ONTARIO BIRDS

Journal of the Ontario Field Ornithologists
Volume 15 Number 1 April 1997

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 (birder/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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Ontario Birds

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Design/Production: DFR Printing, Pembroke

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 birdwatching areas, book reviews, and similar material of interest on Ontario birds.

If possible, material submitted for publication should be double-spaced and typewritten. All submissions are subject to review and editing. Please submit items for publication to the Editors at the address noted above.

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ISSN 0822-3890

Letters to the Editors

Harrier drowns yellowlegs

Large birds of prey normally evoke an image of tremendous power and speed. Last summer, however, I had an opportunity to observe at close range a Northern Harrier using a more artful approach to capturing its prey.

On 20 August 1996, I was travelling west on a sideroad between Airport Road and the village of Caledon, Ontario, when I noticed a flock of shorebirds wading in a shallow cow pond, perhaps 30 m from the edge of the road. I stopped for a closer look. About fifty shorebirds, including Least Sandpipers, Lesser Yellowlegs, Pectoral Sandpipers and one Solitary Sandpiper milled around the edge of the pond.

The flock suddenly burst into a zig-zagging flight and my binocular's field of view was filled with a Northern Harrier, hovering a few feet above the surface of the pond. I then realized that not all of the shorebirds had taken flight. A single Lesser Yellowlegs was frantically diving under water to hide from the predator. In this instance, the harrier used the technique of hovering not in the process of searching for prey, but to keep the prey from escaping and perhaps wear it down before striking. After the yellowlegs had dived and resurfaced a couple of times, the harrier gingerly descended upon it and held it under water, presumably until it was asphyxiated. A minute or two later, the hawk took flight with its meal in its talons and disappeared into a nearby woodlot.

Although the Northern Harrier feeds primarily on rodents, apparently it has been known to eat a wide variety of birds, including shorebirds (Bent 1937). As for the Lesser Yellowlegs' attempt to escape by diving under water, this behaviour has been observed in at least one other species of shorebird (Terres 1982). Since yellowlegs frequently wade in relatively deep water, they may be more inclined to take this action than other species.

The harrier used relatively little force and seemed to subdue its prey by drowning it. Bald Eagles have been known to force waterfowl into repeated dives in order to tire them out (Bent 1937), much as the harrier did in this instance. But in my very brief literature search, I could not find any reference to the act of holding prey under water for the apparent purpose of drowning it. Perhaps your readers can shed some light on this for me.

Mike Lepage
Guelph, Ontario

Ron Tozer comments:

There are various accounts in the literature of birds diving under water to avoid raptors, including cases involving waterfowl, shorebirds such as the Spotted Sandpiper (Kelso 1926) and Common Snipe (Terres 1982), and even the Tree Swallow (Jacklin and Harris 1993). However, sightings like Mike Lepage's, involving raptors holding prey under water until drowning occurs, appear to have been reported rarely.

There have been observations of the Cooper's Hawk drowning prey in water (Forbush 1927, David 1948, Rosenfield and Bielefeldt 1993). Gerig (1979) presented a series of photographs and described a "Cooper's Hawk" drowning a European Starling in a small puddle near Salem, Oregon. However, Pramstaller and Clark (1980) subsequently were able to very convincingly show that the hawk in

this incident was actually a "juvenal plumage female Sharp-shinned Hawk". In any case, Gerig (1979) "watched the hawk struggle with the Starling for several minutes with no apparent success in some underbrush. . . . it carried the violently struggling Starling . . . into a depression where several inches of rainwater had collected. Once in the water with the Starling, the hawk merely stood on top of it, and when the Starling would struggle to raise its head and a wing out of the water, the hawk would shift its feet so that it would push the Starling's head back under the surface. . . . for about four or five minutes, by which time the Starling had stopped struggling entirely and appeared to be dead. Then the hawk flew easily away, the Starling in its grasp."

There are previously published records of harriers drowning prey (MacWhirter and Bildstein 1996). Fitzpatrick (1979) described a Northern Harrier drowning a Common Moorhen at Holiday Beach Conservation Area, Ontario. In this case, a female harrier struck an adult moorhen in 2 to 10 inches of water in a marsh. During a ten minute period, the harrier stood on the submerged moorhen, occasionally bringing it to the surface, only to resubmerge it when the moorhen thrashed about. When the moorhen stopped moving, the harrier dragged it to an exposed clump of ground, and fed on it. A similar incident involving a Northern Harrier drowning a Blue-winged Teal in a South Carolina marsh was reported by Bildstein (1988).

In an amazing case of "turning the tables", a Northern Harrier that attempted to catch an American Coot chick near Reardan, Washington, was itself driven into the water by adult coots (Rogers 1982). Male Ruddy Ducks and several Eared Grebes then surrounded the hawk, and it drowned after a ten minute struggle!

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More "white-crested" cormorants

I read with interest the recent article by Ron Pittaway and Peter Burke describing the "white-crested form" of Double-crested Cormorant in Ontario (*Ontario Birds* 14: 124-128). In this note, the authors present two known records for Ontario: one in "May" in the late 1980s (Stoney Point, Essex County), and the other on 14 May 1993 (Thunder Cape, Thunder Bay District).

Unfortunately, the authors were not aware of two sightings that I have had of this "form" in southern Ontario. Although both records were submitted to the respective Ontario editor of *American Birds*, apparently neither sighting was deemed worthy or interesting enough to warrant publication! My two observations are as follows:

Record #1: On 1 May 1986, a small flock of Double-crested Cormorants flying close to shore from east to west at Wheatley Harbour, crossing the Kent and Essex county line, contained an adult bird with entirely white head plumes. At the time, I was quite puzzled by this observation, but a review of the literature soon revealed that the observed feature was characteristic of a west coast subspecies (either widespread *albociliatus* or the mostly non-migratory *cincinatus*).

Record #2: On 18 April 1996, I observed a similar "white-crested" Double-crested Cormorant at Hillman Marsh, Essex County. This high-plumaged adult was swimming and diving in the open water of the marsh, with a few "normal" individuals of the species. Again, the head plumes were noted to be entirely pure white.

Although I use the term "form" to describe the above Ontario sightings, I see no reason why these records can not be tentatively referred to as subspecies *albociliatus* of the west coast of North America (contrary to the categorization of these occurrences by Pittaway and Burke as simply a form of eastern *auritus*). The fact that all known Ontario occurrences (four) were during spring migration, in combination with the fact that this taxon has yet to be found in a breeding colony in the province, would support the assumption that these individuals were indeed strays from western populations. As Dennis Paulson, of the state of Washington, stated in the article, the western populations of Double-crested Cormorant are also exploding, thus indicating that stray individuals could indeed appear in the east.

Alan Wormington
Leamington, Ontario

Ron Pittaway comments:

We thank Alan Wormington for his sightings of white-crested Double-crested Cormorants in Ontario. Regarding the use of the term "form" instead of subspecies (race) in our article, Peter Burke and I discussed two possibilities for the occurrence of white-crested birds in Ontario. They are either wandering birds from one of the two western subspecies, or variants of the eastern race having white head plumes like western birds. Because of this uncertainty, I consulted with Earl Godfrey, who recommended that we use "white-crested form" for birds with white crests seen in Ontario since form is a neutral term having no taxonomic significance. Until it can be shown by banding recoveries or specimens that the western races occur in Ontario, the origin of the white-crested form in the province will remain uncertain.

Articles

An Update on the Status of the Sandhill Crane in Northern and Central Ontario

by
John H. Pedlar and R. Kenyon Ross

INTRODUCTION

The Sandhill Crane (*Grus canadensis*) is distributed in three relatively distinct populations throughout Ontario. In the west, summering populations of cranes have been reported from wetlands south of Lake of the Woods (Lumsden 1971), and nesting has recently been confirmed in this area (Peck and James 1993). In north-central Ontario, a breeding population of about 225 cranes was reported from the Algoma region (Tebbel and Ankney 1982). The Hudson Bay Lowlands appear to support the largest population of cranes in the province with some areas reporting more than 10 pairs per 100 km^2 (Lumsden 1987). It has been suggested that there are two racial identities of cranes in the province (Walkinshaw 1965). Cranes in the Algoma region and near the Lake of the Woods are thought to have originated from an expansion of the Michigan crane population and probably belong to the race *G. c. tabida* (Tebbel and Ankney 1982, Lumsden 1971), while those on the Hudson Bay Lowlands have been referred to the race *G. c. rowani* (Lumsden 1971). The two races are distinguished based on size; *G. c. tabida* is considered to be the largest crane in Canada, while *G. c. rowani* is intermediate in size.

Throughout its range, the population status of the Sandhill Crane is generally considered to be stable or increasing (Tacha et al. 1992). Across Canada, there has been a mean annual increase of 9.1% in crane numbers from 1966-1994 (Downes and Collins 1996). Tebbel and Ankney (1982) reported that the crane population centred around Sault Ste. Marie was increasing in numbers and expanding eastwards, and Lumsden (1987) suggested that the population on the Hudson Bay Lowlands underwent a rapid increase throughout the 1970s. Since 1980, the Canadian Wildlife Service has been conducting aerial surveys to monitor waterfowl populations throughout northern and central Ontario. During these surveys, sightings of non-waterfowl species, such as the Sandhill Crane, were also recorded. This data provided us with an opportunity to examine the extent to which Sandhill Crane populations in Ontario are changing in numbers and geographic distribution.

METHODS

Aerial Survey Methods

The aerial survey design that was used from 1980-1990 is described in detail in Ross (1987) and Fillman (1990). Basically, 33-100x100 km blocks were systematically located throughout northern Ontario (north of the French and Mattawa rivers) based on the Universal Transverse Mercator (UTM) mapping grid. Systematically

located 2x2 km plots, within each of these blocks, were flown at least once between 1980 and 1989. We used the information from these surveys to produce a province-wide distribution map for the crane. A subset of 7 blocks, located between North Bay in the southeast and Wawa in the northwest, was flown in 1985 and annually from 1987-1989. This information allowed us to examine whether crane numbers were changing over this time period.

A different survey design was used from 1990-1995. This survey employed 48-10x10 km plots, that were systematically located between Pembroke in the southeast and Geraldton in the northwest. All plots were flown at least once from 1990-1995, which allowed us to produce a distribution map of the crane in northeastern Ontario over this time period. Twenty-five plots were flown annually from 1990-1994. We used this data to test for a trend in crane numbers during this time period.

Surveys were flown in the spring, starting with the most southerly plots in early May and finishing with the northerly plots in late May or early June. All wetlands within each plot were surveyed by a helicopter containing one navigator/recorder and two observers as well as the pilot (as in Ross 1985). The flights were carried out at an altitude of 15 to 90 m and a speed of 60 to 100 km/h. Single passes were usually made over wetlands, but circling was done if coverage on the first pass was not adequate. All crane sightings were recorded.

Distribution Maps

Maps of density estimates were generated through the POTMAP routine of the SPANS spatial analysis system program (SPANS 1993). This approach essentially takes the mean number of cranes seen on each block or plot and uses weighted averaging to produce a contour map of crane density. In order to examine whether a spatial change had occurred in Sandhill Crane distribution, one map was generated for the 1980-89 sampling period and a second map was generated for the 1990-95 sampling period.

Population Trends

Population trends were examined over two time periods: 1) from 1985-1989 using the 7 blocks that were repeatedly measured over this time, and 2) from 1990-1994 using the 25 plots that had been sampled in each of these years. We tested for trends by calculating a Thiel slope (Hollander and Wolfe 1973) for each block or plot and applying a Wilcoxon matched pair signed rank test (Siegel 1956) to determine if the slopes were predominantly negative or positive.

RESULTS AND DISCUSSION

Distribution and Range Expansion

The distribution maps generated for the 1980-1989 sampling period (Figure 1) and the 1990-1995 (Figure 2) period are in general agreement with previous studies. Lumsden (1971) concluded that the distribution of Sandhill Cranes in the northern portion of the province was closely tied to the post-glacial, marine submerged area of the Hudson Bay Lowlands. In the Algoma region, the range shown by our maps is in general agreement with the sightings reported by Tebbel and Ankney (1982).

Our distribution maps could not demonstrate an expansion in the range

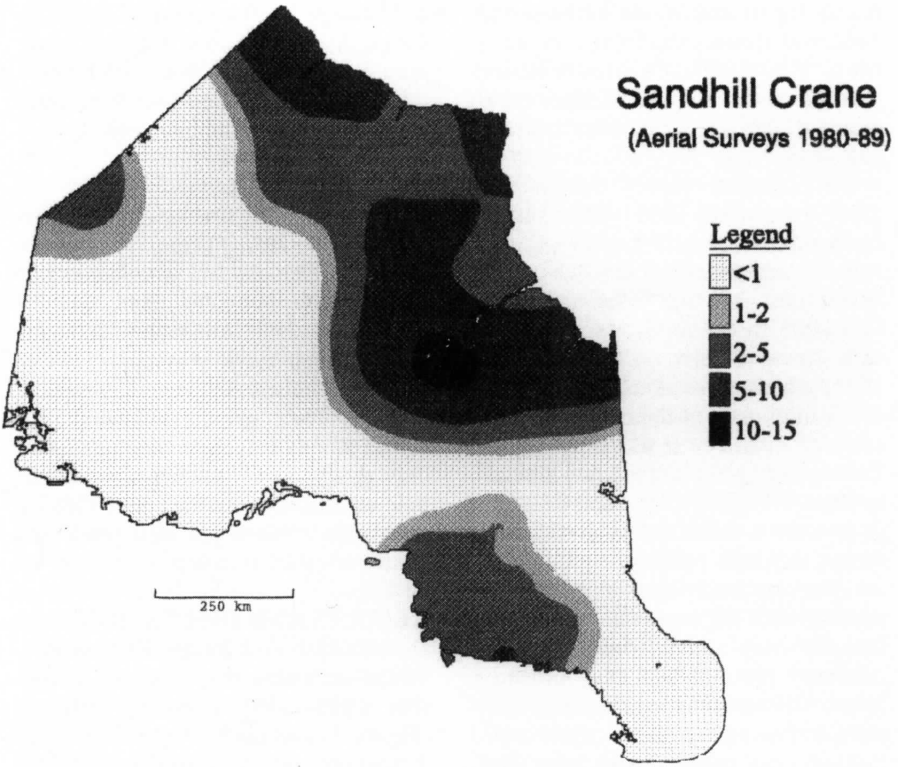

Figure 1: Contour map showing the density of the Sandhill Crane (#/100 km^2) throughout northern and central Ontario based on aerial surveys flown between 1980 and 1989.

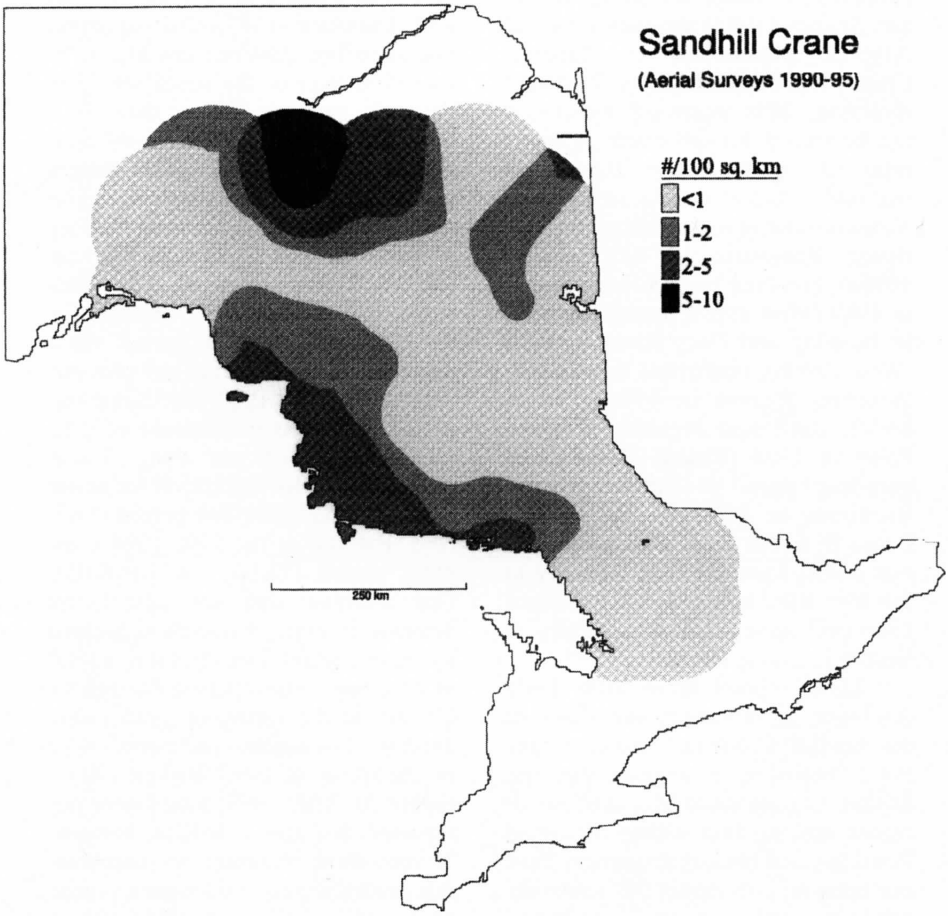

Figure 2: Contour map showing the density of the Sandhill Crane (#/100 km^2) throughout northeastern Ontario based on aerial surveys flown between 1990 and 1995.

of Sandhill Cranes between the 1980 and 1990 sampling periods (compare Figure 1 and Figure 2), even though other reports indicate that the crane is expanding its range in Ontario. Tebbel and Ankney (1982) suggested that the Algoma population of Sandhill Cranes was expanding in an eastward direction. This eastward expansion can be traced through crane sightings reported in *American Birds* and *National Audubon Society Field Notes*: confirmed breeding on the Bruce Peninsula in 1985 (Weir 1985a), breeding pair in Parry Sound in 1989 (Weir 1989), spring migrants in Innerkip and Deep River in 1990 (Weir 1990b), confirmed breeding in Waterloo Region in 1992 (Ridout 1992), confirmed breeding at Long Point in 1993 (Ridout 1993c), and breeding pairs at Sundridge and Buckhorn in 1994 (Ridout 1994b). Bruce Di Labio (pers. comm.) reports that cranes have returned annually to the Mer Bleu bog near Ottawa since 1986 and have bred successfully at least twice since then.

These reports leave little doubt that there is an eastern expansion of the Sandhill Crane in Ontario. At this point, however, it appears that the expansion consists of low numbers of cranes moving into widely separated locations, and helicopter surveys have not been able to detect the relatively subtle changes that have occurred in crane distribution to date.

Population Change

Our distribution maps (Figures 1 and 2) indicate an area of high density that starts at the tip of James Bay and curves upward to the northwest. This corresponds well with Lumsden (1971), who reported a preponderance of sightings from the Missinaibi, Albany, and Attawapiskat Rivers. Our abundance estimates are in the same range as those given by Lumsden (1987) of about 2 to 10 pairs per 100 km^2. Lumsden (1987) also suggested that breeding densities are higher in the north than in the south which is generally supported by our data.

A general impression of how crane numbers in the Algoma district changed over the study period can be obtained by plotting the mean number of cranes per plot for each survey year (Figure 3 and Figure 4). The Thiel slope, or average yearly change, for the 1985-1989 sampling period was a decrease of 0.025 cranes per plot per year, and for the 1990-1995 sampling period there was an increase of 0.12 cranes per plot per year. These changes were not significant for either the 1985-1989 sampling period ($T=7$, $N=5$, $P>0.05$) or the 1990-1994 sampling period ($T=10$, $N=7$, $P>0.05$). Our analysis did not detect the increase in crane numbers suggested by other reports. For instance, a total of 45 cranes was reported throughout Ontario in the spring of 1985 (Weir 1985b) – this number had risen to 199 by the spring of 1993 (Ridout 1993a; Figure 5). After 1993, totals were not reported for the province because "cranes were becoming so numerous that several regions no longer reported total numbers" (Ridout 1994c). More specific to the Algoma region, Chris Saunders (pers. comm.) reported that he has noticed an increase in the frequency of crane sightings in the Sault Ste. Marie area in the last decade.

There are a number of possible reasons for the discrepancy between our aerial survey results and the increase suggested by the published

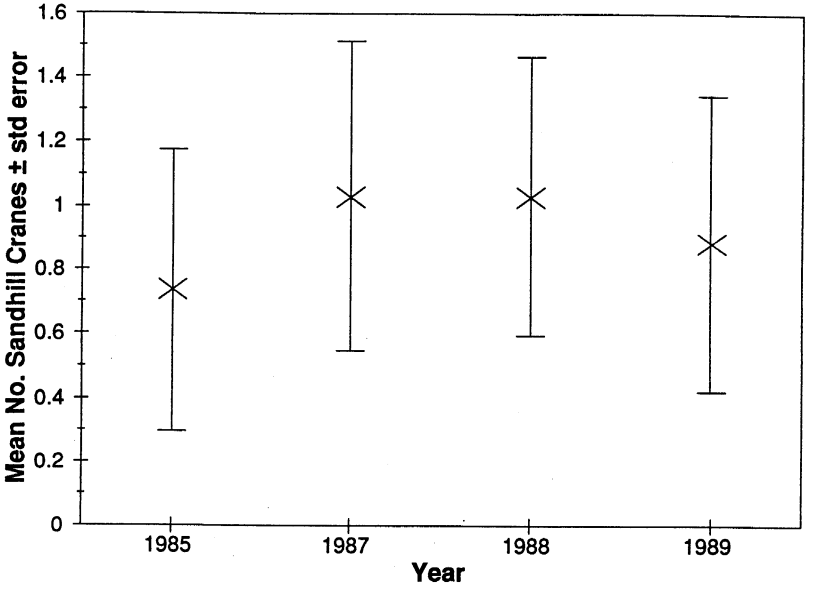

Figure 3: The mean number of Sandhill Cranes per 100 km^2 (±S.E.) seen during aerial surveys in the Algoma region from 1985-1989.

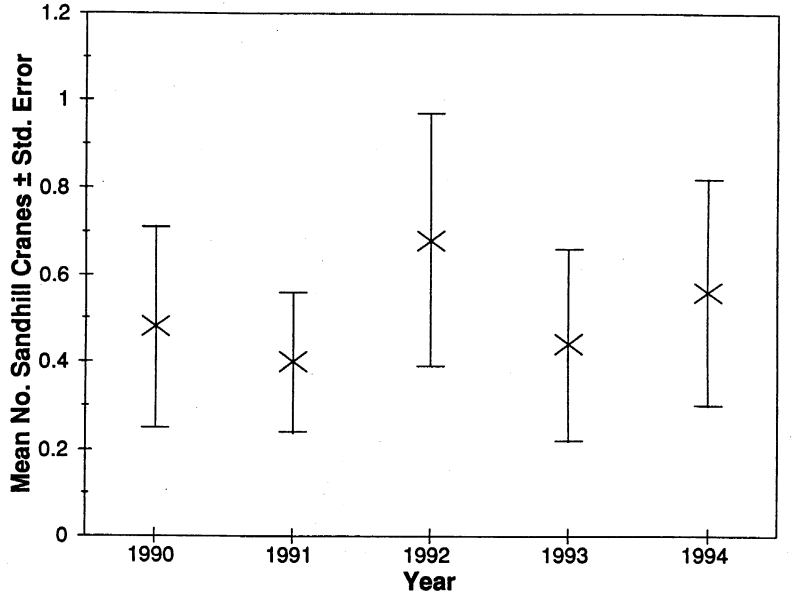

Figure 4: The mean number of Sandhill Cranes per 100 km^2 (±S.E.) seen during aerial surveys of northeastern Ontario from 1990-1994.

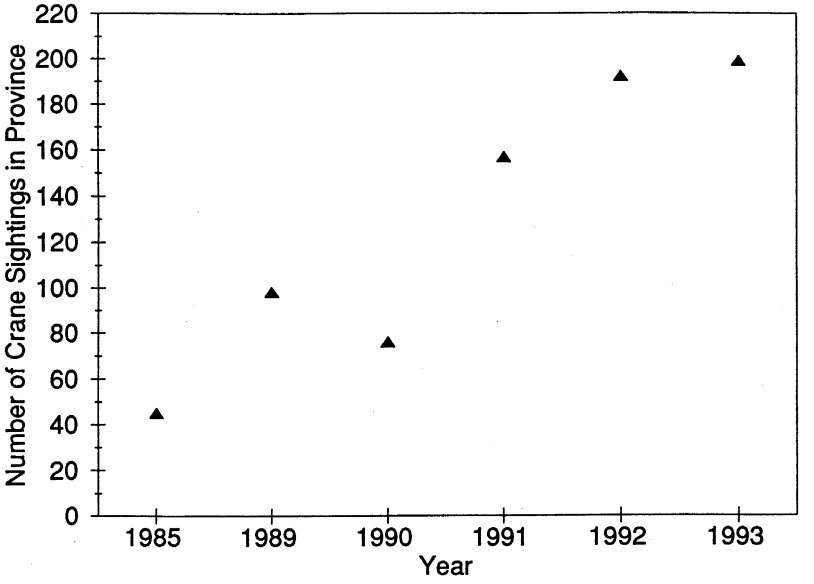

Figure 5: The total number of spring (1 March – 28 May) sightings of Sandhill Cranes reported in *American Birds*, 1985 to 1993.

sightings. It may be that helicopter surveys are not adequately sensitive to document the change that has occurred in crane numbers. Although cranes are large, easily identifiable birds, their cryptic coloration and dense breeding habitat make them difficult to accurately survey from the air. Unlike ducks, for which the survey was designed, cranes often do not flush during a helicopter fly-over.

Another possibility is that the published sightings are misleading, and there is actually no increase occurring. This could result from an increase in the number of people reporting sightings, or an increase in public awareness of the Sandhill Crane. This explanation seems unlikely given that the observer base in northeastern Ontario has changed little in the last decade, and most observers are well experienced birders (Ridout, pers. comm.).

A final possibility is that Ontario cranes have altered their migration routes such that more cranes are observed moving through the province, but there is actually little change in the size of the breeding population. Cranes in the Algoma region are thought to migrate through Michigan to overwintering areas in Georgia and Florida, while those in northern Ontario are part of a population that moves through western Ontario and the prairie provinces to overwintering areas in Texas (Tacha et al. 1992). However, Lumsden (1971) suggested that large numbers

of cranes used to migrate through southern Ontario in the mid-1600s, but were exterminated on their wintering grounds in New Hampshire and Vermont in the 19th century. He reported that crane migration through southern Ontario at the time of his report was scarce. Since then, Sandhill Cranes appear to have become considerably more common – in the fall of 1989, 358 cranes were reported to have passed south of a line connecting Wiarton and Hamilton (Weir 1990a). The reactivation of the southern Ontario migration route may, in part, explain the increased number of crane observations throughout Ontario.

Crane Conservation in Ontario

Based on our findings, and the published sighting reports, the Sandhill Crane appears to be stable or increasing in numbers in Ontario. This is in agreement with the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), which lists the crane as "not at risk". During migration, Sandhill Cranes form into loose social groups that often concentrate in staging areas. These areas provide essential resources for the crane during migration, which makes this species particularly vulnerable to loss of strategic staging areas. A list of some of the staging areas in Ontario is provided in Table 1.

Location	Migration Period	Number of Birds	Dates	Reference
Bruce Mines/ Thessalon	Spring and Fall	up to 100	throughout 1990s	Chris Saunders (pers. comm.)
Massey	Spring	56	25 Apr. 1993	Ridout (1993a)
Shipsands Island	Spring	42	22 May 1993	Ridout (1993a)
Cochrane	Spring	35	29 May 1993	Ridout (1993a)
Britainville	Fall	345	25 Oct. 1992	Ridout (1993b)
Lion's Head	Fall	115	14 Nov. 1992	Ridout (1993b)
Teeswater	Fall	68	15 Nov. 1992	Ridout (1993b)
Gameland (Rainy Riv. Dist.)	Fall	98	15 Sept. 1993	Bill Crins (pers. comm.)
Massey	Fall	500	10 Oct. 1993	Ridout (1994a)
Hawk Cliff	Fall	65	23 Nov. 1994	Ridout (1995)

Table 1: Concentration areas for the Sandhill Crane in Ontario during spring and fall migration.

SUMMARY

We could not detect a change in the distribution and abundance of Sandhill Cranes in the Algoma district based on aerial surveys flown between 1980 and 1995, in spite of general observations throughout the province that suggest an increase. This discrepancy may be due to the difficulty in accurately censusing cranes by helicopter, or to altered migration routes which result in more cranes moving through the province during migration. Despite the differences between the two data sources, it appears that the Sandhill Crane is relatively abundant in Ontario and is maintaining a stable to increasing population throughout the province.

ACKNOWLEDGEMENTS

We are very grateful to the many observers on the aerial surveys, particularly Don Fillman and Steve O'Donnell who have participated from the very beginning. Barb Campbell and Dawn Grainger provided advice on mapping in SPANS, and Mark Mallory helped with the trend analysis. We also thank Mike Cadman, Bruce Di Labio, Chris Saunders and Ron Ridout for their helpful input on crane distribution in Ontario.

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PUBLICATION NOTICE

Bird Trends: A report on results of national and regional ornithological surveys in Canada. Number 5, Fall 1996. Migratory Birds Conservation Division, Canadian Wildlife Service, Ottawa, Ontario K1A 0H3. No charge.

The latest report in this series summarizes population status and trends of waterbirds in Canada. The following is just a sample of the many interesting facts available in this free publication.

Among ducks, the Northern Pintail has shown the most significant long-term (1961-1996) decline in the continental population, followed by the scoters. However, trends over the last ten years indicate stable or increasing continental populations of all ducks except scoters. The major issue of concern in eastern Canada is the gradual decline of American Black Ducks over the past 30 years, especially in the agricultural and industrialized areas of southern Ontario and Quebec.

Populations of "migrant" Canada Geese show significant decline in numbers, while the "resident" population (breeding primarily south of 47°N in southern Ontario) is dramatically increasing. Lesser Snow Geese numbers have grown rapidly over the last 30 years (to at least four million breeding birds in 1995), such that some Arctic colonies are threatened by overpopulation and degradation of the habitat due to over-grazing. Ross's Geese have also increased dramatically on the traditional nesting grounds that they share with Snow Geese in the Central Arctic, and they have recently expanded into Snow Goose colonies in the Eastern Arctic as well.

Trends in "other" waterbirds indicate declines in Horned and Pied-billed Grebes, American Bittern, rails, and American Coot. The Whooping Crane population has grown from a low of 16 birds (and only 4 or 5 breeding pairs) in 1941 to at least 133 individuals (including 47 breeding pairs) in 1995. The number of Double-crested Cormorants continues to expand on the Great Lakes, reaching an estimated 54,000 pairs in 1994.

Yellow-throated and Solitary Vireos in Ontario: 3. Nest Building

by
Ross D. James

Nest Building

Nest building may seem simple enough – just gather materials and put them together. But, in addition to the intricacies of weaving a hanging nest, the activity is linked closely to the reproductive physiology of the birds. The few days of nest building are among the most demanding for a pair of birds of any time in the year. The pair rather suddenly must closely attune its activities not only of building, but also of going through the appropriate courtship activities and displays to culminate in both being reproductively ready to produce fertile eggs. They have to contend with fitting into the activities of a whole community of other species using the same woodland, some of which are potential predators or nest parasites. Building a nest is also an energetically demanding activity.

The schedule

For a first nest of the year, building in both Yellow-throated (*Vireo flavifrons*) and Solitary Vireos (*V. solitarius*) usually takes about eight days, with the first egg laid on the ninth day after starting. On the first day, there is little more than a start made. The nest is largely put together in five additional days. The seventh day is devoted mainly to courtship and copulation, with the nest as the focal point of the activity. The lining of the nest is completed on the eighth day.

Through the egg laying period, or even during incubation, they occasionally bring a few more bits of material, but nothing substantial is added. Renests, after the loss of eggs or young to a predator, can be done in as little as five days. A pair is no doubt more comfortable with each other and better able to coordinate its activities, as well as being more familiar with its surroundings. Renests, however, may take just as long as a first nest.

Nest building is generally continuous throughout the day from the second to the sixth day. Only inclement weather is likely to stop it. Birds will build almost continuously for several hours with only irregular breaks of 10 to 15 minutes to look for food. But, by the end of the sixth day and on the seventh and eighth, trips may be an hour apart.

The materials

Materials are gathered locally about the nest area and vary slightly depending upon what is available and the particular pair involved. The most important materials are insect silks and spider webs. These are gathered from tree trunks and branches or bark crevices where cocoons, caterpillar tents and spider webs are found. These fibres bind other materials together as well as providing much of the suspension support for the hanging nest.

The nest is largely composed of

bark strips, although other materials are also used (see Peck and James 1987). The birds cling to or hover beside a trunk and pull off pieces. If a piece is large, the birds land nearby and hold it with one foot while they tear off suitably sized items, letting unwanted parts fall. Several pieces are usually brought in any one trip to the nest. In the main body of the nest, pieces are about 2 to 10 mm wide and 3 to 10 cm long.

Nest lining is of thin pieces of grass or other fine materials they may encounter. To gather grass they typically alight on a branch or stick near the ground, seldom ever hopping on the ground itself. Lining materials can be 15 to 20 cm long at times, being bent to fit into the nest.

Each nest of the Yellow-throated Vireo has added to it a considerable quantity of grayish lichen, of the kind that is typically found growing on the trunks of trees. Even renests usually have many pieces, most clearly visible on the exterior of the nests. It is picked off a trunk as the birds cling to or hover beside a tree. In fact, the lichen is added almost anytime during construction, most of it in the early stages, as if it were just more building material. What appears on the exterior just ends up there because of the way the nest is put together. It is not specifically added as an adornment at the end.

Solitary Vireos use less lichen, and many nests have none at all. Bits of white birch bark and spider egg cases protruding from the exterior provide a mottled appearance to the surface in much the same way lichens do for the Yellow-throated Vireo.

Nest sites

Details of placement and sizes of Ontario nests are to be found in Peck and James (1987). Although all Yellow-throated Vireo nests reported from Ontario have been in deciduous trees, pines are often used in the southern parts of their North American range (Imhof 1962). Some very low nests are known (1.3 m), but typically, they average over 10 m high, are more than half the tree height (but below three quarters) and are closer to the centre of the tree than toward the outer branches. Yellow-throated Vireos may occupy forests where Red-eyed Vireos (*V. olivaceus*) are also found, and it appears that they will nest higher in such situations (James 1979, Williamson 1971) probably avoiding conflict/competition with another vireo species. Although foraging tactics of these two vireos are somewhat different (James 1975) they no doubt take some of the same types of food, especially during the nesting season.

In Ontario, Solitary Vireos typically place nests below about 5 m in height, although a few may be over 10 m (Peck and James 1987). They tend to use the tops of small evergreen saplings well below the canopy of taller trees, putting the nest among leafy green parts of the tree. In other provinces/states where Solitary Vireos occupy deciduous dominated forests, they are likely to place the nest near the top of a broad-leaved shrub or sometimes near the ends of a branch of a lower limb in a deciduous understory tree.

The building process

As is typical of all vireos, the nest is suspended by the rim from a small forked twig (or possibly from two small twigs arising close together).

Initially some silk or webbing is brought and wrapped rather loosely about the fork. Then bark strips are brought and they are also wrapped about the branch and the ends tucked in amongst the webbing. By the end of the first day, a small accumulation of materials is wrapped about the fork, mostly toward the base of the fork.

The birds then begin to stretch fibres across the fork and to lay bark strips across. When they come with bark, they just drop it in a random fashion on top. Then they again pick an end of material and pull it and tuck it in somewhere or pull it right over and around the branch and tuck it in. Then they take a piece of insect fibre and pull it over and tuck it in. The end they take may be from the top or the bottom of the accumulating material. By alternately pulling and tucking the different materials they develop a very random weave of materials.

The building does not seem to be very systematically done, as bark materials are just dropped, and ends are grabbed and tucked almost anywhere. Silk may even be wrapped about their foot, and it then breaks when they fly away. Yet, the strength of the future nest is no doubt ensured by having everything randomly woven, so long as sufficient material is wrapped around the fork. By the end of the second day, there is a substantial platform of materials (see Figure 1), with a high proportion of insect fibres, very loosely woven about and across the fork. Spider egg cases and/or gray lichens are obvious and, later, naturally end up on the outside of the nest.

After this, little material is added

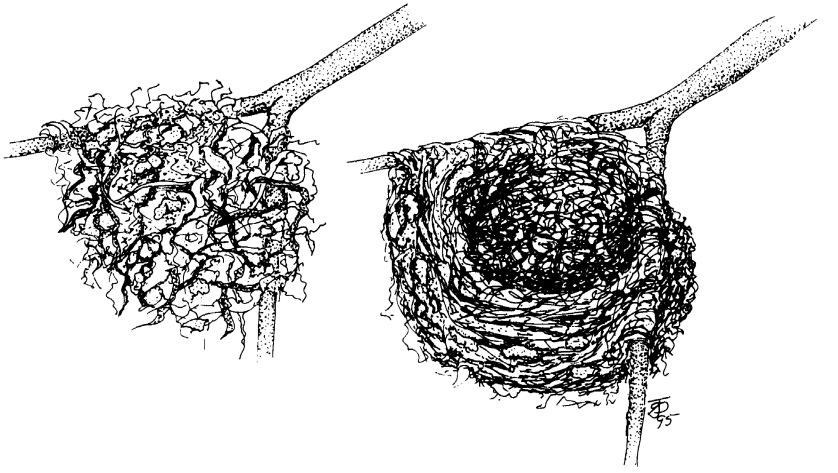

Figure 1: A second and a fourth/fifth day of nest construction. The second day nest (left) is a very loose, nearly flat accumulation of insect fibres, bark strips and lichens. The fourth/fifth day nest is still loose inside, but much tighter on the outside and over the supporting branches, as well as having been pushed down to nearly full size. Drawing by *Ross D. James*.

that will be wrapped about the branches for support of the nest, except at the outer rim that is not supported by a branch. The bulk of the material added on the third and fourth days goes to fill out the bottom and sides of the nest. Large numbers of bark strips are brought and dropped onto the nest and pushed down. By now, the birds can get onto the nest and push with their feet. The elasticity of the insect fibres is essential to holding things without breaking as the nest is expanded.

As the centre of the nest is depressed, the outer rim becomes more prominent. In part, it can be treated as if it were supported by a branch. Material from within or the outside bottom of the nest can be wrapped over it and tucked in on the other side to provide support for the nest bottom and side. But more importantly, it is anchored well to the supporting branches at each side. By stretching fibres diagonally up from the centre to the side supports, the outer rim is lifted and well supported. Although the outer rim will sag below the supporting branches, it is surprisingly strong and durable.

On the fourth day, pushing the nest down and out becomes more vigorous. The birds will spread their wings against the nest rim to hold them as they push. The bottom bulges and springs back as the feet shove against the inside. The seemingly random arrangement of materials, as it is stretched out, provides a fairly tight weave. The materials on the outside become stretched and smoothed compared to the loose interior at this stage. The materials over the forks of the branches also become stretched quite thin or tight against the branch. By the fourth day, the nest has been pushed out almost to full size.

Then, pieces of lining are pushed down into the nest and any protruding piece is bent down and tucked in. The bird gets on and pushes with the feet and sits in the nest, turning about pushing in different directions. Adding the lining pushes the nest to its final size. These longer materials, just bent randomly about the interior, push out because of their own elasticity, helping to hold the nest shape as well as smoothing the interior. Relatively little material is used for lining, but more time is spent arranging it and sitting on it to smooth the interior.

Lining is completed on the final two days, but the addition of materials seems less important than the final shaping of the nest. The female may sit on the nest as long as 15 minutes at a time, appearing to be just resting or becoming familiar with the place that she will spend much of the next two weeks of her life. This probably helps to put a bend into the lining materials so they stay against the sides. She also needs to rest, in preparation for egg laying, that is also energetically demanding.

The builders

At the start of the building, the males of both species make as many or more trips with material than do the females. Males are usually the first to get there and do some of the building. The females then supplant males at the nest and build in the materials one or both have brought. Initially, when supplanted, the male stands nearby and gives his nest building display (see James 1978). He may fly off a short distance and gather material while the female

builds, returning to the nest when the female leaves. But, he seldom stays at the nest alone, usually following the female away, and both search for more material together.

Through the second day of building, the female becomes more committed to building and gradually begins to arrive first at the nest. The male will wait until she leaves before coming to build. The female may then return with more material by the time the male has finished with the material he brought.

But the amount of building by the male soon declines. Even on the third day of building, while he continues to come with the female every time, he may come with no material, or just drop it and leave it for the female to build in. The female definitely does most of the building on the fourth and fifth days, although there is considerable variation in how much each male continues to do. On the sixth day, the male has stopped building entirely, leaving the lining to the female.

Behavioural synchrony

Once birds are paired, they tend to remain in almost constant contact with one another for the first week or so at least. This tendency seems much stronger in the male. The male almost never flies off leaving the female alone in early nest building, or does not go out of contact call range. But the female often flies off for more nest material, leaving the male at the nest. The male may fly off after her, even taking the nest material he just brought away with him. More usually, he will fly to the nest, drop the material and fly away after her. Sometimes he will fly after her, fly back to the nest and build very briefly and then fly off to find her.

When together, they use contact calls, but if the male is left alone and loses contact with the female, he usually begins to sing loudly and rapidly until he finds the female again. He may remain at the nest, or fly about singing and calling until contact is made. However, by the time the nest is complete, the male becomes considerably more independent again. He does still ordinarily follow his mate closely, but she more frequently flies off alone, without him calling and searching for her.

The nest building display seems to be most important in stimulating the female to build (James 1978). It is given on almost every trip to the nest on the first day, but the frequency wanes rapidly, as does the male's nest building, and as the female's building activity increases. On the second day of building, it is seen on only about one third of the trips to the nest, as many as six times an hour. By the fourth day, it is seen perhaps only once an hour. It is seldom seen on the fifth day and never after that, when the female has assumed all the remaining building activity.

Male song, apart from times he becomes separated from the female, is usually only heard when the pair come to the nest. Even after he is not building any longer, he continues to fly to the nest area with her and to sing while she builds. Away from the nest, contact calls are used predominantly. But then suddenly about the seventh day, there is a resurgence of song associated with courtship. He will sing slowly almost anywhere in the territory and most of the day.

About the fourth day of building, some males will begin to chase females. These are not aggressive

chases; the male never chases until after the female has flown. He then flies close after her until she lands, and he breaks off as if nothing happened. Such chasing is a prominent part of courtship in many species, apparently allowing for a harmless release of aggressive energy that might otherwise interfere with mating synchrony (Marler 1956, Kreig 1971). With some male Yellow-throated Vireos, it can be quite common, but it is virtually never seen with others. Chasing generally seems to be less frequently seen among Solitary Vireos, and not seen at all among most pairs. When it does occur, chasing increases until the seventh day, but seldom persists after that in either species.

At the time of pairing, the male uses a courtship display, but then it is not seen again for several days. About mid nest building on day 3 or 4, it may suddenly appear again. At either of these times, the display may be seen almost anywhere in the territory, but is not very vigorous, is not accompanied by any resurgence of song, and is usually seen only early in the day (or immediately after finding a possible mate). Never have I seen copulation at these times. The display usually disappears again until about the seventh day of building.

Only on the seventh day (rarely late on the sixth or continuing into the early eighth) does a pair finally copulate successfully. This is accompanied by the resurgence of song, but also the male is again seen fluffing his plumage as he did when the birds first paired (see part 2). The fluffing will be maintained through the day and even into the next day. But, now the female may be seen fluffing also, whereas she never did at the time of pairing. The seventh day is the culmination of building and courtship in preparation for the next phase of the nesting cycle. The eighth day seems a day of relative rest.

Discussion

The lives of these two species in Ontario are quite parallel through the nest building period. The main points of departure are the heights at which they nest, the type of tree used for nesting, and the amount of lichen on the nest exterior. The use of deciduous trees for nesting by Yellow-throated Vireos, and coniferous trees by Solitary Vireos, is probably largely a function of the type of habitat they occupy. The Yellow-throated Vireo seems quite capable of using pines and the Solitary Vireo of using broad-leaved trees where they occupy different habitats in other parts of their range.

However, nesting at different heights may reflect the avoidance of competition between these two species in an earlier era. Although they are now largely separated by elevational and geographic distributions (James 1979), through a previous long glacial period they might have been pushed into much closer contact. The Yellow-throated Vireo today appears to avoid competition when occupying the same habitats with the morphologically less similar Red-eyed Vireo, by nesting and foraging higher (Williamson 1971, James 1979). Direct competition may now be minimal between Yellow-throated and Solitary Vireos, but their divergent nesting habits persist. To some extent, the Solitary Vireo may also be avoiding competition with the more abundant Red-eyed Vireo, by nesting very

low and in coniferous dominated forests in Ontario.

The Yellow-throated Vireo has apparently had better nesting success with increasing amounts of grayish lichen festooning the exterior of its nests. They now incorporate this as a building material in virtually all nests. In a relatively bright environment, that of the top of a deciduous tree, it may serve well to provide a cryptic coloration to the nest. In the typically more shady environment low in a coniferous dominated woodland, the lichens may be less useful to the Solitary Vireo. The whitish bits of bark and spider egg cases would seem to be more important to this species in providing a nest that is less readily detected by predators.

The close contact maintained between the male and female through the nest building period is characteristic of many songbirds, and probably serves several functions. It has been considered mate guarding, to prevent extra-pair copulations (Howes-Jones 1985), but, that seems a rather weak argument among the sparse populations of these species. In fact, it still occurs in very isolated pairs, and likely is of greater significance in other contexts.

For a while after pairing, the male seems very intent on encouraging the newly arrived mate to stay and nest with him. He devotes a great deal of energy to the nest building display at every opportunity through the first day. Maintaining close contact with the female probably also contributes to establishing a pair bond. Then, as the bond becomes firmer, and the female assumes a greater commitment to nesting, the close attention of the male should assist in synchronising their reproductive capabilities. The pair might well be able to build a complete nest in fewer than eight days, as they usually do when renesting, but the extra time helps ready both physiologically for successful reproduction.

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Unusual Nesting Habitat and Song of the Prairie Warbler on Georgian Bay

by
Jean M. Niskanen

Introduction

For some years, Prairie Warblers (*Dendroica discolor*) have been observed migrating through the Dillon Cove area of Carling Township in the District of Parry Sound. This is 47 km WNW of the town of Parry Sound and 12 km north of Snug Harbour on Georgian Bay. My first Prairie Warbler record at Dillon Cove was on 30 June 1981. Then, I had sightings in 1982 and 1985, during the Ontario Breeding Bird Atlas period and several more sightings during May and June in each of 1989, 1990 and 1991, during the Rare Breeding Bird Program. During 1994, I had one sighting in each of May, June, and July. I always hoped that one day I would find a nesting colony or at least a pair. The location being discussed in this paper is near the northern limit of its breeding range in Ontario.

The Prairie Warbler was designated as "Rare" by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) in 1985, but with recent declines across North America, including Ontario, it has been recommended that the status be changed from "Rare" to "Threatened" in Ontario (Austen et al. 1994). The Ontario population has been estimated at fewer than 500 pairs (Lambert and Smith 1984).

Unusual Nesting Habitat

The usual habitat for Prairie Warblers along the southeastern Georgian Bay shoreline is rocky pine-oak-juniper scrub, with Common Juniper (*Juniperus communis*) being an important component (Lord 1955, Lambert and Smith 1984, Lambert 1987).

On 23 May 1996, I discovered a singing male close to Dillon Cove along the rocky shoreline of Georgian Bay. They sometimes sing for a few minutes up to several hours in this area before migrating, presumably farther up the coast. On 24 May, I rechecked the area and found a bulldozer and chainsaw working there, with no chance of hearing the bird. I tried again unsuccessfully on 25 May, but I persevered and finally found it again on 27 May. It sang on territory every day from 27 May to 1 June, when I found **two** singing males. Then, I was absent for one week and only found one male on territory from 8 June onwards. The habitat here had been vastly altered in the last 3 - 5 years. First, a road was built up for a new subdivision by clearing a swath 20 m wide, scarring the landscape. Then, during 1991 to 1996, a major outbreak of Introduced Pine Sawfly (*Diprion similis*) occurred at Dillon Cove. The larvae built to such numbers in 1993 that the White Pines (*Pinus strobus*) along the shoreline of Georgian Bay in this area were completely defoliated and died during

1993-1994. The Prairie Warbler sang in this desolate area using the dead White Pines as its singing perches (Figure 1). It sang from the top of a rocky knoll with Georgian Bay on one side and the new road beside a small marshy backwater on the other side. There were Red Oaks (*Quercus rubra*) and Common Juniper present, and much open space of bare rock (Figure 2). The second male occupied a similar adjacent territory and also sang from a perch in a dead White Pine next to the shoreline. I have birded this area regularly since 1972 and have never recorded Prairie Warblers at this location before, when the White Pines were alive. Was the dying of the pines the reason for attracting them to nest near Dillon Cove?

By 10 June, I found a female in the territory but observed that the male had shifted his territory slightly to incorporate the area in which the female was found. She spent much time in the wetland, frequently flying into the Sweet Gale (*Myrica gale*) shrubs in the drier edges of the wetland. The male left the high rocky knoll and sang from high perches on both sides of the wetland. He sang from either the Red Oaks on the west side of the wetland or from the dead pines on the rocks on the east side of the wetland.

On 12 June, I observed the female on the side of a White Cedar (*Thuja occidentalis*) tree trunk pecking at the trunk as if she were gathering strips of cedar for a nest, although I was unable to see her carrying anything. However, on 13 and 14 June, she was gathering fluff from a willow (*Salix discolor*) for her nest. She gathered it only about 5 m from me and flew repeatedly into the same location in

Figure 1: Rocky ridge with dead White Pines used as singing perches by Prairie Warbler. Photo by *Jean M. Niskanen.*

Figure 2: Prairie Warbler nest was located in wet area in front of Red Maples (right), bordering the rocky ridge. Photo by *Jean M. Niskanen.*

the Sweet Gale shrubs at the edge of the wetland, undisturbed by my presence. Prairie Warblers are known to incorporate a fair amount of plant down into the body of their nests, not just as a nest lining (Harrison 1975, Nolan 1978). Since there was only one small willow in the marsh with the fluff, she kept returning to the same plant which was 2 m high. Nolan (1978) noted that willow catkins and strips of cedar bark had been recorded as nest components by other observers.

This nest location is unusual since the normal habitat for nests in the Georgian Bay area is the White Pine/Red Oak/Common Juniper habitat (Lambert and Smith 1984, Lord 1955). The area selected by the female is best described as a low, marshy area protected from the winds between two rocky ridges, with the third side protected by the high road edge which has been built about 3 m higher than the wetland. The fourth side is a narrow neck of water of a small back bay off of Sand Bay. Almost half of the original marshy area was filled for the new road and the total size of this back bay (open water) and marsh is probably less than 1 ha. Both rocky ridges were vegetated with junipers and dead White Pines, while Red Oaks and a few Red Maples (*Acer rubrum*) were present at the edges of the road and wetland. A significant percentage of the emergent vegetation near the open water of the wetland was composed of Blue Flag (*Iris versicolor*), with a patch of albino plants among them. Sweet Gale and three species of grasses (*Glyceria canadensis, Calamagrostis canadensis*, *Phalaris arundinacea)*

dominated the drier edges in the vicinity of the nest.

The nesting attempt failed sometime after 26 June, which is the last date when the male was singing strongly. No Prairie Warbler activity was observed after that date and no call notes were heard either. The nest was approached for the first time and photographed on 5 July (Figure 3). The finished cup was lined with grasses and fine black rootlets, but was empty, with no egg shells found. The nest was attached to two different branches of Meadowsweet (*Spiraea alba* var. *latifolia*) which were hidden from view inside the Sweet Gale shrubs. This type of nest placement appears to be quite uncommon (Type VI, Nolan 1978). The nest was built at a height of 0.8 m above the ground, but was well concealed under the upper canopy of the Sweet Gale. George Peck (pers. comm.) has documented only one other Prairie Warbler nest in Meadowsweet, in the Regional Municipality of Haldimand-Norfolk. The Dillon Cove nest was located about 6 m from the disturbed area of the new subdivision road edge (a wall of large boulders and fill about 3 m higher than the wetland) and about 3 m from the rocky ridge on the east side. All of the Sweet Gale shrubs in the marsh are in full sunlight by early morning, except the nest site, which lies in a shadow cast by four Red Maple trees until midday.

Unusual Song

On 10 June, I discovered that the male was singing a different song, like a

Figure 3: Prairie Warbler nest in Meadowsweet, after removal from patch of Sweet Gale, on 19 August 1996. Photo by *Jean M. Niskanen.*

Black-throated Green Warbler (*D. virens*). During the period from 10 June to 26 June, the male sang both his normal song and this alternate song and readily switched back and forth between the two songs. Many repetitions of the alternate song were tape recorded on 18 June and it is best described as *zee zee zoo zoo zee*, also *zee zee zoo zoo zoo zee*, and sometimes ending with an extra *zee zoo* sung quickly. The *'zee'*s are the higher buzzy notes and the *'zoo'*s are the lower notes. Sometimes the second *zee* was lower than the first but other times it was higher than the first note, similar to the sequence of Song 1 of the Cornell University (1983) tape, Song 3 of the Cornell University (1975) tape, and Song 3 of Borrer and Gunn (undated), of the Black-throated Green Warbler.

He sang this alternate song particularly strongly when the female was busy with the nest building, which she does alone (Ehrlich et al. 1988). She was also observed flying out to him when he sang this song, so she appeared to respond to it. Prairie Warblers have a large repertoire of songs, but Nolan (1978) made no reference to a song similar to that of the Black-throated Green Warbler. Scott Connop (pers. comm.) heard and taped an alternate song in Rockton Tract, Regional Municipality of Hamilton-Wentworth, Ontario, on 1 June 1992. However, this song was not similar to the Black-throated Green Warbler song of the individual at Dillon Cove, since it was all on one pitch, except for the ending, which ascended the scale. I have heard Prairie Warblers sing at many times throughout the day at Dillon Cove, and this individual also sang throughout the day, contrary to Lambert's (1987) statement that where breeding densities are low, they tend to sing only in the early morning. The typical song of this individual and all other Prairie Warblers heard at Dillon Cove is faster than the Cornell University (1983) songs, which were taped in Florida, and more like Song 1 of Borror and Gunn (undated), taped in Ohio.

Behaviour

I saw both male and female Prairie Warblers feeding on green larvae. They foraged in the Red Oaks and frequently in the Sweet Gale which formed a fringe around the wetland. At no time, however, did I witness the male performing any low 'mothlike' courtship display flight (Ehrlich et al. 1988). On 17 June, I did see the male and female close together in the Sweet Gale, eating larvae. The male caught a green larva but did not give it to the female in courtship feeding, instead eating it himself. Then, the two of them went to the nest site. Both birds were silent when together on this occasion, with no call notes or displays. Just prior to this, I observed a female Common Yellowthroat (*Geothlypis trichas*) at the Prairie Warbler nest site. Neither the male nor female Prairie Warbler defended the nest site by chasing her off. I witnessed no aggression on this occasion or any other occasion as the two species occupied the same habitat. On 20 June, I observed the pair of Prairie Warblers feeding together in the canopy of the Red Oak trees, this time uttering call notes. The female flew directly to the nest site without being secretive, and I saw a male Common Yellowthroat emerge from the same

bush, but again, without any chasing by the female Prairie Warbler.

Summary

This Prairie Warbler nest location appears to be the farthest north yet documented in Ontario. George Peck (pers. comm.) has documentation only as far north as Monument Island (District Municipality of Muskoka). In addition, the fact that two males were attracted to an area of recently dead White Pines, that a female built her nest at the edge of a wetland in this peculiar territory, and that the male sang an uncommon alternate song, all make this a most unusual nesting.

Acknowledgements

I am grateful to Jocelyn Webber and Jeff Kaiser for their identification of the shrubs and grasses. I also wish to thank George Peck and Mark Peck for their interest and for accepting the nest on behalf of the ROM. Bill Crins, Ron Tozer, Ron Pittaway, and Don Sutherland assisted with literature searches and/or editing of the manuscript.

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The 1997 Annual General Meeting of the Ontario Field Ornithologists will be held on Saturday, 18 October 1997, at the Canada Centre for Inland Waters, Burlington, Ontario.

Notes

Sharp-shinned Hawk Preys on Bat

by
Libor Michalak

At 2035h on 30 May 1996, Antonio Salvadori and I, enroute north, stopped along the Trans-Canada Highway below Lake Superior Provincial Park for the night. Taking time to do some birding before retiring as the sun set, one of our observations was of a small bat (probably *Myotis* sp.) fluttering above the tree canopy, moving to about 15-20 m above the road. While focussing our binoculars on it for a closer look to identify it, out of nowhere a Sharp-shinned Hawk (*Accipiter striatus*) bolted out of the tree canopy only to appear in our binocular view, impaling the mammal with its talons. In continuous motion after the catch, readjusting its flight pattern, it flew to the opposite side of the road where it landed in some aspen trees, seemingly to adjust its prey. Only seconds later, it continued its flight to the side from which it came. Amazed at what we had just witnessed, we tried to follow the hawk but lost it due to the dense tree cover.

Among the three accipiters, this species shows a strong preference for areas of regenerating young forest which have a variety and abundance of small birds. It takes mostly birds as prey; only rarely does it make other food a choice (Evans 1982, Ehrlich et al. 1988). It is agreed that birds comprise over 90% of the Sharp-shinned Hawk's diet, but other prey to a much lesser extent consists of herptiles such as frogs, snakes and lizards (Palmer 1988). Bent (1937) and Palmer (1988) note that mammals such as meadow voles (*Microtus* spp.) and bats are also taken, and Snyder and Wiley (1976) state that food species proportions of 93.1% birds, 2% mammals, 0.6% lower vertebrates and 4.3% insects have been observed. Insects taken consist mainly of grasshoppers, crickets, beetles, large lepidopterans and caterpillars (Palmer 1988). Mature Sharp-shinned Hawks have been known to spend an entire day capturing grasshoppers from an open, high perch in exactly the same way as an American Kestrel (*Falco sparverius*), as noted by Beebe (1973). Lastly, with bats not being common, an interesting observation was reported by Sprunt (*in* Palmer 1988), involving Sharp-shinned Hawks arriving at a Texas cave to await the evening emergence of free-tailed bats (*Tadarida* spp.).

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For advice and assistance in the search for more material on the subject, I wish to thank Bruce Duncan and Toni Salvadori.

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A Collision of Oldsquaws

by
Kenneth F. Abraham and Nancy Wilson

Introduction

Oldsquaw ducks (*Clangula hyemalis*) are regular but relatively inconspicuous migrants in southern and western James Bay (Figure 1). They are most noticeable in spring and autumn when they traverse northeastern Ontario and western Quebec between James Bay and the Great Lakes and the St. Lawrence River, using major rivers as inland flight corridors. In May, flocks are seen flying low over the river ice, often at day break, or swimming in open water reaches of rivers at the time of ice break-up. In autumn, migrants concentrate in James Bay and can be observed passing headlands on the coast (Sinclair 1986; D. McRae, pers. comm.) en route to rivers such as the Harricanaw and Moose which enter extreme southern James Bay. Oldsquaw migration over land in spring is made at high altitude and may commence in the afternoon, thus spanning the night (Palmer 1976). Both altitude and night flights help explain their relative inconspicuousness during migration.

Little is known about the characteristics of migration in James Bay

Figure 1: Male Oldsquaw. Photo by *Don Gunn*.

other than a few dates of occurrence (Lewis and Peters 1941, Smith 1957, Todd 1963). Here, we add a summary of observations over the past 20 years from the Moosonee and southern James Bay region (Table 1). The earliest observation was a flock of 24 in Hannah Bay on 16 April 1987. The majority of observations occurred in the latter two weeks of May (13th-26th). Such timing coincides with both observations of peak numbers and departures from Lake Ontario and Lake Erie (late April and first week of May) and major movements in Georgian Bay near Manitoulin Island and Killarney (17-24 May) (Goodwin 1975). It suggests a rapid movement from wintering areas to spring staging areas in James Bay.

Table 1. Oldsquaw migration dates in the Moosonee area, including southern James Bay shoreline at Shipsands Island, Netitishi Point, Hannah Bay and East Point.

	Day migration was reported in:					
	April	**May**	**Sept.**	**Oct.**	**Nov.**	**Dec.**
1977		13				
1978		14				
1980		15		2		
1981		16, 23		28[1]	20	
1982		16		16,25		
1983					3, 4, 10	
1984		19		20,21		
1985				25, 27	5, 8, 9	
1986		26				
1987	16	16				
1988		21, 22				
1990		1, 18, 20, 22				
1992		6	25			
1993		21, 30				
1994		7, 21				4
1995		19				
1996		22				3
Total Obs.	1	22	1	8	8	2
Ave. Date	–	17-18	–	20-21	7-8	3-4

[1] Underlined dates had more than 1000 birds reported; maximum was 14, 800 on 28 October 1981.

Fall migration observations were concentrated from about 20 October to 10 November, with two notable later dates. The earliest observation was on 25 September 1992, and the latest date of occurrence was 4 December 1994. Exceptional migrations were recorded at Netitishi Point by Doug McRae and Alan Wormington when 33,000 were recorded between 13 October and 24 November 1981 (Goodwin 1982). Peaks of 14,800 and 3000 were recorded on 28 October and 20 November. Similarly impressive numbers were recorded by Doug McRae and Pam Sinclair in 1985 (total of 15,640 recorded from 25 October to 9 November). A major night movement on 3-4 November 1983 (Abraham) coincided with peak numbers three days later at Long Point, Lake Erie and Prince Edward Point, Lake Ontario (Weir 1984), again suggesting rapid and perhaps non-stop movements between James Bay and the lower Great Lakes.

A regular feature of fall bird migration at Moosonee, Ontario (51° 17'N, 80° 38'W), is the movement of Oldsquaws along the Moose River in late October and early November. They are often heard rather than seen because the passage frequently occurs at night. Further, the movements often occur in association with periods of inclement weather, when low overcast and fog creates poor visibility. We have witnessed these night passages in most years since 1982, when one or the other of us resided in Moosonee.

Similar movements associated with inclement weather have been noted during spring migration, and night migration in spring was noted on at least three occasions. On 21 May 1993, Wilson witnessed a night migration of Oldsquaws at the Moosonee townsite. Low cloud cover conditions existed, and Oldsquaws could be heard calling for several hours that evening. It seemed that the birds were flying in circular or erratic patterns above the community. Although not visible, the numbers were estimated to be at least 100, but could have been substantially more.

An Unusual Event

On 5 November 1985, Oldsquaws passed conspicuously along the river and over the Moosonee townsite. In the darkness of early evening, Abraham listened to the calling birds and observed them from several vantage points along Revillion Road, which runs adjacent to the river. Oldsquaws were visible in the reflected light at the lower edge of the low clouds. Other birds, including Killdeers (*Charadrius vociferus*) and yellowlegs (*Tringa* spp.) were also heard. One notable aspect of the movement was that there was no average direction of flight. Indeed, birds crisscrossed in flight over the townsite in all directions. We could not tell how many birds were involved, although several flocks of 20-40 birds were visible simultaneously. At the time, we thought that the birds were probably disoriented by the town's lights.

Moosonee residents, Tommy Moore and Grant Churcher, also observed the flight that night, and Abraham watched and discussed the phenomenon with them at about 2000 h, then returned home. At 2030 h, Grant Churcher arrived at Abraham's house with a dead Oldsquaw. He explained that he and Tommy Moore had been watching the crisscrossing

birds when they heard a dull clap from above and were startled a few seconds later as two birds (one adult female, one adult male) fell from the sky and landed nearly at their feet. Abraham dissected the female and found that it was in good condition with abundant body fat, including heavy abdominal cavity fat. Haematomas were visible in the neck region, but these were the only signs of trauma. As there were no tall structures present, we concluded that the birds collided with each other in the air, and either the collision or the subsequent impact with the ground caused their deaths.

Discussion

Fatal collisions between birds in migrating flocks must be rare. However, disorientation and bird collisions with human built structures, particularly by night migrants in inclement weather, are not unusual (Weir 1976, Ogden 1996). Night migrants are thought to navigate using multiple cues, including visual cues such as star patterns, the moon and topographical features (e.g., coastlines and rivers) and as such are subject to disorientation. The incidence of waterfowl in such kills is relatively low and usually associated with structures on or near waterbodies, such as dams, power lines and lighthouses. An example involving Oldsquaws occurred at Smoky Falls, Ontario, on the Mattagami River, on 26 October 1986, when at least 27 Oldsquaws were killed when they struck transmission wires associated with the hydroelectric dam (Leafloor et al. 1996). Abraham received a report of ducks falling from the sky at Detour Lake, Ontario, in December 1987. This was reported by an employee at the Detour Lake gold mine, and included Common Goldeneye (*Bucephala clangula*), Bufflehead (*B. albeola*), and Common Loons (*Gavia immer*). The weather on all three occasions was inclement, with either fog or low cloud. Moosonee, Smoky Falls and Detour Lake are all in remote northern areas, where artificial light sources are uncommon and isolated. The Moosonee and Smoky Falls events indicate either that the Oldsquaws were travelling at relatively low altitudes or that they were attracted to the light source from higher altitudes, and thus to their deaths. Those that did not die in collisions may have been harmed by the aimless flying through the waste of energy reserves or exhaustion. In addition to the documentation of an unusual event, these observations serve as a warning that the hazards associated with artificial light sources are not limited to urban areas.

Acknowledgements

We thank the following contributors to the Moosonee area bird observation database: S. Badzinski, D. Byers, G. Faries, P. Ford, P. Gilboe, M. Hill, E. Hunter, F. Johnson, D. McRae, S. Muldal, P. Pratt, J.P. Prevett, S. Scholten, P. Sinclair, Y.R. Tymstra, and A. Wormington.

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Nesting of the Yellow-throated Vireo in the Sudbury District

by
Charles J. Whitelaw

The Yellow-throated Vireo (*Vireo flavifrons*), a hardwood-loving species, has been found breeding on Manitoulin Island (for several years at the same location), and was listed as a probable breeder in the Sault Ste. Marie region and as a possible breeder a short distance south of the French River during the Breeding Bird Atlas Project (James 1987). In the Sudbury District, the species has been recorded on only one previous occasion, on 13 May 1984 at a location east of Espanola near Hanna Lake. This locality is less than 32 km distant from the site discussed in this note.

During July of 1995, when several of us were searching for species such as Wood Thrush (*Hylocichla mustelina*) to bolster our year lists, information was passed on to me by Chris Bell that a fairly extensive hardwood existed along the Bay of Islands Road, west of Whitefish Falls, Ontario. A brief examination of this hardwood in Mongowin Township during early October of 1995 revealed that this area was indeed an attractive and mature hardwood forest containing species such as Sugar Maple (*Acer saccharum*), Yellow Birch (*Betula alleghaniensis*), American Beech (*Fagus grandifolia*), White Ash (*Fraxinus americana*), Striped Maple (*A. pensylvanicum*), Mountain Maple (*A. spicatum*), and a good sprinkling of mature Eastern Hemlock (*Tsuga canadensis*). At this time it was considered worthy of further examination in the spring of 1996, in the hope that some southern hardwood-type species of birds could be found during the breeding season. In early May of 1996, before any leaves were on the trees, a hike was undertaken to further determine the extent of the hardwoods and accessibility to the area.

On the evening of 29 May 1996, I received a phone call from Floyd Cosby saying that he had found what he believed to be a Yellow-throated Vireo along the main trail, a considerable distance into this hardwood. The bird was not in song and was feeding at medium height on the outer branches of some of the larger maples, right beside the trail. Floyd's description sounded very good and I suggested that he submit a rare bird report based on his sighting to the Sudbury Committee, which he did at a later date.

I had been planning to follow that particular trail soon at any rate, so on 31 May about mid-morning, I made my way along the trail. After descending the hill to a point near to where Floyd had made his sighting, species such as Least Flycatcher (*Empidonax minimus*), Scarlet Tanager (*Piranga olivacea*), American Redstart (*Setophaga ruticilla*), Black-throated Blue Warbler (*Dendroica caerulescens*), Eastern Wood-Pewee

(*Contopus virens*), and Rose-breasted Grosbeak (*Pheucticus ludovicianus*) were in full song. I had just found the freshly constructed nest of a Least Flycatcher, and one of the Scarlet Tanager a little farther on, when I heard it: a vireo song with a distinct hoarseness and the phrases separated by very long pauses. I recognized the song right away as that of the Yellow-throated Vireo, having learned it at an earlier time many years ago in an oak-hickory woodland near Komoka, west of London, Ontario, where the Yellow-throated Vireo bred each year along with the Cerulean Warbler (*D. cerulea*).

The singer was located high in a Large-toothed Aspen (*Populus grandidentata*) which was not leafed out as yet. The plumage was distinctive: plain olive-brown above; white wing bars; and prominent yellow spectacles around the eye, with yellow extending through the lores to the base of the bill. The throat and the breast were a bright yellow, and the belly was white. As I watched this bird at an estimated height of about 20 m, a typical vireo-type nest appeared in the field of view, a little to the right of the singer. Right away, a second vireo appeared with plumage similar to the first bird. This second bird immediately began fidgeting about the nest, and then the two birds flew off together.

I returned on 10 June, at which time one bird was sitting on the nest, apparently incubating. The second bird was silent and not to be seen. At this time, two photographs were taken of the nest with the incubating bird. On 14 June, Igor Konikow visited the site, saw both birds at the nest and heard one bird in song. Heather Baines, Chris Bell, and Rodney Campbell, accompanied by Floyd Cosby, saw the nest and birds, but heard no song, on 16 June.

Acknowledgements

I wish to acknowledge information from Chris Bell, Donald Ferguson and John Nicholson, which was helpful in the preparation of this note.

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Recognizable Forms

This regular feature will appear again in the August issue of *Ontario Birds*.

Nest Re-used by Wood Thrush

by
Valerie E. Wyatt

The Wood Thrush (*Hylocichla mustelina*) is typically double-brooded, building two nests and laying two clutches of 3-4 eggs each summer (Bent 1949, Terres 1980, Peck and James 1987). In many multi-brooded species, the second nest may be built by the female while the fledglings from the first are still being fed by the male (Martin and Geupel 1993). In the course of searching for Wood Thrush nests for a study of nesting productivity in the summer of 1996, we discovered seven probable occurrences of double-brooding, where second nests were built within 6-50 m of the first successful nest. We also observed a single Wood Thrush nest in which two broods were raised. Although nest re-use has been documented for other passerine species (Nickell 1957, Briskie and Sealy 1988, Curson et al. 1996), it is apparently very rare in the Wood Thrush (Bent 1949, Harrison 1975). In a 19 year study of a colour-banded Wood Thrush population in Delaware, Roth reported just three cases of nest re-use out of 389 nestings (Roth et al. 1996).

The nest was found on 31 May, in a stand of maple saplings in a woodlot near Elmira, Ontario. The contents, three Wood Thrush eggs, were easily viewed with a mirror attached to the end of a telescoping painter's pole. Three young hatched on approximately 10 June, and fledged from the nest as it was approached by us on 20 June. Young Wood Thrushes were observed in the area for the next two weeks, and an adult was observed feeding a fledged youngster in the area on 2 July.

A new Wood Thrush nest was located on 10 July, 56 m north of the original nest. This area had been carefully searched one week earlier, specifically to find a second brood of the same pair, as the male had been singing above the sapling stand nearly continuously. There was no other singing male in the area, suggesting the nest was built by the same pair. The new nest contained one Brown-headed Cowbird (*Molothrus ater*) egg, but although a singing male and fledged young were in the area, no adults were observed on or near the nest. The cowbird egg remained, apparently abandoned, until 26 July when it disappeared.

We also checked the first nest with the mirror on 10 July, but it was empty. To our surprise, a visit to the nest on 12 July revealed three Wood Thrush eggs, with the male Wood Thrush singing nearby. On 18 July, we flushed a large unidentified bird, perhaps a Common Grackle (*Quiscalus quiscula*) or a Blue Jay (*Cyanocitta cristata*), from near the nest, and discovered that only two eggs remained. Another egg disappeared before 22 July, leaving only one tiny featherless

young in the nest. The agitated parent was seen frequently. The single youngster fledged on 1 or 2 August.

The nest was located at a height of 2.75 m, in the fork of a 4 m Sugar Maple (*Acer saccharum*) sapling (dbh = 3.0 cm). The nest tree was surrounded by nearly uniform dense maple saplings of similar size. There was a sparse ground cover of maple seedlings and a canopy of maple and Hop Hornbeam (*Ostrya virginiana*) trees, approximately 15 m in height. Nest position, nest tree size, and surrounding vegetation were typical of most of the 61 Wood Thrush nests found in Waterloo Region woodlots this summer.

There are several possible reasons why passerines avoid re-using old nests, including predator knowledge of the site and parasitic insect infestations. However, in this case it may be that the second nest constructed was abandoned due to Brown-headed Cowbird parasitism (Harrison 1975). The subsequent re-use of the original nest represented a saving of time and energy for the Wood Thrush (Briskie and Sealy 1988, Curson et al. 1996), or reflected a shortage of high quality nest sites, although to us, the sapling stand appeared uniform (Briskie and Sealy 1988, Curson et al. 1996).

Acknowledgements

Thanks to Andrea Spender, who first discovered the new eggs. This field work was carried out as part of a study coordinated by Mike Cadman and Lyle Friesen of the Canadian Wildlife Service and Jock MacKay of the University of Waterloo, and was funded through the Ontario Ministry of Natural Resources (Environmental Youth Corps), the Canadian Wildlife Service, Environment Canada's Biodiversity Convention Office, and the University of Waterloo. Helpful comments on an earlier draft of this note were provided by Mike Cadman and Lyle Friesen.

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Book Reviews

The Breeding Birds of Quebec: Atlas of the Breeding Birds of Southern Quebec. By *Jean Gauthier and Yves Aubry* (editors). Association quebecoise des groupes d'ornithologues, Province of Quebec Society for the Protection of Birds, Canadian Wildlife Service, Environment Canada, Quebec Region, Montreal. Hardcover, 1302 pages. $149.95 Canadian.

This monumental book is a treatise on the breeding biology of 293 Quebec bird species. The main part of the text is devoted to 242 species found breeding in southern Quebec during the atlas project (1984-1989). An additional 51 species accounts cover northern Quebec breeding birds, possible breeders, introduced birds, and extinct species. The atlas, resulting from a six-year inventory by almost 1,000 volunteers, contains over 1,000 photographs and illustrations, and cites some 5,000 references. This English edition was published a year after the French version, allowing for correction of editorial errors, revision of some sections, and updating of several species accounts.

The book's stated goal is to address three main themes: "the changes that have transformed the Quebec landscape"; "breeding biology and distribution"; and "the biodiversity of the bird life of southern Quebec in relation to the major ecological components of the region". In response to the "dearth of information in French on Quebec breeding species", the editorial board decided to include "a synthesis of bird biology, listing major reference works so that members of the public could go back to the sources themselves", even though it "was clear that this went well beyond the scope of traditional atlases". This expansion in scope is intimately linked to the book's greatest strengths and shortcomings, in my view.

Each of the atlas species accounts contains five sections. The introduction describes the species' distinctive characteristics and its general status in Quebec. A description of breeding habitat and behaviour follows. The Distribution section details the regions in southern Quebec where the species is commonest, and provides complementary information to the distribution map. History and Trends gives an overview of the species' historical status in Quebec, and recent population trends. Finally, there is information on territory size and home range, and data on density in various habitats.

In addition, for each atlas species there is a map depicting breeding distribution and evidence determined during the atlas project, a map of the world breeding range, a bar graph of breeding chronology in Quebec, and a species profile prepared from an extensive literature review (with references cited) and presented in easy-reference, tabular format. The latter profile covers: clutch size, laying interval, start of incubation, incubation period, maturity at hatching, care of young, nestling period, age at first flight, dependence of young, broods per year, breeding age, mating system, duration of pair bond, total

length, wing span, weight, and longevity record. All you ever wanted to know about Quebec breeding birds, and more!

Other special features include the history of amateur and professional ornithology in Quebec, assessment of human impact on the Quebec landscape, the correlation between birds and bioclimatic regions, photographs documenting changes in the landscape from the 1920s on, and satellite images of many regions of southern Quebec.

In reviewing this volume for *Ontario Birds*, my major goal was to evaluate its potential value to Ontario birders, especially since I do not feel qualified to judge how accurately the atlas project reflected the real distribution and abundance of southern Quebec breeding birds. After actually using the atlas in researching breeding information on several species (and comparing it with other standard sources), I consider it to be an excellent reference work. The book is really a "breeding bird encyclopedia" rather than a traditional breeding bird atlas. Its very extensive review and synthesis of the current research literature is extremely valuable, since most birders (in Ontario and Quebec) do not have easy access to ornithological journals. The species accounts are well organized, and presented in a very readable style (with a superlative English translation). I detected very few typographical errors, as well.

Inevitably, there are some aspects which can be criticized. The book is not "user friendly" in several ways. Its large format (27 cm x 32 cm) and excessive weight (about 5.6 kilograms or over 12 pounds!) make this volume very awkward to handle. Due to the amount of information and decision to publish in one volume (undoubtedly, economically driven), the print size is quite small, especially in the 37 pages of references which almost require a magnifying glass to read! At $149.95, the Quebec Atlas is very expensive for the average birder (in Ontario or Quebec) to purchase, which may preclude it reaching many people despite its obvious quality.

I think that the book could (and should) have had fewer pages, and hence been less expensive and easier to handle, with little loss in value to even its primary target audience, the francophone Quebec reader. For example, the section titled "Taxonomy of the Birds of Quebec" (110 pages) presents an overview of the various bird families, with a colour photograph for each species. The visual enhancement of the book, which this section undeniably provides, does not justify the considerable cost and added pages, in my opinion. Both francophone and anglophone readers have ready access to colour depictions of all these birds elsewhere.

There are four to six black and white photographs (some full page) accompanying most species accounts, which greatly enhance the reader's understanding of breeding behaviour and habitat, and nest sites. However, considerable reduction in the number of photographs (and hence the size and cost of the book) could have been undertaken, with little loss of information provided. For example, frequently repetitive photographs of different locations featuring "mixed woods" for each of the many species that breed there are not really necessary.

Having said all this, should an Ontario birder purchase such an expensive book? If you enjoy reading, and frequently refer to, sources such as *The Audubon Society Encyclopedia of North American Birds*, *The Birder's Handbook*, or *Bent's Life Histories*, I am confident that you would find the Quebec Atlas to be a very helpful and informative addition to your library. I wish that I had bought one at the pre-publication bargain price of $89.95!

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Birding Ecuador. 1996. By *Clive Green*. Published by Clive Green, 1208 N. Swan Road, Tucson, Arizona 85712 USA. Ring-bound, 210 pages. Available from ABA Sales, 2812 W. Colorado Avenue, Colorado Springs, Colorado 80904 USA.

There are, I know, birders who despise the new allure of site guides and annotated checklists, preferring to discover a new country for themselves. I have no problem with this attitude, in fact my response is good luck to them. However, the majority of birders, whether fanatical listers or somewhat milder types, visiting a new part of the world with limited time and on a limited budget, are very glad to be able to use the experiences of people who have gone before to plan their trips efficiently, economically and safely. Most of us are glad to share our knowledge and readily proffer advice of variable usefulness to anyone who is prepared to listen. Almost thirty years ago, a new type of book, exemplified by John Gooder's *Where to Watch Birds*, began to appear for this specific purpose. Many of these were rather general and of dubious utility; the most recent tendency is for very detailed books on one country (or one province or state), which are in fact more useful. The present work is of this type.

Birding Ecuador follows on a much smaller, but still very useful, publication by the same author produced several years ago. I did in fact use this first edition on my second visit to Ecuador, and it so smoothed my passage that I greatly regret that it had not appeared a few years earlier. The present volume is greatly expanded, in a larger format, and is a major advance on the earlier work.

The book starts off with several pages of general but essential information on such things as road conditions, car hire and other transport, weather, health tips, useful reference books, both on general subjects and for birds and local travel agents. For those without previous or recent experience of the country, there are a dozen useful pages. The bulk of the book, some 180 pages, is then devoted to individual site accounts and maps which are grouped for convenience into nine geographic areas.

The success or failure of a book of this type depends upon two things: how comprehensive it is in including all reasonably productive sites, and how accurate it is in providing unmistakable directions for the visitor (in a country where things like signposts,

guard-rails on precipices, etc., are regarded as frivolous fripperies not worthy of the public purse). So far as I can see, it succeeds well in both respects, although with regard to the second, only an actual test under field conditions will allow a true evaluation. Nevertheless, the book seems to me, based on my own experience, to be indeed both comprehensive and accurate. The directions given appear to be very painstaking and complete, and are complemented by forty pages of sketch maps; more than sixty individual sites are dealt with. The only location with which I am personally familiar which is omitted is the slope of Volcan Pichincha, immediately accessible (with a modest amount of bribery to open a locked gate) from the western suburbs of Quito. As an acid test of the practicality of the directions, I can only cite my own efforts to locate the Quito end of the old Chiriboga Road, totally unmarked of course. On my first visit, I paid a taxi driver to guide us while I followed in a jeep, a nightmare ride through high-speed Latin rush hour traffic which reduced my companions to a bunch of gibbering wrecks and didn't do much for my own nerves either; on my second, Clive Green's excellent directions allowed a smooth uneventful navigation precisely to the desired spot.

A determined person could doubtless find details to carp about in this second edition, but my overall impression is that it is a thorough, painstaking work. I would make a constructive suggestion for future versions, namely the inclusion of an overall road map with realistic driving times as well as distances included (it always takes longer to get from A to B in Ecuador than you'd think). Nevertheless, I would thoroughly recommend *Birding Ecuador* for any independent visitor to what is one of the most interesting and beautiful countries in the world.

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Photo Quiz

by
Bob Curry

When confronted with a "different looking" large gull standing on the shore, it is good to review the variety of features to examine with the goal of identification. One should consider overall size, shape and proportions, overall impression of shade/colour, wing length, head shape, soft parts structure and colour, and the details of pattern and plumage of the upperparts. It is important to remember with large gulls that few features are by themselves diagnostic, but rather they are relative and comparative. The sum total of features, rather than one or two criteria, compared with other similar species must tilt the case in favour of identification. This implies, of course, that the observer is intimately familiar with the commoner species of gulls, which requires that many hours be invested in gull study before one should attempt the identification of the more subtle of the rarer birds.

Spending time with gulls enables one to understand age and molt sequence, which is crucial for gull identification. This bird is a juvenile. Its plumage is exquisitely crisp with no wear on any feather margins. The contrast between dark centres and light margins also indicates no sunlight bleaching of feathers. Identification in this plumage is actually more difficult than later when molt of body contour feathers results in greater differences among several species which at this age all tend to be uniformly dark.

In Ontario, four or five species of large larids need to be compared, as they are essentially overall dark or dusky in juvenal plumage: Slaty-backed Gull (*Larus schistisagus*); Western Gull (*L. occidentalis*), for which there is no Ontario record; California Gull (*L. californicus*); Lesser Black-backed Gull (*L. fuscus*); and Herring Gull (*L. argentatus*). I am essentially eliminating Great Black-backed from the mix as it is much larger and more robust than these five, with a massive bill, coarser black and white upperparts, and greater contrast between dark upperparts and essentially white head, neck and underparts. Such a bird can be seen directly behind the subject bird in the second photograph.

Let's examine our bird closely. It is really quite dark on the upperparts, especially the scapulars. On close examination, this is seen to result from the shade of feathers which, on these black and white images, are a shade approaching black, and the very limited neat white fringes with few internal markings or bars except on some of the greater coverts, especially inner ones. There is a noticeable dark eye-crescent or patch on the side of the head. We can't tell in this plumage just how many primaries extend beyond the tail as they lack white apical spots, but there is a long extension and the entire bird is elongated or attenuated. The bill is entirely black and not particularly thick at the gonydeal angle. It is difficult to make true comparisons with the other gulls in the photos as none is at the same distance from the camera. Having said this, I think the subject bird is a little slimmer in body diameter and sleeker overall than the gulls to the left. It has a smooth rounded head with a slightly domed profile.

Slaty-backed in juvenal or first basic plumage would be an extremely difficult bird to identify and I don't believe it has been reported out-of-range in North America. It should appear more uniformly dusky, and have light-fringed primary tips as in Thayer's Gull (*L. thayeri*). It should have a huskier bill than this bird, and

generally be more robust or aggressive in appearance than this bird. Western Gull has a uniformly dark grey-brown wash on the head, neck and underparts, without the contrasting dark eye-crescent and coarse streaks on the breast and belly of this bird. More important, it has a proportionately bulbous bill, being larger near the tip than at the base. In juvenal plumage, California Gull can have an all-dark bill which, however, should appear proportionately longer than on this bird. Fairly quickly, the basal two-thirds of a California Gull bill should begin to lighten. The upperparts would be more mottled and not so dark, with light bars on the brownish (not blackish) coverts, scapular and back feathers.

It would appear then that the subject is either a Lesser Black-backed or Herring Gull. The latter is, of course, the standard against which all large gulls must be compared. It is abundant and ubiquitous, and highly variable in shade and pattern of immature plumages and in timing of molts. Moreover, although in Ontario the subspecies is *smithsonianus*, there are many other subspecies and forms for which the indefatigable gull watcher should be on the lookout. Whether the Herring Gull is a light grey-brown or a dark chocolate brown, the shade of the scapulars is not as blackish as on the photo bird. There are broader, less regular off-white margins on scapular, covert and back feathers. The effect is that these tracts are dark-barred light feathers rather than light-fringed dark feathers. The head is more uniform in shade; there may be a partial dark eye-crescent but it is not as prominent as on this bird. Herring Gull averages a longer, bigger bill, although male Lesser Black-backed can have a bill exceeding the length of female Herring. However, Lesser Black-backed has a consistently thinner bill with a less prominent angle of gonys which bears out when comparing the subject to the bird to the left. Herring Gull has a more angular, flat-topped head and averages larger than Lesser Black-backed. It is important to make comparisons with all the birds in a flock in order to determine which features are beyond all or most of the other birds in degree.

Given the difficulties inherent in not being able to compare the subject directly with birds at the same distance, it is reasonable to conclude that our bird is a juvenile **Lesser Black-backed Gull**. To summarize the features distinguishing this bird from Herring Gull, it has: darker, more blackish upperparts; a more prominent, darker eye-crescent; a thinner, slighter bill; slimmer body proportions; and longer wings. This plumage is rarely encountered in Ontario as most first calendar year birds will have molted well into their first basic plumage when encountered by birders. In this latter plumage, the job is easier as the head and breast are much whiter, offering greater contrast with the upperparts and the eye-crescent. In addition, the outer (lower on a standing bird), greater upper wing coverts are more uniformly blackish than on Herring Gull. This is likely a function of wear of the narrower light margins on Lesser Black-backed Gull.

This Lesser Black-backed Gull was photographed by Glenn Coady at Frenchman's Bay, Durham Region, on 12 October 1996.

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