Bird Observations from Trodely Island, James Bay, N.W.T.

by
Y.R. Tymstra

Introduction

Seventy-seven bird species were observed by the author and Darrell Parsons during a survey of Trodely Island, Northwest Territories from 19 to 29 June 1993. Trodely Island is situated in lower James Bay (52° 15' N, 79° 25' W), approximately 135 km northeast of Moosonee, Ontario, and 20 km north of Charlton Island (its closest neighbour). (Editors' Note: Although officially part of Northwest Territories, the James Bay islands are closely associated geographically and ornithologically with nearby mainland Ontario -- and hence of particular interest to the province's birders.)

The expedition was undertaken as part of the James Bay Islands Avifaunal Survey, a long-term series of investigations designed to discover more about the breeding distribution and migratory movements of birds in and around the islands of James Bay. This ornithological survey is believed to be the first ever done on Trodely Island. Indeed, other than Akimiski Island, few of the islands in James Bay have been explored to any extent, with the notable exception of the work of Manning (1981) on the Twin Islands. Other explorations included brief island visits by some of the Carnegie Museum Expeditions (Todd 1963), and short expeditions by Lewis and Peters (1941), Smith (1943), and Manning and Coates (1952). Many islands still remain totally unexplored ornithologically.

Description

Trodely Island is a roughly rectangular island measuring approximately 8 km long and 3 km wide. It is essentially an immense drift of sand, rising some 50 m above sea level. Sand cliffs ascend steeply from the beach on the south side while the north shore rises in a series of gentle terraces to a relatively flat interior plateau. The plateau is a dry, windswept plain, with patches of bare sand and a scant ground cover of lichens and low-lying shrubs such as Dwarf Birch (*Betula glandulosa*), Ground Juniper (*Juniperus communis*), and Black Crowberry (*Empetrum nigrum*). White Spruces (*Picea glauca*), up to 5 m high, dot the barrens. Except for a few Dark-eyed Juncos, and White-throated and White-crowned Sparrows, the interior was largely devoid of birdlife. Much richer was the dense, continuous band of taller White Spruces (growing to 20 m) that girds the island perimeter, widening to more extensive forests with lush moss-and-lichen carpets at the eastern and western ends of the island.

A cluster of small lakes is

positioned roughly in the centre of the island. The largest of these is about 300 m in diameter, and is flanked by a small tamarack bog. There are two smaller ponds near the west end of the island, around which were suitable nest trees for cavity-nesting ducks.

On the east side, there is a series of parallel wooded beach ridges, old shorelines presumably cast up by isostatic rebound. A small, interdunal "wet meadow" (measuring approximately 25 x 300 m) flanks the eastern shoreline. It was the only fresh water east of the central lakes, and as such, attracted a wide variety of passerines. This wet meadow contains various willows and sedges, and is bordered by a grassy dune to seaward and a row of spruces to landward.

Weather was mostly fine and sunny throughout the period with only one day of light rain and occasional periods of morning fog. Daytime high temperatures varied from 7° to 25° C, and from 1° to 12° C at night. When we arrived, there were still some remnant snowdrifts and sea-ice but these had all melted a week later. We often observed weather systems passing along the mainland while the bay itself remained clear and sunny. Prevailing winds were from the southwest.

Survey Methods

We sampled each of the island's major habitats, spending from 10 to 14 hours per day. Daily walks ranged from 6 to 17 km and consisted of several cross-island transects and coastal walks, as well as stationary surveys from points of land, monitoring movements of birds and marine mammals on the bay. Point Counts and Line Transects were attempted but we found the more productive habitats too small and disjunct to establish consistent census areas; we depended mainly on direct counting.

Our efforts were concentrated on the eastern half of the island but we walked the length of the island once. The last three days were spent waiting for an overdue aircraft which restricted us to short forays from camp.

Noteworthy Observations

A review of the ornithological literature for James Bay indicated several unusual and/or previously unpublished sightings made during our Trodely Island survey:

Common Eider: Up to twenty were seen daily, including one group of 18 males on 26 June. A female with five young not more than a few days old was seen swimming off the east shore on 28 June. This may be the earliest breeding record for James Bay and one of the more southern. On Gasket Shoal, 60 km WNW of Trodely Island, Manning and Coates (1952) found 200 nests; there, the first young appeared on 10 July. Other southern James Bay reports include nine flightless young on 27 September 1940 on Strutton Islands (Lewis and Peters 1941), and possible breeding on Charlton Island (Smith 1943).

Bufflehead: A male was spotted along the south shore on 19 June and a female was seen on 22 June

on one of the western ponds, where suitable nest trees exist. This appears to be the first published record for the James Bay islands, although it is regular on the neighbouring mainland (Wilson and McRae 1993).

Olive-sided Flycatcher: A single adult was seen flycatching from a 3 m spruce at the wet meadow on 23 June. This is the first published sighting for the James Bay islands, but it was not unexpected as this species is a confirmed breeder on the nearby mainland (Cadman et al. 1987).

Gray Catbird: A male was heard singing daily at the wet meadow throughout the survey period. We found it with a second bird, presumably a female, on 23 June, and the pair was subsequently seen together on several occasions. This species is rare but annual in the James Bay region, and there is one previous breeding record near North Point, Ontario (Wilson and McRae 1993). Manning (1981) observed two catbirds on North Twin Island on 5 June 1973.

Brown Thrasher: One bird was seen in the thickets surrounding the wet meadow from 19 to 21 June, and presumably the same individual was observed about a kilometre west of there on 20 June. It was not heard singing. While rare this far north, this species occurs annually in the Hudson Bay Lowland (Wilson and McRae 1993). Manning (1981) recorded this species on North Twin Island.

Bohemian Waxwing: A flock of four was observed on 22 June in small spruces near the west point. Seven birds frequented the woodlands near the eastern shore, 26 to 28 June. The only other published record for the James Bay islands was a partially feathered skeleton found near North Twin Island on 22 July 1973 (Manning 1981).

Cape May Warbler: A singing male was observed at the wet meadow on 21 June, and breeding was confirmed when a female carrying food was seen nearby on 23 June. This is apparently the first documented record for the James Bay islands, but it is regular on the mainland (Wilson and McRae 1993).

Black-throated Green Warbler: A male was seen at the wet meadow on 21 June. This is the first published record for the James Bay islands, but is not unexpected as this species is a confirmed breeder on the nearby Ontario mainland coast (Cadman et al. 1987). This may also be the first documented record for the Northwest Territories, east of the Mackenzie River (R.D. McRae, pers. comm.).

Species List

The seventy-seven species recorded during our ten day survey are listed below, with the order and common names following the American Ornithologists' Union Check-list (1983) and its supplements. Breeding status is based on criteria described for the *Atlas of the Breeding Birds of the Northwest Territories* (Cadman 1988). Ten species were "confirmed" as breeders (marked"*" below), twenty-five

species were found to be "probable" breeders (marked "+"), and seven more were "possible" breeders (marked"#").

Numbers in parentheses indicate the number of days (out of a total of ten) that a species was recorded, followed by the maximum one day count of individuals for that species (i.e., number of days / daily maximum).

Red-throated Loon:	(3 / 2)
Common Loon:	+ (10 / 17)
Canada Goose:	(9 / 400)
Green-winged Teal:	(1 / 1)
American Black Duck:	(9 / 120)
Mallard:	+ (7 / 6)
Northern Pintail:	+ (5 / 3)
Greater Scaup:	+ (5 / 23)
Lesser Scaup:	(1 / 1)
Common Eider:	* (10 / 20)
Oldsquaw:	(9 / 4)
Black Scoter:	(10 / 150)
Surf Scoter:	(10 / 45)
White-winged Scoter:	(10 / 200)
Common Goldeneye:	(10 / 450)
Bufflehead:	+ (2 / 1)
Hooded Merganser:	(1 / 1)
Common Merganser:	(7 / 2)
Red-breasted Merganser:	(10 / 8)
Osprey:	(2 / 1)
Bald Eagle:	(1 / 1)
Northern Harrier:	(1 / 1)
Rough-legged Hawk:	(1 / 1)
Merlin:	+ (8 / 2)
Willow Ptarmigan:	+ (1 / 2)
Semipalmated Plover:	(1 / 1)
Killdeer:	(3 / 3)
Greater Yellowlegs:	(2 / 1)
Lesser Yellowlegs:	(1 / 1)
Spotted Sandpiper:	# (1 / 4)
Whimbrel:	(2 / 2)
Common Snipe:	(1 / 1)
Ring-billed Gull:	(3 / 1)
Herring Gull:	(10 / 44)
Arctic Tern:	(10 / 145)
Black Guillemot:	(10 / 5)
Northern Hawk Owl:	(1 / 1)
Common Nighthawk:	(2 / 1)
Northern Flicker:	* (8 / 5)
Olive-sided Flycatcher:	(1 / 1)
Alder Flycatcher:	+ (3 / 3)
Tree Swallow:	(1 /1)
Gray Jay:	* (6 / 5)
American Crow:	+ (4 / 4)
Common Raven:	* (10 / 3)
Boreal Chickadee:	* (8 / 6)
Red-breasted Nuthatch:	+ (2 / 2)
Winter Wren:	+ (8 / 4)
Ruby-crowned Kinglet	+ (10 / 30)
Swainson's Thrush:	(1 / 1)
Hermit Thrush:	+ (9 / 3)
American Robin:	* (10 / 8)
Gray Catbird:	+ (10 / 2)
Brown Thrasher:	(3 / 1)
American Pipit:	# (3 / 2)
Bohemian Waxwing:	# (4 / 7)
Cedar Waxwing:	+ (8 / 13)
Tennessee Warbler:	+ (2 / 2)
Orange-crowned Warbler:	+ (4 / 2)
Yellow Warbler:	* (4 / 2)
Cape May Warbler:	* (2 / 1)
Yellow-rumped Warbler:	+ (9 / 15)
Black-throated Green Warbler:	(1 / 1)
Wilson's Warbler:	+ (2 / 2)
Chipping Sparrow:	+ (4 / 2)
Savannah Sparrow:	+ (10 / 20)
Sharp-tailed Sparrow:	(2 / 1)
Fox Sparrow:	* (10 / 10)
Song Sparrow:	# (2 / 1)
Lincoln's Sparrow:	+ (4 / 5)
Swamp Sparrow:	# (2 / 1)
White-throated Sparrow:	+ (10 / 25)
White-crowned Sparrow:	+ (7 / 12)
Dark-eyed Junco:	* (10 / 16)
White-winged Crossbill:	+ (10 / 325)
Common Redpoll:	# (7 / 25)
Pine Siskin:	# (2 / 4)

Additional notes were taken on the butterflies, molluscs, and marine mammals, listed below:

Molluscs:

Green Sea Urchin *Strongylocentrotus droebachiensis*
Small White Mussel *Macoma balticha*
Blue Mussel *Mytilus sedulus*
Iceland Scallop *Chlamys islandica*
Arctic Rock Borer *Hiatella arctica*
Iceland Cockle *Clinocardium cileatum*

Butterflies:

Old World Swallowtail *Papilio machaon*
Tiger Swallowtail *Papilio glaucus*
Grizzled Skipper *Pyrgus centaureae*
Arctic Blue *Plebeius aquilo*
Jutta Arctic *Oeneis jutta*

Marine Mammals:

Ringed Seal *Pusa hispida*
Bearded Seal *Erignathus barbatus*
Beluga Whale *Delphinapterus leucas*

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Y.R. Tymstra, 1209 Nottingham Drive, Sarnia, Ontario N7S 5B1