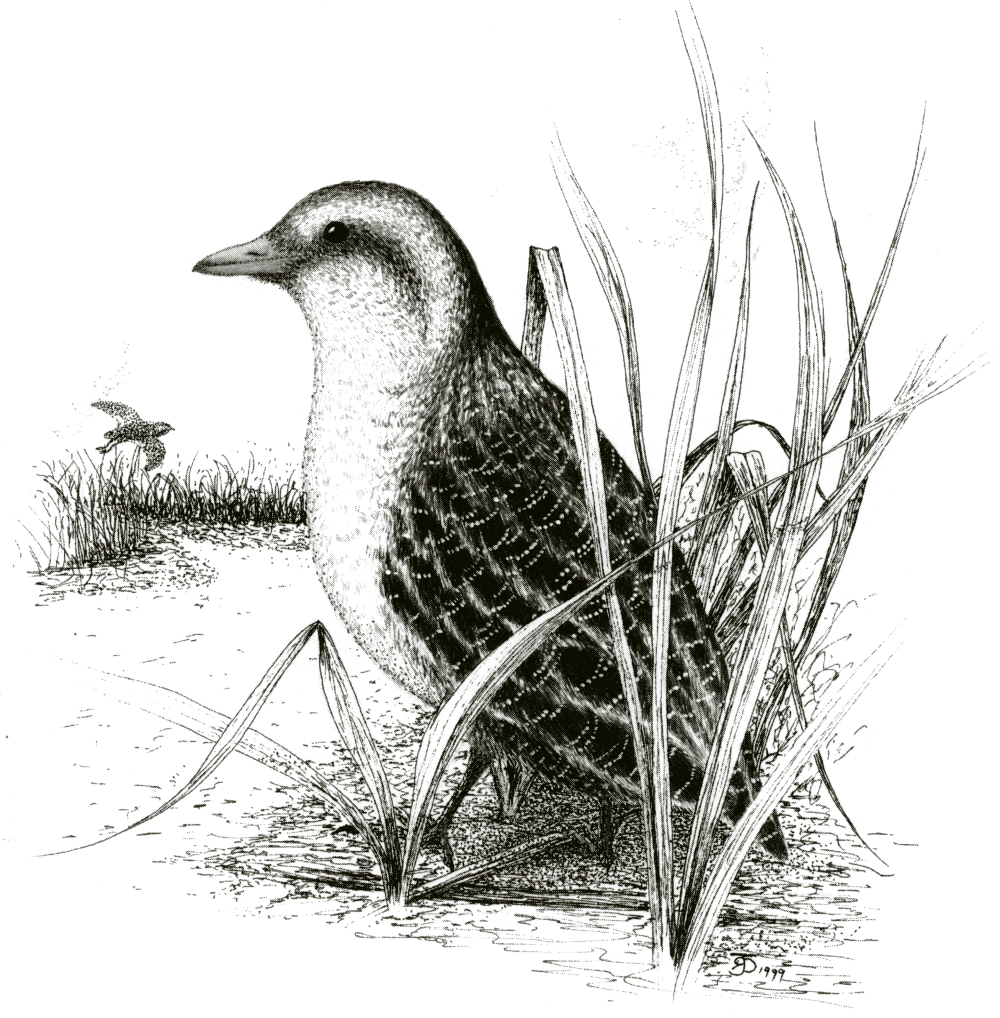
ONTARIO BIRDS



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Ontario Field Ornithologists

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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 (*OFO News*) and a journal (*Ontario Birds*), hosts field trips throughout Ontario and holds an Annual General Meeting in the autumn.

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The aim of *Ontario Birds* is to provide a vehicle for documentation of the birds of Ontario. We encourage the submission of full length articles and short notes on the status, distribution, identification, and behaviour of birds in Ontario, as well as location guides to significant Ontario bird-watching areas, book reviews, and similar material of interest on Ontario birds.

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by *Ross D. James*

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Letter to the Editors

Gulls Eating Voles

On 2 June 1998, I watched a flock of approximately 40 Ring-billed Gulls flying low over a field on the Downsview Lands, adjacent to the Canadian National rail line in Toronto. Judging by their shifting head movements and sudden changes in flight direction, it became apparent that they were preying upon something on the ground. After spotting their prey, the gulls would "dive" and land in the tall grass. More often than not they would take to the air again with nothing for their efforts. The gulls frequently hovered a metre or so above the ground for a few seconds, waiting for the prey to reappear. During these observations, some of the gulls were seen to successfully capture and consume what appeared to be voles (*Microtus* sp.). I consider this to be unusual behaviour for Ring-billed Gulls.

Gerry Cuccio
Downsview, Ontario

Ron Tozer comments:

Ryder (1993) reported that summer studies of Ring-billed Gulls (*Larus delawarensis*) breeding in the Great Lakes region recorded a diet of fish, arthropods and earthworms, but not small mammals. However, western populations of this gull foraging on agricultural lands were found to eat grains, arthropods, earthworms and rodents, including meadow voles (*Microtus pennsylvanicus*) and deer mice (*Peromyscus maniculatus*). Your observation of Ring-billed Gulls foraging on voles may be quite unusual in eastern North America.

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Ryder, J.P. 1993. Ring-billed Gull (*Larus delawarensis*). *In* The Birds of North America, No. 33 (A. Poole, P. Stettenheim, and F. Gill, editors). Academy of Natural Sciences, Philadelphia, and American Ornithologists' Union, Washington, D.C.

Articles

Taxonomic History of Thayer's Gull

Ron Pittaway

In this article, I present a chronological review and historical perspective on the taxonomy of Thayer's Gull (*Larus thayeri*). It is hoped that this overview will be a helpful contribution to the ongoing discussion of this confusing gull. I lay out the historical and current views on Thayer's Gull taxonomy so that you can make your own decision. In the end, I give you my opinion on Thayer's Gull.

In reading the following chronology, it is important to keep three points in mind: (A) Thayer's Gull was generally treated as a subspecies of the Herring Gull (*L. argentatus thayeri*) from 1917 until 1973 when the AOU (1973) gave it full species ranking; (B) Kumlien's Iceland Gull (*L. glaucoides kumlieni*) has always been the problem taxon because it is highly variable and it exhibits intermediate character traits between Thayer's and nominate Iceland Gulls; and (C) the limits of variation in both Kumlien's and Thayer's phenotypes have not been adequately defined by most of the following authors.

1. W.S. Brooks (1915) described a new species of gull, naming it Thayer's Gull (*L. thayeri),* based on a very few specimens collected in 1901. The designated type specimen is from Ellesmere Island. He compared it to Kumlien's Gull *(L. kumlieni*), then considered a full species, and to Herring Gull (*L. argentatus*).

2. Dwight (1917) next considered Thayer's Gull to be a subspecies of the Herring Gull (*L. smithsonianus thayeri),* based on about 25 specimens, and supposed intergradation between *thayeri* and *smithsonianus.*

3. Dwight (1925), in his classic study of gulls, again treated Thayer's as a subspecies of the Herring Gull. He regarded Kumlien's Gull as a hybrid between Thayer's and Iceland Gulls. Interestingly, Dwight noted intergradation between Thayer's and Kumlien's Gulls, but still listed Thayer's as a race of the Herring Gull!

4. The AOU Check-list (1931) listed Thayer's as a subspecies of the Herring Gull. It placed Kumlien's Gull on the hypothetical list as a probable hybrid between Thayer's Gull and Iceland Gull.

5. Taverner (1933) regarded Kumlien's Gull as a separate species. He

challenged Dwight (1925) and the AOU (1931), who considered Kumlien's to be a hybrid between Thayer's and Iceland Gulls. Even if the Kumlien's population were of hybrid origin, Taverner believed that it should be treated as a separate species because it bred in pure colonies and not in association with either Thayer's or Iceland Gulls.

6. Taverner (1937), in his *Birds of Canada*, treated Thayer's as a subspecies of the Herring Gull. He treated Kumlien's Gull (*L. kumlieni*) as a full species. Taverner noted "much variation in the pattern [of the wingtips]. It may be unusually deep and extensive so to almost suggest the *thayeri* form of the Herring Gull".

7. A. Brooks (1937) believed that Thayer's Gull would prove to be a distinct species from Herring Gull. He was the first to challenge Dwight's (1925) treatment of *thayeri* as a race of the Herring Gull.

8. Peterson (1947) was the guide that I started with in the 1950s. It had a subspecies section in the back of the book that is still worth reading today. He said that some Thayer's come so close to Kumlien's that "it is a question exactly what they are".

9. Salomonsen (1950/51) reported a small population of Thayer's Gulls breeding in the Middle Thule District of northwest Greenland. His description of Thayer's specimens from Greenland is similar to Canadian birds. Salomonsen stated that Thayer's Gull was the high Arctic form of the Iceland Gull. He mentioned two specimens of Kumlien's Gull from Greenland. Salomonsen said that the most natural explanation for *kumlieni* was a hybrid population between *glaucoides* and *thayeri.*

10. Manning et al. (1956) in an analysis of Thayer's Gulls on Banks Island, Northwest Territories stated: "There is no difficulty in deciding that the five adult specimens from Banks Island are typical of the *thayeri* population. A more complex question is the relationship of this population as a whole to *L.a. smithsonianus* on one hand and *L.g. kumlieni* on the other."

11. The AOU Check-list (1957) continued to list Thayer's Gull as a subspecies of the Herring Gull. There was very little interest in Thayer's among birders because it was thought to be only a race of the Herring Gull and virtually nobody knew how to identify it.

12. Parmelee and MacDonald (1960) treated Thayer's Gull as a separate species. They included a photograph of two adult Thayer's from Ellesmere Island. One is a typical Thayer's. In the second bird, the amount of dark in the folded wingtips is well within the range of many Kumlien's Gulls. The field

party from the National Museum of Canada collected specimens of Thayer's Gull near Eureka on Ellesmere (80 degrees north latitude). Parmelee and MacDonald described the wingtip patterns of the specimens: "The tips of the primaries (excluding white mirrors) grade from dark grey to grey to very light grey in the four males; from very dark grey (nearly black) to grey in four females. The fifth female has the entire wing tips white or nearly white and is the only one of the series (both sexes) that differs greatly in wing tip pattern from the type specimen (*see* Dwight, 1917:413-4). According to A.H. Macpherson (verbal comm.), Thayer's Gulls with grey to light wing tips appear to be numerous in the breeding range only at high latitudes. The Eureka specimens bear this out." The reason these pale winged birds from Ellesmere are classified as Thayer's and not Kumlien's is that they were collected well within the breeding range of Thayer's and they are part of an interbreeding population of Thayer's Gulls. However, these pale winged Thayer's suggest past introgression with Kumlien's, nominate Iceland Gull or even Glaucous Gull. Alternatively, they may just represent part of the variability found in this population. A pale winged Thayer's originating from Ellesmere Island would be impossible to tell from Kumlien's in the field on the winter range.

13. Macpherson's (1961) study of Arctic gulls was the most important and pivotal work of its time. The big hurdle then was to prove that Thayer's was not a race of the Herring Gull. Macpherson found that *thayeri* and *smithsonianus* Herring Gulls were breeding sympatrically (breeding ranges overlap without interbreeding). This is the best test of a biological species. Macpherson also recommended treating Thayer's Gull as a subspecies of the Iceland Gull. He said the characters shared by *kumlieni* and *thayeri* "include preference for cliff-nesting, gregarious breeding habits, and possession of a purplish-red orbital ring".

14. Godfrey (1966) was the first to treat Thayer's Gull as a separate species, based on Macpherson (1961) who reported Thayer's breeding sympatrically with Herring Gull and because Neal Smith's personal communications to Godfrey reported that *thayeri* and *kumlieni* bred sympatrically on Baffin Island. Godfrey also had access to Smith's PhD thesis. Godfrey's (1966) description and John Crosby's illustrations of adult Thayer's in the first edition of *The Birds of Canada* provided birders with the field marks of adult Thayer's for the first time.

15. Smith (1966) reported that his research done at Home Bay, Baffin Island, found *kumlieni* and *thayeri* to be reproductively isolated, thus

behaving as separate species. It is noteworthy that no subsequent researchers have reached this same conclusion. Smith reported that he conducted a number of ingenious experimental techniques; for example, he stated that he painted and changed orbital ring colour that induced hybridization by establishing 55 Thayer's x Glaucous pair bonds! I recommend that you visit a university or museum library to read this now infamous study which led the AOU (1973) to regard Thayer's Gull as a distinct species.

16. Smith's (1967) study was featured on the cover and in a major article of the October 1967 issue of *Scientific American*. A good library should have this issue or access to it.

17. Parmelee et al. (1967) reported on ornithological investigations of Victoria Island in the Northwest Territories. They listed Thayer's Gull as a separate species, probably based on Macpherson (1961) and personal communications with Neil Smith. An adult Thayer's Gull banded on 27 August 1962 at Cambridge Bay, Victoria Island was observed 58 days later in Vancouver, British Columbia. It was seen several times at the city dump from 24 October to 6 November 1962, when observations were discontinued. Remarkably, the observer read the band number with a telescope! Most Thayer's Gulls winter on the West Coast from British Columbia to San Francisco.

18. Sutton (1968) was the first to publish a skeptical review of Smith's (1966) study. George M. Sutton was an eminent ornithologist who knew Thayer's and Kumlien's Gulls in the Arctic. In his carefully worded review, Sutton wrote: "Smith's findings concerning 'super-eye-ringed' Thayer's Gulls perplex and discomfort me. In one breath he asks us to believe that the success of a gull's whole reproductive cycle depends on eyesight keen enough to keep it from wasting effort on a gull of opposite sex which does not have precisely the same eyelid colour as its own, and that this same gull will be fooled into considering a big black circle as an 'eyelid', an eye as a 'pupil', etc." Sutton further stated: "His findings ... are intensely interesting to speculate upon whether they be considered conclusive or not."

19. Andrle (1969) listed five specimens of Thayer's Gull from the Niagara Frontier Region, including the first specimen (first winter) taken in 1945 that was originally identified as *L.g. kumlieni*. In December 1967, three Thayer's (two adults and one second winter) were collected in the gorge of the Niagara River below the power dams. Andrle (1969) said: "The 1967 specimens might also be considered the first three for the Province of Ontario because these birds frequently flew back and forth across the International Boundary before

being collected on the United States side, and they probably were retrieved from the Canadian portion of the river." We now know that the Niagara River is one of the best places in eastern North America, south of the Arctic, to see Thayer's Gulls.

20. J. R. Jehl and B. A. Smith (1970) treated Thayer's Gull as a full species. Jehl was one of the reviewers of Neal Smith's (1966) monograph. Jehl and Smith's book has an excellent photograph of an adult Thayer's Gull, and text on separating it from Herring and Kumlien's Gulls. They also mentioned two immature specimens of *thayeri* from Churchill in the National Museum of Canada that were originally identified as *L.g. kumlieni* by Taverner and Sutton, once again illustrating the confusion between the two forms. They also describe "one call-note of *thayeri*, given both by flying and foraging birds, that is distinctly deeper-pitched than the comparable note of *argentatus*." I saw my first Thayer's Gulls in 1970 at Churchill, Manitoba.

21. The AOU (1973) gave Thayer's Gull full species status based on Macpherson (1961) who showed that *smithsonianus* and *thayeri* bred sympatrically without interbreeding, and Smith (1966) who reported *kumlieni* and *thayeri* breeding sympatrically. Until this decision, Thayer's Gull was regarded as a subspecies of the Herring Gull. This was the turning point. Thayer's Gull was now official as a distinct species. Birders were now looking for this mythical gull and seeing it everywhere! Interestingly, we would know much less about Thayer's Gull today had the AOU not given it full species status in 1973.

22. On 11 November 1973, I found a first winter Thayer's Gull in Hull, Quebec near Ottawa. Richard Poulin of the National Museum (CMN 59224) collected it on 19 November 1973, and Earl Godfrey confirmed its identification. This specimen was the first record for Quebec. The specimen of *L.a. thayeri* listed for Tadousac, Quebec by Dwight (1917) and the AOU (1957) was re-identified as *L.a. smithsonianus* with a Thayer's-like wing pattern (Earl Godfrey, pers. comm.). Ottawa area birders soon became familiar with the field marks of Thayer's, finding them regularly in small numbers afterwards. During the 1970s a large series of Thayer's, Kumlien's and intermediate birds was collected at Ottawa area dumps by the National Museum, and upon analysis, Earl Godfrey began to have doubts about the validity of Thayer's Gull as a separate species.

23. Gosselin and David (1975) published the most detailed description of Thayer's Gull to date with photographs in *American Birds*. Now birders had more field marks, and Thayer's Gulls were seen everywhere!

24. Lehman (1980) wrote a comprehensive article in *Birding* on the identification of Thayer's Gull, with excellent photographs and illustrations of all ages. Birders had more field marks, and the sightings increased across North America.

25. Weber (1981) in a taxonomic review concluded that the Iceland-Kumlien's-Thayer's complex formed a single polytypic species.

26. Gaston and Decker (1985) of the Canadian Wildlife Service reported random interbreeding between Thayer's and Kumlien's phenotypes on Southampton Island in northern Hudson Bay. They reported a mix of light and dark eyed gulls, with varying wingtip pigmentation and patterns.

27. Grant (1986) revised his classic gull guide of 1983 and it now included North American species. Thayer's Gull was treated as a full species following the AOU (1973, 1983). Based on information from one Nova Scotia birder, Grant incorrectly said that Kumlien's Iceland Gull is not variable, when in fact it is extremely variable. This wrong information added to the confusion.

28. In the revised edition of *The Birds of Canada*, Godfrey (1986) treated Thayer's Gull as a subspecies of the Iceland Gull. Godfrey said: "Studies made by Brian Knudsen for the National Museum of Natural Sciences in summers of 1975 and 1976 at Home Bay, Baffin Island (where in 1961 *thayeri* and *kumlieni* were thought by N.G. Smith [1966 Ornithological Monographs 4] to breed sympatrically with no observed interbreeding) produced no evidence of assortative mating of the morphs but indicated instead an area of widespread interbreeding among the phenotypes of these two taxa. Additional reasons for treating *thayeri* here as a subspecies of *L. glaucoides* include abundant specimen evidence from widely separated localities that colour and pattern differences between *thayeri* and *kumlieni* are completely bridged by individual variation." Godfrey's book has colour illustrations on Plate 36 by John Crosby of all three subspecies: *glaucoides, kumlieni and thayeri.* In addition, there is an illustration by S.D. MacDonald on page 264 showing the variation in the pattern and pigmentation in the primaries, ranging from pale extreme to average adult Thayer's.

29. DeBenedictis (1987), in a commentary on Gaston and Decker (1985) [incorrectly cited as A.J. Canaster and R. Zecher], stated that: "This paper may mark the beginning of the end of *thayeri* as a species."

30. Snell (1989, 1991) found non-assortative breeding between

Kumlien's and Thayer's Gulls at Home Bay, Baffin Island. He refuted the assortative mating of *thayeri* and *kumlieni* reported by Smith (1966). Snell assessed the logistical difficulties of Smith setting up experiments, collecting data and travelling long distances between study sites in the Arctic, concluding that it was impossible for Smith to have completed all the work reported. He stated that Smith's methodology and conclusions should be viewed cautiously.

31. DeBenedictis (1990) traced the history of Thayer's Gull. He stated that his article "might well have been subtitled the 'rise and fall of Thayer's Gull'." DeBenedictis discussed the studies of Macpherson (1961), Smith (1966, 1967), and how Snell (1989) tried to replicate some of Smith's experiments, "given the contrary results that subsequent investigators had reported". He concluded: "I think that it is time to accept the consensus of Canadian ornithologists and reduce *thayeri* to a subspecies of the Iceland Gull ... like *kumlieni*".

32. Gaston and Elliot (1990) described a colony of Kumlien's Gulls on Coats Island in northern Hudson Bay, which Smith (1966) previously identified as Thayer's Gulls. This is a good example of the confusion that existed and still exists about the appearance of these two taxa.

33. Sibley and Monroe (1990) treated Thayer's as a subspecies of the Iceland Gull. They stated that "*kumlieni* appears intermediate between *glaucoides* and *thayeri*, all these forms constituting one continuum of breeding populations representing a single species". They also cited Richard C. Banks who "suggests that *kumlieni* (and *thayeri*) is a distinct polymorphic species more closely related to *argentatus* than to *glaucoides*". Richard Banks is the current chair of the AOU Committee on Classification and Nomenclature. Interestingly, Burt L. Monroe, co-author listed above, was the previous chair of the AOU Committee on Classification and Nomenclature. Monroe died in 1994. Considering that Sibley and Monroe (1990) treated Iceland, Kumlien's and Thayer's as conspecfic, I wonder if the recent AOU Check-list (1998) would have lumped Thayer's with Iceland had Monroe lived. Also of interest, the late Charles C. Sibley was Neil G. Smith's PhD supervisor at Cornell, but he did not follow his former student's conclusion in his book as stated above.

34. Zimmer (1990) provided a detailed treatment of the complex. He stated that "the problem of identifying Thayer's Gull has not gone away; it has become even more difficult" because "these gulls are confusingly variable". The presence or absence of pigmentation on

the sixth primary arbitrarily divides adult Thayer's and Kumlien's according to Zimmer.

35. Smith (1991) replied to Snell (1989) and to the earlier review by Sutton (1968). Smith agreed that there were some errors in his study, but claimed that they did not affect his findings and conclusions. I highly recommend that you read the two papers by Snell (1989, 1991), and Smith's (1991) reply in *Colonial Waterbirds*.

36. Zimmer (1991) had 19 photographs showing the tremendous range of variation in Iceland Gulls from Newfoundland, including several probable *kumlieni* x *thayeri* intergrades. The photo in Figure 14 shows four birds (three adults and one third winter); one bird has white wingtips, one bird has black wingtips, and the third and fourth birds are intermediate! Zimmer again arbitrarily separated Kumlien's and Thayer's by the pigmentation on the sixth primary. Southern Ontario birders also are aware of the incredible variation in Iceland Gulls, ranging from adults with pure white wingtips and clear yellow eyes to birds with black wingtips and dark eyes.

37. James (1991) treated *thayeri* as a subspecies of the Iceland Gull, following Godfrey (1986) and supported by a large series of specimens in the Royal Ontario Museum.

38. The British Ornithologists' Union (1991) treated Thayer's Gull as a subspecies of the Iceland Gull.

39. Snell and Godfrey (1991) presented their findings at the AOU meeting in Montreal. They said: "Iceland Gulls (*Larus glaucoides*) form a poorly understood and taxonomically controversial species complex. We analysed patterns of geographic variation among 317 museum specimens of adults collected throughout the breeding range of Greenland to Banks Island in the western Canadian arctic archipelago. Although east-west clinal increases in degree of mantle melanism, primary feather melanism, primary pattern score, and bill size are significant, there is substantial overlap in all characters among geographic regions. There is no evidence that any of the three subspecies (*L.g. glaucoides, L.g. kumlieni*, and *L.g. thayeri*) are morphologically discrete. Type specimens of *kumlieni* and *thayeri* (the type of nominate *glaucoides* is not extant) are simply points within clinal continua, rather than exemplars of differentiated groups." Richard Snell is of the "new school" of taxonomists. He considers the Iceland-Kumlien's-Thayer's cline to represent one highly variable species with no subspecies. Earl Godfrey is of the "traditional school" of taxonomists, believing that dividing the three forms into subspecies is a very useful way of sorting the populations.

40. Pittaway (1992) treated Thayer's as a subspecies of the Iceland Gull following Godfrey (1986) and James (1991). I often accompanied Richard Poulin of the National Museum to collect gulls at Ottawa area dumps. Seeing the fresh specimens in the hand and the wide degree of overlap between Iceland and Thayer's Gulls made me realize that they comprised one variable species.

41. Weir et al. (1995) reported on an invasion of Iceland Gulls that were killed by an oil spill at the British Shetland Islands in 1993. The adult specimens examined clearly demonstrated a *glaucoides-kumlieni* cline.

42. The video by Vanderpoel (1997) on *The Large Gulls of North America*, like Grant's classic guide, is a milestone in gull identification. It includes excellent footage and discussion of Thayer's and Iceland Gulls.

43. The AOU (1998) currently regards Thayer's Gull as a full species. The decision to give species status to Thayer's Gull in 1973 was based primarily on Smith (1966). The conclusions and methodology of Smith's study are now widely treated with skepticism based on information from Sutton (1968), Godfrey (1986), Snell (1989), DeBenedictis (1990), Snell and Godfrey (1991), Snell (1991), BOU (1991) and others. The AOU continues to disregard this information. Finally, the AOU (1998) says that Thayer's Gull "is now generally regarded as a distinct species". To the contrary, many of the authorities cited in this article do not consider Thayer's Gull a distinct species.

44. Beaman and Madge (1998) regard Thayer's as a race of the Iceland Gull.

45. Howell (1999) gave a concise overview of the Thayer's debate. I found myself agreeing with most of his points. He questioned the AOU's (1998) statement that Thayer's "is now generally regarded as a distinct species", by pointing out that most recent non-AOU literature treats Thayer's Gull as a subspecies of the Iceland Gull.

46. Michel Gosselin (*in litt.*) of the Canadian Museum of Nature has made a careful study of 80 adult breeding specimens and additional winter adults of Thayer's-Kumlien's in the museum. His examination included measurements, primary pigmentation and pattern, and mantle colour. Gosselin arbitrarily considered as pure Thayer's, adult birds with five or more dark tipped primaries, occurring north or west of Home Bay, Baffin Island. Using a printer's grey scale (0 = white, 100 = black), he found that mantle colour taken from the small upperwing coverts ranged from 45 to 55 in Thayer's (n = 57, mean = 50) and from 30 to 50 in Kumlien's (n = 21,

mean = 38). He stated that the mean of nominate Iceland is probably around 30. The shade of the darkest wingtip markings ranged from 62 to 75 in Thayer's (n = 54, mean = 69) and from 35 to 70 in Kumlien's (n = 19, mean = 44). Gosselin concluded: "Given the great variability of Kumlien's Gull, its intermediate appearance, and the intermediate position of its breeding and wintering grounds, I firmly believe that Kumlien's Gull is an intergrade population between Iceland and Thayer's."

47. Richard Snell (in prep.) is doing the account of the Iceland Gull for *The Birds of North America* series. Based on his field work and museum studies, Snell (pers. comm.) will treat Thayer's Gull as a form of the Iceland Gull. Since Iceland Gull was the first described of the three taxa, it will become the name of the species.

Conclusion

The published and specimen evidence clearly indicate that Thayer's Gull is not a distinct biological species. The "new school" of taxonomists, such as Richard Snell, treats Thayer's as part of the Iceland Gull complex, but would not give it subspecies ranking because its clinal characters vary geographically at different rates and in different directions. I recommend following the traditional treatment of Godfrey (1986) that lists three subspecies of the Iceland Gull: nominate *L. g. glaucoides, L. g. kumlieni*, and *L. g. thayeri*. The two approaches used by Snell and Godfrey are not incompatible. We could classify Iceland Gulls as Type I (*glaucoides*-like), Type II (*kumlieni*-like) and Type III (*thayeri*-like). Regardless of how we classify them, they are no more or less identifiable in the field. The AOU is bound to change its position as more authors independently adopt a taxonomy recognizing that Thayer's is a form of the Iceland Gull.

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Yellow-throated and Blue-headed Vireos in Ontario: 5. Nestling Period, and Post-nesting Activities

Ross D. James

The reader may assume once again that the lives of the Yellow-throated Vireo (*Vireo flavifrons*) and the Blue-headed Vireo (*V. solitarius*), formerly Solitary Vireo, are similar unless otherwise noted.

NESTLING PERIOD

Hatching and Feeding

When eggs were close to hatching, the adults rose in the nest every three to eight minutes to look under themselves before settling back on. They seemed well aware of what was happening. I did not observe what was done with egg shells. Lawrence (1953) observed Red-eyed Vireos (*V. olivaceus*) carrying shells away. Adults returning to the nest to sit, brought food as soon as there was even one young in the nest. For the first few hours, however, they seldom actually fed the young. They stood over the nest trying to elicit gaping, but ended up eating the food themselves.

Both parents bring food. In only one pair (Yellow-throated Vireo) did I observe a male giving food to the female to feed, on a few occasions. The food exchange was very rapid. The male flew directly to the nest, the female hopped off the nest and took the food almost before he could perch, and he continued to fly on out.

As during incubation, one bird left the nest just as the incoming bird arrived, so that it appeared as if a single bird passed quickly through the tree, unless the exchange was seen. Feeding began shortly after sunrise in the morning and continued through the day until just after sunset in the evening. The greatest frequency of feeding was in the early morning, and the least about mid day. Two or three trips per hour by each parent was the usual frequency for smaller young, increasing to four or five per hour for older nestlings. Smaller young generally got smaller items, but occasionally an item too large to swallow was brought. After trying to feed it half a dozen times, the adult would eat it. They never pull apart large items to feed pieces to the young, as they did for themselves.

Soft-bodied green caterpillars (*Lepidoptera*) seemed to be the usual fare when young were small. A wider variety of insects was brought as the nestlings got older. As noted in Bent (1950), several times I saw Blue-headed Vireos bring large dragonflies (*Odonata*) to older young, stuffing them in head first, wings included. The young sat with the long abdomen protruding from their mouths for five minutes or more until they

could swallow more. Also, when the young were older, I observed parents feeding by regurgitation. This is not usual, even unusual, with Blue-headed Vireos. I always saw fresh material brought to small nestlings, although Wheelock (1905) claimed to have seen young vireos (not these species) fed by regurgitation. Weygandt (1907) reported regurgitative feeding by Blue-headed Vireos, but the age of the young was not given.

When young were very small, the adults would stand over the nest briefly until the young gaped, before they could feed. They gave contact calls, and hopped back and forth to jar the nest gently until the young gaped. As the young got older, they gaped immediately, even upon hearing an approaching bird.

Brooding and Nest Sanitation

The female brooded at night, but the male did as much during the day. Brooding was continuous for at least five days. By the fifth day, if the weather was warm, the nest might be left unattended for short periods. Among Yellow-throated Vireos, brooding ceased by the sixth day; in one instance, seven day old young were not brooded even in a light rain. Among Blue-headed Vireos, brooding was regularly continued for six days, and even on the seventh and eighth days during colder times of the day. This reflects the cooler climate and microhabitat of this species where I observed them.

Once brooding had ceased, the adults typically remained at the nest only long enough to feed and dispose of fecal sacs. When young were small, and adults remained to brood, they ate the fecal sacs. By day six, only about half were still eaten, and thereafter, most were carried away. They were generally carried some distance before being dropped. I rarely saw adults eat a fecal sac as late as the 10th day of nestling life. Fecal sacs were produced at a rate of about one per nestling per hour.

The Nestlings

Young were born blind, and remained so for about seven days. They were probably somewhat deaf also, as adults seemed to have to hop about jarring the nest to get them to gape, even though they had been calling (with contact calls) on approach to and at the nest. Small young would gape when I jarred the nest, seemingly unaware of the fuss the adults were making over me; older young with eyes open crouched motionless in the nest. The young did not call loudly enough to be heard from the ground until they were no longer being brooded. At this time, they could be heard calling in chorus, a high pitched *ceeee* sound. Although I have no quantitative data, it seemed that the loudness and duration of the calling after being fed influenced the speed at which the adults returned with more food.

By the time young were no longer being brooded (and probably somewhat earlier), they could grip the nest bottom rather strong-

ly. Young could be seen preening by the tenth day of age, but might be doing it sooner down in the nest where I could not see them. They would spend as much as one third of their daytime preening in the last few days in the nest. About the tenth day, also, I saw them stand on the nest rim and vigorously exercise their wings. The clutching power of their feet was sufficient that they could maintain themselves even in a moderate wind.

Young hatched nearly naked, with a small amount of natal down. Feathers grew to cover most of their body by the time they were six to seven days old or about the time brooding was reduced or ceased. By the time they left the nest, they appeared to be nearly the same colour as the adults, but the wings were short and tails were very short.

Adult Behaviour

The males ordinarily sang little during the nestling period. I several times noted only a few sporadic songs over a period of several hours. They usually continued to give a few songs, however, as they approached the nest. The females used contact notes on approach, and both used contact notes when at the nest.

Unless exchanging at the nest, the adults seldom flew directly to the nest. They usually landed a short distance away and then flew to the nest. Once young were in the nest, the adults of both species routinely exhibited "flycatching" behaviour on the way to the nest tree. That is, they made a short arc upward as if hawking an insect on the way to the nest. They would do this even when they had food in their beak already, or early in the morning when it was cold and unlikely that any insect was flying, and I could never see anything in the air that they might actually have been catching. This behaviour seemed to be a deceptive action, designed to fool any nest predator that might be watching into thinking that the bird was just foraging, not taking food to a nest (see James 1979).

When the young were no longer brooded, but still fairly small, the adults might stand over the nest for a brief period after feeding. More usually, they moved a short distance away and preened for awhile before leaving. But, as the young got closer to nest leaving, the nest was unattended almost completely except for feeding and fecal sac removal. The adults seemed to avoid close approach for any length of time.

Normally, only one adult was at the nest at any one time, once brooding had ceased. If a second bird came, the first typically left. But if a second adult came to feed while the first stayed there, the first bird would begin to wing quiver (see Figure 1). This is the same gesture used by young in begging food from an adult, once they have left the nest. The wing quivering adult, however, was never fed by the incoming bird. Wing quivering probably indicated a submissive

attitude, allowing two birds to come close together (overcoming individual distance). Usually, the display was brief before the displaying bird departed. Among some pairs, wing quivering rarely happened, but it was quite common among others.

POST-NESTING ACTIVITIES

Much of the basis for the information presented here was gleaned from one pair of Yellow-throated Vireos and their young. They were the only pair in the area, and were followed from nest leaving in mid July until they left for the winter in September. Additional, more casual, observations from several other families of both species support what happened with this one family.

Nest Leaving

Young remained in the nest for about 13 days, and left the nest early in the morning. They stayed very near the nest for a short while before a first "long" flight. The first flight of one young Yellow-throated Vireo covered a distance of about 30 m downhill. But later in the day, it again flew about 25 m, this time gaining height. The initial flight was accompanied closely by an adult bird.

With the closely followed Yellow-throated Vireo pair, the young were still within 100 m of the nest after a week, and had moved only 200 m by twelve days out of the nest. Through the rest of the summer, they could usually be found within 500 m of the nest. With one pair of Blue-headed Vireos, they seemed less confined by topography and habitat, and moved as much as 2 km from the nest within a couple of weeks and would move 0.5 km in any one day after that.

Feeding and Foraging

The young were totally dependent upon the adults for food for some time. Even nine days out of the nest, the young were largely content to stand and wait for food, only occasionally moving after the adult, begging briefly. I watched a young Yellow-throated Vireo, twelve days out of the nest, after being fed a large worm. It tried to swallow, then coughed it up, beat it over a branch like an adult would to initially kill it, then held it with one foot and pecked it apart to eat. They were capable of handling what they got, but not yet able to assume their own independence. By sixteen days, young of either species would be foraging about looking for food, rather than just waiting to be fed. At this time, they were still rather slow and ineffective, but from then on did more and more of their own food procurement. They would continue to beg food and might still be fed even a month or more after leaving the nest.

Most food brought was fresh, but on occasion, adults would also regurgitate food for the young during the first week or so post nest leaving. Adults never stayed close to young after feeding them. When young began to forage on their own, after a couple of weeks out of

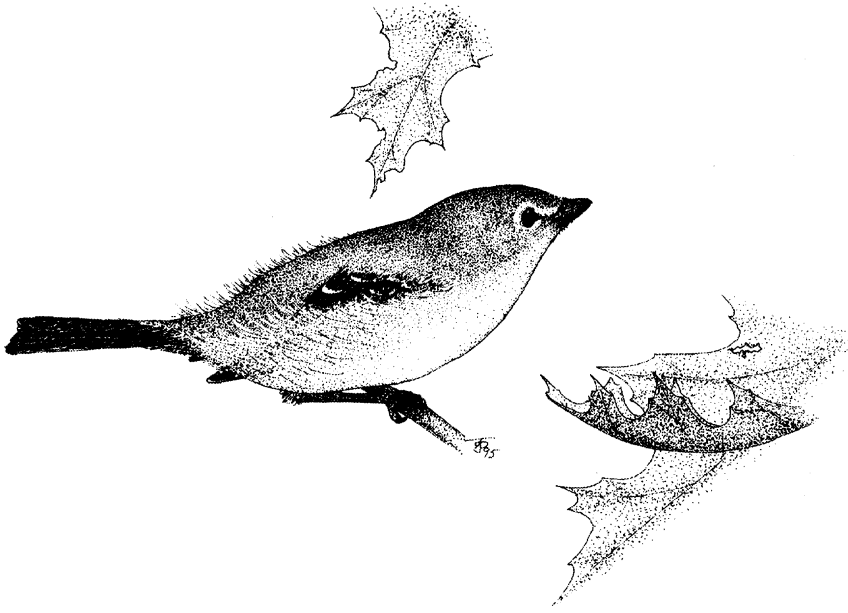

Figure 1: The *wing quivering* display of adults or young of Blue-headed or Yellow-throated Vireos. The birds crouch, droop the wings and spread the side-feathers out and up over the wings. As the wings are quivered behind, the sides of the bird vibrate noticeably in response. Drawing by *Ross D. James.*

the nest, they generally stayed by themselves, not moving far between feedings by a parent. But, as they became more mobile, they gradually tried to keep up with a parent, travelling within contact call range.

Follow the Leader

Either adult would feed any young for the first few days. But after about a week, the young were far enough apart that the parents had also separated and were each looking after one or two young. Infrequently, through the next month, I would find all together for half an hour to an hour. But, they soon split up again, half the young staying with each parent throughout the rest of the summer. With the one pair of Yellow-throated Vireos, the same young seemed to stay with the same parent, the one with the male having a louder and more emphatic voice (probably a young male, as the adult male had a louder and more emphatic voice than the female when using contact calls). However, I heard two young with the male from other nests where the young had different voice quality, suggesting it is not

exclusively male offspring that follow a male parent.

After the August molt period, the young tended to be much more independent, frequently foraging off by themselves. They did, however, periodically return to the company of an adult, until migration in September.

Sutton (1949) indicated that he thought Yellow-throated Vireos were double brooded in Michigan. But, I never had any indication of second broods. Given the period of dependency of the young, it seems somewhat unlikely, at least in northern parts of their range. Late nests or renests could easily give the impression of a second brood, but second broods have not been documented. Bent (1950) also suggested that Blue-headed Vireos (*V. s. solitarius*) might be double brooded, but no concrete example was provided. However, I once observed a pair of Blue-headed Vireos in Ontario that had lost all but one young. They did begin to renest almost as soon as the young left the nest. The female was doing all the building even in the early stages, while the male fed the young and attended the female at times. McLaughlin (1888) reports an example of a renesting pair of "Mountain" Solitary Vireos (*V. s. alticola*) with three young in North Carolina. These young were apparently still dependent upon the adults. So renesting may occur in Blue-headed Vireos, but there is little evidence of it being regular, in Ontario at least. It may be more frequent in more southerly latitudes (possibly even so in Yellow-throated Vireos), especially where some nestlings have been lost.

Development

About the time they left the nest, the call of young birds of both species changed to a single *"cheep"*. Each time a young flew to a new tree on the first few days out of the nest, it began calling. They called fairly continuously at a rate of about 24 per minute until an adult returned to feed them. This constant calling was no doubt helpful to the adult in locating them.

The approaching adult usually sang or gave contact calls. This immediately caused the young to start begging. They crouched on the branch with mouth wide open, calling much more quickly, and quivering their wings vigorously. The calling ceased as the adult got close, but the wing quivering continued through the feeding and for a short time thereafter.

After being fed, they perched quietly for a time. But, if more food did not appear, they soon began to call again. Within a few days, the call became more prolonged to a *"Cheep-cha-cha-cha"* type of sound. This call remained the one heard for the rest of the summer.

Recently fledged young spent a small amount of the day sleeping (in several short bouts). They crouched down on a branch with the feet and branch right up into the belly feathers. The head was drawn back, and the beak pointed

up at about a 45 degree angle, not turned around and tucked into the back feathers. (I have never observed a sleeping adult to see what posture they use.) Then their eyes were closed, for short periods only.

When not sleeping, the young preened for as long as 20 minutes at a time. They spent almost half their time preening when just out of the nest. It was fairly easy to identify young birds as such for most of the summer. They had short tails, with a graduated length of feathers, for a couple of weeks. The outer feathers appeared to be the last to grow out to full length. From then until the August molt, body plumage looked very fine and new compared to the worn plumage of the adults. After the molt, it was the adult with the shorter tail, which could take until the first of September to grow out again.

For a few days after nest leaving, young leaned back and crouched noticeably when defecating. This crouching disappeared within a week. They were well able to stand firmly on a branch as the wind blew. Pierce (1931) reported that young Yellow-throated Vireos were able to "run" up a vertical tree trunk with the aid of their wings when still scarcely able to fly. As the young moved from tree to tree, they could usually be found perching in a sunny spot. Although I did not observe sunning behaviour as seen for adults, perching in the sun with feathers fluffed up was commonly seen.

Voices

The adult male seemed to sing only very sporadically when young were just out of the nest, usually only when coming to feed a young bird. Later, as the young became more mobile, the male seemed to sing somewhat more. But, as adult and young began to move about together, it was usual to hear only a continual conversing with quiet contact calls. When all members of a family got together again for short periods, there would be much calling. The young would be chasing about after each other, as well as after adults, begging for food. The male would sing some, and both adults would be trilling and using *cheee* calls. This "commotion" could be heard at some distance, and was very noticeable after the usual quiet most of the time.

In August, the males' songs almost entirely ceased during the molt period. They sang a bit more in late August, but it gradually diminished into early September, when only an occasional song was heard. Sutton (1949) said that young Yellow-throated Vireos might begin to sing adult-like songs before they left on migration, although I did not hear this. Perhaps among earlier successful nestings this does happen. I have, however, heard young Blue-headed Vireos in early September singing adult-like song (James 1981), and so would expect it in Yellow-throated Vireos as well.

Both species are known to sing on migration, and even in wintering areas (Bent 1950). The young then

have a chance to practice their song before the next spring when, for the first time, they will become part of the nesting population. All seem to sing essentially developed song in their first spring on territory.

Autumn Departure

Some birds remained on or near their summer territories through the first week of September, although others would be moving by that time. Most birds moved south by the middle of September. Migrants were typically alone or as singles with flocks of warblers rather than with other vireos, indicating that young and adults had separated for the migration.

Discussion

There are not the same intricacies of behaviour associated with the latter stages of the summer. The birds largely direct their attention to finding enough food, rather than coordinating nesting efforts and courtship activities. More detailed studies, however, could no doubt provide significant details about the lives of these species. We still have only a rudimentary understanding of many aspects of the growth and development of the young, or the extent of and modifications in behaviour that might accompany renesting. And what transpires through the winter months remains almost a total mystery.

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Sharp-shinned Hawk – Eastern Kingbird Interaction

Ross D. James

There are a number of well known potential causes of death among songbirds, including attacks by hawks. However, when looking at any particular species, there seem to be few, if any, actual observations available to indicate whether any particular mortality factor has occurred and, if so, how frequently.

A particularly interesting relationship exists between Eastern Kingbirds (*Tyrannus tyrannus*) and predatory birds. While kingbirds are known for their aggressive nature, how far can they go with a potential threat to their own life? Very limited information was available to Murphy (1996) on which to base comments about Eastern Kingbird reactions to, or threats from, small bird predators.

He cites an instance of a kingbird being killed by an American Kestrel (*Falco sparverius*), but while distracted with attacks on a Red-tailed Hawk (*Buteo jamaicensis*). He indicates that kestrels also may be chased on occasion, although they are usually given a wider berth. Even with the kingbird's flying ability, is it worth the risk to approach another skillful flier? Apparently so, if the motivation is appropriate.

With respect to *Accipiters*, Murphy (1996) can only say that they will be chased by kingbirds if they have been "spotted". While we know that Sharp-shinned Hawks (*A. striatus*) are predators of small birds (Fisher 1893, Snyder 1932, Duncan 1980), few are the opportunities to witness an attack by one of them. Most data on food habits come from stomach content analyses.

While Eastern Kingbirds are within the size range of birds taken by Sharp-shinned Hawks (Storer 1966), I have been unable to find reference to a documented instance of a Sharp-shinned Hawk killing an Eastern Kingbird. An interaction I witnessed last summer, then, seems worth reporting for what it can reveal about kingbirds and Sharp-shinned Hawks.

In early August 1998, shortly after noon, I was cutting grass at my place near Sunderland, Ontario. I was riding a tractor along the south edge of a field, and just as I was turning north at the eastern corner, a Sharp-shinned Hawk flushed from a fencepost, perhaps 25 m ahead. As it flew west across my path, I noted a greyish back, indicating an adult. My impression was that it was a male; however, being distracted by what I was doing, and later seeing, I am not certain of that.

The hawk flew west across the field and perched low on the dead branch of a tree in a fencerow there. A few moments later, it flew north behind the row of trees to try to intercept another bird (which I also flushed) as it passed through or

over tall trees in the same fencerow. The hawk missed, and soared back into the field where I was.

Just prior to the hawk reappearing, two Eastern Kingbirds left the top of another tree, somewhat farther along the same fencerow. They flew slowly across the field toward a large clump of tall shrubs a short distance in front of me, as I continued travelling along the eastern edge of the field. Ever the opportunist, the Sharp-shin went after the trailing kingbird. The kingbird saw it coming in time, and made evasive manoeuvres that narrowly but handily evaded two quick attempts to grab it.

By this time, the other kingbird had become aware of what was happening and, in an instant, had reversed direction and was diving for an attack. In the few seconds more that they were in sight, the hawk was fleeing, with the kingbird closely pursuing and vehemently pounding away at the back of the hawk.

Given the chance then, it seems a Sharp-shinned Hawk would take the opportunity to try to kill an Eastern Kingbird. They are of a size that even a male Sharp-shin is apparently capable of handling (Storer 1966). It seems fairly obvious, however, that this potential predator is not much to be feared by an experienced and aware kingbird, particularly if it is motivated appropriately. I could not help but be impressed by the speed, agility, and determined response of the kingbirds in this situation. What is not clear is the motivation.

It would be interesting to know if the attacked bird was a juvenile following one of its parents (a distinct possibility). Also, was the hawk able to recognize a juvenile, or did it just try anything opportunity presented? Had the hawk succeeded in striking the one kingbird, would it ever have had a chance to eat it in peace, or would it have ended as another futile pursuit?

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Notes

Unusual European Starling Nesting Attempt

Larry Drew

I discovered the oddity in Figure 1 while exploring for nesting sites as a volunteer for the Ontario Nest Records Scheme. The site was an empty granary on my brother's farm in Kent County, Ontario. A European Starling (*Sturnus vulgaris*) was observed at the location in early May 1998, and was apparently the architect of this unusual nesting attempt. The starling entered the granary through a hole in the outside wall under the eaves. However, the nesting material continuously trickled down from between the boards with each new delivery since there was nothing to stop it from falling. The stack of nesting material on the floor reached a height of 1.5 m before this failed nesting site was abandoned.

I had wondered if the pile had built up over two or more seasons, and questioned my brother whether he had noticed any of the material in the granary the year before. Remarkably, he described a similar pile existing that year, but had cleaned that pile up completely, as he had for each of the previous four or more years!

Discussion

Starlings are aggressive competitors for nesting sites and will accept virtually any cavity to begin a nest (Peck and James 1987). The male establishes the nesting site and will carelessly accumulate a messy assortment of plant material (Cabe 1993). The female completes the nest after pairing. Cabe (1993) noted that "the amount of material depends in part on the size of the cavity". The persistence of European Starlings in attempting to construct a nest is well shown in this example from Kent County.

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Figure 1: Pile of material (1.5 m high) accumulated during failed nest-building attempt by European Starling. Photo by *Larry Drew.*

More Observations of White-winged Crossbills Foraging on Wood

Bill Crins and Dan Strickland

On 6 September 1998, between 0920h and 0930h, Crins observed six White-winged Crossbills (*Loxia leucoptera*) working on dead wood in a dead-tree swamp/marsh near the shore of Mineral Springs Lake, Huntsville, Ontario. The birds (one adult male, five juveniles) apparently were eating the dead wood from the moister, more rotten parts of stumps and snags of Yellow Birch (*Betula alleghaniensis*), White Cedar (*Thuja occidentalis*), and Black Spruce (*Picea mariana*), at heights of 0.5 to 3 m above the ground. For the most part, the crossbills engaged in quiet twittering while they worked, although the male sang once. Numerous ants were flying in the vicinity, but there was no obvious evidence of ants emerging from the wood on which the crossbills worked.

During the morning of 23 February 1999, Strickland observed several White-winged Crossbills foraging on the rotting wood of 10 to 15 different old stumps in a swamp/marsh bordering Mud Bay at the north end of Galeairy Lake, Airy Township, Nipissing District, in Algonquin Provincial Park, Ontario. As many as six birds at a time were noted on a single stump, apparently eating the wood. Several of the stumps had flat tops, and were probably White Pines (*Pinus strobus*) cut during the early logging days in the area.

Crins and McRae (1998) noted that foraging on wood had been reported only rarely in White-winged Crossbills, but the recent observations published by them, along with those reported here, suggest that this may not be an uncommon form of behaviour in this species.

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White-winged Crossbills Eating Wood Ash

Ron Tozer

On 9 September 1998, at about 1300h, Don Craighead and Doug Guay observed one male and two female White-winged Crossbills (*Loxia leucoptera*) land at a campfire pit on an island in Galeairy Lake in Algonquin Provincial Park (Nightingale Township, Haliburton County), Ontario. Craighead (*in litt.*) later reported that "they had landed outside the ring of rocks that formed the pit circle and proceeded to the gaps between the rocks which contained only the burnt fire ash. There were no other materials in the area. The females only stayed briefly and then moved on around the pit and pecked at the ground area that was outside the ashes. The male stayed in the opening between the rocks and picked at the ash for 3 or 4 minutes. We were able to get our cameras and move into close position to photograph the birds, especially the male who ignored us even though I was only about 2 m from him" (Figure 1).

Figure 1: Male White-winged Crossbill eating wood ash. Photo by *Don Craighead.*

Discussion

I was unable to find any reference to wood ash being eaten by White-winged Crossbills in the literature, including extensive reviews of their food habits by Bent (1968) and Benkman (1992). However, there are published accounts of wood ash consumption by other bird species.

Some sightings involved incubating females leaving their nests to eat ash, and it was theorized that this behaviour might have been due to a calcium deficiency during the stress of egg production. Wood ash is rich in calcium (Pulliainen et al. 1978, Ficken 1989, des Lauriers 1994). McMillan (1948) observed a female Red Crossbill (*L. curvirostra*) "feed on what appeared to be bits of charcoal" at a campsite near its nest (containing one egg) in Yosemite National Park, California. Similarly, des Lauriers (1994) reported incubating female hummingbirds "repeatedly licking, and probably consuming, powdery gray wood ashes." His observations involved one Broad-tailed Hummingbird (*Selasphorus platycercus*), one Blue-throated Hummingbird (*Lampornis clemenciae*), one Costa's Hummingbird (*Calypte costae*), and two Anna's Hummingbirds (*C. anna*), in Arizona and California. It has been speculated that "ash feeding by nesting birds may be more common than the limited records suggest" (des Lauriers 1994).

In contrast to the above accounts, other published observations of ash consumption occurred outside the breeding season, and included males. The occurrence described in this note appears to fit in this category. In a review of the Red Crossbill's common habit of feeding at mineral sources, Tozer (1994) reported that there had been numerous sightings of that species eating wood ash at campsites in Algonquin Park. Ficken (1989) observed that Boreal Chickadees (*Poecile hudsonicus*) selectively fed on wood ash that was much higher in calcium (2580 ppm) than nearby ash (600 ppm), during October at a campground in Terra Nova National Park, Newfoundland. Both Parrot Crossbills (*L. pytyopsittacus*) and Common Redpolls (*Carduelis flammea*) in Finland were often seen to eat "ash from ovens and fireplaces out of doors" (Pulliainen et al. 1978).

The consumption of wood ash by birds may occur more frequently, and among more species, than published observations indicate. Observers should watch for (and report) this interesting behaviour.

Acknowledgements

The author is indebted to Don Craighead for providing a description and photographs of his observations.

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CORRIGENDA

Ontario Birds 15(2) August 1997

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The plant used in Rose-breasted Grosbeak nests was incorrectly identified as *Anemone canadensis*. It was actually White Avens (*Geum canadense).*

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The Greater Shearwater was found at Budapest Park, near the foot of Parkside Drive, east of Sunnyside Beach, on the Toronto waterfront, not "at Budapest Beach, in the grounds of the Canadian National Exhibition", as reported.

Backcover

We apologize for any inconvenience to our readers or Kindermann (Canada) Inc. caused by two errors which appeared in the Leica ad. Please note that the $50 Instant Rebate is no longer offered, and that the Leica website address should be: http://www.leica.kindermann.com

Book Review

The Handbook of Bird Identification for Europe and the Western Palearctic. 1998. By *Mark Beaman and Steve Madge.* Princeton University Press, Princeton, New Jersey. Hardcover, 784 pages. $99.50 U.S.

This long-awaited handbook is of interest to North American birders. It treats nearly 900 species, almost one-tenth of the world's birds. It is a comprehensive textbook concentrating on identification, not a field guide! The area covered includes all of Europe, North Africa to the central Sahara, and the Middle East to the border of Iran.

The extensive introduction discusses identification, bird topography, molt and plumage terminology, feather wear, soft parts, etc. The characters of each bird family are described before the species accounts. The species accounts are detailed, describing the field marks of most plumage stages, similar species, sex and age characters, voice, subspecies, status and habitat, and include 625 range maps in colour.

The colour plates by six artists number an amazing 357 full pages, plus many more birds illustrated in colour spread throughout the text. Each plate depicts two or three species with about 15 illustrations per plate showing males and females in various plumages, including fresh and worn individuals, subspecies, morphs and variants. Many species also are illustrated in flight, such as gulls, shorebirds, hawks, waterfowl and some passerines. The illustrations generally are excellent and precise. For example, on the folded wings of many passerines, you can see the median coverts are overlapping from the outside inward toward the body, and the next row of greater coverts is overlapping in the opposite direction. It is like having the birds in the hand!

A tradition in bird book reviews is to point out errors and omissions. It is a credit to the authors, artists and publishers that there are very few mistakes in this handbook. However, the illustration of the male "Cory's" Least Bittern (dark morph) on page 98 is unlike any of the specimens in the Royal Ontario Museum. Interestingly, *The Birds of the Western Palearctic* (BWP) illustrates a very similar "Cory's" as number 4 on plate 30 in Volume 1 (Cramp 1977). Perhaps it was the source of the error here, or the same specimen from a British museum was used in both cases. In 1996, Peter Burke and I pointed out in *Ontario Birds* 14(1): 26-40 that the illustration in BWP is "definitely not a Cory's or even a typical Least Bittern". The same comment applies to the illustration in this handbook. If the illustrations in this handbook and the

BWP are based on the same specimen in a British museum, then that specimen should be re-evaluated. The illustrations of the male Cory's in both books should be almost black above, and a much richer dark chestnut below, and even the bill is darker on Cory's.

This handbook is packed full of identification information. The illustrations are outstanding. I highly recommend this book to birders and ornithologists.

It is 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.

Ron Pittaway, Box 619, Minden, Ontario K0M 2K0

OFO Bird Finding Guide #6

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

Stephen J. Scholten

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 Shipsands 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

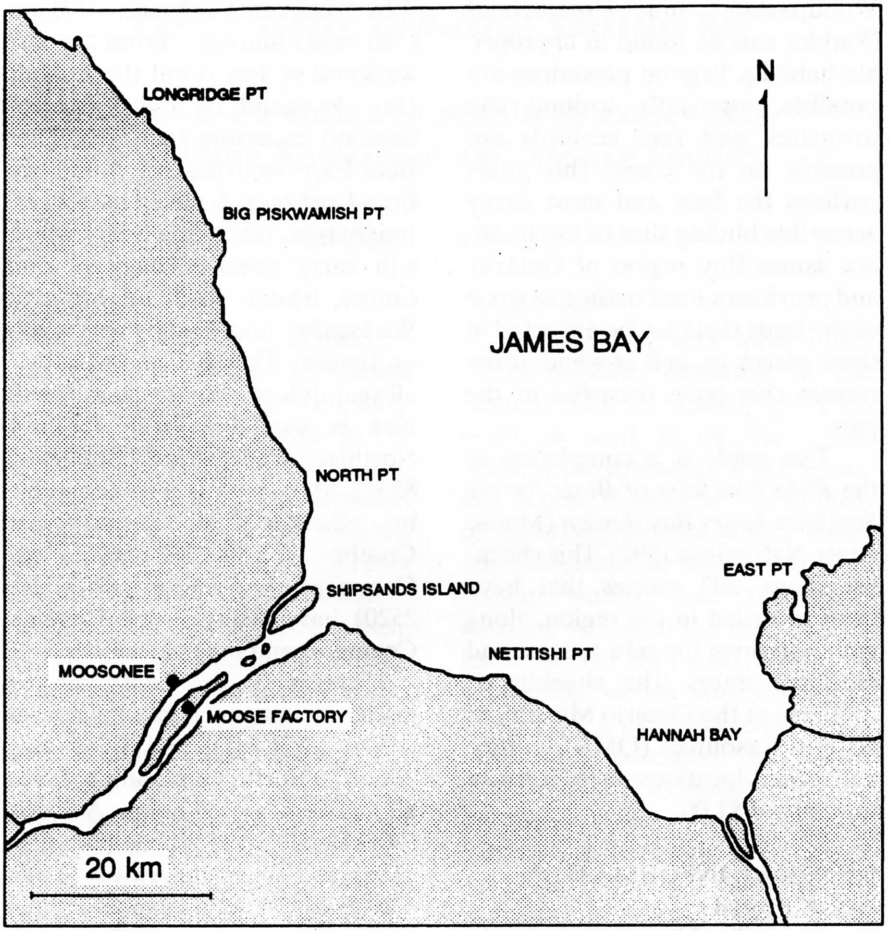


Figure 1: Southern James Bay Region.

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-

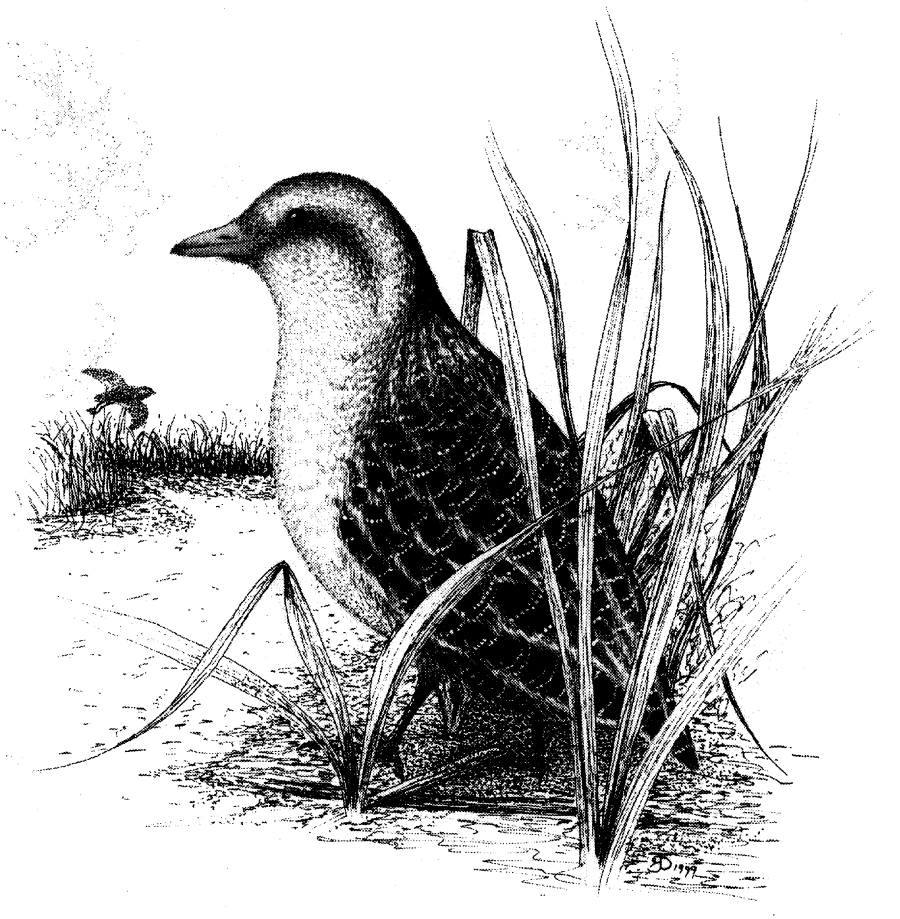


Figure 2: Yellow Rail. Drawing by *Ross D. James.*

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

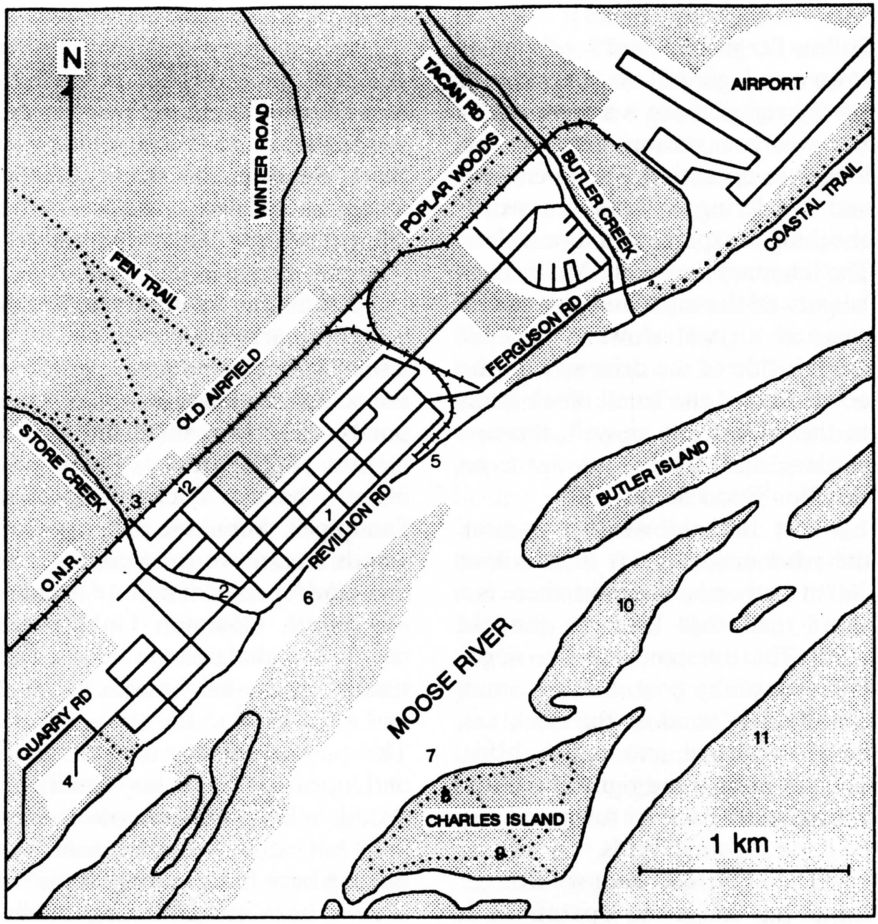
Follow Ferguson Road South out of town (see Figure 5). At the first turn (to the right), there is a driveway to the weather station which is no longer in operation. The open field and bordering willows are worth checking for sparrows and warblers. The channel between Maidsmans Island and the mainland 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
2. Fire Hall
3. Water Tower
4. Old Weather Station
5. Barge Landing
6. Public Dock
7. Tidewater Park dock
8. Tidewater Park
9. Tidewater Trail
10. Moose Flats
11. Moose Factory Island
12. Train Station

Figure 4: Moosonee road map and walking trails.

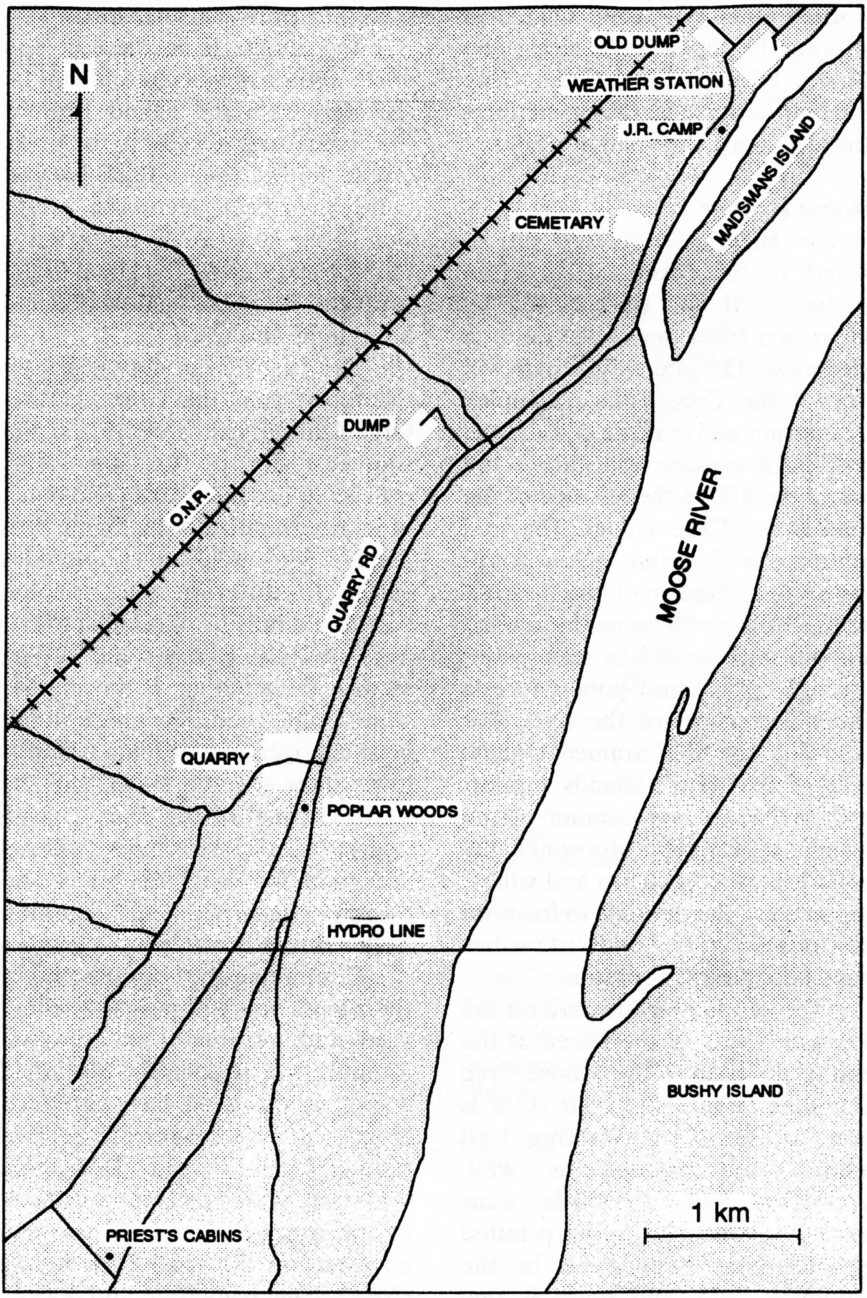


Figure 5: Moosonee Quarry Road.

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

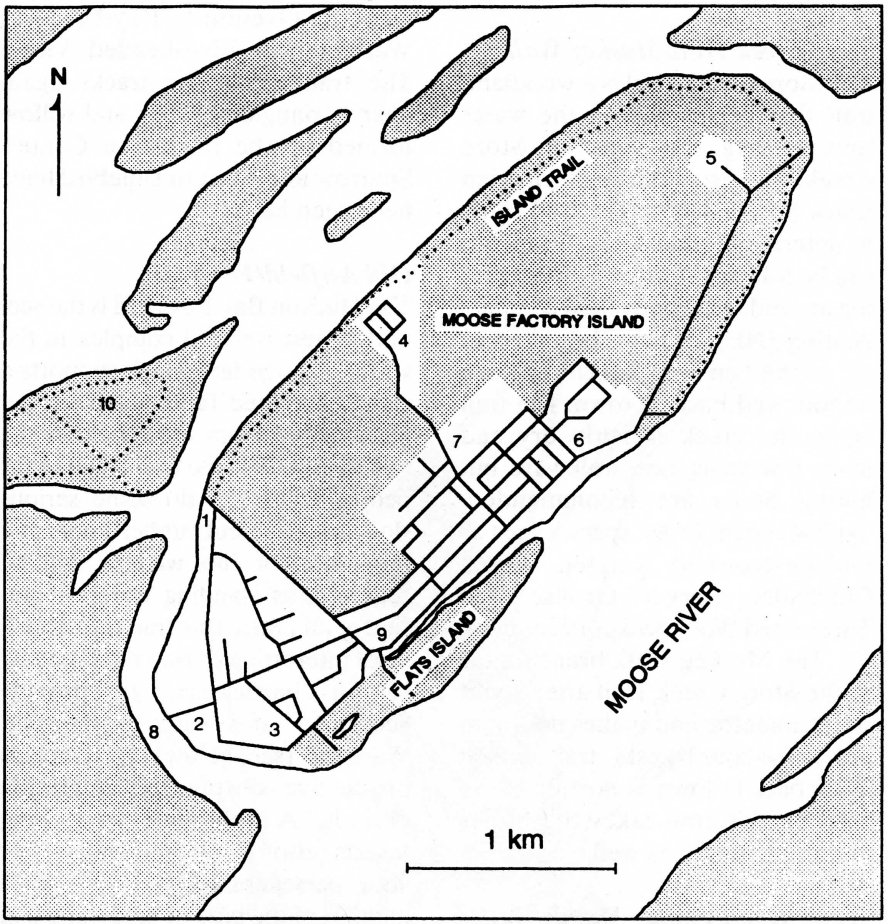
Moose Factory is located on an island in the Moose River (see Figure 6). It can be accessed by water taxi from the public dock in Moosonee ($5 one way). Taxis will stop at the Cree Village complex (restaurant and craft shop) or at the hospital. A walking trail starts at the top of the hill on the left 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
2. Hospital
3. School Yard
4. Sewage Lagoons
5. Dump
6. Cree Cultural Organization
7. Moose Cree Complex
8. Hospital Docks
9. Museum Grounds
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 fairly 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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Stephen J. Scholten, Ontario Ministry of Natural Resources, 435 James Street S., Suite B001, Thunder Bay, Ontario P7E 6S8.

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*

In Memoriam

The Gerry Bennett I Knew: A Eulogy

Ron Scovell

Gerry Bennett was unique. When Gerry passed away on Sunday, 10 January 1999, he left a void in the birding world that will never be filled. In 1933, Frank Chapman, Curator of Birds in the American Museum of Natural History, wrote his autobiography which he entitled *Autobiography of a Bird-Lover.* If Gerry had written his own biography, this would have been a perfect title for his book as well. Birds were Gerry's life. It is almost fitting that he died while filling the bird feeders in his own backyard for the very last time.

I first met Gerry in the early 1950s. My brother Doug, who passed away only fifteen months before Gerry, introduced me to birding while I was a teenager. Doug birded a lot with Gerry, and it was inevitable that sooner or later I would meet him. The three of us had two things in common. We loved birding, and we loved a good laugh. The Scovells were a perfect audience for Gerry. He was an absolute master at the instantaneous pun, and although there were too many to remember, there were two that I have never forgotten.

On a TOC Field Day, which was held the first Sunday in September (and still is), Doug and I were just leaving Whitby Hospital Marsh as Gerry arrived. "What did you see?", asked Gerry. I told him that we had seen a Sora Rail and that, uncharacteristically, it had been walking around out in the open on some lily pads. Gerry's instantaneous reply was "classic Gerry". "God, there's nothing more painful than an open Sora!"

The second occasion took place at the Corner Marsh in Ajax. While the three of us were looking over the ducks in the pond, Doug suddenly exclaimed, "Hey what's that?" as he looked skyward at a bird flying over. We both looked up, asking excitedly, "Where?". "Oh never mind, it's just a gull", Doug said rather sheepishly. Again, the response from Gerry, in a split second. "Aha! Up to your Douggullery again, eh?"

On another occasion when the three of us were birding together at the aforementioned Whitby Hospital Marsh, Gerry gave us an example of his spontaneous humour. As we approached the bay pond on the marsh side, Gerry very suddenly walked to the edge of the water where there were several "park" ducks and a family of Mute

Figure 1: (Left to right) Jim Baillie, Gerry Bennett and Helen Baillie, c. 1955. Photo by *Ron Scovell.*

Swans (two adults and two young). The swans were about fifty yards out from the shore. Gerry began waving his arms in the air while exclaiming in a loud voice, "Come ye, come ye. Hear the word of the Lord and thou shalt be saved". The birds, of course, thought that Gerry had food and proceeded to splash their way towards him in a great hurry. As he continued with his sermon, extolling on their sins and promising them eternal life for repentance, the swans joined the group of ducks, with the exception of one of the cygnets. This opened the door for chastisement from "Reverend" Bennett. He berated the youngster for his wayward ways and damned him to hell if he didn't join in the worship. Unbelieveably, the wayward swan joined the group. Vintage Gerry!

Gerry was a man of lists. Most of us keep lists, particularly of birds seen (e.g., Toronto; Ontario; Canada; North America; World; house, etc.). So did Gerry, but to an extreme I am sure unsurpassed by any living man. Not only did he keep the bird lists that most of us keep, he invented others. When he edited *Birdfinding in Canada*, (which I liked to refer to as Birdfunding in Canada, in Gerry's presence), he invented ATPAT (All Territories And Provinces Added Together), and a spinoff, Son of ATPAT, which I never did figure out. He had lists for his yard, his

township block, the county, the Maple dump, and each individual woodlot near his house. When I rewrote the Toronto section for the recent FON update of Murray Speirs' *Naturalist's Guide to Ontario*, I leaned heavily on Gerry's lists for updates. One of his favourite lists was of people with "bird" surnames. I had the honour of adding several names to this list, the last of which had Gerry chuckling in disbelief. While supply teaching at an Etobicoke Secondary School, I noticed the surname of a young girl, "Redhead", which I quickly relayed to Gerry for his list.

But his lists did not stop at birding. One of his more exotic lists, and one that he insisted on adding to while we were birding, was "Ontario Pubs that I've had a glass of ale in". I've often wondered how many birds we missed while Gerry was adding to this list!

Gerry did not talk much about his religious faith, so I really don't know how deeply involved he was with religion and a belief in the hereafter. I somehow like to think that if there is indeed a heaven, there is a special room for those that appreciated God's greatest creation — birds. And if there is, Gerry will certainly have a place there. I can envision Gerry walking into the room and seeing Doug sitting beside Dick and Norm, and I know exactly what he would say. "Think you're pretty smart don't you Doug, sitting there on Norm's Chesterfield."

At the interment, in a small cemetery where Gerry often birded, across from Purpleville Woods not far from Gerry's house, it was strangely silent. Only the voice of the minister laying Gerry to rest broke the cold air. At the conclusion of the ceremony as we walked out to our cars, a chickadee sang once. I feel certain that it was one of the birds that fed daily at Gerry's feeders saying a last thank you, and a sorrowful goodbye.

Ron Scovell, 3 Sim's Crescent, Rexdale, Ontario M9V 2S9

Editors' Note: Gerry Bennett was born on 20 August 1921 in Foresters Falls, Renfrew County, the son of a "gospel preacher". He wrote and published three outrageous books: *Wild Birdwatchers I Have Known* (1977), *More About Birdwatchers* (1978), and *Laughing Matter* (1978). The latter book was described by Gerry, in typical fashion, as "an anthology of poems and prose. Not a serious line in the whole book."

Memories of Gerry Bennett (1921-1999)

David F. Fidler and Rolph A. Davis

The short obituary in the *Globe and Mail* stated that Gerry Bennett died "suddenly, while feeding the birds at his Purpleville home on Sunday, January 10, 1999 in his 78th year". This cryptic note marked the end of the career of one of Ontario's most colourful field naturalists. Gerry was a naturalist in the best sense of the word, with a broad knowledge of all aspects of the natural environment gained through 64 years of field experience in Ontario. However, Gerry was most interested in birds and is best known as a birder.

We first met Gerry in May or June 1965 on the Green Lane in King Township, where he was watching a colony of Henslow's Sparrows that we had previously found. We birded with Gerry on many occasions over the subsequent 34 years. Birding with Gerry was always enjoyable because of his wealth of stories, anecdotes and his ever present wit, sometimes subtle and sometimes sharp.

We had many memorable winter birding trips. These included a January trip for an unidentified rare bird that had been visiting a non-birder's feeder in Delhi. After spending the entire day in the living room of the unsuspecting, but ever gracious family, we left without having any idea what the bird was that they thought they had coming to their feeder. On the way back to King City, we were overtaken by a horrendous blizzard that delayed our arrival home until next morning.

One bitterly cold and windy morning in January, we were walking the Toronto Island leg of the Toronto Waterfowl census. Gerry informed us that he had concocted a libation that would take the sting out of the air. This he called a "bomb-blast". The innocent looking thermos was filled with the remains from every liquor bottle in Gerry's house. He was correct that the drink did seem to take the bite out of the wind, although it may not have helped our identifications. We were quite fortunate that he never served this drink again!

Dave and Gerry made regular winter trips to Algonquin Park over a period of approximately ten years. One year they stayed overnight in Huntsville, and found that the temperature was -40° F when they got up. The red wine that they had brought for lunch had frozen solid in the bottle. Not to be deterred, come lunch time, they fired up the Coleman stove and "fried" the wine in the frying pan. Gerry asked, "Do you like your wine rare or well done?"

Gerry knew most of the birders

in the province. At the congregations of birders that were attracted to rare birds, Gerry was in his element greeting and talking to almost everyone in the assembled horde. Whenever we chased a bird from the "Hotline", Gerry would keep a list of the birders that we met at the bird's location.

One could easily tell that Gerry was not exactly a "fashion plate". His birding coat and his cardigan sweater were exceeded in age only by his vintage binoculars, that were over 40 years old. Gerry never took advantage of the greatly improved optics available to modern birders.

Gerry always had birding projects that he was working on. One of the best was his Centennial project in 1967. That summer, he walked and birded every kilometre of every road in Vaughan Township at least once, and he visited the interior of each concession block at least twice. He generated lists of species, the frequency of times observed, and he listed all species from the most numerous to the least numerous for the entire Township.

Gerry kept innumerable bird lists for almost every area and occasion. He kept life bird and nest lists for every County and District in Ontario. When birding, he always noted the change from one county into the next. He was very exasperated with governments that arbitrarily changed Counties into Regions, and fiddled with boundaries for crass political purposes without considering the implications for serious bird listers! In 1979, Gerry decided to focus on finding as many bird nests as possible in a single year in Ontario. He visited every County and Regional Municipality to find and record bird nests. According to George Peck, Gerry Bennett turned in over 800 nest record cards for approximately 120 species, a record that has not been approached in any one year.

In 1970, we conducted a "Big Day" in King Township. We discussed this with Gerry, and the next year he started doing a simultaneous Big Day in Vaughan Township along the southern boundary of King. Thus was born a long-standing contest that continued for the next 25 years. Originally, Arne Dawe accompanied Gerry on these Big Days, and in later years Jim Macey was his main birding companion.

After Dave Fidler moved to Owen Sound in 1983, Gerry suggested that they do an annual October bird list for their respective properties. Up until 1991, Gerry would appear at Dave's house near Owen Sound in early November for a few days birding and to compare the "lies lists" for October. The fact that Dave's property was about ten times the size of Gerry's did not spoil the contest; it just meant that Gerry had to work harder, which he enjoyed doing.

Gerry Bennett and Jim Baillie were long-time friends. Jim kept very detailed notes describing every

birding trip that he took. These diaries are of great interest in providing a history of birds and birders in Ontario. In the last few years of his life, Jim got far behind in his record keeping. After Jim died, Gerry laboriously completed Jim's diaries using the notes taken by Jim during each trip. These diaries now reside in the Thomas Fisher Rare Book Library of the University of Toronto. Undoubtedly, Gerry's own daily field notes will provide a thesis or two for future students of Ontario birds.

Perhaps Gerry's most remarkable achievement as a birder was his creation and publication of *Birdfinding in Canada*. Gerry began this venture from scratch in January 1981, and published an issue every two months for the next nine years. *Birdfinding in Canada* became **the** definitive journal for Canadian bird listers, with many bird-finding articles, Big Day reports, and life lists for every conceivable area in each issue. Gerry produced each issue single-handedly! Every issue was delivered to the Post Office on time, although he used to rail that this issue had taken 31 days to arrive in Saskatoon and that one had taken 13 days to reach Toronto, about 12 miles away. He kept up an extensive correspondence with birders across the country. All of this was done without the use of modern word processors and well before e-mail appeared. A truly remarkable achievement by an incredibly well-organized individual!

Gerry was a tremendous sports fan. Every day he would read all the box scores for every sport listed in the daily papers. The sports he most enjoyed were baseball and hockey. He attended the first Blue Jays game at Exhibition Stadium and continued going to the games at Skydome. He never missed a Jays game on the radio. After retirement, he even wrote to various ball teams and offered his services as a "scout". His knowledge of hockey was also very extensive. He was a Maple Leaf fan from a young age, and enjoyed listening to Foster Hewitt on the radio. In his younger days, Gerry was a championship-calibre bowler. He was rumoured to have won a few dollars at the game.

We will miss Gerry and his refreshing wit, but we take pleasure in remembering him and in knowing that he has undoubtedly already started several new lists in the great beyond.

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Henri Roger Ouellet (1938-1999)

Ron Pittaway

Dr. Henri Ouellet suffered an embolism and passed away suddenly on 9 January 1999, at his home in Hull, Quebec. He was 60 years of age. Henri Roger Ouellet was born in Rivière-du-Loup, Quebec on 29 January 1938. He is survived by his wife Yvette and son Alain.

I first met Henri Ouellet in 1962 at the National Museum in Ottawa, shortly after he began there as Research Assistant in Ornithology. His mentor was W. Earl Godfrey. I often visited the museum as a teenager to ask questions of Earl Godfrey, Henri Ouellet, S.D. (Stu) MacDonald and Tom Manning. It was amazing to hear their stories of field trips to remote parts of Canada, and to go through the collections with these museum men.

In 1965, Henri Ouellet served as Chief Naturalist at Point Pelee National Park. He was Assistant Curator (1965-1966) and Associate Curator (1967-1970) of Vertebrate Zoology at McGill University's Redpath Museum in Montreal. Henri returned to the National Museum in 1970, and was appointed Assistant Curator of Ornithology. In December 1976, he became Chief of Vertebrate Zoology and Curator of Birds when Earl Godfrey retired. In 1977, Henri Ouellet obtained his doctorate in zoology from McGill University; his thesis concerned the biosystematics and ecology of Hairy and Downy Woodpeckers.

Henri Ouellet's research included the speciation, systematics and taxonomy of nearctic birds, particularly of the subfamily Emberizinae (buntings, sparrows, and allies). He travelled widely, especially to the Neotropics. While attending the 18th Ornithological Congress in August 1982 in Moscow, Henri gave a talk about Canadian birds on Russian television that was seen by 20 million viewers! Between 1970 and 1985, Henri led or directed over 20 field surveys across Canada, from Newfoundland to the Yukon and from Ellesmere Island to southern Quebec. During his career at the National Museum, he greatly expanded the ornithological collections through collecting, exchanges, gifts and purchases.

In 1991, all the curatorships at the Canadian Museum of Nature were abolished. Ouellet became a research scientist. Then in 1993, the museum again reorganized and all the research scientists dealing with terrestrial vertebrates were terminated. Unfortunately, under these misguided managerial decisions,

Henri Ouellet was the last ornithologist of an era that included P.A. Taverner, A.L. Rand, W.E. Godfrey and S.D. MacDonald. After leaving the Canadian Museum of Nature in 1993, Henri's lifelong passion remained the evolution and zoogeography of the birds of Quebec and Labrador.

Henri Ouellet co-authored with Dan Strickland the account of the Gray Jay in *The Birds of North America* series (Strickland and Ouellet 1993). Along with Michel Gosselin, he established a French nomenclature for North American birds (Ouellet and Gosselin 1983). From 1982 to 1986, as Secretary General, Henri organized the 19th International Ornithological Congress held in Ottawa in 1986. He later edited the massive two volumes of Congress proceedings (Ouellet 1988).

Henri served on various committees and organizations. For example, he was a member of the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) from 1976 to 1986, and served on the Scientific Advisory Committee of the World Wildlife Fund (Canada) from 1981 to 1988. From 1983 until his death, Henri was a member of the Committee on Classification and Nomenclature of the American Ornithologists' Union. In the recently published AOU Check-list (1998), Henri was responsible for the preparation of approximately 350 species accounts, and revisions to the species known to occur in Canada.

In recent times, Henri Ouellet was best known for his research on the Bicknell's Thrush, leading to its recognition as a full species (AOU 1995). Ouellet's (1993b) studies showed that Bicknell's differed from Gray-cheeked Thrush in morphology, vocalizations, breeding habitat, behaviour, ecology and migration routes, and biochemical analysis showed a strong divergence in mitochondrial DNA. See Ouellet's article on Bicknell's Thrush in the August 1993 issue of *Ontario Birds* 11(2): 41-45. OFO members will remember meeting Henri at the October 1996 Annual General Meeting when he spoke about Bicknell's Thrush. After that meeting, Henri wrote a site guide to finding Bicknell's Thrush in Quebec in the February 1997 *OFO News* 15(1): 6-7. One of the last correspondences I had with Henri was in October 1998, about postings on the Internet's ID-Frontiers. There were several posts questioning the species status of Bicknell's Thrush because it is so similar to the Newfoundland *minimus* subspecies of the Gray-cheeked Thrush, and migrants are hard to identify. Henri's e-mail to me said: "I found the information on Bicknell's Thrush interesting, but some people have a knack for commenting on topics about which they know very little." Regarding Bicknell's and

other difficult identifications, there is no rule in ornithology that says a species must be recognizable at all times in the field by humans!

In preparing this tribute, I appreciate the help of Dan Brunton, Earl Godfrey, Michel Gosselin and Richard Poulin. Henri Ouellet will be greatly missed by his many friends and associates, and by Canadian ornithology. Henri published widely in refereed and popular journals. Some of his publications relating to birds in Ontario are included in the list below.

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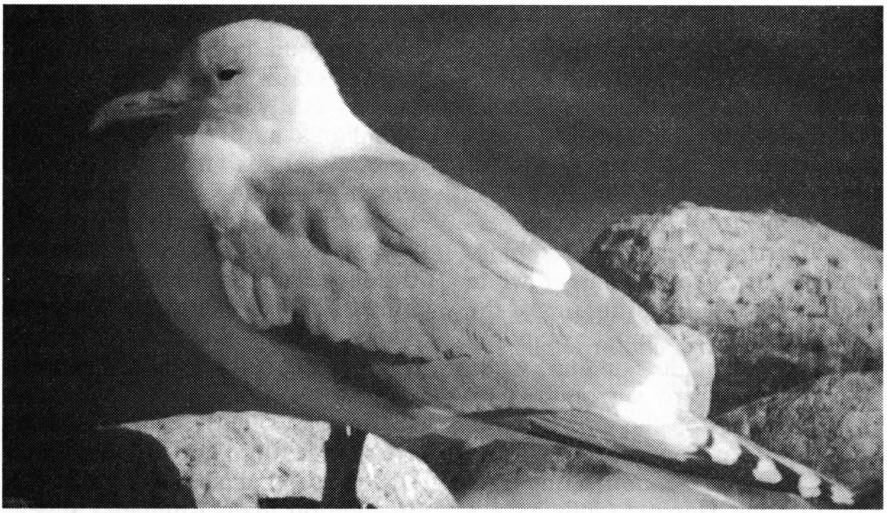
Photo Quiz

Ron Pittaway



When identifying any large gull, keep in mind that there are few single diagnostic characters separating the species. Large white-headed gulls in the genus *Larus* are very closely related genetically. As well, there is low to high frequency hybridization between many species. Hybrids are fertile and they may backcross with either of the parent species. Large gulls also show much more individual and geographical variation than is generally realized. The identification of a large gull should be based on a combination of consistent field marks.

Glenn Coady photographed the quiz bird on 12 April 1998 at the Leslie Street Spit in Toronto. Glenn reported that it was about the size of a Herring Gull (*L. argentatus*). We can tell that it is a white-headed gull with a grey mantle. It has black wingtips showing large white primary spots. In life, the legs were pink and the bill was yellow with a red spot on the lower mandible near the tip.

First, let us age the quiz bird. It shows no sign of immature plumage. It also lacks dusky head and neck streaking typical of this type of large gull in definitive basic (adult winter) plumage. Given its appearance and the date, we can assume that the quiz gull is in definitive alternate (adult breeding) plumage.

What species is it? Except for California Gull (*L. californicus*), North American Herring Gull (*L.a. smithsonianus*), Thayer's Gull (*L. thayeri*) and Kumlien's Iceland Gull

(*L. glaucoides kumlieni*), other large gulls in Ontario can be eliminated by checking a good field guide.

The quiz bird has a dark eye as in a California Gull, but California usually has a black spot (not always present) in front of the red spot on the bill. In addition, the quiz bird shows too much white and not enough black in the folded wingtips to be a California Gull. In life, the California also has greenish yellow legs, whereas the quiz bird has pink legs.

We can rule out a *smithsonianus* Herring Gull by the combination of dark eye and larger white spots on the folded primaries of the quiz bird. On most standing Herring Gulls, the smaller white primary spots are surrounded by black, whereas on the quiz bird the white spots are open on top, as on many Thayer's. *Caution*: a tiny fraction of adult Herring Gulls have a wingtip pattern that is identical to Thayer's Gull, so the primary pattern alone is not diagnostic of Thayer's. Compared to a Herring Gull, other supporting field marks for Thayer's are its usually deeper pink legs, mantle averaging slightly darker, and silvery undersides to the primaries, best seen in flight, but often partly showing on standing birds. Much more difficult to see is the purplish red fleshy orbital ring (eyelid) of Thayer's and Kumlien's, instead of the yellowish orange of Herring, most evident on breeding birds. Finally, adult Thayer's and Kumlien's Gulls often can be picked out among Herrings Gulls in winter until about April by their pale yellow or greenish bills; Herrings usually have brighter yellow bills, lacking greenish tones. Glenn Coady reported that the quiz bird's legs were pinker and its mantle was perceptibly darker than on nearby Herring Gulls.

The quiz bird appears to be a Thayer's Gull, but Kumlien's Gull is not so easily eliminated. In both Kumlien's and Thayer's, the eye colour ranges from yellow to brown, averaging somewhat darker in most Thayer's. Birds with brown eyes appear to have black eyes at a distance. The very dark eye of the quiz bird favours it being a Thayer's. It also has more extensive black, and blacker, wingtips than almost all Kumlien's. Its mantle shade was slightly darker than a Herring's; Kumlien's usually has a slightly paler mantle than Herring. In addition, many Kumlien's appear smaller and more dove-headed than the quiz bird, because of their rounder heads and shorter, thinner bills, but there is overlap in size and structure. However, the bigger and longer bill on the quiz bird again favours Thayer's. Finally, compare the quiz bird to the illustration of the Thayer's Gull on Plate 36 in the revised edition of *The Birds of Canada* by W. Earl Godfrey (1986). They are a close match. Based solely on its morphological characters, the quiz bird can be identified with a high degree of confidence (99%) as a **Thayer's Gull**.

For an historical perspective on the taxonomy of the Thayer's Gull, see my article in this issue.

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Editors' Note: Bob Curry will be back doing the Photo Quiz in the August issue.