and ponds. Finally, the townsites' riverbank locations offer good views of the tidal waters of the Moose River, and the open terrain and human development attract birds otherwise uncommon

in the region.

Birding this area most effectively requires coverage of the range of habitats found near the villages, as well as on the coast. Walking the townsites of Moosonee and Moose Factory will yield birds of disturbed habitats, willow thickets, shorelines, upland spruce and poplar woods, and freshwater marshes. A trip to the coast, either for a day to Shippagan Island or White Top, or for several days of camping at a more distant site, will offer more extensive freshwater marshes, as well as brackish and salt marshes, the open waters and vantage points of James Bay, and potentially large numbers of migrants associated with these habitats. If your visit coincides with spring or fall migration, you can expect large numbers of sparrows, warblers and finches in the disturbed habitats, thickets and woodlands, and large numbers of shorebirds, gulls and waterfowl on the river and along the coast. During the summer months, numbers will be lower, but specialties such as Nelson's Sharp-tailed and Le Conte's Sparrows, Three-toed

Woodpecker and Connecticut Warbler can be found in appropriate habitats. Vagrant passerines are possible, especially around the townsites, and rare seabirds are possible on the coast. This guide outlines the best and most easily accessible birding sites of the southern James Bay region of Ontario, and provides a brief outline of some of the birds that may be expected in these places, as well as some of the rarities that have occurred in the past.

This guide is a companion to the *Field Checklist of Birds for the Southern James Bay Region* (Moose River Naturalists 1992). This checklist shows 292 species that have been recorded in the region, along with notations for rare species and breeding status. The checklist is available at the Ontario Ministry of Natural Resources (OMNR) office and other locations in Moosonee for a fee of \$1.00.

GENERAL INFORMATION

Area Covered

The *Field Checklist of Birds for the Southern James Bay Region* defines the boundary as the Ontario-Quebec border on the east, the 51st parallel (mile 159 on the railway) on the south, the 81st meridian to Cockispenny Point on the west, and the near-shore waters of James Bay on the north and east (Figure 1).

Access

No roads lead to Moosonee. Access

is by train from Cochrane, a 298 km (186 mile) journey. From the last weekend in June until the Labour Day weekend, a daily (except Sunday) excursion train, the Polar Bear Express, makes the round trip from Cochrane. A mixed passenger-freight train (the Little Bear), which will carry checked baggage and canoes, travels north on Monday, Wednesday and Friday, and south on Tuesday, Thursday and Saturday, all year. Information on train schedules is available from Ontario Northland Rail Services (1-800-461-8558). Moosonee is also accessible by scheduled air service. Air Creebec (1-800-567-6567) and Commercial Aviation (705-336-2520) have flights from Timmins, Cochrane, and other locations.

Access to the coast can be made by canoe, boat, helicopter (when available), and fixed-wing aircraft (North Point only). Local air carriers are Huisson Aviation (705-336-2725), HeliCree (705-658-5185), and Bushland Airways (705-336-2966). Travel by canoe or boat is cheapest, but beyond the mouth of the Moose River, travel should be attempted only with a guide familiar with the area. Shallow water, tides and unpredictable weather can make conditions hazardous. Helicopter travel is expensive, but several good birding locations are located relatively close to Moosonee. The interior of the Hudson Bay Lowland is best accessed by canoe. Several large

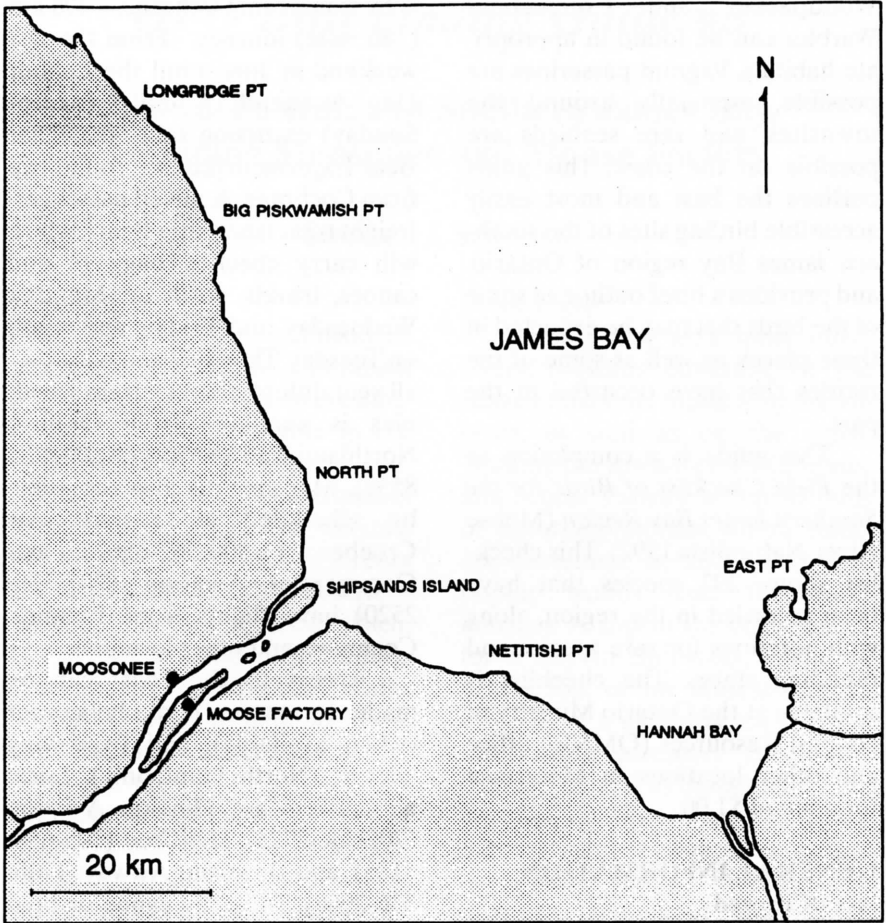


Figure 1: Southern James Bay Region.

rivers converge in the Moose River (including the Missinaibi, Mattagami, Abitibi, North French, and Kwetaboahigan Rivers), and all are suitable for canoe trips.

Accommodation

During the tourist season (end of June to Labour Day), and probably also during the peak of the hunting

season (September), it is wise to reserve rooms in Cochrane and Moosonee. In other seasons, there shouldn't be any problem getting a room. Polar Bear Lodge (705-336-2345) and Moosonee Lodge (tourist season only, 705-336-2351) are located on the waterfront. The Osprey Inn in Moosonee (705-336-2226) and Trappers Lodge in Moose

Factory (705-658-4440) also have hotel-style accommodation. There are several Bed & Breakfast establishments, as well. Tidewater Park is in operation for tent camping during the tourist season (water supply, garbage collection). You may camp there in the off-season as well, but you will have to bring your own water from Moosonee and take garbage with you when you leave. The campground is on an island between Moosonee and Moose Factory, offering easy access to both communities by canoe or water taxi. The park provides overviews of the river from several locations and good birding in the poplar-spruce forest. Another good camping location is the Baptist camp just south of the old check station site on the north bank of the Moose River, just before Wavy Creek and Shipsands Island. This site is always accessible, regardless of the tides. It is also possible to camp at White Top (adjacent to Shipsands Island), but it is sometimes difficult to access due to the tides. White Top is a popular campsite for hunters in the fall, but birders also have camped there during the hunting season. This site provides exceptional birding, as well (A. Wormington, pers. comm.).

Weather

Weather in the Lowland can be unpredictable. In the open water season, it is strongly influenced by the cold waters of James Bay. The

Moose River at Moosonee usually breaks up between the third week of April and the second week of May. Freeze-up occurs in late November. The average July highs and lows are 23°C and 11°C, respectively. The temperature difference between town and the coast can be 10-15°C, so it is wise to be prepared for cold, even if it is warm in town. In the winter, the bay freezes over and the climate is more continental. The average January highs and lows are -15°C and -25°C, respectively, with lows in the -30°C range common. Often, it is windy, especially on the coast, where it is flat and treeless, and because of the temperature differential between the cold water of James Bay and inland areas.

Hazards

James Bay and the lower Moose River experience tides that average about 2 m (6 ft) in height. One must be aware of potential tide height when anchoring boats, choosing campsites, and travelling. In particular, the fall is known for extremely high tides that can drown sites that are usually dry. Onshore winds and storms, again especially in the fall, can disrupt travel plans. Allow for extra days in case of weather-caused delays. It is best to hire a boat driver in town who is familiar with the area.

Walking trails are not maintained. Use them at your own risk. No matter what your mode of trav-

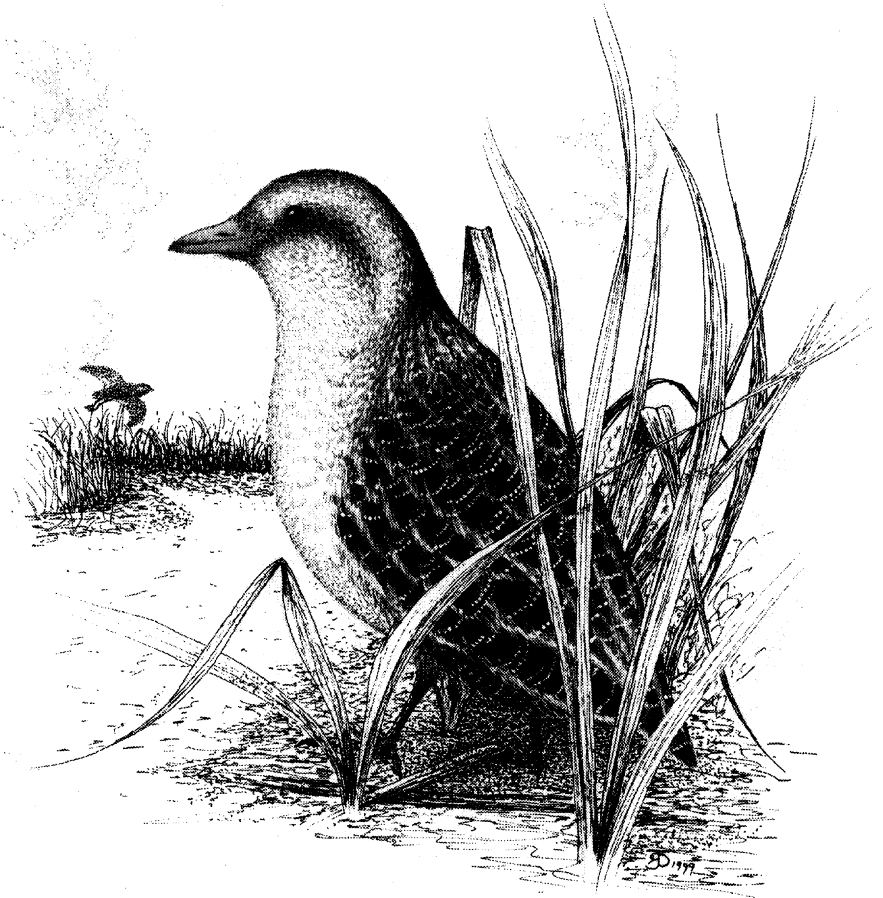


Figure 2: Yellow Rail. Drawing by *Ross D. James*.

el might be, let someone know where you are going and when you expect to return. Be sure to carry adequate supplies of food and water. From June to October, biting insects can be bad at any time. On the coast, salt marsh mosquitoes can be particularly bothersome in late summer. Appropriate clothing and repellent are essential.

Reporting Observations

The OMNR office in Moosonee maintains databases of bird, mammal, amphibian, reptile, and plant observations. We encourage visiting naturalists to submit lists of their observations to the office. Information required includes species, date, location (as specific as possi-

ble), breeding evidence, number and sex, observer(s) name(s), and any other comments. Of particular interest are species highlighted as being rare on the checklist, breeding evidence, and arrival, departure and peak migration dates. Observations can be dropped off in person at the OMNR office, or mailed to: Area Supervisor, Ontario Ministry of Natural Resources, Box 190, Moosonee, Ontario P0L 1Y0. It would also be a good idea to send a trip summary to Ron Ridout, Ontario's field editor for *Field Notes* (formerly *American Birds*), at Bird Studies Canada, Box 160, Port Rowan, Ontario N0E 1M0, to assist in his compilation of seasonal summaries.

Maps

The southern James Bay area is covered by the following National Topographic Series maps (1:250,000): 32M (Fort Rupert), 42P (Moosonee). The map index and maps can be ordered from the Canada Map Office, 615 Booth St., Ottawa, Ontario K1A 0E9 (Phone 613-952-7000; FAX 613-957-8861).

WHERE TO GO

The Coastal Zone

Known for its large concentrations of migrant waterfowl and shorebirds, and occasional observations of seabirds, the southern James Bay coast is an exceptional area for birding. A variety of shorebirds and waterfowl occurs here through

most of the open water season, with peaks for migration occurring in late May and July-September. The spring shorebird migration is brief, with most species passing through by early June. The fall migration is more extended. Failed breeders begin to show up in late June, and other adults appear shortly afterwards. Juveniles arrive later, with individuals of many species lingering well into October, and sometimes even as late as freeze-up. August probably is the best month for species diversity and numbers.

Disjunct populations of Nelson's Sharp-tailed Sparrow, Clay-colored Sparrow, Le Conte's Sparrow, Wilson's Phalarope, and Marbled Godwit breed here. The western element of the fauna is enhanced by occasional sightings of Yellow-headed Blackbird and Western Meadowlark. Marsh birds include American Bittern, Sandhill Crane and Yellow Rail. Among the raptors, Peregrine Falcon, Gyrfalcon, Rough-legged Hawk and Short-eared Owl are seen regularly during migration, and Ospreys nest in the area. Parasitic Jaeger is fairly regular in the fall, especially in August, and there is a November record for Pomarine Jaeger. For seekers of rarities, late fall has seen occurrences of Northern Fulmar, Northern Gannet and King Eider. Black Guillemot is somewhat regular, this being the best accessible location in Ontario to see this species.

White Top and Shipsands Island Migratory Bird Sanctuary

Located at the mouth of the Moose River, White Top, on the north mainland, and Shipsands Island are the most easily and cheaply accessed points along the coastal zone. They can be accessed by canoe. A water taxi also can be hired at the public boat dock in Moosonee for a charge of about \$20/person for a boat load (4-8 people) for a day trip. The 45-minute trip (by water taxi, much longer by canoe) follows the north shore of the river, where waterfowl, gulls, and shorebirds can be seen. White Top is accessed by travelling the tidal channel (Wavy Creek) between the island and the mainland, but knowledge of the tides is essential. To visit Shipsands Island, it is best to get dropped off on the river side of the island, past the last willows. Some birders consider White Top **the** place to go on the coast. Shipsands has some of the same habitats, but because it is an island, the amount of area and range of habitats that can be covered is more restricted. Also, White Top is better suited to camping, and the Baptist camp near the old check station is an even better camping location. Inexperienced visitors should consult with local people regarding camping sites that are above the reach of high tides. In late summer and fall, mosquitoes can be troublesome. Small tidal ditches drain the island and can be difficult

to cross, especially at high tide. Soft clay can swallow rubber boots.

Waterfowl hunting occurs in the areas adjacent to Shipsands Island. We discourage visits to the island longer than day trips during periods of hunting activity, to minimize disturbance in this much needed sanctuary. The peak time for hunting is from late August to late September.

North Point

North Point is situated about 30 km northeast of Moosonee. An unmaintained airstrip is located there, making for relatively cheap access by fixed-wing aircraft. Because of this, it is a popular area with hunters, and is recommended for visiting between June and mid-August (outside the hunting season). The site is located on a coastal ridge with trees and shrubs for shelter from the elements and dry campsites. Freshwater marshes are found on the inland side and salt marshes and mudflats occur on the seaward side.

Netitishi Point and East Point

These two sites are among the best birding places in Ontario. They are located roughly opposite each other on the west and east sides of Hannah Bay, east of Moosonee. Both locations provide exceptional vantage points for viewing the fall migration in southern James Bay, and have access to inland habitats (marsh, conifer forest), as well.



Figure 3: Nelson's Sharp-tailed Sparrow. Drawing by *Ross D. James*.

Astounding numbers of regular migrants such as Brant, Oldsquaw, King Eider, and Gyrfalcon, rarities such as Northern Fulmar and Black Guillemot, and unexpected passerines including Great Crested Flycatcher, Blue-gray Gnatcatcher and Field Sparrow have been seen here. Because they are more difficult to access, visits to these areas require more planning and preparation, and are more suited for longer stays. East Point is in the Hannah Bay Migratory Bird Sanctuary. However, Netitishi Point and adjacent areas have no restrictions on hunting. If you are visiting these sites during the hunting season,

care and consideration of the hunters' activities and needs will be reciprocated.

Townsites **Moosonee**

Stretched out along the bank of the Moose River, Moosonee has an excellent waterfront overlook (see Figure 4). From the first appearance of open water in mid to late April until early June, the waterfront should be a high priority for birders. Waterfowl seen here include all three species of scoter, Brant, and a wide assortment of dabbling and diving ducks. Herring, Ring-billed, and Bonaparte's Gulls are common

at most times. Little Gulls are common for about a week in late May or early June, with over 20 being present at times. Various unusual or vagrant species have been seen (Ross's, Great Black-backed, and Lesser Black-backed Gulls, and others). Terns (mainly Arctic, but also Common, Black, and Caspian) also occur regularly.

The townsite has a great deal of potential for interesting landbirds, especially during the migration periods. Empty lots, willow thickets, and weed patches can hold numerous landbirds, and have produced many rarities, including Prothonotary, Blue-winged, and Yellow-throated Warblers, Northern Wheatear (several), Blue-gray Gnatcatcher, Harris's and Lark Sparrows, Western Tanager, North-available in Ontario from Open Air Books & Maps in Toronto at 416-363-0719, or in the U.S. from ABA Sales, toll free at 800-634-7736, or from Buteo Books, toll free at 800-722-2460. Have your credit card ready. ern Mockingbird, and others. Common breeding species in town are Yellow Warbler, Tree and Cliff Swallows, Least Flycatcher, Song, Lincoln's, Fox, and Chipping Sparrows, and Purple Finch. In winter, Pine and Evening Grosbeaks, Common Redpoll (with occasional Hoary), and Downy and Hairy Woodpeckers, are common at feeders. A small Great Blue Heron rookery recently has become established at the upstream end of Butler

Island. It can be seen from Moosonee. Please do not disturb it. The willows and alders on the bank of the river are good for songbirds during spring migration as the river seems to be a migration corridor.

Proceeding south from the waterfront, Revillon Road curves to the right and becomes First Street. A road on the left begins behind the Fire Hall, and goes behind the main street. The road parallels Store Creek and has a mixture of open areas, willows and poplars. The road ends at the main bridge that crosses the creek. Between this road and the railroad tracks, there is an excellent feeder that is maintained year-round. The owner is an avid birder (and the dog is friendly). At the Fire Hall, you can also cross the bridge to the south side of Store Creek. Open fields on the left lead to the waterfront and through scattered willows that are good for songbirds during migration.

Walking north from the waterfront, you will encounter the barge landing. The Ontario Northland Railway track loops back from here to the train station, with a spur going to the airport. The airport is located at the far north end of town. Follow Ferguson Road North about 2 km from downtown or follow the railroad tracks. The large cleared area is good for raptors, Horned Lark and other species of open areas. An Upland Sandpiper was found here once.

Moosonee Quarry Road

Follow Ferguson Road South out of town (see Figure 5). At the first turn (to the right), there is a driveway to the weather station which is no longer in operation. The open field and bordering willows are worth checking for sparrows and warblers. The channel between Maidsmans Island and the mainland also can be checked for waterfowl. A trail off the left side of the driveway on the north side of the small creek leads to the waterfront as well, through poplars, and comes out again on Revillon Road South.

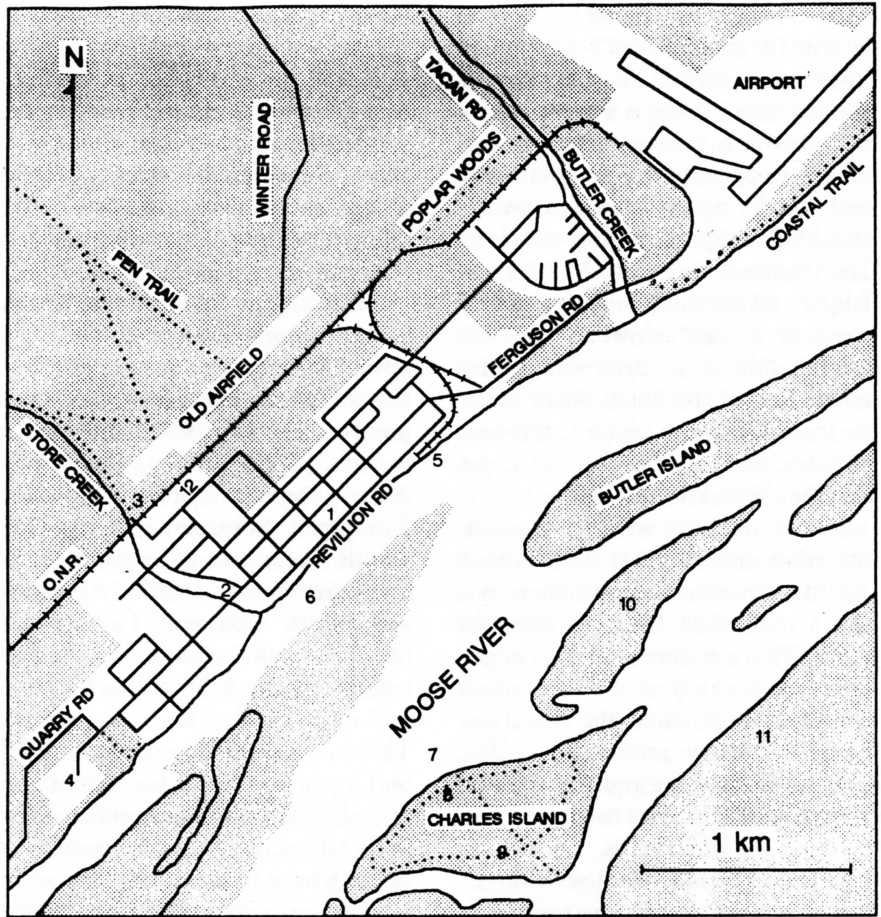
Past the old weather station, the road makes a left turn. About 300 m farther on the right, there is a short road that leads to the old dump. There is some debris to negotiate your way past, but the small cattail-lined pond at the back can have waterfowl and marsh birds. The cut line on the right of the driveway leads back to town and can be good for small birds.

The OMNR Junior Ranger camp (no longer in operation) is about 1 km south on the left. The river can be viewed and there is a short trail through poplar woods at the far end of the camp, where Black-capped Chickadee, American Kestrel and Long-eared Owl can be found. Three kilometres farther, after crossing a small creek, the dump road is on the right. The creek can be checked for waterfowl. The dump is good for gulls. Glaucous and Great Black-backed Gulls are

fairly regular, and a wide variety of vagrants has been seen. It is best to visit early in the day, before the traffic disturbs them. However, be aware that there is a population of Black Bears in the vicinity of the dump, so caution is advised. The dump has controlled access, and the road may be gated and locked.

Continuing south about 200 m past the quarry bridge, on the left, is a small turn-around area. A trail at the south end leads past two small ponds, then up a small hill into a mature poplar grove. The ponds often have ducks, Spotted Sandpiper, Sora, etc. The poplar woods are known for woodpeckers and other species of mature deciduous forest. Common Goldeneyes nest in the abandoned cavities. The trail loops through various habitats and ends back at the turn-around. The quarry itself has a creek, pond and open grassy areas. American Woodcock is uncommon in the area, but can be heard and seen displaying here in the spring. It also is a good area for collecting fossils. Barn and Cliff Swallows nest under the bridge.

A bicycle is a good way to visit the Quarry Road. In many places, it is lined with willows and alders that contain a lot of songbirds during migration. Another alternative to avoid having to walk the route twice is to have a taxi drop you off as far south as you wish to go, and then to walk back to Moosonee. In March and April, Boreal, Great



Legend:

- | | |
|----------------------------------|--------------------------|
| 1. Ministry of Natural Resources | 7. Tidewater Park dock |
| 2. Fire Hall | 8. Tidewater Park |
| 3. Water Tower | 9. Tidewater Trail |
| 4. Old Weather Station | 10. Moose Flats |
| 5. Barge Landing | 11. Moose Factory Island |
| 6. Public Dock | 12. Train Station |

Figure 4: Moosonee road map and walking trails.

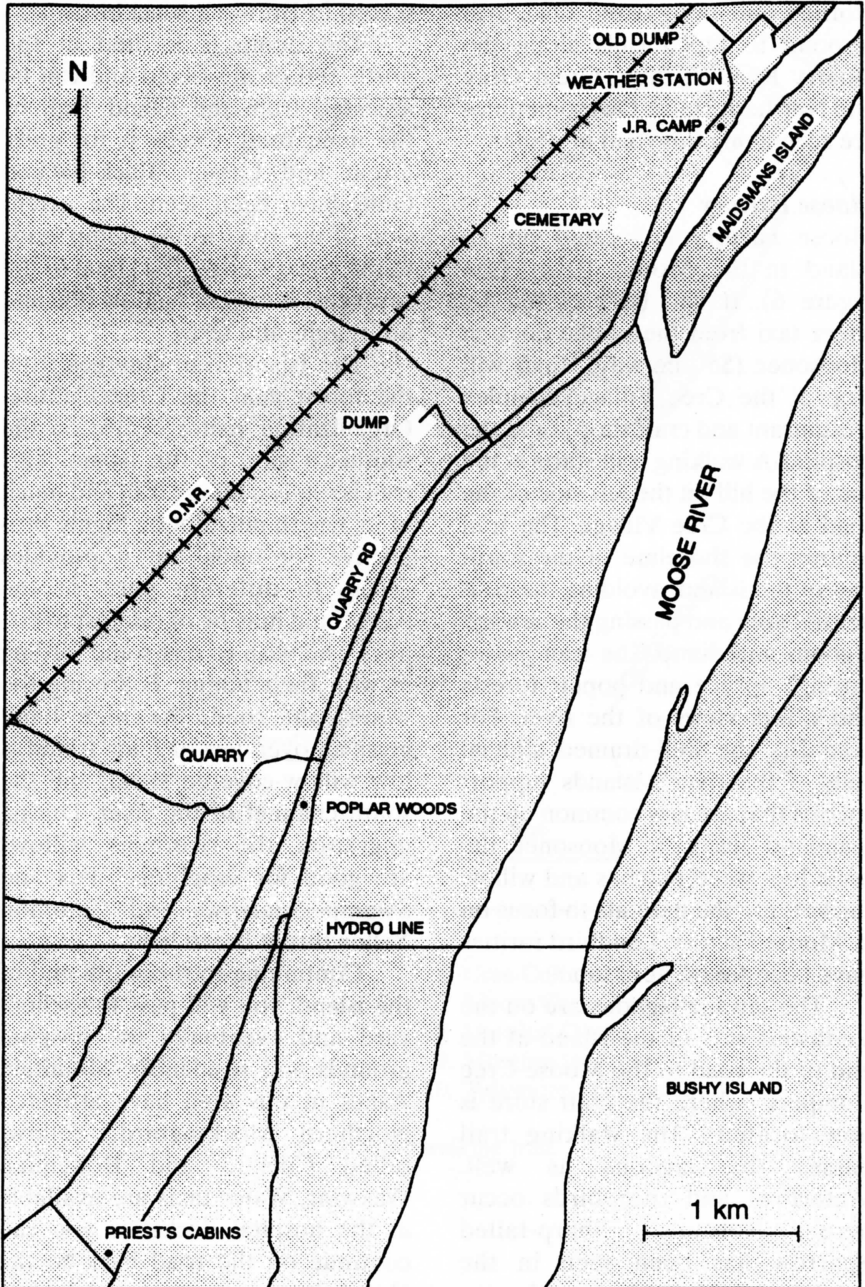


Figure 5: Moosonee Quarry Road.

Horned and Long-eared Owls will respond to taped calls along the Quarry Road at dusk. Great Gray and Northern Hawk Owl sometimes are seen along this road in winter.

Moose Factory

Moose Factory is located on an island in the Moose River (see Figure 6). It can be accessed by water taxi from the public dock in Moosonee (\$5 one way). Taxis will stop at the Cree Village complex (restaurant and craft shop) or at the hospital. A walking trail starts at the top of the hill on the left side of the road at the Cree Village. The trail follows the shoreline of the north end of the island, avoiding the residential area and passing the sewage lagoons and dump. The trail passes through spruce and poplar forests and offers views of the river. For botanists, the well-drained alluvial soils of the river's islands support species that are less common on the mainland. Just as in Moosonee, the open lots, weed patches and willow thickets are the habitats to focus on in Moose Factory. Landbird rarities have been found here too.

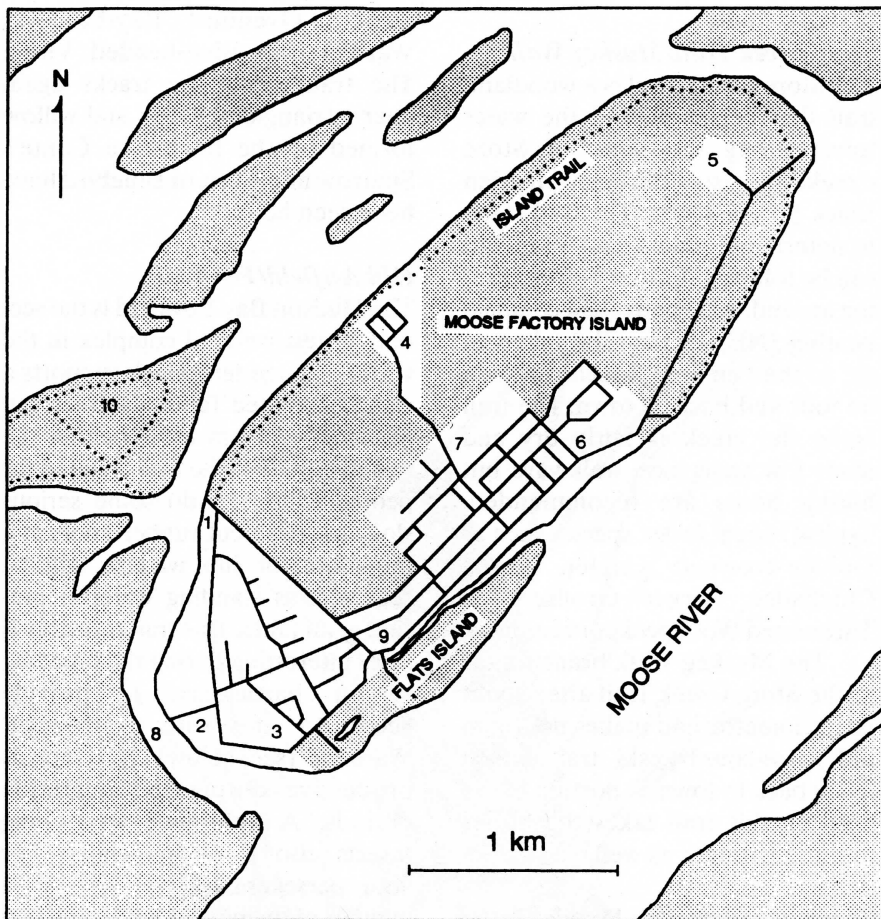
The sewage lagoons are on the southwest side of the island at the end of the road to the Moose-Cree Complex (where the craft store is now located). The walking trail passes the lagoons as well. Waterfowl and shorebirds occur here. Nelson's Sharp-tailed Sparrow has been seen in the adjoining field, and there is one

record of Brewer's Blackbird.

The dump is located at the north end of the island and can be accessed from the Island Trail or the main road. Check it for gulls. Great and Lesser Black-backed Gulls have been seen. The extension of the road to the dump leads to the water's edge. The shoal to the southeast is exposed at low tide and holds gulls and terns.

The Island Trail emerges from the forest near the Cree Cultural Organization visitor centre on the southeast side of the island. This trail is really a hiking trail and much of its length may not be highly productive for birds, but it provides access to different parts of the island, and may be of interest to visitors who wish to mix some birding in with their hiking. Following the waterfront road, the high bank gives an overview of Flats Island, a low willow-covered shoal, and the south channel of the river. During migration, the riverbank willows are good for songbirds. Fox and Swamp Sparrows and Common Yellowthroat breed here.

Continuing to the south end of the island, you will pass the school yard and eventually the hospital grounds and residences. Mountain Ashes in this area have attracted Northern Mockingbird, Yellow-billed Cuckoo and Bohemian Waxwing. Water taxis are available at the hospital docks, or you can continue on the road back to the Cree Village restaurant and docks.



Legend:

- | | |
|--------------------------|-------------------------------|
| 1. Cree Village and Dock | 6. Cree Cultural Organization |
| 2. Hospital | 7. Moose Cree Complex |
| 3. School Yard | 8. Hospital Docks |
| 4. Sewage Lagoons | 9. Museum Grounds |
| 5. Dump | 10. Tidewater Park and Trails |

Figure 6: Moose Factory road map and walking trail.

Walking Trails

Store Creek Trail/Muskeg Walk

The Store Creek Trail is a woodland trail that begins behind the water tower along the bank of Store Creek. It passes through riparian Black Spruce forest. The trail starts to deteriorate after about 5 km, but can be followed farther before turning around. Alternatively, a compass bearing (NE, 45°) can be taken to get to the Fen Trail, which can then be followed back to town. The trail along the creek is fairly dry and many low areas have walkways, but hiking boots are recommended. Typical boreal forest species such as Golden-crowned Kinglet, Boreal Chickadee, Spruce Grouse, and Three-toed Woodpecker occur here.

The Muskeg Walk branches off of the Store Creek Trail after about one kilometre, and makes use of an old cross-country ski trail, which loops back to town. A portion of the loop on this trail takes the birder into fen habitats, as well.

Tacan Road/Poplar Woods/Butler Creek

Butler Creek, at the north end of Moosonee, offers similar habitats as those on the Store Creek Trail. An unimproved road (Tacan Road) follows it for about 1 km. Then, a trail continues for about 5 km farther. On Tacan Road about 50 m past the railway crossing, a trail on the left parallels the railroad tracks through dry poplar forest. It is good for typical upland species such as Ruffed

Grouse, Ovenbird, Bay-breasted Warbler and Blue-headed Vireo. The trail meets the tracks again near a triangle of sedge and willow formed by the tracks. Le Conte's Sparrow and Eastern Bluebird have been seen here.

Old Airfield/Fen Trail

The Hudson Bay Lowland is the second largest wetland complex in the world. A large fen, which supports a stand of stunted Tamarack trees, can be accessed from trails behind the railway station. The trail is suited for people willing to do some serious slogging. High-cut rubber boots at a minimum, or hip waders, will be required, as standing water is present at all times. This trail probably is most interesting during the breeding season, particularly to provide access to sites with Connecticut Warblers (see below). It is not as productive during the migration periods. A tolerance for biting insects also is recommended. For your perseverance, you will get a glimpse of the type of landscape that dominates the Lowland interior.

Starting behind the water plant, a trail in the back right corner of the yard leads to an abandoned winter airfield. Several interconnected side trails start from the northwest side of the airfield and lead into the interior.

Deep in the pure Tamarack fen is a high breeding density of Connecticut Warbler (good luck seeing them!). Palm Warbler,



Figure 7: Le Conte's Sparrow. Drawing by Ross D. James.

Hermit Thrush and Gray Jay also occur here. The airfield itself is good for Lincoln's Sparrow and occasional raptors. Clay-colored Sparrow has been heard singing on the airfield.

For the winter visitor, travel is easier, as many of these trails get regular snowmobile traffic. Cross-country skis are useful to cover more distance. The species list will be short, but Northern Hawk Owl, White-winged Crossbill, Boreal Chickadee and Sharp-tailed Grouse may be seen.

Coastal Trail

Intended as an overnight backpacking route to the coast, the Coastal Trail has not been developed at this time, although plans are in the works to open and maintain it in the near future (check with the Moosonee Chamber of Commerce Tourism Committee). Although it can be used for this purpose, travel will be difficult, as creeks are not bridged and are subject to tides. The trail is not clearly marked and is poorly cleared. Considering the ease of accessing the coast by boat and the difficulties that may be encountered, it is recommended that only serious hikers attempt the entire trip. Notwithstanding the limitations, it is a good trail for day trips. Serious birders will not find the trail very interesting, but visitors with broader interests may find this hike worthwhile. The first several kilometres of the trail are fair-

ly dry, passing through spruce forest and stands of poplar, with frequent overlooks of the river.

The trail begins near the Moosonee airport and follows the bank of the Moose River. The entrance is near the fence on the east side of the road. The walking trail generally stays close to the river bank where drainage is best. The trail passes through a clearing at the end of one of the airport runways. Always check for aircraft before crossing, cross quickly, and cross at your own risk.

The River

The shoals and islands of the Moose River can be explored by canoe. Dredging in several of the shoals has left narrow channels. Charles Island, part of Tidewater Park, between Moosonee and Moose Factory, offers campsites and a walking trail. The trail passes through poplar-spruce forest and offers views of the river. When travelling on the river, always be aware of the tides and the weather. Strong winds and reversing currents can make progress difficult and conditions dangerous for the paddler.

Conclusion

This guide has provided you with a brief introduction to the birding opportunities and facilities available in the Moosonee/Moose Factory area. I hope that you will find it useful, and welcome any comments that you may have.

Acknowledgements

I would like to thank the reviewers, and particularly Alan Wormington, Doug McRae and John Romanow for their valuable comments on the text. Dan Byers produced the maps, and Ross James kindly provided the drawings.

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PUBLICATION NOTICE

Stopover ecology and habitat use of migratory Wilson's Warblers. 1998. By Wang Yong, Deborah M. Finch, Frank R. Moore and Jeffrey F. Kelly. *Auk* 115: 829-842.

This study of Wilson's Warblers (*Wilsonia citrina*) in New Mexico illustrates how neotropical songbirds may suffer from disturbance to migration habitats, in addition to the widely documented negative effects of habitat disturbance and fragmentation on the breeding and wintering grounds. Migration habitat requirements may differ between the sexes in spring, and among age classes in fall. The implication for conservation of these birds is that a broad range of migratory habitat types may be required.

When introducing this paper, Richard Hutto (*Auk* 115: 823-825) cautioned that songbirds exhibit important "differences between the sexes in habitat use, foraging behavior, stopover length, fat stores, and other characteristics during spring migration that appear to result from sex-related differences in breeding-season duties". In addition, "immature warblers, which are inexperienced compared with adults, are especially vulnerable to habitat disturbance at stopover sites during fall migration", and the resulting "insufficient fat stores can lead to energy depletion and/or 'exhaustion' that causes mortality during long flights across inhospitable habitats". *Ron Tozer*