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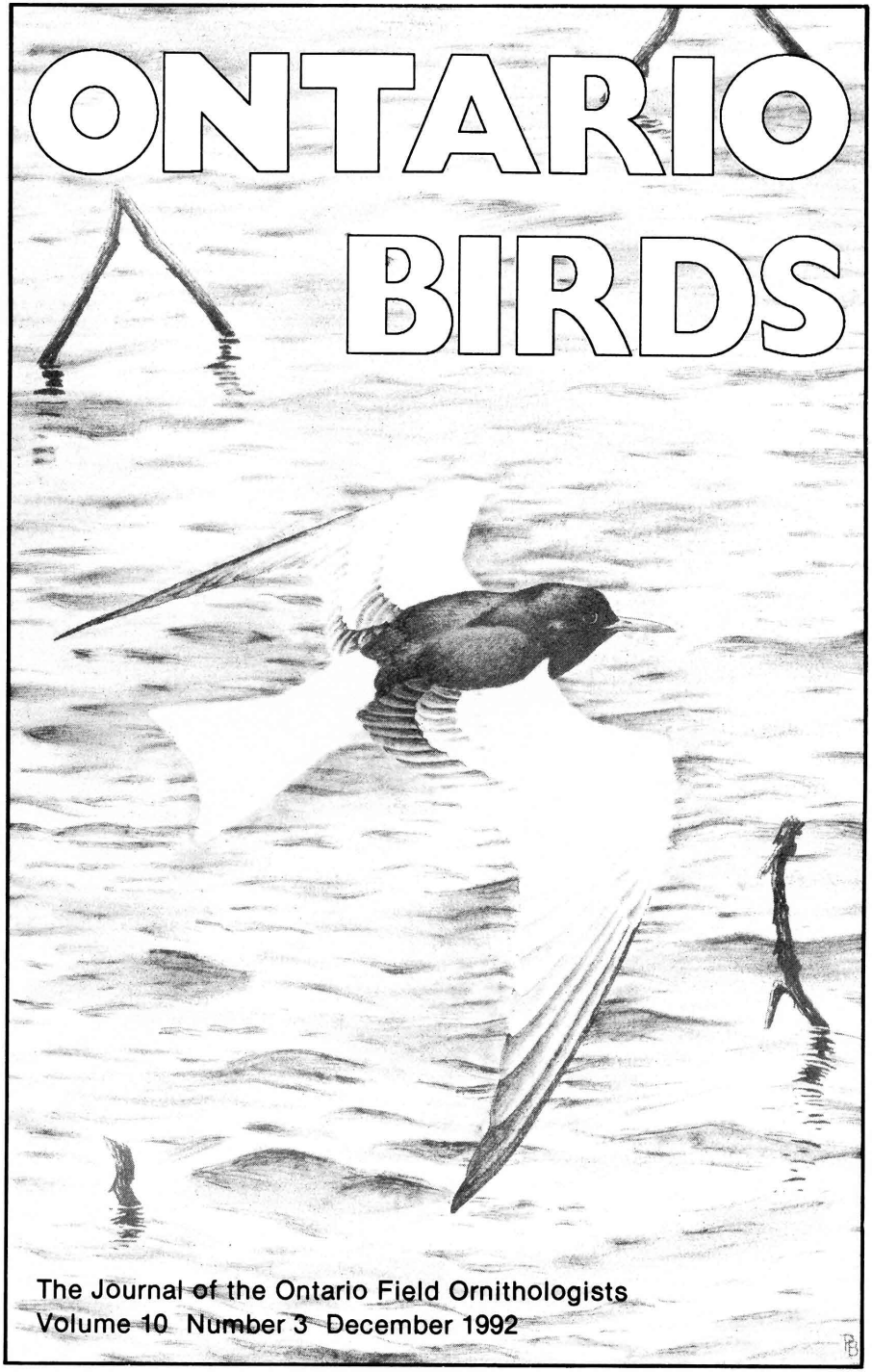

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White-winged Tern: New to Ontario

by
Y. Robert Tymstra

At about 1800 h on 8 May 1991, John Raven and I arrived at the Port Lambton sewage lagoons, Lambton County, Ontario. Several terns and gulls were hovering over the two nearly full ponds as we crested the dike and began our scan. A noisy flock of about 125 Black Terns (*Chlidonias niger*) hovered over the rectangular lagoons. To my surprise and delight, mixed in with the terns were at least three adult Little Gulls (*Larus minutus*) in breeding plumage. Two of these appeared to be paired and I relayed to John my hopes that they would breed at Walpole Island.

I scanned the Black Terns more carefully and found among them two Forster's Terns (*Sterna forsteri*) and six Bonaparte's Gulls (*L. philadelphia*). I remember thinking what a pleasing array the gulls and terns presented: all of the birds were some variation of black, grey, and white, flying against a grey overcast sky. Suddenly, another permutation of these colours caught my eye. One of the "Black Terns" had pale wings instead of the usual slaty-black and it sported a flashy white rump and tail. When the wings were in their upstroke, I noticed stark black wing-linings contrasting with pale grey primaries and secondaries. Although I immediately recognized it as a White-winged Tern (*C. leucopterus*), I was incredulous at first.

I raced back to the car to get my camera, looking briefly at a field guide to confirm my identification. When I returned to photograph the bird, I could not immediately relocate it (and just as there are few things more pleasurable than finding a new bird for the province, there is nothing more horrifying than not being able to document it). My fears were allayed, however, when I rediscovered it a minute later. I photographed the tern as it circled the north lagoon in an oval pattern, coming as close as 15 m.

After studying it for about fifteen minutes, we left the lagoons to notify the birding community. Four local birders managed to see it before dark and hundreds more descended upon the lagoons in subsequent days.

It ranged more widely during the following days, and in addition to continuing to frequent the Port Lambton lagoons, was spotted at the Sombra sewage lagoons 6 km to the north, and at least once over the St. Clair River north of Walpole Island. It was last seen on 12 May by Jon L. Dunn *et al.* at Port Lambton (not to 14 May as published by Ridout, 1992).

A White-winged Tern, presumably the same bird, showed up a few days later at Long Point, Ontario. On 15 May, Tim Sabo heard

a call reminiscent of a Little Gull at Big Creek National Wildlife Area, Haldimand-Norfolk R.M., and looked up to see a White-winged Tern. It was subsequently observed by dozens of people in fairly open cat-tail marsh enclosed by berms, and was seen until the evening of 19 May (Tim Sabo, pers. comm.).

Description and Behaviour

The bird was easy to spot among the dozens of uniformly dark Black Terns with which it was flying. The pale wing-linings and slaty upper wing surfaces of the Black Terns were almost a negative image of the White-winged Tern's wing pattern. The latter species' black wing-linings and axillaries contrasted strongly with its light grey secondaries and tertials. The primaries were silvery-grey with the outer feathers edged black. The bold white leading edge of the inner forewing was prominent in flight.

The head, neck, and underparts to the vent and flanks were jet black. Its black mantle blended into a duller sooty black on the lower back. In bright contrast, its lower vent, under tail-coverts, tail and rump were snowy white. Its bill was black.

It seemed somewhat stockier and shorter than the Black Terns. Harrison (1983) states that both species have similar length and wingspan but the slimmer build, longer bill, and proportionally longer, more pointed wings and tail of the Black Tern make the shorter-billed White-winged Tern appear heavier and larger bodied.

In flight, the White-winged Tern seemed more purposeful and less buoyant than the Black Terns, with shallower, more powerful wing beats. Cramp (1985) says the White-winged Tern has a "flight of similar style to *C. niger* but its shallower wing-beats produce (a) rather steadier track". During the period of first sighting it continually flew an oval track inside the circumference of one of the lagoons, occasionally hovering and dipping to pick insects from the water's surface. Unlike the noisy Black Terns, it was silent.

Although it flew with the Black Tern flock, its motions seemed quite independent of its companions; no interaction between the two species was observed. In the Palearctic, the White-winged Tern is a sociable species that commonly mixes with Black Terns and Whiskered Terns (*C. hybrida*) during migration and for feeding (Cramp 1985).

At Long Point, Tim Sabo observed the tern aggressively courting Black Terns, carrying minnows and "churring" as it flew. Sabo said it was an efficient and skilled feeder, successfully catching a fish on every observed attempt.

Distribution and Extralimital Records

The White-winged Tern is an Old World species, breeding on inland marshes from Hungary east across Asia to central Russia and southern China. It has made attempts at breeding recently in France, Germany, Belgium, and Sweden (Harrison 1983). Most Eurasian populations winter in central and southern Africa while Asian breeders move to southeast Asia and northern Australia. A few winter in west African coastal areas and perhaps these birds may be the main source of North American records. They are

numerous in Senegal and abundant in the upper Niger region in Mali during the winter months (Cramp 1985).

The White-winged Tern has been recorded more than three dozen times in North America. Its first documented occurrence on the continent was a bird seen at Lake Koshkonong, Wisconsin on 5 July 1873 (Bent 1921). After an absence of almost a century, a White-winged Tern was found at Chincoteague NWR, Virginia in 1963 and has since been recorded almost annually in various east coast locations with dates ranging from 8 May to 17 September. Other individuals have been recorded in Indiana, Vermont, New York, Alaska, and the West Indies. A list of records appears in Table 1.

The first Canadian record was a bird at Grand Point, Grand Lake, Queen's County, New Brunswick on 27-30 July 1968 (Godfrey 1986). Since then, the White-winged Tern has appeared at four other New Brunswick locations and annually at Saint-Gédéon, Quebec, from 1985-1987. The Quebec bird, a female, successfully mated with a Black Tern producing three offspring in 1985 (Yank and Aubry 1985). There is a possible sight record from Newfoundland.

Discussion

The field marks observed were classic for White-winged Tern in definitive alternate (adult breeding) plumage. Sexes are similar but females tend to have less gloss on the head, scapulars and underparts are slightly tinged slate-grey, and often have varying amounts of light grey wash on the tail (Cramp 1985). The Ontario bird's clean black-and-white plumage and aggressive behaviour at Long Point would seem to indicate that it was a male.

In breeding season, the White-winged Tern's bill is usually dark red or black with a crimson tinge (Cramp 1985). Apparently 10-15% of White-winged Terns in full alternate plumage have solid black bills instead of red (*fide* Paul Holt, *via* Jon L. Dunn, pers. comm.). Both the Port Lambton and Long Point birds had dark bills and, considering the proximity of locations and dates, are likely the same bird.

Much discussion has taken place as to its possible origins. Boyle *et al.* (1989) speculate that White-winged Terns reach North America after joining up with Black Terns of North American origin on wintering grounds off the west African coast. Certainly the strong Guinea and North Equatorial currents, with prevailing flows from east to west, could assist birds in their move towards the Americas. This could account for the predominance of spring and summer records along the east coast of North America. A Siberian source is unlikely given the early date and distance involved.

The only late fall records are from the West Indies. It is interesting to speculate about the destinations of southbound North American White-winged Terns. Do they return to Africa or spend the winter on the South American coasts with Black Terns? (The White-winged Tern has not yet been recorded from South America).

In North America, some birds have exhibited remarkable site-fidelity. Some of the Chincoteague, Virgina, and Little Creek, Delaware

Table 1: North American Records of White-winged Tern.

Dates	Location	Source
Canada		
1968 27-30 July	Grand Pt., Grand L., Queen's County, N.B.	(Godfrey 1986)
1971 23-26 May	McGowan's Corner, N.B.	(Finch 1971:707)
1971 6-10 July	Portobello Creek, Sunbury County, N.B.	(Finch 1971:835)
1976 19 August	Miscou Island, N.B.	(Godfrey 1986)
1985 30 May-summer	Saint-Gédéon, Quebec	(Yank and Aubry 1985)
1986 18 May-summer	Saint-Gédéon, Quebec	(Yank and Aubry 1986)
1987 26 May-6 June	Saint-Gédéon, Quebec	(Yank *et al.* 1987)
1988 16 June	St. Paul's, Nfld. (possible sight record)	(Mactavish 1988)
1988 9 July	Cap Pele, N.B.	(Mactavish 1988)
West Indies		
?	Great Inagua, Bahamas	(AOU 1983)
1888 24 October	Barbados	(Bent 1921)
1986 Fall	St. Croix	(Norton 1987)
Northwest		
1976 12 July	Nizki Island, Aleutians, Alaska	(Gibson and Byrd 1976)
Inland U.S.		
1873 5 July	Lake Koshkonong, Wisconsin	(Bent 1921)
1979 17 July	Gary, Indiana	(Kleen 1979)
1987 12 June	White River Junction, Vermont	(Kibbe 1987)
1991 19 June	Rochester, New York	(Paxton *et al.* 1991)
East Coast U.S.		
1963 16 May-early Aug.	Chincoteague NWR, Virginia	(Kain 1987)
1963 11-18 July	Salisbury, Massachusetts	(Bagg and Emery 1963)
1964 16 May-9 Aug.	Chincoteague NWR, Virginia	(Kain 1987)
1965 8-30 May	Chincoteague NWR, Virginia	(Kain 1987)
1974 7 July-Sept.	Chincoteague NWR, Virginia	(Scott and Cutler 1974)
1974 13 July-17 Sept.	Little Creek, Delaware	(Scott and Cutler 1975)
1975 10 July-27 Aug.	Chincoteague NWR, Virginia	(Scott 1975, 1976)
1977 24 July-Aug.	Little Creek, Delaware	(Buckley *et al.* 1977, 1978)
1977 15 Sept.	Jekyll Island, Georgia	(LeGrand 1979)
1978 19 July-late Aug.	Little Creek, Delaware	(Smith *et al.* 1978)
1980 7-17 July	Chincoteague NWR, Virginia	(Armistead 1980)
1980 19 July	Little Creek, Delaware	(Boyle *et al.* 1980)
1983 10 May	South Cape Hook, New Jersey	(Boyle *et al.* 1983)
1983 17 May	Sandy Hook, New Jersey	(Boyle *et al.* 1983)
1987 11-19 July	Little Creek, Delaware	(Paxton *et al.* 1987)
1988 30 July-28 Aug.	Ted Harvey WMA, Delaware	(Paxton *et al.* 1988)
1989 4-10 June 17 July-Aug.	Cape May, New Jersey	(Boyle *et al.* 1989)
1989 23 July-Aug.	Bombay Hook, Delaware	(Boyle *et al.* 1989)
1990 22-29 July	Little Creek, Delaware	(Boyle *et al.* 1990)
1991 12 May	Cedar Beach, New York	(Boyle *et al.* 1991)

terns have returned to the same ponds repeatedly and one returned to St. Gédéon, Quebec three years in a row. From 7-8 May 1992, a White-winged Tern again appeared at the lagoons at Port Lambton and Sombra, Ontario, almost exactly a year after the first sighting. Dennis Rupert said it had jet black primaries and crisper colours than the previous year's bird and described its call as a softer, less harsh version of the Black Tern's. On 2 June, a White-winged Tern was seen at Windermere Basin, Hamilton, Ontario. (The 1991 records were submitted to the Ontario Bird Records Committee and have been accepted, but 1992 sightings are awaiting review).

Acknowledgements

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Green Violet-ear: First for Canada

by
Nick Escott

As Bird Records Chairman of the Thunder Bay Field Naturalist Club, I occasionally receive reports of birds unexpected in our area, some of which turn out to be false alarms. So when a club member phoned on the evening of 2 July 1991 reporting a Green Violet-ear (*Colibri thalassinus*) at a local feeder, I was skeptical. Nevertheless, I knew the bird must be something unusual, since it was said to be quite different from the Ruby-throated Hummingbird (*Archilochus colubris*), the only regular hummingbird in our area.

I went immediately to the location of the sighting, a home on the outskirts of Kakabeka Falls. This is a town on the Trans-Canada Highway about a half-hour drive west of Thunder Bay on the north-west shore of Lake Superior. The area is characterized by rolling hills covered by mixed coniferous and deciduous forest, at the northern edge of the Great Lakes - St. Lawrence Forest Region. There are some clearings occupied by scattered farms and rural homes. The house where the rare hummingbird had been seen had a fairly large open garden, with stands of tall jack pines (*Pinus banksiana*) at various distances in all directions, giving the area a decidedly coniferous look, somewhat reminiscent of Mexico's highland pine forests.

The homeowner, Bob Broome, had first seen the bird Sunday, 30 June, at his hummingbird feeder, which was hanging under the eaves of the house, in front of the kitchen window. His sister-in-law, Ellen Stewart, subsequently observed the bird, identified it as a Green Violet-ear using her National Geographic Field Guide, and phoned me.

I met Bob and Ellen on my arrival, and we waited until dark, but all we saw was a Ruby-throated

Hummingbird at the feeder.

The next morning I went back at 0645 h and within 5 minutes the Green Violet-ear appeared. It frequently hovered at the feeder, and between visits would perch in a nearby maple (*Acer* sp.) tree. It chased the Ruby-throat, and also a pair of Chipping Sparrows (*Spizella passerina*) that frequented the tree.

It was a large hummingbird, twice the size of the Ruby-throated Hummingbird. It was green all over except for bright blue ear patches extending from the bill to behind the eye, which appeared black at some angles. There was also a large round bright blue patch on the lower breast. The undertail coverts were pale gray-brown, and there was a wide blackish subterminal band on the dorsal aspect of the tail, with a narrow pale terminal band. The wings were dull blackish-brown, and extended to the end of the tail when the bird was perched. The bill was at least as long as the head, black, and slightly decurved. The eye was at the top of the blue ear patch and was black. The bird occasionally uttered one or a pair of high-pitched chipping notes.

About 15 people saw the bird on 3 July, and attempts were made to photograph it. The bird fed heavily all day at the feeder, until close to dusk, and was not particularly bothered by the attention, including a photographer's flash. The next morning, 4 July, it was raining heavily, and the Green Violet-ear did not reappear. It was not seen again.

The weather prior to this occurrence was as follows. A high pressure system dominated northwestern Ontario in late June, extending down to Kansas. On the morning of 26 June, a low pressure system moved in, and by that evening stalled near Geraldton, north of Lake Superior. Strong southwest winds up to 40 km/h coming from at least Oklahoma funneled up to Lake Superior in a wedge formed between the warm front extending from Geraldton toward Sarnia and a cold front extending from Geraldton towards Atikokan. We had 25.4 mm of rain and only 1 hour of sunshine on 26 June, and the next day (27 June) was very hot, with a high of 29.3° C, and strong west-southwest winds. The low pressure system finally moved to the east late in the afternoon of 27 June, and on 28 June another high pressure area descended on northwestern Ontario and dominated the weather for the next few days, with local thunderstorm activity, showers, and cool temperatures.

Unfortunately, the flash photographs could not be developed. The only extant photographs were taken through the kitchen window, and show the bird's silhouette only. These photographs, along with three written reports with sketches, were submitted to the Ontario Bird Records Committee, and were subsequently accepted (Bain 1992).

The Green Violet-ear is a common breeding bird of the highlands of central and southern Mexico, Central America, and South America to Bolivia and Brazil. In Mexico it prefers oak-pine forests and cutovers (Johnsgard 1983). It is to some degree migratory, with females, young and some males from the northernmost Mexican populations moving southward at the beginning of the dry season in October, and

returning to the breeding grounds in July (Johnsgard 1983). Sexes are similar, with the females slightly smaller and duller than the males.

There are several subspecies of the Green Violet-ear. Mexican birds (*C. t. thalassinus*) have the most prominent blue spot on the breast. South American birds (*C. t. cyanotus* and *C. t. crissalis*) lack this patch, and Central American birds (*C. t. cabanidis*) are intermediate. Only *C. t. thalassinus* is migratory.

The Sparkling Violet-ear (*C. coruscans*) looks almost identical to the Mexican Green Violet-ear, but is much bigger (15.5 cm) (Hilty and Brown 1986), with the blue ear patch extending under the chin to the other side. It inhabits the Andes from Colombia to Argentina, and is non-migratory, although it changes elevations seasonally.

The possibility of this being a Sparkling Violet-ear was ruled out by measuring the bird in the photos in comparison to the known dimensions of the feeder. This calculation gives the bird a length of 11 to 12 cm, which compares exactly to the published length of the Green Violet-ear (11.7 cm) (Hilty and Brown 1986). We also entertained the idea that this bird could have escaped from captivity, but a survey of Thunder Bay pet stores and greenhouses failed to turn up any evidence of hummingbirds ever having been kept here. In addition, the prominent blue breast spot ruled out the South American subspecies, which are the ones usually imported into the U.S. (J.V. Remsen, pers. comm.).

This is the first record for Canada; however there are several for the United States (Table 1). Texas has the most, with 10 accepted records prior to 1991 (Greg W. Lasley, pers. comm.), and two additional 1991 records (Lasley and Sexton 1991). Arkansas has had four records since their first in 1984 (Max Parker, pers. comm.), and North Carolina had one in October 1987 (John Gerwin, pers. comm.). California has had two records, but both were rejected narrowly by the California Bird Records Committee, one because it may have been a South American bird escaped from captivity, and the other due to the brevity of the description and the lack of photographs, which had been obtained, but lost (Roberson 1986).

The Ontario record shares some features with the U.S. occurrences. First, most records have been in the spring and summer between April and August (see Table 1). Second, most have been the Mexican subspecies (*C. t. thalassinus*); and third, the majority have appeared in hilly to mountainous areas (Remsen, pers. comm.).

We suspect that this bird got caught up in a fast-moving weather system while migrating back to its breeding range in the highlands of Mexico. It shot up through the central U.S. to southern Canada, probably arriving in our area on 26 or 27 June, and found a "home-like" atmosphere in Kakabeka Falls. We believe its disappearance from our area was natural, and had nothing to do with the attention paid to it 3 July by birders and photographers.

Table 1: Green Violet-ear Records from North America north of Mexico.

Discovery Date	Location	County	State/Prov.	Reference
Apr. 14 1964	San Benito	Cameron	Texas	Oberholser 1974
Apr. 21 1991	San Benito	Cameron	Texas	Am. Birds 45: 471
May 6 1980	McAllen	Hidalgo	Texas	Am. Birds 34: 795
May 12 1977	Austin	Travis	Texas	Am. Birds 31: 1159
May 14 1983	San Marcos	Hays	Texas	Am. Birds 37: 889
May 21 1976	Wimberley	Hays	Texas	Am. Birds 31: 199
May 21 1991	Helotes	Bexar	Texas	Am. Birds 45: 471
May 26 1981	Lake Jackson	Brazoria	Texas	Am. Birds 35: 841
June 2 1989	Arkadelphia	Clark	Arkansas	Am. Birds 43: 1328
June 3 1989	Brownsville	Cameron	Texas	Am. Birds 43: 1340
June 22 1989	Sinton	San Patricio	Texas	Am. Birds 43: 1278
June 30 1991	Kakabeka Falls	Thunder Bay	Ontario	
July 3 1975	Wimberley	Hays	Texas	Am. Birds 30: 96
July 6 1990	Furton	Newton	Arkansas	Am. Birds 44: 1147
July 11 1961	Santa Ana NWR	Hidalgo	Texas	Oberholser 1974
Aug 4 1990	Rogers	Benton	Arkansas	Am. Birds 45: 116
Aug 18 1977	Berkeley	Alameda	California	W. Birds 17: 73
Aug 25 1969	Austin	Travis	Texas	Oberholser 1974
Aug 31 1977	Mt. Pinos	Kern	California	W. Birds 17: 73
Oct 7 1984	Fort Smith	Crawford	Arkansas	Max Parker
Oct 21 1987	Asheville	Buncombe	N. Carolina	John Gerwin

Note: The two records from California were not accepted by the California Bird Records Committee, but at least one is probably valid (see text).

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Black Rail: New to Ontario and Canada

by
Paul D. Pratt

14 June 1987. There I was, out prowling the back roads of Bentinck Township, Grey County after midnight, choosing direction at random as each intersection appeared. Anything to avoid the crowd back in Durham which had gathered for my grandmother's funeral. Clear, still nights like this are perfect for picking out the distant calls of herps so I decided to look for wet spots and record calling frogs for the Ontario Herpetofaunal Summary. At 20 minutes after midnight I stopped the car at an intersection which had a few marshy spots. Even before opening the car door I heard an odd distinctive call. My first thought was that I must be confusing the call of some familiar species. Is this really happening? Is this really a Black Rail? I knew there were no accepted records for this species (*Laterallus jamaicensis*) in Canada and that I was alone, without binoculars, boots, tape recorder or fellow birder. I nearly had a fit!

After locating the calling bird in a roadside ditch I returned to Durham to pick up Marg Catton and Terry Pratt. The rail was still calling persistently when we returned. The bird gave two (sometimes three) loud whistle-like calls on the same pitch followed by a gravelly, lower pitched "dew" (the typical "kick-ky-dew" call). This call was repeated every three to five seconds. Shining the flashlight often resulted in the abrupt cessation of calls for 5 minutes. Terry was satisfied with hearing the bird (oh, to be so blasé!) but Marg and I desperately wanted to see it.

I have used a technique which works very well for seeing Yellow Rails (*Coturnicops noveboracensis*) (Pratt 1981) and reasoned it might also work with this species. After much walking back and forth along the road, Marg and I triangulated the bird's location, and slowly entered the ditch. We estimated that the bird was three times more distant than one would guess from listening at a single point. We were within 10 m of the bird when it stopped calling for several minutes. We waited very quietly until the bird resumed calling and cautiously approached another 5 m. The calls stopped and again we stood still (without using a flashlight and tolerating the mud easing up past our ankles). The calling resumed but our first attempt to spot the bird with the flashlight missed and we had to wait once more. We finally spotted the bird 3 to 5 m away in a small opening in the mat of dead cattails. The most obvious and striking features of the bird were its small size, smaller than a young Red-winged Blackbird (*Agelaius phoeniceus*) seen moments before, and the abundant white spots/flecks covering the upper body and flanks. The bird remained in full view for about 10 seconds before it slowly walked into the cattail mat.

We left at 0145 h, ecstatic but with serious thoughts concerning the disturbance a descending horde of people would have on the bird,

especially during the breeding season. I had only recently heard the story of a Black Rail in California which was trampled by birders, and reluctantly decided that this sighting could not go out on the hot-line.

I returned at mid-day to photograph the site. A truly nondescript, typical roadside ditch dominated by a heavy mat of last year's cattails, about 10 m wide, very shallow with tiny pools of open water. The adjacent, uncut, low pasture supported birds such as Bobolinks (*Dolichonyx oryzivorus*) and Upland Sandpipers (*Bartramia longicavda*).

Calling was now much more intermittent, with only six short calling periods between noon and 1406 h. The bird was moving east along the ditch bordering Hwy. 4 and over the period of observation, it travelled about 75 to 100 m. Despite several attempts to position myself ahead of the bird and at a point where the vegetation was fairly open, it always managed to get by without being observed. One brief period of calling was recorded with an inexpensive, borrowed tape recorder.

I returned to the site on 18 June and searched for the bird both at night and during the day without success. The pasture had been mowed and the ditch had dried up during the hot, dry period between visits.

The documentation for this record along with a duplicate of the audiotape has been deposited with the Royal Ontario Museum archives. Although this is the first confirmed record for Ontario (Curry 1991), this species has been reported on many past occasions (James 1991).

The earliest report of Black Rail for Ontario was a specimen taken near Ingersoll by Dr. T.J. Cottle in 1857 (Cottle 1859). Thomas McIlwraith (1894) in *The Birds of Ontario* stated "I have not seen the specimen, but ...I knew Dr. Cottle and feel sure that no mistake would be made in the identification". The record was also accepted by J.H. Fleming and included in the *Catalogue of Canadian Birds* (Macoun and Macoun 1909). Interestingly the rolling terrain about Ingersoll is very similar to the Grey County site. Suitable habitat in the form of small marshes and sedge meadows are numerous in both areas. Unfortunately the specimen was never examined by a competent authority.

The second report described four birds shot 18 August 1874 and mentioned several others seen later that year by C.W. Nash (1894) in the Dundas Marsh.

The third report was of a bird seen "at the mouth of the St. Clair" in June (year not specified) by W.E. Saunders (Macoun and Macoun 1909). Saunders did not include this species in his list of birds from western Ontario (Morden and Saunders 1882).

Black Rails have also been reported without documentation at Point Pelee National Park on 17 May 1958 (Axtell 1969), Rondeau Provincial Park on 24 May 1951 and 17 August 1985 (Baillie 1951; P.A. Woodliffe, pers. comm.), Erieau in 1921 (McKeough and Smith 1924) and Westover on 1 July 1959 (Speirs 1959). A report from Long Point on 10 June 1991 was accepted by the OBRC as the second confirmed Ontario record (Bain 1992).

The rarity and typically cryptic nature of the Black Rail make documentation of this species particularly difficult. This first accepted sighting of Black Rail for Ontario turned an otherwise sombre weekend into an extraordinary event.

Acknowledgements

Thanks to Craig Campbell for historical information and Karen Cedar and Jo Barten for their many constructive comments.

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Publication Notice

Ontario Nest Records Scheme: Twenty-third Report (1956-1991). 1992. By *George K. Peck.* Royal Ontario Museum, Toronto, Ontario M5S 2C6. No charge.

This report summarizes nest record card data submitted over the previous breeding season (1991). It also tabulates the total number of nest record cards on file for each species known to nest in Ontario, and provides a breakdown by geographical area (county/district/regional municipality) of the number of species recorded on cards in this database.

Ontario's Cavity-Nesting Birds

by
Christy MacDonald

Introduction

Standing dead trees (snags) play an essential role in the provision of nesting, roosting, denning, perching, and feeding sites for a variety of Ontario birds and mammals. Approximately 85 species of birds in North America either nest or feed in snags, and these birds often represent 30-45% of a forest bird community (Scott *et al.* 1977). Thirty-eight species of Ontario breeding birds are to some degree dependent upon snags for nesting (see Table 1).

The Role of Cavity-Nesting Birds in Ontario Forests

Cavity-nesting birds can be separated into two categories: primary excavators and secondary cavity-nesters. Primary excavators are those species which excavate a nesting or roosting cavity in a live or dead tree. The species belonging to this group are largely non-migratory, except Common Flicker (*Colaptes auratus*), Yellow-bellied Sapsucker (*Sphyrapicus varius*) and Red-headed Woodpecker (*Melanerpes erythrocephalus*), and mainly insectivorous. Insectivorous birds play an important role in a forest community by influencing destructive insect populations (Koplin 1972; Dickson *et al.* 1979; and Temple *et al.* 1979) in three ways: (1) directly through consumption, (2) indirectly by spreading pathogens to insect populations and (3) by altering the insect microhabitat.

Woodpecker populations in particular have been known to exhibit functional and numerical responses to localized outbreaks of insect infestations. Kendeigh (1947) documented increased consumption of spruce budworm (*Choristoneura fumiferana*) by woodpeckers during an outbreak in Ontario forests. Besides accelerating the decline of an outbreak, and perhaps more importantly, insectivorous birds play a major role in the retardation of insect populations before they reach outbreak levels. Species most involved in this respect are non-migratory residents like woodpeckers, chickadees (*Parus* spp.) and nuthatches (*Sitta* spp.). These birds have the greatest impact on insect populations during the winter when their diet consists mainly of sedentary insect larvae. Resident bird species limit the number of insects emerging in the spring, thus reducing the severity of summer outbreaks. Most insectivorous birds feed by pecking, which disrupts the microhabitat of the insect prey thus having a detrimental effect on the over-winter survival of the remaining insects (Otvos 1979).

Ontario's primary excavators not only play an important role in insect suppression, but also in the provision of nesting cavities for other species. Secondary cavity-nesters are unable (or rarely attempt) to excavate their own cavity, and are thus dependent upon natural cavities or those built by other species. When a cavity built by a primary excavator is abandoned, it may then provide a nesting site for a secondary cavity-nester. Some

Table 1: Cavity Nesting Ontario Breeding Birds, Showing Snag Use and Preference

	Use of Snags						Snag Type Preference			
SPECIES	Roost	Nest	Forage	Perch	Primary Exc.	Secondary Exc.	Soft Snag	Hard Snag	Live With Heartrot	Live with Broken top and limbs
Wood Duck *		X		X		X				X
Common Goldeneye		X				X				X
Bufflehead *		X				X				
Common Merganser		X		X		X				X
Hooded Merganser *		X		X		X				X
Turkey Vulture		X		X		X				X
American Kestrel *		X		X		X				
Merlin		X		X		X				
Eastern Screech Owl *	X	X		X		X		X		
Northern Hawk Owl		X		X		X				X
Barred Owl		X		X		X				X
Great Horned Owl		X		X		X				X
Northern Saw-whet Owl *		X		X		X		X		X
Boreal Owl *		X		X		X				
Chimney Swift		X				X				

Common Flicker *	X	X	X	X	X		X			X
Pileated Woodpecker *	X	X	X	X	X			X		
Yellow-bellied Sapsucker *	X	X	X	X	X				X	X
Red-bellied Woodpecker *	X	X	X	X	X					
Red-headed Woodpecker *	X	X	X	X	X					
Hairy Woodpecker *	X	X	X	X	X				X	X
Downy Woodpecker *	X	X	X	X	X		X	X	X	X
Black-backed Woodpecker *		X	X		X		X	X	X	
Three-toed Woodpecker *		X	X		X		X	X	X	
Great Crested Flycatcher *		X				X				X
Tree Swallow *		X				X				
Purple Martin *		X				X				
Black-capped Chickadee *	X	X			X		X			
Boreal Ckickadee *	X	X			X		X			
Tufted Titmouse *	X	X				X	X			
White-breasted Nuthatch *	X	X	X			X			X	X
Red-breasted Nuthatch *	X	X	X		X	X			X	X
Brown Creeper	X	X	X			X		X	X	X
House Wren *	X	X	X			X	X		X	X
Winter Wren		X				X	X			
Carolina Wren		X				X				
Eastern Bluebird *	X	X	X			X	X	X		X
European Starling	X	X				X		X		

* Denotes obligate cavity nesters

Principle Sources: Bent 1938, 1939, 1948; Thomas et al 1979; Scott et al 1977

secondary cavity-nesters are very selective in their choice of a cavity to the point of becoming dependent upon a particular species of primary excavator. For example, both Bufflehead (*Bucephala albeola*) (Bellrose 1976; Scott *et al.* 1977; and Harrison 1984) and American Kestrel (*Falco sparverius*) (Scott *et al.* 1977) have demonstrated a distinct preference for abandoned Common Flicker nesting sites. In order for cavity-nesting birds to perform their role in the forest ecosystem, they must be provided with suitable nesting habitat in the form of snags.

Snags in Ontario Forests

We seem to know a great deal about cavity-nesting species, but very little is known about the snags which provide the nesting substrate critical to the reproductive success of these species. Insufficient knowledge of the role snags play in meeting the requirements of cavity-using wildlife in Ontario has in the past forced resource managers to develop habitat prescriptions based upon studies conducted in the northeastern United States. Concern for the lack of information on snags prompted the Ontario Ministry of Natural Resources to conduct a study to determine the abundance and characteristics of snags in stands representing various forest types. I was involved in this study and would like to present a brief summary of the results from the report (MacDonald 1990).

Methods

The survey was conducted during the summer of 1989 within the Leslie M. Frost Natural Resource Centre management unit encompassing parts of Sherborne, Stanhope, Ridout, Havelock and Hindon townships in Muskoka D.M. and Haliburton County. Forty-four stands (978 ha) representing a variety of hardwood and conifer forest types typical of the Great Lakes - St. Lawrence Forest Region were surveyed. The stands ranged in age from 80 to 160 years and varied in disturbance history (managed forests and those which are relatively undisturbed from logging and fire were included in the study).

Stands were sampled by cruising a continuous strip 10 m wide in a zig-zag formation throughout the stand resulting in a sampling intensity of 5%. For the purposes of this survey, snags were defined as standing dead trees greater then 10.2 cm in diameter at breast height (1.4 m) and greater than 1.8 m in height. For each snag encountered, the following information was recorded: species, diameter, height, state of decomposition (whether hard or soft), and presence of excavated cavities.

Results

The mean density of snags per hectare of all stands surveyed was 53.1 snags/ha (range 16.3-97.3). Stands dominated by intolerant species, white birch (*Betula papyrifera*) and poplars (*Populus* spp.), had the highest average density of snags. Undisturbed stands had the lowest average number of snags per hectare. White pine (*Pinus strobus*) and sugar maple (*Acer saccharum*) represented the most abundant snag species. Seventy-five percent of the snags recorded were within the 10.2-25.4 cm diameter class. Undisturbed stands contained proportionally more large-diameter

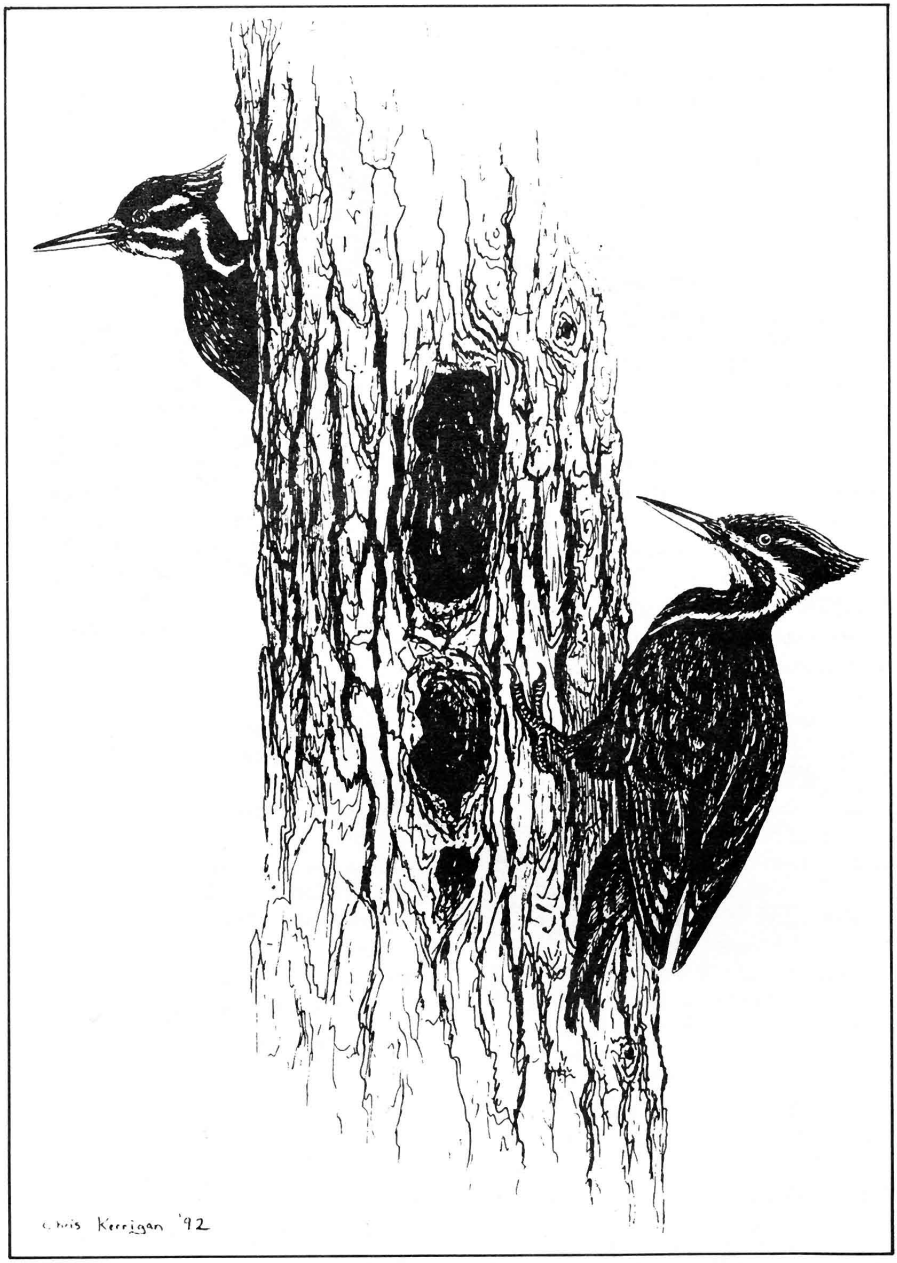

Figure 1: Pileated Woodpeckers on snag. Drawing by *Chris Kerrigan.*

snags (»50 cm) than any other forest type. Large-diameter snags were utilized most frequently in relation to their abundance. Cavities excavated in live trees were found mainly in white pine and sugar maple.

Discussion

The availability of suitable nesting habitat is critical to the reproductive success of all cavity-nesters. Numerous studies indicate that cavity-nesting species densities are strongly correlated with snag density (Balda cited by Back 1979; Land *et al.* 1989; Howard *et al.* 1986; Zarnowitz and Manual 1985; Rapheal and White 1984). Snag density in the stands surveyed is similar to that reported in the United States by Carey (1983) who found that snag densities ranged from 22.4-55.1/ha in maple/beech/birch forests with old growth stands having the lowest density. Cavity-nesting bird density is also closely correlated with the density of large-diameter snags (Rapheal and White 1984). Most species which nest in snags have individual requirements regarding snag diameter. For example, Pileated Woodpeckers (*Dryocopus pileatus*) require snags »35 cm in diameter (Peck and James 1983). Large diameter snags are capable of supporting the greatest number of snag-dependent species. A large-diameter snag with limbs intact can provide a nesting site in the trunk for species which require large cavities (e.g. Pileated Woodpecker), while providing sites for cavities in the branches for species which require smaller-diameter substrate, e.g. Black-capped Chickadee (*Parus atricapillus*).

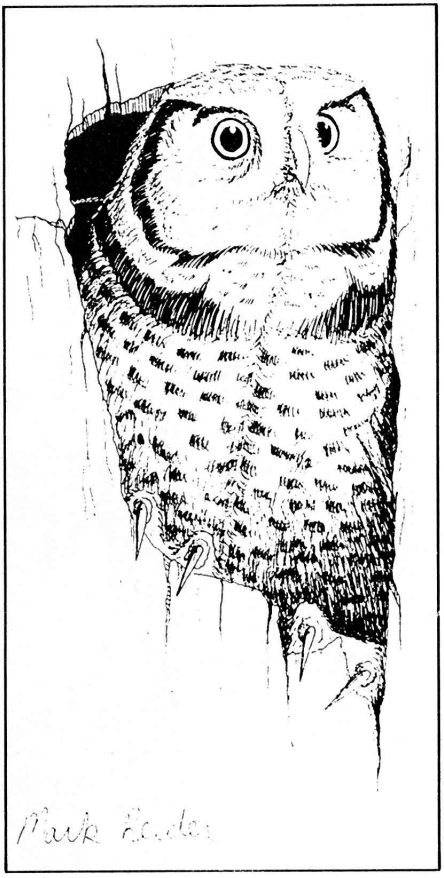

Figure 2: Northern Hawk Owl in nest cavity. Drawing by *Mark Reeder.*

Reduction of available snags may result in increased competition for nesting sites, poor reproductive success, and heavier dependence upon artificial nesting structures. European Starlings (*Sturnus vulgaris*) are known to be aggressive competitors with the Common Flicker, Bufflehead, Yellow-bellied Sapsucker, House Wren (*Troglodytes aedon*) and numerous other species for nesting cavities. Competition may

also result from mammals which require cavities to raise their young, e.g. flying squirrels (*Glaucomys* spp.). If sufficient cavities are not available, some species may be forced to excavate or build their own nests. The first choice of a nesting site for Barred Owls (*Strix varia*) is a broken topped snag, or a tree with a large cavity. When these sites are not available, Barred Owls may attempt to build their own stick nest or use a hawk/crow/raven/squirrel nest. Although attempts may be made to repair nests, nesting is often unsuccessful due to poorly constructed nests offering little or no protection to eggs and young (Bent 1938; Stokes and Stokes 1989).

As the result of decreased snag availability due to fuelwood cutting and the clearing of forested land, many of Ontario's secondary cavity-nesters have become heavily dependent upon nest boxes; examples are House Wren, Eastern Bluebird (*Sialia sialis*), Wood Duck (*Aix sponsa*), Tree Swallow (*Iridoprocne bicolor*), and Purple Martin (*Progne subis*) (Peck and James 1987). Nest boxes are only suitable for secondary nesters; primary excavators require a natural snag in which to excavate cavities. Nest boxes do not provide sufficient insulation for winter roosts and even though they are used by many species, they do not provide feeding and roosting sites which natural snags can, and by no means provide habitat for the multitude of species of microorganisms, fungi, insects, birds and mammals which natural snags do.

Conclusions

Current Ontario Ministry of Natural Resources guidelines regarding snags in timber management in the study area (Central Region) require that a minimum of 6 cavity trees greater than 25 cm in diameter per hectare be maintained within stands allocated for harvest (Watton 1989). In comparison to snags surveyed in managed stands, on average this represents 46% of existing snags. The guidelines represent 36.1% of the average density of snags found in undisturbed stands within the study area. During logging operations, snags which pose a safety hazard are removed in accordance with the Occupational Health and Safety Act. Forest and wildlife managers are continuously collecting more information to provide a basis for determining exactly how to manage for snags and snag-dependent species in Ontario forests.

Standing dead trees represent an essential component of any forest ecosystem, and are critical for the maintenance of healthy populations of all cavity-using wildlife. It is my hope, and the hope of those who contributed to this survey and others like it, that the data collected will help satisfy the need for pertinent information regarding snags which will form the basis of snag management in Ontario forests.

Acknowledgements

I would like to again thank all those individuals who contributed to the Snag Survey in 1989. Thanks to the editors of *Ontario Birds* for their constructive criticism of the first draft, especially to Ron Pittaway for all of his friendly advice, and to Mike Turner for help with the table.

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The Recent Nesting History of the Bald Eagle in Rondeau Provincial Park, Ontario.

by
P. Allen Woodliffe

The Bald Eagle (*Haliaeetus leucocephalus*) has long been known as a breeding species along the shoreline habitats of Lake Erie (Weekes 1974a; Field 1976). Two of the reasons for the Bald Eagle's historical abundance along these shores are (1) the proximity to water, and therefore their main food sources of fish and waterfowl, and (2) the extensive natural areas, including forests, which provided prime nesting sites. Indeed early records suggest that there was one nesting pair of eagles for every mile of shoreline between Port Stanley and Point Pelee (Weekes 1974a).

The early part of this century saw a noticeable decline in the southwestern Ontario population of Bald Eagles. This was due primarily to a loss of habitat through the clearing of woodlots and draining of wetlands. An equally insidious cause, that being the widespread use of pesticides such as DDT, exacerbated their decline in the 1940s and 1950s through reproductive failure. By the early 1960s, only 20 pairs could be found in southwestern Ontario (Brownell and Oldham 1980), and by 1980, only three active nest sites remained, none of which successfully fledged any young (Anonymous 1991). Since then the plight of the Bald Eagle in southwestern Ontario has been deemed as "guardedly optimistic". This has resulted from governments throughout North America banning the use of some of the most harmful chemicals, an increase in water levels especially of the lower Great Lakes which may have diluted the pollution and an active "hacking" or release program by agencies in New York state and Ontario. In 1991, the number of active nest sites in southwestern Ontario had increased to 11, which successfully fledged a total of 11 young (P. Hunter, pers. comm. 1991).

Rondeau Provincial Park is one of the three major sandpits on the north shore of Lake Erie. The park and the area immediately surrounding it consists of rich, southern deciduous forest habitat adjacent to a sandy beach shoreline, an extensive marsh and the shallow waters of Rondeau Bay encompassing almost 5000 ha. Food items for eagles, such as fish and waterfowl, are readily available, and numerous large, deciduous trees are available for nesting and roosting sites. As a result, Bald Eagles have always been known to breed in Rondeau. Up to three pairs of Bald Eagles have attempted to nest at Rondeau in one year, even as recently as 1957. However, successful nesting attempts during the several decades prior to 1980 have been sporadic, with only the period between 1981-1991 showing evidence of annual success.

Virtually all nesting activity in Rondeau has taken place on the western side of the park where the forest and marsh habitats abut. The greater availability of food in the

marsh and bay is undoubtedly one of the reasons for the eagles' preference for this part of the park, but perhaps equally important is the much lower level of human activity here. Cottages and related activity have been present along the eastern shoreline for more than a century, likely discouraging eagles from giving serious consideration to this side of the park as a nesting area. Some of the most recent nest locations are marked on the accompanying Figure 1, and described in Table 1.

Table 2 documents and provides comment on the recent nesting history of the Bald Eagle, where known, in Rondeau Provincial Park. A "+" indicates, as per the appropriate column, that adults were present during the breeding season and demonstrated at least some nesting activity or that eggs were present, but the number is unknown.

Table 1: Nest location information.

Nest #	Description (all distances very approximate)
26	This is the main, most visible nest, located in a tall red oak (*Quercus rubra*), approximately 350 m south of Gardiner Ave. It is the most visible nest from the Marsh Road. It was used in 1978, but was noted in poor shape in 1979 and not used again until at least 1986. Although it has been designated nest #26, it may in fact be the same tree that earlier nests occurred in. The eagles have been known to abandon this nest when it gets in disrepair and in danger of falling out of the tree, and then build a new nest in the same tree after the old nest has fallen.
27	This nest is approximately 400 m south of nest #26, also in a red oak. This nest was noted in 1979, but was never observed in use and shortly thereafter it fell out of the tree.
28	This nest was also noted in 1979 for the first time, about 18 m up in a soft maple (*Acer* sp). An adult eagle was observed on this nest in an incubating position, on 12 March 1979. The nest and tree had blown over by 14 April 1979.
29	This nest was noted for the first time on 29 November 1979, after leaf fall. It was in a partly dead white oak (*Quercus alba*). The nest was possibly used later in 1979 after #28 blew over. Its use was confirmed in 1980, but there were no young fledged.
30	This nest was first noted in February, 1981. It is in a fairly tall white oak, and has been used for several years, especially during the early 1980s. By June 1991, this nest was noted as having fallen out of the tree.
31	This nest was first noted in late April/early May of 1991. It is located approximately 200 m south of the intersection of the South Point Trail and the abandoned Dillon Trail, about 150 m east of the South Point Trail. It is visible from the South Point Trail until the trees leaf out. This is the first time in at least 20 years that Bald Eagles have chosen to nest in an area other than along one of the most westerly forested ridges in Rondeau, overlooking the marsh and bay.

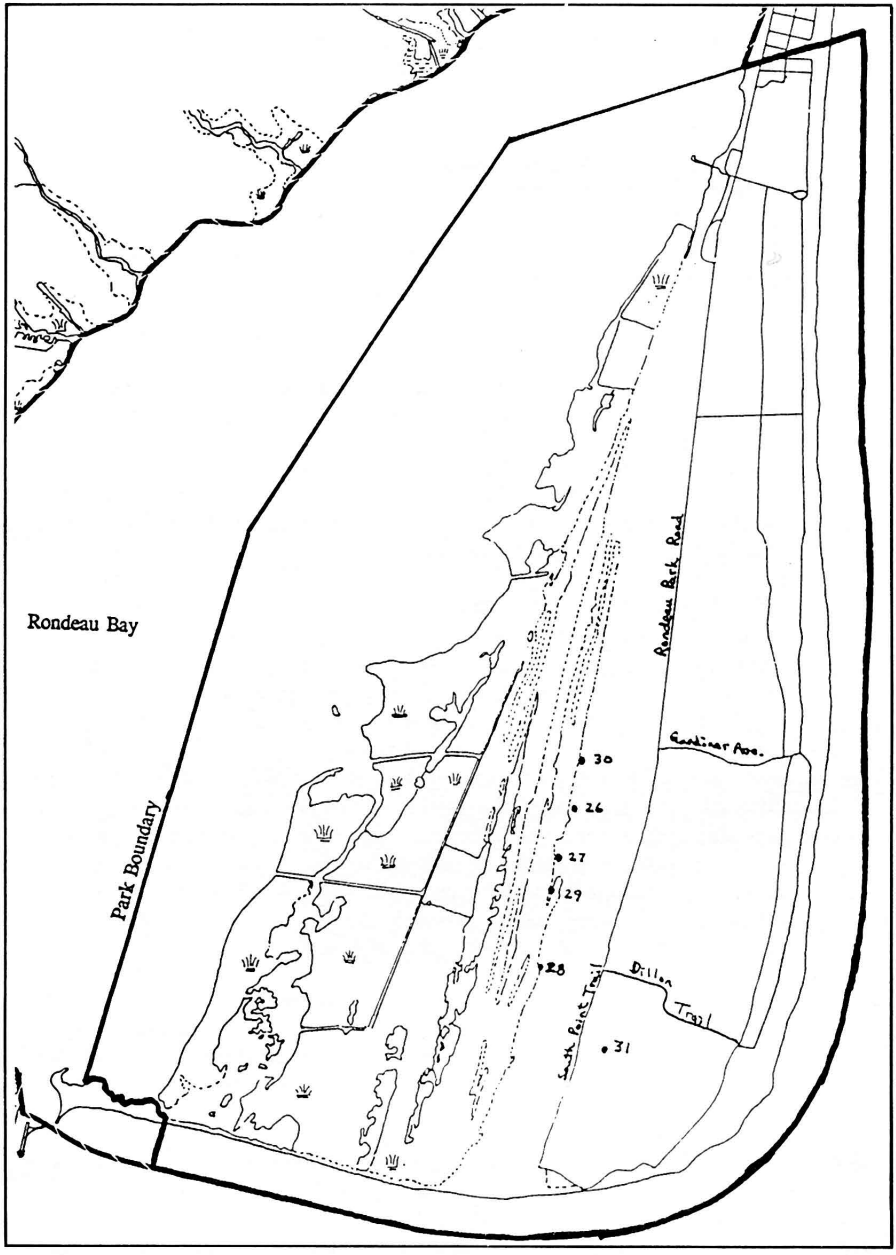

Figure 1: Approximate locations of recent Bald Eagle nests in Rondeau Provincial Park.

Table 2: A summary of Bald Eagle nesting activity and related success at Rondeau Provincial Park, Ontario.

Year/ Source*	Adults Present	Eggs Present	Young Fledged	Comments
1991a	+	+	2	A new nest (#31) was discovered in late April, along the South Point Trail. It is only observable from the trail until the trees leaf out. The two young were banded on 12 June.
a	+	?	0	Nest #30 was considered to be an active nest as well, because of the following events. On 4 April, an adult was seen at a distance of approximately 50-75 m, facing the nest, for a period of about 2.5 h. In addition the top of the nest appeared to be built up somewhat from the previous year, making the observation of an incubating adult even more difficult than usual, especially if the adult was hunched down. Then on 17 April, an adult was seen on the nest in an incubating position. The nest was not examined again until early May, and from that point on there was no sign of any eagle activity at that nest. The ages of the eaglets banded at nest #31 on 12 June were estimated to be about 5-6 weeks old at the time of banding. Hatching therefore would have occurred between 1-8 May. Since the incubation period is 5 weeks at the minimum, incubation should have begun somewhere around 27 March at the latest. The eagle activity at nest #30 in mid April, at a time when eagles at nest #31 would be incubating, suggests that another pair of eagles at least tried to nest at one of the traditional nest sites. Also the discovery of a new nest #31 in a location quite different from nest locations used in the previous 20 years suggests the probability of a new pair taking up residence at Rondeau with a different perspective and choice of nesting locations. Later in the season, up to three different adults were seen, including one pair close together at the south end of the marsh (possibly the pair using #31), and a single adult in a tree almost due west of nest site #26.
1990a	+	+	1	There was an unconfirmed report of 2 young seen in the nest, but most reports, including the findings of the banding crew, indicated that only one young was raised (banded 18 June).
1989a	+	+	2	Young were banded on 27 June at about 6-7 weeks of age.
1988a	+	+	2	Young were banded on 21 June at about 6 weeks of age.

1987a	+	2	1	A late season, as the nest cycle was still at the egg stage on 27 May. This is possibly due to a mate change, as a partially decomposed adult was found in the park on about 27 April.
1986a	+	+	1	Young was banded on 6 June.
1985a	+	+	2	Nest #30; young were banded 7 June.
1984a	+	+	3	Nest #30; young were banded 8 June.
1983a	+	+	2	Nest #30; young were banded 6 June.
1982a	+	+	1?	Nest #30; 1 immature observed in marsh area frequently after 12 June.
1981a	+	+	1	Nest #30.
1980a	+	+	0	Adults observed incubating in March at nest #29, but little or no activity after mid April.
1979a	+	?	?	An unusual year, as the birds seemed to be carrying on normally at nest #28 until early April, when observations on 12 April indicated that the nest had fallen to the ground. This was probably as a result of either a wind storm of 4-5 April or an ice storm of 8-9 April, or both. The birds apparently gave up nesting activity, but then an immature was seen over the park on 15 July, on 25 and 28 August, and again on 16 December, in the company of the two adults. These sightings may be that of an immature which fledged elsewhere, but the fact that it was observed with the Rondeau adults on one occasion and that a new nest (nest #29) had been built in a different location (but not noticed until November, after leaf fall) may indicate that there was some nesting success.
1978a	+	+	1	Nest #26.
1977a	+	+	1	
1976a	+	?	?	
1975a	+	?	?	
1974a	+	+	1	
1973a	+	?	?	

1972c	+	?	?	
1971b	+	+	2	
1970e	?	?	0	
1969e	?	?	0	
1968b,e	+	?	?	No confirmed hatching at nest #22.
b,e	+	?	0	Nest #9.
1967b	+	+	2	Two immatures seen in marsh 28 July, one of which still showed downy feathers.
1966b	+	?	?	Adults at nest #22, but no known success.
1965b	+	?	?	Adult noted on nest #22, 6 and 22 April but no indication of any success.
b	+	?	0	Two adults noted at nest #4, 6 April.
1964b	+	+	1	Nest #22.
1963b	+	?	0	
1962b	+	+	1	One immature noted with adult in marsh later in season.
1961b	+	?	0	Nest #8.
b	+	?	0	Nest #9.
1960b	+	?	0	
1959b	+	?	1?	Adults at nest #21 in March; no activity on 16 May, but adult and immature noted together later in season.
b	+	?	?	Nest #9.
1958b	+	+	2	Nest #20.
1957b	+	?	?	No young reported, nest #9.
b	+	?	?	Nest #8.
b	+	?	?	Nest #4 (one adult, one immature (subadult?) reported 25 Feb.).
1956b	+	+	1	Nest #8.
b	+	+	?	Nest #17.
b	+	?	?	Nest #4.

1955b	+	+	2	Nest #8.
1952b	+	+	1	
1942c	+	+	2	
1939c	+	?	?	
1935c	+	?	?	
1934b	+	?	?	

There is an unfortunate lack of records for earlier years, especially prior to 1955. Park naturalist staff have been present only in 1947-1951 (seasonal staff); from 1952-1969 (permanent and seasonal staff); 1970-1972 (seasonal staff); 1973-1985 (permanent and seasonal staff) and 1986-1991 (seasonal staff).

*The above information was obtained from:
(a) personal records, observations and field notes of the author, 1973-1991;
(b) the Rondeau Provincial Park files, housed at the Rondeau Visitor Centre;
(c) a search of the nest record cards in the Ontario Nest Records Scheme, housed at the Department of Ornithology, Royal Ontario Museum;
(d) Wood 1948;
(e) Weekes 1974b.

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Recognizable Forms

Redpolls

by
Ron Pittaway

Introduction

The American Ornithologists' Union Check-list (1983) recognizes two species of redpolls: **Common Redpoll** (*Carduelis flammea*) and **Hoary Redpoll** (*C. hornemanni*). Each species has two well-marked subspecies in Canada (Godfrey 1986). However, the taxonomy of redpolls has been much debated. Some authors suggest lumping all redpolls into a single species, while others propose splitting them into four separate species. Regardless of how many species there are, classic individuals of each of the four forms are recognizable in the field. The legendary George North of Hamilton actually saw the four forms of redpolls in one flock at Aldershot on 23 March 1958 (North 1983)! In order to recognize these forms, we require a sound knowledge of the field marks, plus a thorough understanding of redpoll plumages, effects of wear, age classes and molts. It is a fascinating identification challenge, worthy of our consideration.

Taxonomy

The Common Redpoll has two subspecies in Canada: the smaller and southern nominate race (*C. f. flammea*) and a larger northern race (*C. f. rostrata*). A third race, *C. f. holboelli,* is considered by most authorities to be of doubtful validity (AOU 1957, Godfrey 1986). Knox (1988) treats it as representing very long-billed individuals of nominate *C. f. flammea.* The Hoary Redpoll also has two subspecies in Canada: a small southern race (*C. h. exilipes*) and the larger northern nominate race (*C. h. hornemanni*).

Troy's (1985) widely read and much quoted study concluded that the southern race of the Common Redpoll (*C. f. flammea*) and the southern race of the Hoary Redpoll (*C. h. exilipes*) should be lumped as one highly variable species. His assumption was that intermediate birds represented hybrids. This view appealed to many ornithologists, birders and banders who had found themselves perplexed by redpoll identification. However, later researchers questioned Troy's taxonomic conclusions. Seutin *et al.* (1989) noted that Troy failed "to take age dimorphism into consideration in his analysis". In fact, Knox (1988) could find no direct evidence of hybridization anywhere in the large area of overlap between Common and Hoary Redpoll populations, although he suspected that occasional hybridization does occur. Based on biochemical evidence (electrophoresis), Marten and Johnson (1986) found that the two most similar forms of Common Redpoll (*C. f. flammea*) and Hoary Redpoll (*C. h. exilipes*) "seem to have split 550,000

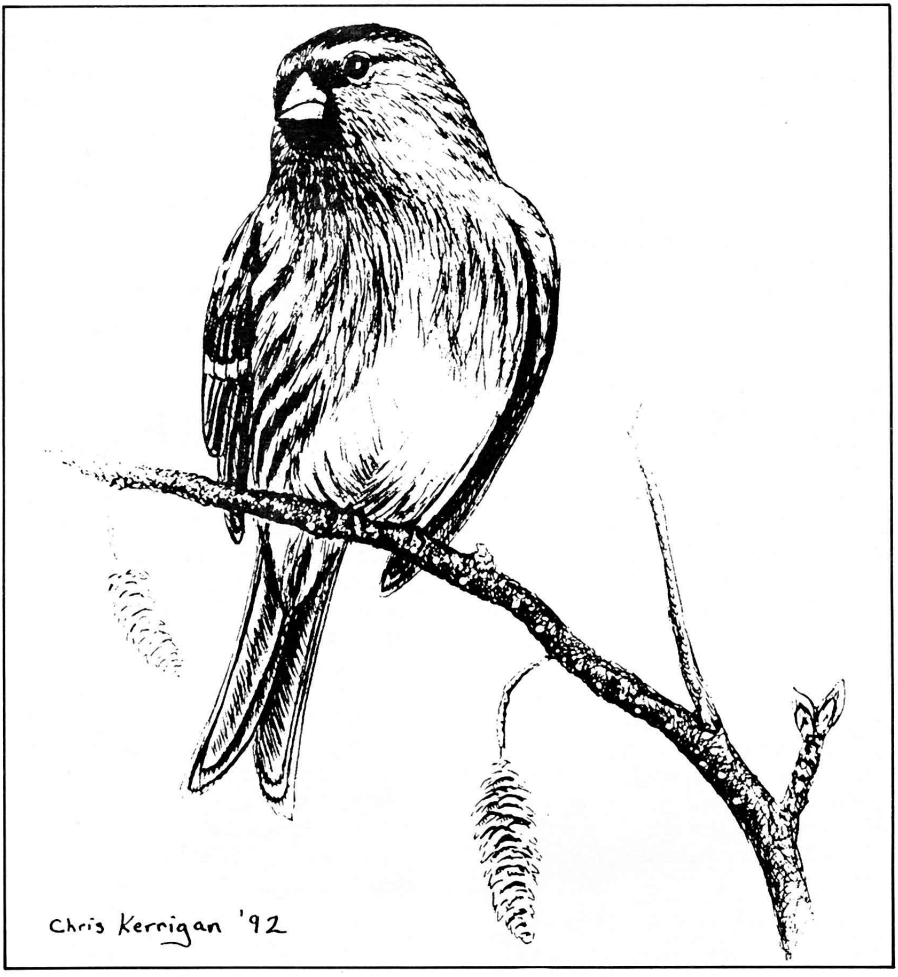

Figure 1: Adult male Common Redpoll. Drawing by *Chris Kerrigan.*

years ago". These two forms "are clearly near the boundary of species formation" (Knox 1988). Both Knox (1988) and Herremans (1989) considered the two forms to be a pair of sibling species. Sibling species are two or more closely related species that have very similar morphology. The *Empidonax* flycatchers are a good example of sibling species. Similarly, the two large northern redpolls (*C. h. hornemannii* and *C. f. rostrata*) also occur together over a wide area with virtually no evidence of interbreeding. Previously, Todd (1963) and recently Herremans (1989) have proposed four species of redpolls: *C. hornemanni, C. exilipes, C. rostrata* and *C. flammea.* See Figure 2.

Plumages, Molts and Ageing

A knowledge of redpoll plumages will help in understanding the variation seen in redpoll flocks. Instead of resulting from hybridization, much of the confusion over intermediate birds can be explained by age and sex differences, and individual variation (Knox 1988). The following is only a general outline of the plumages, molts and ages in redpolls.

Adult (definitive basic) redpolls undergo a complete molt (all feathers) once a year after the breeding season. Because of buffy or greyish feather edges which gradually wear off, adults in fresh (new) fall plumage are much paler than the same birds in worn (old) breeding plumage. In males, the pink coloration is also pale when fresh, gradually becoming richer and redder by spring. Feather wear allows redpolls to don a breeding dress without the need to molt (Newton 1972). This change is well illustrated in the National Geographic Society's Field Guide (Scott 1987). Compare the illustrations of the Common Redpolls labelled winter and breeding on page 439.

Juveniles lack the red cap and black chin of the adult birds. On the breeding grounds in late summer, juveniles undergo a partial (body) molt to first year (first basic) plumage, retaining most of the juvenile wing and tail feathers. Seasonally compared, first year birds are darker and more streaked than their respective adults. Redpolls wear their first year plumage for approximately one year, after which they molt completely into adult or definitive basic plumage.

A large flock of "Southern " Common Redpolls (*C. f. flammea*) will show four plumage types: adult males, adult females, first year males, and first year females. Add another form to the above flock and now there are eight possible plumage types!

"Southern" Common Redpoll
(C. f. flammea)

This low Arctic form breeds south to northern Ontario (James 1991). It is an erratic winter visitor to southern Ontario, sometimes in large numbers. This is the commonest form in the province, far outnumbering the other three forms and is the standard by which the other forms are compared and recognized. Study the flocks (bird feeders are ideal) and learn the different plumage variations. Adult males are richly coloured with rosy pink while first year males are somewhat darker and often washed with light pink. Adult females on the other hand usually lack any pink colouration (sometimes tinged) and first year females are the darkest and most heavily streaked of the age classes, at times almost siskin-like.

In all plumages, this form is usually noticeably streaked on the sides, rump and undertail coverts. The bill is longer and less stubby than the Hoary's. Individuals showing characteristics that are intermediate between *C. f. flammea* and *C. h. exilipes* are best left unidentified.

"Greater" Common Redpoll
(C. f. rostrata)

This large and dark form breeds on Baffin Island and Greenland (Todd

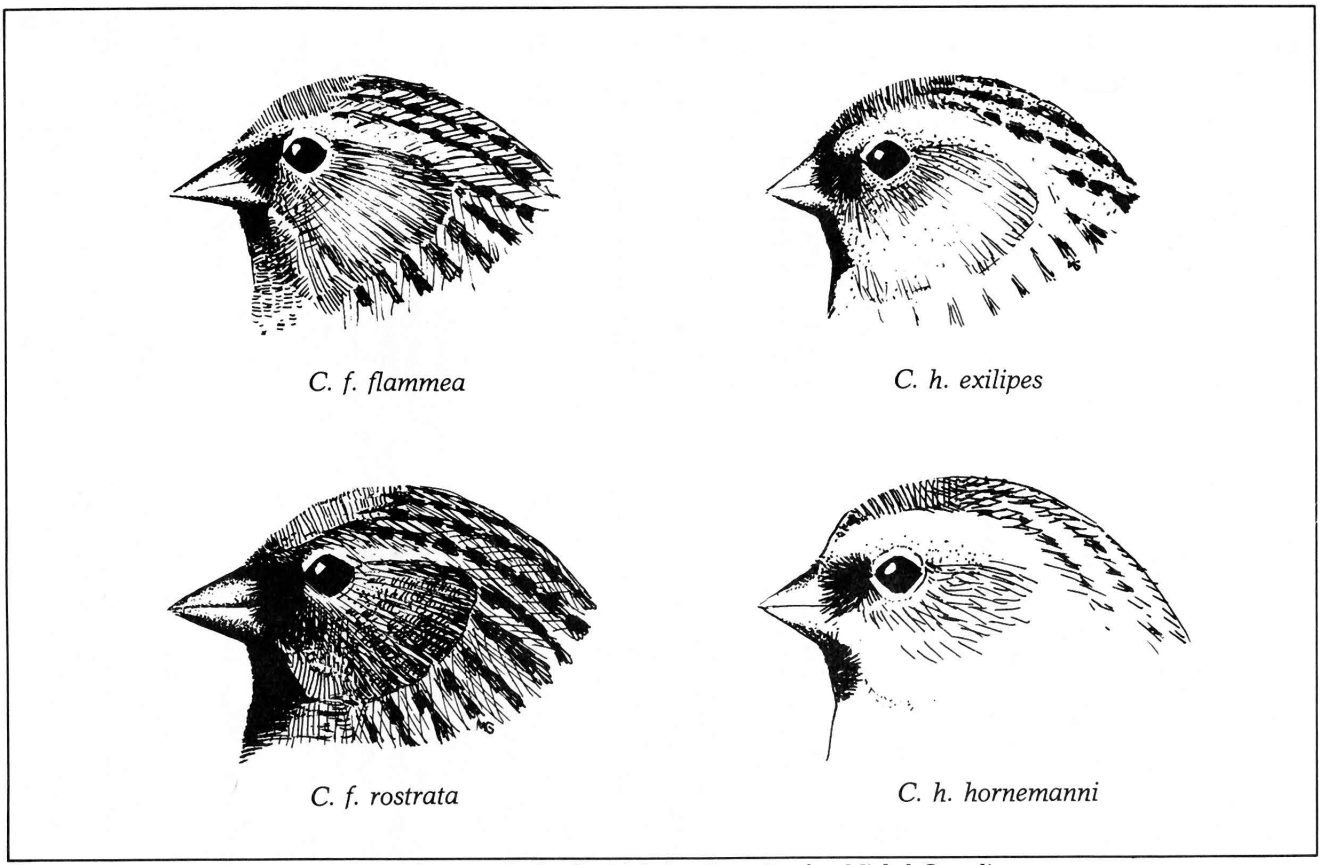

Figure 2: Common Redpolls (left) and Hoary Redpolls (right). Drawing by *Michel Gosselin.*

1963). In parallel with the two subspecies of the Hoary Redpoll, there is also a gap between the breeding ranges of the two subspecies of the Common Redpoll. See the range map in Godfrey (1986). It is a winter visitor "in small numbers to southern parts of the East from Ontario to Newfoundland" (Godfrey 1986). Richard Poulin (pers. comm.) has banded hundreds of redpolls near Ottawa, and reports that "Greaters" are more common than Hoary Redpolls during some winters. Look for this distinctive subspecies during redpoll flight years.

The "Greater" is somewhat larger (averaging 14.0 cm) than the "Southern" race which averages 12.5 cm in length (Newton 1972). The difference between the two races of the Common Redpoll is "fairly obvious when the two birds are together in the same flock" (Peterson 1947). "Greater" field marks include "larger size with thicker bill, coloration somewhat darker and browner than in *flammea*, adult males with red of under parts less extensive and less intense" (Godfrey 1986). Observers familiar with "Greaters" in the field have described them as somewhat House Finch-like because of their stout bills, heavy builds and general darker colouration with conspicuous streaking on the underparts.

"Southern" Hoary Redpoll *(C. h. exilipes)*

This form breeds in the low Arctic, and much of its range overlaps that of the "Southern" Common Redpoll. It breeds regularly south to Churchill, Manitoba (Jehl and Smith 1970), and Middleton (*in* Cadman *et al.* 1987) reported that it "may breed in low numbers on the tundra of Hudson Bay" in Ontario. During redpoll flight years, it is usually possible to find a few "classic" adult males. They stand out by their very white "frosted" appearance, pure white rumps, paler and less extensive pink suffusion on the breast, lightly streaked flanks, and very lightly streaked to immaculate undertail coverts. "Southern" Hoaries are similar in size to "Southern" Commons, but usually have shorter, more obtuse (stubby) bills imparting a distinctive "pushed in face" appearance. Many first year and some adult female "Southern" Hoaries can be quite streaked on the rump and sides (Knox 1988). These "intermediate birds" are probably best treated as unidentified. The reader is referred to the excellent article by Lansdown *et al.* (1991) on the identification of this form.

"Hornemann's" Hoary Redpoll *(C. h. hornemanni)*

The "Hornemann's" or "Greenland" Hoary Redpoll is the largest and palest of the redpolls (Godfrey 1986). There is apparently a gap between the breeding range of the two subspecies of the Hoary Redpoll (Todd 1963). This race breeds in the Canadian high Arctic and Greenland and "is a great rarity south of the tundra at any season" (Aubry *et al.* 1987). The American Ornithologists' Union Check-list (1957) lists a record from Galt (Cambridge), Ontario. The specimen is now in the Royal Ontario Museum (North 1983). (See North's account of this specimen and his observation of

the four forms of redpolls in the Postscript to this article.)

"Hornemann's" Hoary Redpoll is a larger bird (averaging 14.0 cm) than the "Southern" Hoary which averages 12.5 cm in length (Newton 1972). Todd (1963) states that there is "no overlap in measurements" between the two subspecies. Compared to the "Southern" Hoary Redpoll, "Hornemann's" is known by its larger size, overall whiter appearance, less prominent streaking on the sides and flanks, and immaculate undertail coverts; males have less pink which is of a different hue, some showing a mere trace of pink suffusion on the breast (Todd 1963). Females and first year birds are probably recognizable, if directly compared to the other forms (especially the two smaller ones), by their pale colouration and larger size. Richard Poulin (pers. comm.) has observed this form in the high Arctic. He describes it as being "really distinctive; a big, very white redpoll suggesting a Snow Bunting"!

Summary

Common and Hoary Redpolls appear to be valid species. The "intermediate birds" reported between *C. f. flammea* and *C. h. exilipes* are apparently the result of age, sex and individual variation and not interbreeding. Some authorities recognize four species of redpolls. Not all redpolls will be identifiable to species or subspecies, but "classic" individuals of each form are very recognizable.

Postscript

George North's (1983) description of his experience with redpolls is worth quoting here, as an example of his interest in recognizable forms:

"The McIlwraith Loan Collection of birds used to be housed in the Hamilton Museum on the second floor of the old Public Library and Art Gallery which stood on the east side of Centenary Methodist Church. Back in the 1920's I used to visit the museum often to admire the birds and study them carefully. Among the most striking was the big white Greenland Redpoll, that seemed to be as big as a Snow Bunting. It was collected about 1863 by a friend of Mr. McIlwraith's from a small flock in the town of Galt.

For many years I searched the big or small flocks of redpolls that visited us almost every winter, but without success in finding this big and hoary bird. Then on March 23, 1958, on one of our weekly birding trips together, Dr. R.G.C. MacLaren and I visited a spot that had produced good birds in previous springs. This was an extensively open field off the Plains Road at Aldershot that was part of the property of Mrs. Towsend's at Oaklands. On walking over the field we came on a flock of redpolls feeding on weed seeds. To our delight there was a big white redpoll, twice as big as the Common Redpolls, the Greenland Redpoll that I had been searching for for thirty years. But this was not the only rare bird there. On looking over the flock we found one specimen of the commoner small white-rumped Hoary Redpoll and one individual of the Greater Redpoll. This latter is classified as a subspecies of the Common Redpoll, but it is a much larger bird, more the size of a Purple Finch and has a much heavier bill, more like a grosbeak's. I have

seldom seen the Greater Redpoll since the winter of 1929-30 when I found them on the north shore of the Dundas Marsh."

Acknowledgements

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Notes

Notes on Calls of Breeding Connecticut Warblers

by
Don Shanahan

During the first week of June, 1991, numerous Connecticut Warblers (*Oporornis agilis*) were heard singing in a tamarack fen west of Moosonee (Doug McRae, pers. comm.). These observations were made by volunteer bird identifiers walking two transect survey lines, each one kilometre long, as part of the M.N.R.'s Habitat Based Wildlife Assessment of the Hudson Bay Lowlands, co-ordinated by biologist, Nancy Wilson.

On 22 and 23 July, four sweeps of the aforementioned tamarack fen by two groups including bird identifiers, Bob Curry and myself, yielded one, and possibly two, very short Connecticut Warbler song bursts.

On the morning of 24 July, Curry heard an unfamiliar call while entering a mixed tamarack - black spruce (*Larix laricina - Picea mariana*) wetland. Following the call into very thick cover, Curry also encountered calling White-throated Sparrows (*Zonotrichia albicollis*) and Yellow-rumped Warblers (*Dendroica coronata*). These birds seemed extremely anxious. While tracking the original call, Curry had a very short look at a perched Connecticut Warbler carrying food. In the next minute or two, the warbler was seen briefly in flight. Curry later characterized the call as sounding like "poyt".

Curry and I returned to the same area early that afternoon, and despite following a faint version of the "poyt" call, did not see a Connecticut Warbler. Proceeding into an area adjacent to the tamarack fen, we encountered a group of adult and young White-throated and Lincoln's Sparrows (*Melospiza lincolnii*) as well as Palm Warblers (*Dendroica palmarum*). Spishing seemed to agitate these birds and calling continuously the group quickly moved off into the fen. I followed and about 90 metres from our original observation point began to hear a repetitious, loud, liquid "poyt" call. Continuing a short distance, I spotted an insect larva-bearing Connecticut Warbler perched about 3 metres up on a lateral branch of a small tamarack. Mindful of the wary nature of this bird, I observed it quickly and determined that it was a male. The bird called continuously and remained immobile on its perch. After ten minutes, I hailed Curry who joined me near where the bird still called.

Suspecting that the bird had a nest with young in the immediate vicinity, we began a systematic ground search of the area's many moss and lichen filled hummocks.

After a further ten minutes of calling the bird disappeared and did not reappear or call again. An additional 35 minutes search failed to turn up a nest containing young or fledged young. Just as we stopped looking, Curry found a small grass-lined nest built into the top of a hummock some 4 to 5 metres away from the Connecticut Warbler's tamarack perch. It was impossible to accurately determine the age of the nest or the species that had used it.

Leaving the area with the Connecticut Warbler's call fresh in our minds, Curry and I reaffirmed the "poyt" (or in some instances "poitch") representation. The next morning while working the same tamarack - black spruce fen that had yielded Curry the initial Connecticut Warbler call, I again heard the now familiar "poyt". Unable to leave the transect midline, I did not pursue this bird.

Field guides and texts offer limited information on the calls of the Connecticut Warbler. Various correspondents in Bent (1953) describe fall migration calls as, "peek", or "witch" or "plink". Similarly, A.E. Allin, in Griscom and Sprunt (1957), describes the call note as "a distinctive sharp metallic peenk or plink". The cassette series, *Songs of Warblers of North America* by Donald J. Borror and William W.H. Gunn gives no call for Connecticut Warbler. In summary, there are no references to the distinctive softer "poyt" call heard near Moosonee.

Considering the circumstances surrounding our hearing of this call, Curry and I have concluded that it is either a general distress call or, more likely, an alarm call made by parents with young nearby. Readers who find themselves in Connecticut Warbler habitat at this time of year may be able to track down the species by listening for this peculiar call note.

Acknowledgements

I wish to thank Bob Curry for his suggestions and for proofreading this note.

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New Breeding Record for Great Gray Owl: Most Southerly in Canada

by
Graham Forbes, Michael Runtz and Ron Tozer

On 6 August 1989, an adult Great Gray Owl (*Strix nebulosa*) was observed by Graham Forbes and Jenny Theberge near Round Island Lake in central Algonquin Provincial Park, Ontario (45° 43'N, 78° 14'W). This, the second summer record of a Great Gray Owl in the park, prompted Michael Runtz and other staff naturalists from the Algonquin Park Museum to search the area the following morning at sunrise. One adult and three fledged young were soon located, enticed into view by the sounds of "squeaking" (squeals resembling the cries of an injured animal, produced by noisily sucking on the backs of fingers).

The three fledgling Great Gray Owls were near adult size. They exhibited distinctly browner plumage than the adult (particularly on the upper back and neck), incomplete facial discs, undeveloped white "moustache" marks on the bottom of the face, less bulky heads than the adult, and some down still present on the flanks and the back of the head. The central retrices were pointed at the tips. The young frequently emitted raspy food begging cries. On 7 August, an adult was observed feeding a vole, possibly *Microtus pennsylvanicus*, to one young. At least one, possibly two adults and the three young were present again on 8 August, and two immature Great Gray Owls were located at the site on 16 August. Although the family group was found repeatedly in the same area, a nest could not be located. This was not surprising since the young probably would have been off the nest for close to two months (Nero 1980). However, the nest may have been in the near vicinity, for Great Gray Owls have been known to remain within one eighth of a mile from a nest for at least seven weeks after leaving it (Nero 1980).

The birds were most frequently observed in a mixed second-growth forest, with Sugar Maple (*Acer saccharum*), Yellow Birch (*Betula alleghaniensis*) and Eastern Hemlock (*Tsuga canadensis*) dominant on the higher ground, and Balsam Fir (*Abies balsamea*), Black Spruce (*Picea mariana*) and Speckled Alder (*Alnus rugosa*) bordering the creek and bog system that flowed through the lower area. One adult repeatedly flew into a beaver meadow on this creek system, and was seen leaving this opening carrying food (small voles) in its beak on at least two occasions, as noted by Ron Tozer *et al.*

Great Gray Owls typically breed in boreal forest habitat comprised of dense coniferous or mixed deciduous-coniferous forest, and spruce-tamarack (*Larix laricina*) bogs (Godfrey 1986). While only three nests are known from Ontario (Peck and James 1983), family groups, like this Algonquin one, were reported several times during the Ontario Breeding Bird Atlas Project (Prevett 1987). All of these records however, occurred much farther north than

Algonquin Park. Prior to this successful nesting in Algonquin, the most southern Canadian breeding record lay in Chisholm Township, Nipissing District (Baillie and Harrington 1936). (Chisholm Township is located northwest of Algonquin Park, east of Powassan, Ontario.) Although Algonquin Park lies in the Great Lakes - St. Lawrence Forest Region, the elevations of "the Algonquin Dome" on which the Park is situated create conditions favourable for vegetation typical of the boreal regions (Strickland 1990). Thus the nesting of Great Gray Owls in Algonquin Park merely reflects this northern aspect of the Park, which also supports southern populations of Spruce Grouse (*Dendragapus canadensis*), Gray Jay (*Perisoreus canadensis*), and Boreal Chickadee (*Parus hudsonicus*) -- birds representative of the boreal forest.

Of interest, on 5 September 1988, Graham Forbes observed a presumed adult Great Gray Owl in a bog less than two km from the site of the 1989 birds. This fuels speculation that breeding may have possibly occurred in previous years.

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Photo Quiz

by
Doug McRae

Answer to Photo Quiz in *Ontario Birds* 10 (2): **Red Phalarope.** This quiz bird is one that for many years was poorly dealt with in most field guides, thereby causing a lot of unnecessary grief for shorebird fans.

With any shorebird identification, it's best to determine the age of the bird first. This individual can be identified as a young of the year by several features. The brown streaked juvenile back feathers (most obvious near the base of the neck) are being replaced by grey first-winter feathers. Also, the crown and area around the eye and ear are coloured in a diffuse brown, again indicative of a young bird. These latter features are usually lost within a few months of fledging.

So, now that we have determined it is a juvenile bird, we must find features that establish this bird as a Red Phalarope. There are many species of shorebirds found in Ontario, but only three phalaropes --the Wilson's, Red-necked (formerly Northern), and Red. One feature that I find noticeable about all the phalaropes is their long body length, a product of having a long rear end which gives them a kind of "boat-like" look, apparent in this photo. The neck appears a bit longer than many species of shorebirds and, in proportion, the head also looks a bit smaller than it should. The fact that the bird is up to its belly in water is not of much use since all shorebirds can wade. However, if you see a shorebird actually swimming for prolonged periods, then a phalarope is almost a certainty.

Wilson's Phalarope can be ruled out fairly easily on both structure and plumage. Wilson's have very long, fine bills, probably appearing half again as long as the bird in this photo. Juvenile Wilson's also have more uniform, scaled backs, not streaked and blotched like this photo. The real trick here is to separate this bird from a Red-necked Phalarope, and this is the hardest age to do it with. In plumage characteristics, juveniles of both species look fairly similar so the old standby of bill shape and size remains the best point to focus on. The bill of this bird appears somewhat unremarkable in proportion, with the tip being fairly fine and the base somewhat enlarged. Red-necked Phalarope bills are similar in length but always appear much finer in overall length, much the same as a Wilson's does. If this bird were a Red-necked, the thicker base of the bill would not be readily noticed.

Many books, particularly older guides, refer to Red Phalaropes as having a yellow base to the bill but this is not present on juveniles, nor many winter adults. Another helpful feature for separating the two most similar phalaropes is their call, which is frequently given when they take flight. Red-necks have a crisp "chit-chit", while Red's have a much higher pitched and softer "chit", not too unlike a White-rumped Sandpiper's call.

This juvenile Red Phalarope was photographed in September at Ottawa, by Brian Morin.

Our next quiz bird is suitably nondescript!

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Ontario Field Ornithologists

Ontario Field Ornithologists is an organization dedicated to the study of birdlife in Ontario. It was formed to unify the ever-growing numbers of field ornithologists (birders/birdwatchers) across the province and to provide a forum for the exchange of ideas and information among its members. The Ontario Field Ornithologists officially oversees the activities of the Ontario Bird Records Committee (OBRC), publishes a newsletter and a journal, *Ontario Birds*, hosts field trips throughout Ontario and holds an Annual General Meeting in the autumn.

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