ONTARIO BIRDS

Journal of the Ontario Field Ornithologists
Volume 24 Number 1 April 2006

Ontario Birds
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ISSN 0822-3890
Publications Mail Agreement No. 1856170

Articles

Erythristic Rose-breasted Grosbeak

Ron Pittaway and Jean Iron

Description

On 5 May 2004, we observed three male Rose-breasted Grosbeaks (*Pheucticus ludovicianus*) eating sunflower seeds at our feeder in Toronto, Ontario. One of the grosbeaks was an aberrant male with extensive erythristic (red) coloration as shown on the front cover and in Figures 1 and 2. It stayed until 8 May during a period of cool weather. We aged it to be nearly two years old or older in definitive alternate (adult breeding) plumage based on its black folded primaries, which are visible in Figure 2. Year old birds in first alternate plumage show contrasting retained juvenal brown (not black) folded wingtips. In typical adult male Rose-breasted Grosbeaks in breeding plumage, the red colour is restricted to the wing linings, breast, and narrow extension down the centre of the breast (Godfrey 1986). Rarely the white rump and shorter upper tail coverts are pink (Wyatt and Francis 2002). The red on the underparts of the variant Rose-breasted Grosbeak was on the same area as the cinnamon-brown colour on a male Black-headed Grosbeak (*P. melanocephalus*), a close relative with which it hybridizes occasionally (Wyatt and Francis 2002). The rump was an impressive red colour also (Figure 2) instead of white as in most Rose-breasted Grosbeaks. Male Black-headed Grosbeak has a cinnamon-brown rump. Otherwise, the red variant's black and white feathering was similar to typical adult male Rose-breasted Grosbeaks in breeding plumage.

Discussion

Oberholser (1974) in his detailed plumage descriptions does not mention any variation in the extent of red on Rose-breasted Grosbeaks. Mutchler and Mutchler (1987) describe and illustrate small variations in the amount and shape of the red on the breast, but nothing like what we report here. There are no individuals with extensive red below or on the rump in the collections of the Canadian Museum of Nature (Michel Gosselin, pers. comm.), Royal Ontario Museum (Mark Peck, pers. comm.) and the Royal Alberta Museum (Jocelyn Hudon, pers. comm.). Alan Wormington (pers. comm.) has seen thousands of Rose-breasted Grosbeaks at Point Pelee, Ontario, but he has never seen or heard of one with extensive red coloration.

Jocelyn Hudon (pers. comm.)

Figure 1: Erythristic male Rose-breasted Grosbeak with red underparts extending to area normally coloured cinnamon-brown in male Black-headed Grosbeak. Photo on 6 May 2004 by *Jean Iron*.

of the Royal Alberta Museum, an expert on avian pigmentation, examined the photographs of the erythristic individual and provided a few educated guesses as to its origin. "It is as if the developmental program that dictates where the cinnamon (melanin) pigmentation is to appear on an adult male Black-headed Grosbeak was used to specify the location of red carotenoids in the variant Rose-breasted Grosbeak. This is not impossible if this program was the ancestral state in the lineage that gave rise to the Rose-breasted Grosbeak and Black-headed Grosbeak (coloration like that of adult male Black-headed Grosbeaks is seen in few second calendar year male Rose-breasted Grosbeaks), which was subsequently modified in the lineage leading to the Rose-breasted Grosbeak to produce the pattern seen in that species today, except in the genetic variant, where the change was reversed. Alternatively, this state was reconstituted through genetic recombination following introgression with the Black-headed

Figure 2: Erythristic male's red rump is white (rarely pink) in typical male Rose-breasted Grosbeak and cinnamon-brown in typical male Black-headed Grosbeak. Photo on 6 May 2004 by *Jean Iron*.

Grosbeak. It is also conceivable that alterations in the program of pigment patterning in the Rose-breasted Grosbeak could produce individuals with red pigmentation over a wider area of the body (including the flanks and rump) than is currently observed, as suggested by the occasional occurrence of males with pink rumps."

The red colour in Rose-breasted Grosbeaks is produced by a suite of red carotenoid pigments, mainly astaxanthin and canthaxanthin, which are manufactured through an oxidative process from yellow

carotenoid pigments acquired in the diet, presumably lutein and zeaxanthin (Hudon 1991). Both plant material (seeds, fruits) and insects that feed on plants are natural sources of dietary pigments (Jocelyn Hudon, pers. comm.).

Conclusion

This variant erythristic male Rose-breasted Grosbeak with red pigmentation extending to areas normally coloured cinnamon-brown in the Black-headed Grosbeak has implications for understanding the way birds deposit pigments in some areas and not in others.

Acknowledgements

We are grateful to Jocelyn Hudon of the Royal Alberta Museum for his analysis of the erythristic Rose-breasted Grosbeak and for reviewing a draft of the manuscript. We thank Michel Gosselin of the Canadian Museum of Nature for reviewing an earlier draft. Mark Peck of the Royal Ontario Museum, Ron Tozer and Alan Wormington provided information.

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The Black-billed Magpie in Ontario

David H. Elder

The Black-billed Magpie (*Pica hudsonia*) is a spectacular, long-tailed, black and white corvid (Figure 1) that is found in western North America from Alaska south to New Mexico and Arizona (Sibley 2000). Its Canadian range extends from extreme western Ontario through Manitoba, Saskatchewan, Alberta, British Columbia and the Yukon (Godfrey 1986). The original range of the species likely coincided with the great central North American prairies populated by huge herds of American Bison (*Bison bison*) that through death by predation, disease, accident and old age provided a constant food source.

In Ontario, it is a fairly recent colonizer in the northwestern part of the province and breeds mainly in two separate areas, one west of Fort Frances and one west of Dryden (Figure 2). Both are extensive agricultural areas that have been developed since the late 1800s and early 1900s; farmland carved out of the forested wilderness.

Figure 1: The Black-billed Magpie is a recent colonist to Ontario. Photo by *George K. Peck*.

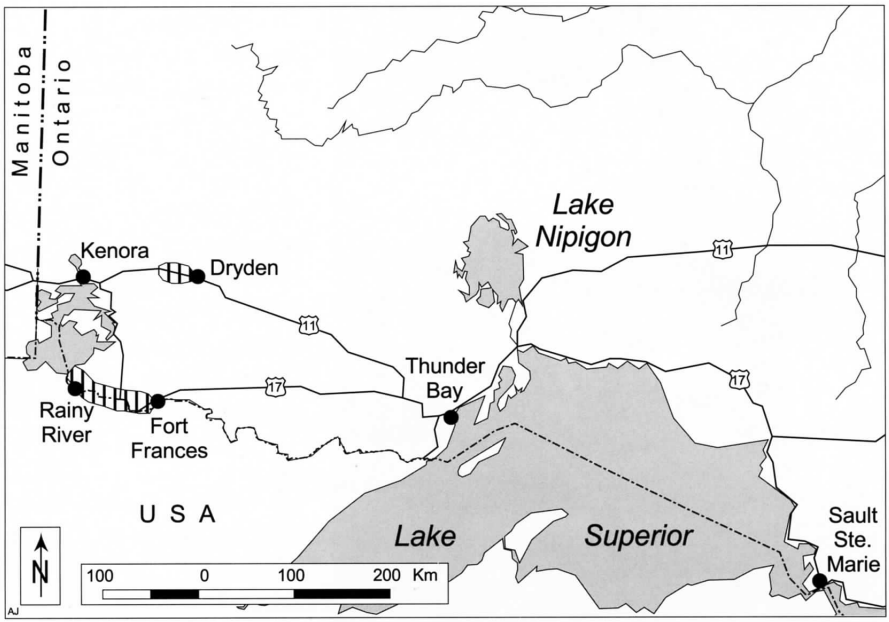

Figure 2: Northwestern Ontario, showing the two main breeding areas of the Black-billed Magpie in the province, near Dryden and Fort Frances/Rainy River (hatched areas). Map by *Andrew Jano*.

Nesting

The first documented Black-billed Magpie nests (four) in Ontario were found by John Lamey, A. Gray, B. Duncan and W. Wilson in a small patch of aspen woodland about 10 km northeast of Rainy River on 6 July 1980 (Lamey 1981).

Magpies build large, conspicuous nests. The nest consists of a large oval mass of sticks in which a grass-lined mud bowl is placed. Access to the interior of the stick mass is through a hole in the side. The nests are very bulky and resemble a small barrel in size and shape. In the Rainy River area, nests (Figure 3) are typically placed rather low in clumps of willow (*Salix* spp.) growing under Trembling Aspen (*Populus tremuloides*). Occasionally, they are placed in a tall tree, well above ground, a location that is favoured in the more western part of the species' range (Figure 4). Magpies very often place their nests close to human dwellings or farm buildings. Nest construction is usually completed from mid-April to mid-May (Peck and James 1987), and nests are frequently used for several years.

Discussion

When the great herds of bison were killed off during the latter half of the 19th century, the Black-billed

Figure 3: A nest of the Black-billed Magpie near Rainy River in a small willow, showing the "barrel" shape and central entrance hole. Photo by *David H. Elder*.

Magpie all but disappeared from Manitoba, Saskatchewan and Alberta (Buitron and Taylor 2003). A return began in the early 20th century, encouraged by agricultural industries and practices. In addition, land clearing to the north of the area covered by the original prairies created new habitat. Today, the Black-billed Magpie is closely associated with farmland or ranchland throughout most of its range. The magpie has also become somewhat urbanized and is common in many western Canadian cities, such as Calgary.

Nearly all known Black-billed Magpie breeding in Ontario has occurred in two areas. The main breeding area is found west of Fort Frances in farmland extending to the Lake of the Woods and north to the boreal forest. Settlement and land clearing began as the fur trade slowly declined and logging of the forests began. The first farms along the Rainy River were established on the heels of the loggers in the 1870s. By 1893, about 600 farms fronted the river between the towns of Fort Frances and Rainy River (Nute 1950). Land clearing advanced slowly north of the Rainy River until the rock and thin soil of the Precambrian Shield was reached. Peatlands were also cleared and drained by a system of ditches. Land clearing for agriculture continues today (Figure 5) and covers about 36,100 hectares (OMNR, pers. comm.).

The second Ontario breeding area is also farmland and is located west of the town of Dryden, centred on the small communities of

Figure 4: A Black-billed Magpie nest near Rainy River located high in a Balsam Poplar (*P. balsamifera*), an unusual site for magpies in Ontario. Photo by *David H. Elder*.

Minnitaki and Oxdrift. Agricultural settlement of this area began in the late 1890s at Dryden, once the Canadian Pacific Railway provided access, and slowly moved westward (Wice 1967). Settlement was encouraged by a huge forest fire that burned from Vermillion Bay to Ignace. It removed a vast area of forest and exposed the claybelt soils of the area. Today, about 9,100 hectares of cleared agricultural land exist (OMNR, pers. comm.).

Black-billed Magpies appear to be recent arrivals to both areas. A biological survey carried out in the Emo-Rainy River area in 1929 failed to record the species (Snyder 1938), and it had not been recorded as a breeding species in Ontario by 1937 (Baillie and Harrington 1937). Magpies were not recorded by Royal Ontario Museum staff working on ornithological surveys along the Canadian National and Canadian Pacific Railway lines between the Manitoba boundary and western Thunder Bay District in 1937, 1947 and 1949 (Snyder 1953). However, an apparently wandering individual was observed by J. R. Dymond in the Kenora area during June 1947 (Snyder 1953).

Birders started to visit the Rainy River area in the early 1970s. There were few if any local residents seriously interested in birds at that time. The first birder to mention Black-billed Magpies was the late Gerry Bennett who saw one at the Emo landfill site on 23 June 1975. In his notes, Bennett stated: "I'd been told to watch for magpies

Figure 5: Typical Black-billed Magpie breeding habitat near Rainy River: farmlands with scattered stands of aspen with a willow understorey. Photo by *David H. Elder.*

in this country and, at a dump about 4 miles north of Rainy River, I found one in with ravens" (Alan Wormington, pers. comm.). It would appear from this statement that local residents were aware of and familiar with the species. Importantly, Bennett did not see any magpies during previous visits to the area in 1966 and 1974.

In the Dryden area, Christmas Bird Counts have been carried out since 1961. Magpies were first recorded in 1972, when two were found. Numbers gradually increased (although it was not found on every count) until 2002, when 52 were observed. Numbers dropped to 26 in 2003 (Darlene Salter, pers. comm.).

The Black-billed Magpie has a propensity to wander. It has been found at one time or another as a vagrant throughout most of Ontario from the far north to the extreme south (Speirs 1985). A major eastward flight occurred in the fall of 1972, when 40 reports were made in northwestern Ontario, from Sioux Lookout, Atikokan, Terrace Bay and Nakina (Speirs 1985). Was this the invasion that established the species in the Rainy River and Dryden areas? The above noted numbers and subsequent observations would appear to support this suggestion.

It would thus appear that Black-billed Magpies gained a breeding foothold in the Rainy River and Dryden areas at about the same time, in 1972. This particular movement put them into areas of suitable habitat with a sufficient "critical mass" of birds to facilitate breeding. To reach both areas, it is likely the birds "island hopped" across the Lake of the Woods or skirted the lake to the north or to the south. It is possible that movements of a similar nature occurred in the past but did not include enough birds to establish breeding.

Since then, Black-billed Magpies have flourished in the farmlands west of Fort Frances to Rainy River, and it is not unusual to see post-breeding flocks of 25 or more individuals feeding in the hayfields during August. The species has done well in the Minnitaki-Oxdrift farmlands west of Dryden also, although the smaller area of suitable habitat may be a limiting factor on the population.

Will the Black-billed Magpie continue to move east in Ontario as a breeding bird? Despite the magpie's inclination to wander, it may be unlikely. The nearest areas of suitable habitat (farmland) are at Thunder Bay (360 km eastward), at Sault Ste Marie (800 km away) and at the Hearst-Cochrane areas (900 km to the east), distances that are covered by more or less continuous forest. Perhaps even more importantly, there is evidence that the Black-billed Magpie is heat-intolerant and not physiologically adapted to the hot and humid summers of eastern North America (Bock and Lepthien 1975, Hayworth and Weathers 1984, Pittaway 1997, Trost 1999).

Acknowledgements

Alan Wormington supplied information on the Black-billed Magpie in the Rainy River area from his personal notes and those of the late Gerry Bennett. Darlene Salter provided magpie information in the Dryden area from notes of the late Laura Howe. Nick Escott and Marc Johnson contributed pertinent information also. The Ontario Ministry of Natural Resources (OMNR) offices in Dryden and Fort Frances supplied data concerning farmland area in 2004. Andrew Jano prepared the map, and George Peck made his photograph available. Ron Tozer helped with the literature and commented on an earlier draft. All this assistance is gratefully appreciated.

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The Importance of Wetlands to Waterbirds in the Boreal Forest of Ontario

Fergus I. Nicoll and J. Ryan Zimmerling

Introduction

The Boreal Forest is the largest biome in Canada and covers 35% of the total land area and 77% of the total forested area in the country (NRC 2004a). In Ontario, the Boreal Forest is the largest forest region, covering 59% of the province's land area (OMNR 2002). Within these northern forests of Black Spruce (*Picea mariana*) and Jack Pine (*Pinus banksiana*), countless wetlands form an integral component of the forested landscape. On average, 20% of the Boreal region is covered with wetlands (NRC 2004b). These wetlands are important breeding grounds for many species of waterbirds, defined in this paper as including shorebirds, herons, rails, gulls, terns, cranes, waterfowl and their allies. Being naturally dynamic, the Boreal Forest has evolved with large disturbances such as fire and insect outbreaks (McCarthy 2001). In recent decades, however, anthropogenic disturbances such as timber harvesting have increased throughout the Boreal Forest. The Ontario Ministry of Natural Resources (OMNR) policy statements, "Direction '90s" (OMNR 1991a), "Direction '90s – Moving Ahead 1995" (OMNR 1995), and "Beyond 2000" (OMNR 2000) called for an ecosystem-based approach to natural resource management (e.g., forest management). Given that wetlands in Canada's Boreal Forest are the biggest wetland area of any ecosystem in the world (Song and Hannah 2004), they clearly are an important, if not critical, segment of the forest's flora and fauna and, ultimately, its ecology. The boundaries between forests and wetlands are not always easily discernable. Furthermore, these two habitats are often synonymous, with sections of wetlands having forest cover. Therefore, effects of forest management activities on wetland ecosystems and waterbirds are an important consideration when managing forests using an ecosystem approach. Indeed, although several research projects have focused on the effects of forest management on Boreal Forest landbirds in Ontario (e.g., Thompson et al. 2003, Zimmerling 2005), none, to our knowledge, have focused on waterbirds and their wetland habitats.

Wetlands in Boreal Ontario

Wetlands cover nearly one third of the province's total land area, representing 6% of the world's total wetland area (Jones et al. 2000). The

Figure 1: Fens and other wetlands cover nearly one-third of the province's land area and are important habitat for many species of waterbirds. Photo by *Michael Runtz*.

majority of these wetlands are found in the Boreal and Hudson Bay Transitional Forests of northern Ontario (NRC 2004b). Boreal Forest wetlands are primarily treed bogs, open bogs, and fens (OMNR 1999) and are also referred to as peatlands. To a lesser degree, swamps (particularly in the south), shallow open water (e.g., beaver ponds, river edges), and marshes are also an important component of these northern forests (NRC 2004b). The formation of bogs and fens is controlled by topography, hydrology, climate, and the chemistry of the soil. Open or treeless bogs have very low levels of mineral or salt nutrients and favour plants such as the sphagnum mosses. As mineral levels increase, trees and shrubs become established, and some herbaceous plants move in (Hains and Telford 2004). In the Boreal Forest, these bogs often have summits of forest (Moore 2001), which are generally dominated by Black Spruce.

Waterbirds in Boreal Wetlands

Blancher and Wells (2005) demonstrated the importance of the Boreal Forest region of Canada as nesting habitat for many species of birds, including waterbirds. This report showed that the Boreal Forest encompasses more than 25% of the breeding population of 55 waterbird species, including 11 species with over 80% of their population breeding in the Boreal Forest. Of the 55 species listed in the report, 44 breed in Ontario (OFO 2006).

Although shorebirds are generally considered birds of coastal mudflats, prairie ponds, and remote tundra (Johnston 2003), some shorebirds use the Boreal Forest for breeding. Huge areas of fens and bogs are scattered throughout the Boreal Forest of Ontario, which provides extensive habitat for certain shorebird species (Ross et al. 2003). In Ontario, some shorebirds are Boreal Forest obligates: Greater Yellowlegs (*Tringa melanoleuca*), Lesser Yellowlegs (*T. flavipes*), Solitary Sandpiper (*T. solitaria*), and Short-billed Dowitcher (*Limnodromus griseus*), all of which are among the least known shorebirds on the continent (Johnston 2003). Another widespread Boreal nester is the Wilson's Snipe (*Gallinago delicata*). This cryptic species breeds in a variety of wet habitats throughout the Boreal Forest region. The *Canadian Shorebird Conservation Plan* (Donaldson et al. 2000) categorized these five shorebird species as high priority in the Boreal region. In addition, two gull species, Bonaparte's Gull (*Larus philadelphia*) and Herring Gull (*L. argentatus*), have over 80% of their breeding population in Canada's Boreal Forest (Blancher and Wells 2005). Herring Gulls usually breed on rocky islands in open water (Pierotti and Good 1994), but the Bonaparte's has the unusual habit of nesting in trees in or adjacent to Boreal wetlands (Burger and Gochfeld 2002).

Other Boreal wetland breeders include rails and herons, which are usually thought of as components of large marsh ecosystems. A few of these species, such as American Bittern (*Botaurus lentiginosus*), Great Blue Heron (*Ardea herodias)* and Sora (*Porzana carolina*), are found throughout Boreal wetlands (Cadman et al. 1987). The Yellow Rail (*Coturnicops noveboracensis*) is listed as a "species of special concern" under the Canadian Species at Risk Act (DJC 2002). Its breeding range includes all of the Boreal Forest of Ontario (Godfrey 1986). Robert et al. (2004) and the second Ontario Breeding Bird Atlas (unpubl. data) showed that this bird is common along the James and Hudson Bay Coasts, and found to a lesser extent in northern Great Lakes marshes. Although the presence of Yellow Rails within its breeding range is localized (Bookhout 1995), there is suitable habitat throughout the Boreal Forest region of Ontario where this elusive species could potentially be found.

The importance of the Boreal Forest to waterfowl in the western provinces has been well documented (e.g., Portman 2005). More than 50% of North American waterfowl have at least part of their breeding range in the Boreal Forest region (Blancher and Wells 2005). In Ontario, Ducks Unlimited Canada (DUC 2005) estimated that 50% of Ontario's fall flight, or about 4 million birds, is produced in the province's Boreal Forest. Ontario's Boreal Forest is particularly impor-

tant as breeding habitat for the American Black Duck (*Anas rubripes*; CWS 2005). Species such as Common Goldeneye (*Bucephala clangula*), and Ring-necked Duck (*Aythya collaris*) commonly nest in the Eastern Boreal Forest also.

Undoubtedly, many waterbird species are dependent upon both forested and non-forested Boreal wetlands. In contrast to southern Ontario, where 70% of all wetlands have been lost (Wiken et al. 2003, FON 2004), Boreal Forest wetlands are relatively intact (Wilkinson 2004). This provides an excellent opportunity to examine and understand these ecosystems. James (1985) suggested that in northern Ontario there was relatively little human activity that could threaten the habitats of wetland bird species, with the exception of forestry. Although forest management has the potential to have large scale impact on wetlands, other anthropogenic activities could also affect wetlands in Boreal Ontario, including mining, hydroelectric production (CWS 2005), and peat harvesting (Hains and Telford 2004).

Currently, there is little information that documents how forest management in the province may affect Boreal waterbirds, but any effect will likely be linked to changes in their wetland breeding habitats. The development and functioning of wetlands is directly related to the dynamics of water supply and loss (Maltby 1991). The physical and chemical characteristics of wetlands are influenced by hydrology, and changes in these parameters can have major implications for ecosystem dynamics, as well as local wildlife (Maltby 1991), including waterbirds. According to Moore (2001), fragmentation around Boreal Forest bogs is not an important consideration since bogs are, by their very nature, "island" habitats. Research in the Boreal Forest has shown that basin stream flow can be altered by forest management activities, with total runoff increasing directly with the magnitude of disturbance (Buttle and Metcalfe 2000). This can result in changes in wetland water levels farther down the watershed, and in fact, a rise in the water table is reported to be a common hydrological change after timber harvesting (OMNR 1997a, Brooks and Stoneman 1997). In addition to increased water flows, silt and nutrient inputs also occur following forest harvesting activities (Nicolson 1975). These physical changes have the potential to alter the structure of wetlands, thus changing the availability of suitable habitat for some waterbirds. For example, a bog with scattered small ponds and hummocky moss-covered ground provides ideal habitat for nesting Greater Yellowlegs (Elphick and Tibbitts 1998). With rising water levels, these areas may become completely submerged. Higher water combined with a significant increase in available nutrients from erosion and sedimentation could

Figure 2: Greater Yellowlegs commonly nest on hummocks in bogs in the Boreal Forest of Ontario. Photo by *Michael Runtz*.

lead to the increased growth of emergent plants such as cattails (*Typha* spp.). The resulting marsh-like conditions will no longer provide suitable nesting sites for peatland ground-nesters such as Greater Yellowlegs. On the other hand, the Sora, which builds its nest in emergent vegetation above water (Melvin and Gibbs 1996), may utilize this newly created habitat. James (1985) suggested that, given the dynamic nature of wetlands, waterbirds may be particularly adapted to fluctuations in water levels (natural or otherwise). Further research in Boreal wetland ecosystems is needed, however, to test this hypothesis.

Another possible effect of forest management on hydrology is the rutting, trenching, and soil compaction caused by the equipment used, which in turn can lead to "ponding", and water-logging (OMNR 1997a). This can initiate wetland succession (Moore 2001), consequently creating new wetlands or altering already existing wetlands. For instance, unpublished data from Zimmerling (2005) showed that timber harvesting in lowland spruce forests often results in the creation of open wet areas and standing water where Speckled Alder (*Alnus rugosa*) and other wetland plants thrive. Moreover, species such as the Wilson's Snipe commonly nest in these newly formed open wetlands. While evidence suggests that harvested forested wetlands will eventually return to Black Spruce domi-

nance, it may take decades depending on the magnitude of the disturbance (Carleton 2000).

Although changes in wetland structure, chemistry, and hydrology may have the greatest effects on waterbirds, some species such as American Black Duck, Bufflehead (*Bucephala albeola*), and Common Goldeneye (Hickie 1985), as well as Solitary Sandpiper (Moskoff 1995), and Bonaparte's Gull (Burger and Gochfeld 2002), use forested areas adjacent to wetlands for nesting. These species often nest in upland habitats, but use wetlands to feed and to raise their broods. Given that little research exists, there is a possibility that harvesting forested wetlands or upland forests adjacent to open wetlands could affect these species, at least in the short-term, through a loss of suitable nesting habitat.

Forest Management Guidelines

To achieve the goal of ecological sustainability through forest management, the OMNR developed several policies and guidelines, some of which relate to wetland protection. The "Code of Practice for Timber Management in Riparian Areas" (OMNR 1991b) was developed to minimize soil and site disturbance, and protect water quality. In accordance with this code (page 7), forest managers are required to leave a minimum three-metre strip of undisturbed vegetation in riparian areas (OMNR 1991b). This 3-m buffer is applied to non-permanent water courses/bodies (Derrick Romain, pers. comm.). Larger, more permanent, bodies of water are covered under the "Timber Management Guidelines for the Protection of Fish Habitat" (OMNR 1988), which was developed to protect fish habitat and water quality. Buffers required under this guideline vary from 30 to 90 m, depending on slope. Forestry companies such as Abitibi-Consolidated Company of Canada often leave from 30 m to 120 m intact around water bodies such as rivers and lakes, depending upon the slope and the value that needs to be protected (Derrick Romain, pers. comm., 9 January 2006).

The forest industry tends to avoid harvesting in the more characteristic wetland areas such as open bogs and fens because trees are often stunted and not merchantable, and the terrain is hazardous to machinery and workers (i.e., deep peat deposits and sinkholes; Derrick Romain, pers. comm.). When managing a merchantable lowland spruce forest (including treed peatlands), some forest managers have adapted different silvicultural techniques such as Harvest with Regeneration Protection (HARP). Such techniques were developed to best emulate the natural processes in wet forested areas (OMNR 1997b). Under the Crown Forest Sustainability Act, forest managers are required to emulate natural disturbances such as fire (OMNR 2001). Given the complex nature of

Boreal fire regimes, this is not easily accomplished, particularly in relation to wetlands. For instance, wetlands that are part of pyrophilic ecosystems such as Jack Pine dominated forests will burn more often than similar wetlands embedded within mesophilic aspen (*Populus* spp.) and birch (*Betula* spp.) forests (Dickmann and Cleland 2002). In addition, there is considerable variation in the disturbance by fires around water bodies; some will burn up to the water's edge, whereas others may leap over these barriers (Hunter 1992). Thus, if emulating natural disturbances such as fires, it may be necessary to leave buffers of variable sizes, including no buffers at all, depending on the characteristics of the wetland. The current policies and guidelines developed by the OMNR and individual companies do offer some protection to wetlands in the Boreal Forest, but they do not apply to all wetlands, nor do they necessarily take into consideration the needs of waterbirds.

Conclusion

There is very limited published research on the effects of forest management on wetlands in the Boreal Forest and very little, if any, has documented the impact on waterbirds in Ontario. Some forest management practices have the potential to alter the structure of Boreal wetlands and, therefore, will positively affect some species and negatively impact others that rely upon these ecosystems. We believe that more specific research is required to better understand how present day forest management practices affect Boreal Forest waterbirds and their wetland habitats, as well as to test if current guidelines are sufficiently protecting this diverse and under-studied group of birds.

Acknowledgements

We would like to thank Derrick Romain for reviewing earlier drafts of this manuscript. Special thanks goes to the Ontario Breeding Bird Atlas for use of unpublished data.

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A Review of Rufous Hummingbird Records in Ontario

Allen T. Chartier

Introduction

The Rufous Hummingbird (*Selasphorus rufus*) is a hardy species native to the western United States and Canada, breeding primarily in the northern Rocky Mountains and Cascades from Montana and Oregon north through Alberta and British Columbia to the Alaska panhandle (61° N), and migrating to its wintering grounds in central and western Mexico (Calder 1993). Rufous Hummingbirds undergo the longest-distance migration of any species of hummingbird, and they are particularly cold-hardy due to their northerly and high-elevation nesting areas, where they experience freezing temperatures at night quite frequently.

The first Rufous Hummingbird documented east of the Mississippi River was on 18 December 1909 in Charleston, South Carolina (Conway and Drennan 1979). A small proportion of the population, representing hundreds of birds at least (Peterson 2002), winters in the Gulf States. During winter 2001-2002, Newfield banded 305 Rufous Hummingbirds in Louisiana (Newfield 2002, Peterson 2002), Bassett banded 85 in southern Alabama and Florida (Bassett 2002), Sargent banded 32 in northern Alabama and 19 in Mississippi (Sargent and Sargent 2002a, 2002b), and Sloan banded 12 in Tennessee (Sloan 2002). Georgia reported a total of 46 Rufous Hummingbirds (Georgia Hummer Study Group 2002). Significant numbers of birds were reported throughout the southeastern United States as returning after being banded in a previous winter, as well. Virtually every eastern U.S. state and Canadian province now has at least one record of this species.

Ontario's first record was perhaps the most unusual. It was collected on 8 September 1966 near Winisk (55° 16' N, 85° 12' W), Kenora District (Barlow 1967, Baillie 1968). This specimen, determined to be a "subadult male" (Barlow 1967), was identified by Barlow through comparison with other specimens at the Royal Ontario Museum (ROM), where it is held (preserved in alcohol), and based on criteria published in Ridgway (1911). Some measurements taken (wing chord and tail) are consistent with a male, using current identification criteria (Stiles 1972). The bill measurement (gonys) is not taken the same way currently, but rather an exposed culmen is taken; so Barlow's meas-

urement cannot be compared with current criteria. The term subadult male likely refers to an immature male (hatch year) that shows rufous back coloration instead of green, but the fact that these birds molt in the fall (pers. obs.) is even to this day not documented in the literature.

From 1966 to 2004, a total of 16 Rufous Hummingbird records have been accepted by the Ontario Bird Records Committee (OBRC). In addition, there are seven records accepted by the OBRC as *Selasphorus* sp. Three species of *Selasphorus* hummingbirds occur in North America: Rufous, Allen's (*S.*

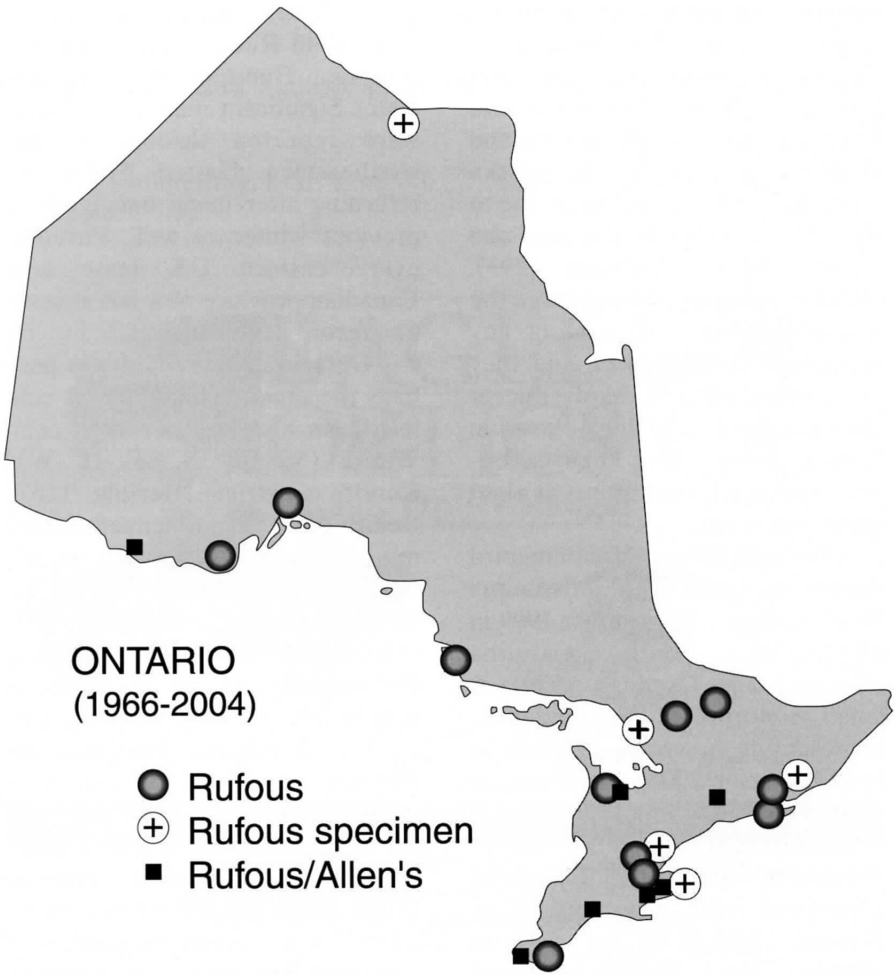

Figure 1. Distribution of records of Rufous and Rufous/Allen's Hummingbirds in Ontario.

sasin), and Broad-tailed (*S. platycercus*). Since in all cases, Broad-tailed can be eliminated for these seven records, they are treated here as Rufous/Allen's Hummingbirds.

These records are summarized below, with some personal annotations (ATC). The geographic distribution of these records, which not surprisingly reflects the distribution of the human population (and hummingbird feeders) in Ontario, is shown in Figure 1. Unless otherwise noted, all documentation and photos have been deposited in the OBRC files housed at the ROM.

Ontario Rufous Hummingbirds (1966-2004)

Immature male on 8 September 1966 at Winisk, *Kenora* (55° 16' N, 85° 12' W).
Description: Found/collected by Daniel Kostachin.
Specimen: spirit/alcohol (ROM #99044).
References: Barlow 1967, Baillie 1968, Wormington 1987.

Adult male from 7-12 August 1972 at Wheatley, *Essex.*
Description: Norm Chestefield, Bob Curry.
Other observers: George Bryant, George North, John Olmsted, "Red" Mason.
References: Kelley 1978, Wormington 1986.

Adult female from 31 October - 10 November 1985 at Parry Sound, *Parry Sound.*
Description: Found/collected by Norma Curry.
Other observers: R. L. Bowles, M. P. Whelan.
Specimen: skin (ROM #151880).
References: Weir 1986a, 1986b; Wormington 1987.
[Taken into captivity, apparently without showing signs of injury or sickness, and placed in a greenhouse at a local flower shop on 10 November. Bird was found dead on 11 March 1986; greenhouse was sprayed with insecticide in spring. This would be about the appropriate time for this species to be released, based on the latitude they reach in migration in the West by this date. – ATC]

Adult male from 30 July - 3 August 1986 at Algonquin Provincial Park (East Gate), *Nipissing.*
Description: Ron G. Tozer, Michael W. P. Runtz, D. James Mountjoy.
Other observers: Mark W. Jennings, Alan Wormington, A. Geoffrey Carpentier, F. Hicks.
Photos: On file, Alan Wormington, A. Geoffrey Carpentier.
References: Weir 1986c, Wormington 1987, Wormington and Curry 1990.

Immature male from 16 September - 19 December 1987 at Battersea, *Frontenac.*
Description: Ian L. Jones, Robert H. Curry. Found by Mr. and Mrs. R. Bennett.
Other observers: Many. Randy Marinelli (MNR), Kathy Nihei (rehabilitator).
Specimen: skin at Canadian Museum of Nature, Ottawa (CMNAV #89040).
References: Weir 1988a, 1988b, 1988c; Wormington and Curry 1990, Crins 2005.
[Bird taken into captivity, apparently with no visible injury or sickness, on 19 December, and transferred to Ottawa where the bird died on 21 December. This bird had survived a number of cold nights when the temperatures fell to –15° C (~8° F) (Weir 1988a). Photos of specimen from Michel Gosselin (CMNAV) show back with about 70-80% rufous. – ATC]

Adult male from 24-26 July 1989 at Oxtongue Lake, McClintock Twp., *Haliburton.*
Description: R. Dan Strickland.
Other observers: Al May (homeowner).
Photos: Al May. No photos in OBRC files.
References: Wormington and Curry 1990.

Adult male from 19-25 August 1990 at Alton, *Peel.*
Description: Terry Osborne.
Other observers: Many. Mr. and Mrs. Underhill (homeowners), Lyne Tyler.
Photos: Wilf Yusek. One print, two slides on file. Also printed in black-and-white in *Ontario Birds.*
References: Weir 1991, Curry 1991.

Adult male from 28-29 August 1992 at Flamborough and Westover, *Hamilton-Wentworth.*
Description: Anna-Marie Galan (also Flamborough homeowner), Lyn Hanna-Folkes (Westover).
References: Henshaw 1992, Ridout 1993, Bain 1993.
[Apparently observed on two consecutive days at locations 15 km apart, a home in Flamborough and a plant nursery in Westover. I would have a tendency to consider this two separate birds as there is precedent for this in the region (pers. obs.). – ATC]

Adult male from 21-30 July 1994 at Lappe, *Thunder Bay.*
Description: Nicholas G. Escott, Don Graham.
Other observers: Found by Ann Christianson.
Photos: On file.
References: Ridout 1994, Richardson 1994a, Pittaway 1995.

Adult female from mid September – 30 October 1995 at Oakville, *Halton.*
Description: Found by T. Sysiuk.
Specimen: skin (ROM #159603).
References: Dobos 1996.
[No age information is given by Dobos (1996). Bird was decomposed and mummified. According to ROM specimen database, bird was sexed by presence of ova, and Mark Peck (pers. comm.) indicated that a portion of the maxilla examined with 40x microscope did not show characteristic corrugations of an immature bird (Stiles 1972). – ATC]

Adult male from 12 October – 28 November 1995 at Owen Sound, *Grey.*
Description: David W. Fidler, Shawn Giilck. Found by Doug and Agnes Yeo.
Photos: On file. William Waterton (via newspaper article).
References: Bain and Holder 1995; Ridout 1996a; Dobos 1998; Wright, unknown date.
[First observed date was listed incorrectly as 17 October in Dobos (1998). – ATC]

Adult male on 7 May 1999 at Sault Ste. Marie, *Algoma.*
Description: Found by Robert and Joanne Knudsen (*fide* ONTBIRDS).
References: Bain and Shanahan 1999a, Hofmann 1999, Roy 2000.
[This is listed as the first accepted spring record for Ontario, but it also appears to be one of only two spring records in the entire Great Lakes region to date (pers. obs.)! Given the typical timing of spring migration of this species, it was still rather far south. – ATC]

Immature male from 31 July – 2 August 2000 at Nipigon, *Thunder Bay.*
Description: Sketch by Lola Grimes. Timothy Grimes.
References: Bain and Shanahan 2000, Hofmann 2000, Roy 2001.
[Record only lists sex of bird, not age. Drawing clearly shows a bird with entirely rufous back and no iridescent gorget feathers. This seems rather early for an immature male to have an entirely rufous back; usually they are entirely green early in the season and molt in rufous coloration in September-November (pers. obs.), but adult males show full iridescent gorgets. Apparently molting early. Bain and Shanahan (2000) listed the locale as Everard, not Nipigon, and Hofmann (2000) listed the locale as Red Rock. According to Mark Peck (pers. comm.), Nipigon was closest town, but locale was probably closer to Red Rock. – ATC]

Adult male on 1 September 2002 at Point Petre (Milford) and 10 September 2002 at Wellington, *Prince Edward.*
Description: Found by Bill Vloeberghs and Cheryl Reed. Madeline Kimmett.

References: Bain 2002, 2003a; Crins 2003.
[The OBRC treated this as one record involving the same bird, as the two locations were less than 20 km apart. But, in fall 2005 alone, there were two instances of Rufous Hummingbirds occurring close together in Ohio; two about 30 km apart, and two others less than 5 km apart (pers. obs.). The latter two were both banded. Given the early fall departure of adult males (Calder 1993), it is not at all surprising that both would be of that age and sex. – ATC]

Immature male on 21 November 2003 – 7 January 2004 at Kingston, *Frontenac*.
Description: William J. Crins.
Other Observers: At home of Mildred R. (finder) and Phill Yendt.
Photos: Several posted on OFO website (Harold Stiver, Carol M. Horner, Phill Yendt).
References: Bain 2003b, Crins 2004, Currie 2004, Elder 2004.
[This bird was observed to molt out green back feathers and attain more rufous back coloration during its stay, as seems to be typical with this age/sex class (pers. obs.). – ATC]

Immature female from 2 September – 18 December 2004 at Niagara Falls, *Niagara*.
Description: Found by Janice and Art Haines. Allen Chartier (banded, first in Ontario), Cindy Cartwright, Willie D'Anna, William W.Watson.
Photos: Allen Chartier (in-hand), Janice Haines, Brandon R. Holden (published in *North American Birds* 59: 190).
Specimen: skin (ROM #96755).
References: Bain 2005, Crins 2005, Haines 2005.

Ontario Rufous/Allen's Hummingbirds (1983-1997)

Female or immature male from 14-17 September 1983 at Sapawe, *Rainy River*.
Description: David H. Elder.
Photos: Nancy Blogg.
References: Weir 1984, James 1984, Wormington 1987, Elder 1994.
[Weir (1984) indicated this was thought to have been an immature male; does not include a photo. Drawing by Elder suggests some rufous in upper tail coverts, which would support immature male. – ATC]

Female or immature male from 1-4 October 1984 at Grimsby, *Niagara*.
Description: George D. Meyers. Expert commentary from Jon L. Dunn.
References: Weir 1985.

Adult male on 25 August 1988 at Holiday Beach Conservation Area, *Essex*.
Description: Michael A. Kielb.
References: Coady and Wormington 1989.
[This appears to represent the only eastern North American record of a *Selasphorus* species from a migration station, away from feeders, and the bird's direction of movement was perpendicular to the known fall migration path of the species. – ATC]

Immature male from 1 October – 10 December 1990 at Grimsby Beach, *Niagara*.
Description: Robert Curry, George Naylor. Found by Patricia and Stephen Gilbert.
Photos: James N. Flynn.
References: Weir 1991, Curry 1991.
[Naylor described rufous upper tail coverts, which is consistent with immature male (Williamson 2001, Howell 2002). Description of rufous feathers among the green feathers of the back, nape, and scapulars (above the wing) is very suggestive of Rufous, and inconsistent with Allen's. – ATC]

Immature female from 20 October – 15 December 1996 at Union, *Essex*.
Description: Alan Wormington. Found by F. Gladys Fisher.
Photos: Four prints by Jim Flynn.
References: Bain and Holder 1996, 1997a; Ridout 1996b, 1997a, 1998a; Dobos 1998.
[The bird is definitely a female based on color of rump and upper tail coverts, and restricted (not visible) rufous on the central rectrix, but age cannot be reliably determined by plumage characters alone. Using buffy edges on upperparts (Heidcamp 1997) to age these birds is not completely reliable. Fresh adult upperpart feathers are also edged with buff (Pyle 1997), and their presence can be difficult to differentiate from bright iridescent feather edges. – ATC]

Adult male from 4-27 July 1997 at Lakefield, *Peterborough*.
Description: Found by Nancy Hanes.
References: Ridout 1997b, Dobos 1999.
[This appears to be the earliest arrival date of a presumed fall migrant in the entire Great Lakes region. – ATC]

Immature male from early November – 24 December 1997 at Owen Sound, *Grey*.
Description: Found by Vern and Dorothea Anschuetz. David Fidler, David Tannahill, Matt Fidler.

Photos: Three prints taken by William Waterton on file. Photo by James Masters published in *The Sun Times* (Owen Sound, Ontario).
References: Diebel 1997, Dobos 1999.
[Written description called the bird an immature male based on "a very small gorget located in the centre of the throat", but Rufous/Allen's Hummingbirds of all age and sex classes can show an incomplete gorget. Throat pattern, though extremely variable, actually suggests female in this case. By December, an immature male should be showing some rufous feathers on the back, but more importantly, the bases of the central rectrices should show rufous beyond the upper tail coverts regardless of molt status. Photos show no rufous visible at base of central rectrix, and entirely green back and upper tail coverts, which is consistent with female. Age cannot be reliably determined in the field. – ATC]

Seasonal Patterns and Age/Sex Ratios

Adult male Rufous Hummingbirds begin departing the breeding grounds as early as July (Calder 1993), and some arrive on wintering grounds in the Gulf States by early August (pers. obs.). These earliest individuals (mainly adults of both sexes) tend to stay on-site only for short periods, while later arriving individuals tend to remain on-site longer (pers. obs.; B. Sargent, pers. comm.).

The seasonal distribution of Ontario records of Rufous and Rufous/Allen's Hummingbirds spans the period from early July through early January. The length of stay at single sites on the main wintering grounds in southern Mexico is 12-75 days, averaging 32 (Calder 1993), which coincides well with lengths of stay of many individuals in the Great Lakes. Data gathered between 2001-2004 of 61 Rufous and Rufous/Allen's Hummingbirds in Michigan, Ohio, and Indiana (unpubl. data) shows a mean length of stay of 58 days (range 1-160, S.D. 38.29). Average length of stay, average arrival, and average departure have varied by year (see Table 1).

Many wintering Rufous Hummingbirds in the Gulf States move on to a secondary wintering site in late December or early January (B. Sargent, pers. comm.), which is also consistent with observations in the Great Lakes (pers. obs.), though there is a tendency for observers here to presume the birds have died. Recaptures of banded individuals (2 in Michigan, 3 in Ohio, 1 in Indiana, hundreds in the Gulf States) have proven that this is not always the case.

The 23 Ontario records (Rufous and Rufous/Allen's combined) have an average arrival date of 7 September (range 4 July – 21 November), average departure date of 18 September (range 26 July – 7 January), and average length of stay of 28 days (range 1-108, S.D. 32.46). These data suggest that Rufous Hummingbirds migrate through Ontario mainly earlier than other

Table 1: 2001-2004 average arrival date, average departure date, and average length of stay by year for 61 Rufous and Rufous/Allen's Hummingbirds in Michigan, Ohio, and Indiana.

Year	Number of birds	Average arrival date	Average departure date	Average length of stay
2001	5	25 October	29 November	36 days
2002	18	14 October	08 December	57 days
2003	24	12 October	11 December	61 days
2004	14	01 October	30 November	62 days

areas in the Great Lakes, with few remaining on-site to winter. However, a similar pattern could be caused by a relative lack of public awareness of the possibility of occurrence of Rufous Hummingbirds (most do not show up at the feeders of experienced birders), and inexperience in how to recognize them as different from Ruby-throated Hummingbirds (adult males excepted of course). Misinformation is still often published in newspapers throughout North America about when to take hummingbird feeders down, perpetuating the myth that leaving them up will prevent hummingbirds from migrating. Hummingbird migration is geneticallly and hormonally controlled, of course, but homeowners following the advice of taking feeders down in early September (often the peak of Ruby-throated Hummingbird migration!) could skew the detection of Rufous Hummingbirds in Ontario, especially non-adult males.

The peak of occurrence of Ontario records appears to be skewed slightly earlier in the season than adjacent areas, but the records also show a subtle peak in occurrence from early October through early December, similar to Michigan, Ohio, and Indiana (Figure 2). Another trend is that there seem to be fewer records overall from the more northern areas, of Ontario and Michigan, than there are for Ohio and Indiana. Again, level of observer awareness in these respective states and provinces could significantly bias these data.

Comparing the age/sex ratios of Ontario records with those from Indiana (Gorney 2004, and unpubl. addenda for 2004; pers. obs.), Michigan (Michigan Bird Records Committee; pers. obs.), and Ohio (Ohio Bird Records Committee; Whan, unpubl.; pers. obs.) may show some interesting trends.

Since not all individuals are confidently aged and/or sexed precisely, for practical purposes the only way we can make such a comparison is by looking at the easily recognized adult males versus all other age/sex classifications (i.e., adult female, immature male, immature female). This comparison is shown in Figure 3. It is interesting that the ratio of adult males is sig-

Figure 2: Timing of Rufous (and Rufous/Allen's) Hummingbird occurrence in Ontario compared to Michigan, Indiana, and Ohio.

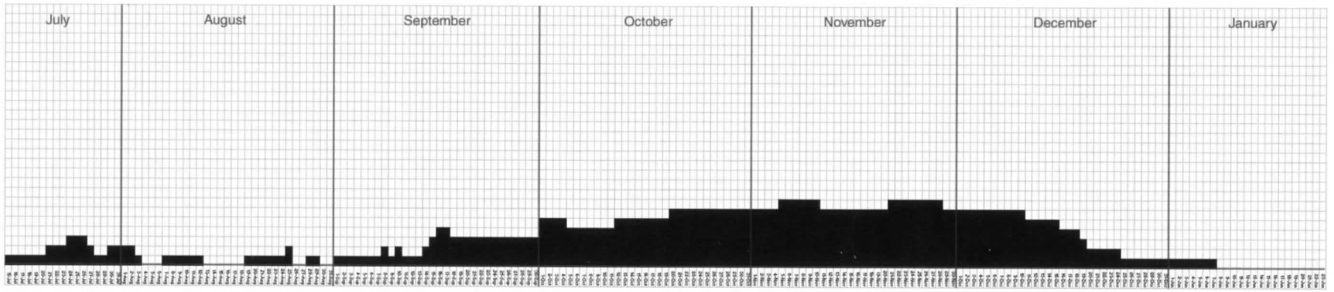

Figure 2a: Ontario 1966-2004 (n=22) (Ontario Bird Records Committee). [plus one spring record] 23 accepted records from 1966-2004 (16 Rufous, 7 Rufous/Allen's), (11 adult male, 12 female/immatures).

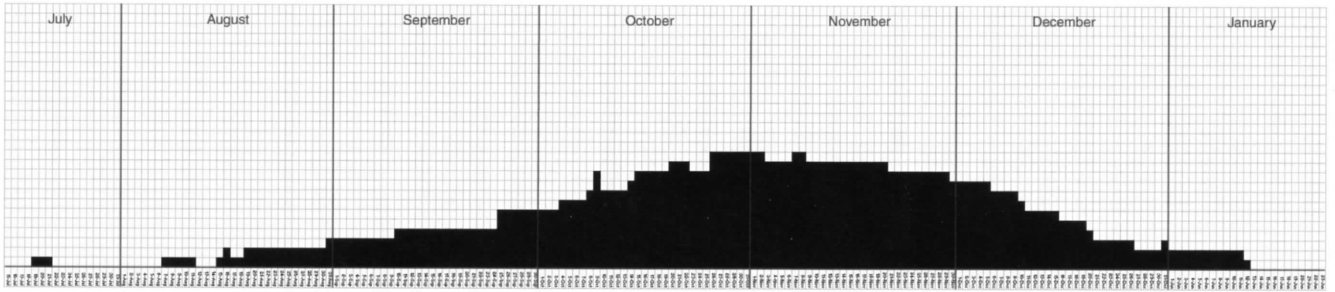

Figure 2b. Michigan 1974-2004 (n=21) (Michigan Bird Records Committee). 21 accepted records from 1974-2004 (16 Rufous, 5 Rufous/Allen's), (16 adult male, 5 female/immatures).

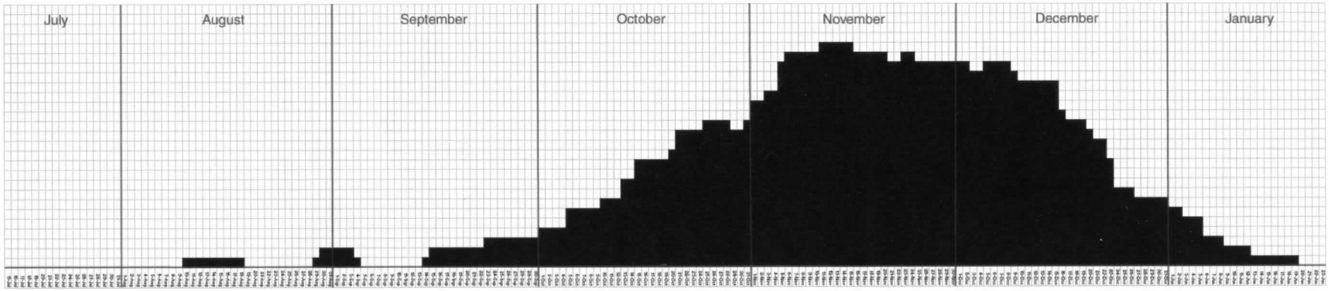

Figure 2c: Indiana 1980-2004 (n=31) (Indiana Bird Records Committee; Gorney 2004; D. Gorney, unpubl.). 31 accepted records from 1980- 2004 (15 Rufous, 16 Rufous/Allen's), (5 adult male, 26 female/immatures).

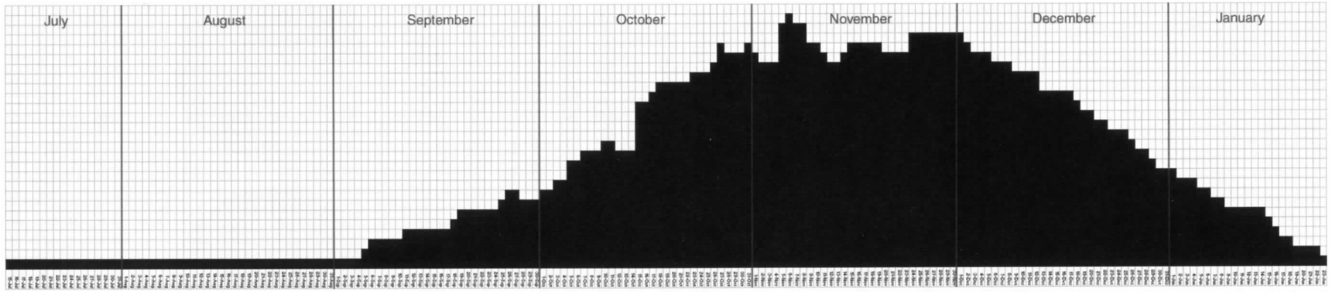

Figure 2d: Ohio 1985-2004 (n=49) (Ohio Bird Records Committee; B. Whan, unpubl.). [Plus one spring record, one record of uncertain dates.] 51 records from 1985-2004 (33 Rufous, 18 Rufous/Allen's), (18 adult male, 33 female/immatures). One "spring" record (8-10 June 1997).

nificantly higher than might be expected for the northern regions, of Ontario (48%) and Michigan (76%). This might be attributable to the fact that adult males are more easily recognized as different, regardless of observer experience, thus skewing the reports in these regions toward adult males. But, the lower ratios in the more southern regions, of Ohio (16%) and Indiana (35%), would then suggest that observers are more experienced or more aware of Rufous Hummingbirds. While the records committees in both of these states do indeed make substantial efforts to increase awareness among birders, and promote the reporting and documentation of these birds, it seems that this is not likely the entire explanation for the difference, particularly among the general public who casually feed birds (the source of most reports). There may indeed be differences, possibly correlated with latitude and geography, but at this point this is unknown.

Records Published But Not Reviewed by OBRC

These records are presented below without judgement as to their validity, and are not included in the prior summary since none has been reviewed by OBRC to date. Such records are often published due to short publication deadlines, with the presumption that documentation would follow. In most of these cases, written or photographic documentation was not provided to the committee. Anyone in possession of written documentation or photos of any of these birds is encouraged to submit them to the OBRC, as even historical records have value in improving our understanding of the occurrence of Rufous Hummingbirds in Ontario.

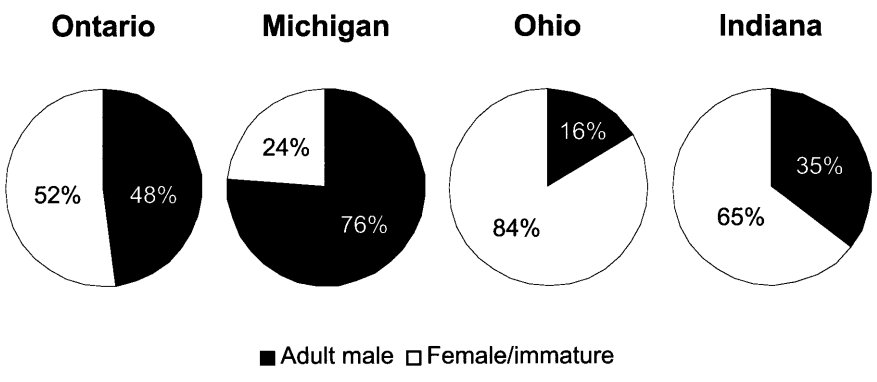

Figure 3: Comparison by state/province of the proportion of adult male Rufous and Rufous/Allen's Hummingbirds to all other age/sex classes (female/immature).

Adult male Rufous Hummingbird on 30 June 1985 at Westport, *Leeds and Grenville*, was referenced by Weir (1988a, 1989b). No documentation on file with OBRC. Wormington (pers. comm.) indicated that this record was in 1985, not 1975 as published. Weir (1989b) provided a brief synopsis of the record, and indicated that the Rare Birds Committee of the Kingston Field Naturalists accepted the written description from the observer as a valid record of Rufous Hummingbird.

Immature male Rufous Hummingbird from 7-15 November 1988 at Waterford, *Norfolk* was published by Weir (1989a). No documentation on file with OBRC.

Rufous Hummingbird (age/sex?) from 15-16 August 1994 at Delaware, *Middlesex* (A. Liversage, various observers), was published by Richardson (1994b) and by Ridout (1995). No documentation on file with OBRC.

Rufous Hummingbird (age/sex?) from October – 19 December 1996 at Goderich, *Huron* (M. Williamson), was published by Ridout (1996b) and by Bain and Holder (1997a). No documentation on file with OBRC.

Adult male Rufous Hummingbird from 30-31 July 1999 at Rebecca Lake, *Muskoka* (*fide* Ron Tozer), was published by Bain and Shanahan (1999b) and by Elder (1999). No documentation on file with OBRC. Tozer (pers. comm.) indicated the bird was described as an adult male.

Adult male Rufous Hummingbird from 9 August – 7 November 2004 at Marathon, *Thunder Bay* (Pat Chadwick, Cheryl Vosburgh), was published by Bain (2005). Documentation and photos have been submitted, and this record is currently under review by the OBRC.

Selasphorus hummingbird (immature/female) on 2 October 1989 from Pt. Pelee, *Essex* (G. Tom Hince), was published by Weir (1990). No documentation on file with OBRC.

Selasphorus hummingbird (age/sex?) on 1 November 1993 from Elginburg, *Frontenac* (*fide* R. D. Weir), was published by Weir (1994). No documentation on file with OBRC.

Selasphorus hummingbird from 9 November – 21 December 1997 at Tecumseh, *Essex* (G. Fraser, C. Fraser, et al.), was published by Bain and Holder (1997b, 1998), and Ridout (1998b). No documentation on file with OBRC.

Acknowledgments

The following people were extremely helpful in the preparation of this paper: Margaret Bain, Michel Gosselin, Jean Iron, Mark Peck, Ron Pittaway, Kayo Roy, Ron Tozer, and Alan Wormington. This is contribution No. 003 of the Great Lakes HummerNet: www.amazilia.net/MIHummerNet/

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Notes

The Ontario Great Gray Owl Irruption of 2004-2005: Additional Records

Colin D. Jones

Following the publication of my article on the Great Gray Owl irruption of 2004-2005 in the December 2005 issue of *Ontario Birds* (Jones 2005), I was contacted by Mike Jacques with additional data from eastern Ontario that was not captured during my compilation for the original article. Although the birding communication network is much better today than in the past, primarily due to e-mail and the internet, it became obvious that I had missed some information sources while preparing the data for the article. With the permission of the coordinator, I posted a request for information on ONTBIRDS, the bird sightings list-serv maintained by the Ontario Field Ornithologists, asking for any other additional data that affected the content of my original article.

Here, I provide corrections/updates to the data presented in Table 1 (date of the first Great Gray Owl record by area) and Table 2 (date of the last Great Gray Owl record by area) of my original article. I also provide some additional records of birds that lingered into the spring/summer of 2005.

Updates to Table 1: Date of first Great Gray Owl record by area during the irruption of 2004-2005. The source of each record is indicated within brackets following the date.

AREA	DATE OF FIRST OCCURRENCE
Bruce County	26 December 2004 (*fide* C. Cartwright)
Frontenac County	18 December 2004 (J. Griffin, *fide* M. Jacques)
Lanark County	Prior to 23 November 2004 (reported in Carleton Place local newspaper, *fide* M. Jacques)
Parry Sound District	3 November 2004 (A. Parker, *fide* M. Parker)
Prescott & Russell County	10 December 2004 (J. Bouvier)
Toronto	13 December 2004 (J. Bartl)

Updates to Table 2: Date of the last Great Gray Owl record by area during the irruption of 2004-2005. The source of each record is indicated within brackets following the date.

AREA	DATE OF LAST OCCURRENCE
Northumberland County	15 April 2005 (K. Appleman, *fide* C. Goodwin)
Prescott & Russell County	11 April 2005 (G. Cadieux, *fide* J. Bouvier)
Toronto	20 March 2005 (J. Bartl)

Updates to Lingering Birds

In Nipissing District, G. Boxwell found an individual Great Gray Owl southeast of Bonfield on 31 July 2005 (M. Parker, pers. comm.). Another bird was repeatedly observed along Highway 515 between the villages of Combermere and Palmer Rapids, Renfrew County, during the summer of 2005 until late September (B. Shulist, pers. comm.).

The bird observed on 26 June 2005 in the Crane Lake area, Bruce County (as reported in Jones 2005) is thought to perhaps be a resident as there has been breeding evidence there since 2000 (C. Cartwright, pers. comm.). A pair was present at Cabot Head in April 2001 also (C. Cartwright, pers. comm.), further supporting the possibility of breeding in Bruce County at least occasionally.

Acknowledgements

I would like to thank all of the individuals who provided me with additional data from the 2004-2005 Great Gray Owl irruption in response to my request for information posted on ONTBIRDS. They included: Joe Bartl, Michael Biro, Jacques Bouvier, Lissa Bruce, Cindy Cartwright, Clive Goodwin, Larry Neily, Martin Parker, Langis Sirois, Brian Shulist and Richard Telfer. I especially thank Mike Jacques for making me aware of some data gaps from eastern Ontario, providing me with a very comprehensive summary of records from his area, and for suggesting that an update be written.

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Herring Gull Takes Sparrow on the Wing

Randy Horvath

When it comes to feeding, gulls are among the most opportunistic of birds. They are quick to seize the moment and exploit every chance for a meal. On 11 October 2004, I witnessed a dramatic example of Herring Gull *(Larus argentatus)* opportunism at Point Pelee National Park.

Early in the morning, I was at the extreme tip of Point Pelee, along with my brother, Robert Horvath, Marianne Reid, and Adam Pinch. The weather was typical for that time of year, with partly sunny skies, brisk northeasterly winds, and temperature hovering around 10°C. We had not seen anything exceptional, but were reluctant to move on, clinging to the hope that something "good" would turn up.

At approximately 0915h, I observed a small brown bird flapping furiously out over the water about 25 metres off the west beach, just slightly south of us. It appeared to be a sparrow, struggling to return to the safety of the trees. I also sensed that there was something wrong with it. It was clearly battling to keep from falling into the water, as though it were injured or overcome with fatigue.

I alerted my companions, and together we watched the bird, trying to establish its identity. It was some five metres above the water, passing through a small swirling flock of Herring and Ring-billed *(L. delawarensis)* Gulls. Suddenly, a first winter Herring Gull dived at the bird, narrowly missing it. A second attempt immediately followed, which appeared to wound it in the left wing. The sparrow fell toward the water, but recovered, and continued its desperate flight toward shelter. The Herring Gull attacked again, and missed, but manoeuvred quickly and captured its prey in midair just above the waves. The gull then flew east, across the tip in front of us and out over the lake, with the sparrow clearly visible in its bill, and three or four other Herring Gulls in noisy pursuit.

Gulls are notorious predators of very young birds, of course, but I had never heard or read of a larid attacking a passerine in flight. Indeed, this behaviour was unfamiliar to all of us, and became the subject of much conversation.

Discussion

The unfortunate sparrow was probably a migrant that had left the park during the night en route to its wintering grounds, and then turned back when it realized it could not complete the journey over Lake Erie. It appeared to be exhausted when it finally reached the Point Pelee tip, having flown some dis-

tance directly into the wind. That this bird seemed to be "in trouble" when it first caught my eye may help explain the episode. The Herring Gull may have been attracted by the sparrow's erratic flight, sensing that it was in a weakened and vulnerable condition.

That evening I began to consult the literature. Bent (1921) recorded no instances of passerines being attacked, killed, or eaten by the Herring Gull, but noted that "all is game that comes in their way" as scavengers of "decaying fish and refuse of all sorts". It was stated that they rob bird nests of eggs and young, also.

Brinkley and Humann (2001), in *The Sibley Guide to Bird Life & Behavior*, described gulls in general as "opportunistic omnivores, eating whatever they can find that will satisfy their nutritional needs". They noted that many of the larger gulls consume the eggs and chicks of other species, and that "they also catch passerines when they can". Pierrotti and Good (1994), in *The Birds of North America*, described the Herring Gull as a "generalist predator" and "opportunistic scavenger on fish, carrion, [and] human refuse". They indicated that Herring Gulls breeding on the Great Lakes fed mostly on small fish, but took insects and birds, as well.

Fox et al. (1990) summarized dietary data from 25 Herring Gull colonies located on Lakes Superior, Huron, Erie and Ontario. Bony fish, 80% of which were Alewife (*Alosa pseudoharengus*) and Rainbow Smelt (*Osmerus mordax*), were the main food items on all four lakes, but Herring Gulls ate amphibians, reptiles, small mammals, insects, earthworms and birds, also. Migrating adult birds were seasonally important food items. "Gulls forced migrating passerines onto the surface of the water and seized exhausted individuals which sought refuge on island colonies" (Fox et al. 1990). Indeed, Ring-billed Gulls have been reported to take passerines also, including by capturing them on the wing (Blokpoel and Haymes 1979).

Conclusion

It would seem that passerine predation by Herring Gulls and other large gulls is not rare, even if it is infrequently observed. Weakened or exhausted migrants in exposed conditions over water may be particularly vulnerable.

Acknowledgements

I would like to thank Willie D'Anna for his comments on the initial draft. I especially thank Ron Tozer for his assistance with the literature and the extensive revision of this note.

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OFO Annual Convention and Banquet
Ottawa
30 September and 1 October 2006

Plan now to attend the OFO Annual Convention at Ottawa on 30 September and 1 October 2006. Enjoy an exciting weekend of birding, a great dinner with your friends, interesting presentations and displays. Saturday's activities at Capones Banquet Hall in the Nepean Sportsplex include the evening banquet, and an illustrated talk by Guy Morrison of the Canadian Wildlife Service, who is the foremost expert on shorebirds in the Western Hemisphere. Guy has spent many breeding seasons in the arctic and many winters in Central and South America studying shorebirds. His presentation will encompass the arctic breeding grounds, spring and fall migration, staging areas, wintering areas, and conservation. On both Saturday and Sunday, local experts will lead groups of convention participants to several of the very productive fall birding locations in the Ottawa area. The OFO convention weekend is always informative and fun. Don't miss it!

Brewer's Sparrow: First Record for Ontario

John M. Woodcock

On 27 May 2003, a Brewer's Sparrow (*Spizella breweri*) was captured and banded at Thunder Cape Bird Observatory on the northwestern shore of Lake Superior, 25 km east of the city of Thunder Bay, Ontario, as the duck flies. It was a rather quiet day, with only 26 birds of 14 species banded. The weather was calm and mild in the morning but quite windy in the afternoon. Volunteers Maureen Woodcock and Sarah Faegre were looking after the mist-nets (14), hawk nets (8), and heligoland traps (2), making rounds every half hour, extracting birds, and bringing them to the banding lab to be processed. Volunteer Allan Hale, a ringer from England with much experience, was manning the banding lab. Program Coordinator John Woodcock was on the "watch platform" documenting numbers of birds migrating through the station that morning. Maureen and Sarah had just completed checking all the nets and were performing the final task of driving birds, of which there were few, into one of the heligoland traps. Only one bird was captured and Maureen noted upon extracting it from the collecting box that it was a bird with which she was not familiar.

After being alerted, Allan and I proceeded to carefully examine the bird. Our first impression was of a very dull looking, immature Chipping Sparrow (*S. passerina*). It was too early in the season to be seeing immature birds, however, and this bird had a well-developed cloacal protuberance, typical of an adult male bird in breeding condition. After much consultation with all available texts, we came to the conclusion that what we had in our hands was a Brewer's Sparrow, a species with which neither of us was familiar. However, that morning we had banded two Chipping Sparrows and two Clay-colored Sparrows (*S. pallida*), species with which Brewer's Sparrow can at times be confused.

The Brewer's Sparrow's measurements were: wing, 66 mm; tail, 59 mm; exposed culmen, 8 mm; weight, 12.2 g; CP = 5; and fat = 0. After photographing and banding the bird, it was promptly released. The pale coloration, with little contrast in the head pattern, suggested that this was a bird of the southern subspecies (*S. b. breweri*). I immediately phoned Nick Escott, Chairman of the Thunder Cape Bird Observatory Committee and a recognized expert on bird identification, to report this bird. Nick was able to drop what he was doing to make the trip out to the Cape in the hope of seeing the bird in the vicinity of the observatory. Thunder Cape is somewhat isolated, separated from Thunder Bay by an hour drive and either a 13-km hike

Figure 1: Male Brewer's Sparrow in alternate plumage, captured at Thunder Cape Observatory on 27 May 2003. Photo by *John M. Woodcock*.

Figure 2: Alternate male Brewer's Sparrow, captured at Thunder Cape Observatory on 27 May 2003. Photo by *John M. Woodcock*.

or a half hour boat ride from Silver Islet to Thunder Cape, lake conditions permitting.

In the interim, the bird was observed feeding in a grassy area and then half an hour later was recaptured in a mist-net. It was decided that the bird should be immediately transported to Silver Islet in the Cape's small boat to be inspected by Nick because lake conditions were rapidly deteriorating and it seemed unlikely that Nick would be getting a boat ride out and we were not going to hold onto the bird for the two or so hours it would take Nick to hike out to the Cape. Nick was intercepted before beginning his trek and he concurred with our identification. The Brewer's Sparrow was then released. I had to walk the 13-km back to the Cape due to high waves that developed on Lake Superior and repeat the trek the next day to retrieve the boat. A far superior way of confirming such an identification would be to take digital photos and transmit them immediately via the Internet to all available experts for confirmation. Alas, Thunder Cape Bird Observatory has no land phone lines, no digital phone reception, and no funds for a satellite phone.

This record of Brewer's Sparrow was accepted by the Ontario Bird Records Committee, and constituted the first occurrence of the species for Ontario (Crins 2004). There have been records of Brewer's Sparrow in southern Manitoba, Illinois, Nova Scotia, Massachusetts, and Minnesota, (AOU 1998).

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An Impaled Mourning Dove

Al Sandilands

On 18 December 2004, I noticed a Mourning Dove (*Zenaida macroura*) at my feeder south of Cambridge, Ontario, that had a straw at the back of its head. Upon closer examination, it was evident that the straw went all the way through the dove's body.

The straw was typical of grain stubble, and extended approximately 10 cm dorsally and 4 cm ventrally of the bird's body. The straw entered ventrally just ahead of and below the left wing, and exited at the posterior end of the neck at about the midpoint on the bird's right side.

This Mourning Dove was observed on three other occasions. On 22 December, the straw was sticking about 2 cm out of the body ventrally and the straw was unchanged above. By 26 December, the straw was barely visible ventrally, and the dorsal portion was reduced in length to about 7 cm. No changes were noticed when it was last observed on 28 December.

I surmised that the dove had impaled itself while landing in a stubble grain field. The bird appeared completely unaffected by having a straw through its body. It was one in a flock of about 55 doves that visited the feeders regularly. It showed no discomfort in eating, was equally alert as others in the flock, and I could not see any difference in its flight. During the period that these observations were made, a female Cooper's Hawk (*Accipiter cooperii*) caught an average of one dove a day. That the impaled dove survived a minimum of 11 days suggested that it was not more susceptible to predation than others in the flock.

The impaled dove was not observed after 28 December. It may have succumbed to its injuries or suffered from predation. An equally plausible explanation is that the straw eventually broke off so that I could not distinguish it from the rest of the doves. It is highly unlikely that the bird moved elsewhere. Flocks of Mourning Doves remain together all winter and, in rural areas, they use the same fields all winter unless food supplies become depleted (Hennessey and Van Camp 1963, Baskett et al. 1993).

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Nikon

Photo Quiz

Sponsored by Nikon Canada

Figure 1

April 2006 Quiz

Glenn Coady

For this quiz, we are faced with a small, brown, streaked passerine—a familiar identification challenge often referred to by birders as a "little brown job". The combination of such a small passerine with a small, conical bill and a short, notched tail limits the range of possibilities to the sparrows, buntings and finches. This bird, however, is not a good match for any adult sparrow, bunting or finch to be found in Ontario. The reason for this is a simple one—this is a fledged juvenile bird. We can age this bird correctly as a juvenile based on a series of traits visible in Figure 1. Notice that the primaries, secondaries, tertials, and greater coverts all seem uniformly fresh, and that the outer primaries are still growing. We can see also that the contour feathers of the body appear to be more loosely textured, which is typical of juvenal contour feathers, lending a somewhat tattered or disheveled appearance despite the freshness of the plumage. Note that the rectrices are very tapered and pointed, more typical of a juvenile bird than an adult.

One of the most striking things we notice about this bird is the very weak contrast of the head markings. Although many of our juvenile sparrows are heavily streaked ventrally like this bird, they all generally exhibit more contrasting head patterns (particularly dark eye lines). Also, they tend to have longer bills than our quiz bird, which has a very stubby bill indeed. Bill size can often continue to grow for about a month after juvenile birds fledge, so it is best to be careful about placing too much emphasis solely on bill size in juvenile birds.

The juvenile buntings (Indigo, Painted, Varied, Lazuli) are not so crisply streaked ventrally, have much plainer backs, and all show a more noticeably curved culmen than this quiz bird.

Our bird is therefore one of the juvenile finches. The overall coloration, streaked plumage and petite bill size obviously rule out species like Brambling, Gray-crowned Rosy-Finch, Pine Grosbeak and Evening Grosbeak. Juvenile Pine Siskins have much longer and more pointed bills than this bird, and they also tend to have a more overall yellowish cast to their plumage. Although both species of juvenile crossbill can look generally similar to our bird, and some are late to develop fully-crossed bills, they would definitely have pronounced curvature to the culmen, so we can eliminate them from further consideration as well. Juvenile American Goldfinch and Lesser Goldfinch are unstreaked


Figure 2

ventrally and are much more yellow-olive in colour, and are thus easily ruled out.

Juvenile House Finch, Purple Finch and Cassin's Finch all have longer bills than this bird, and they lack so pronounced a wing-bar on the rear edge of the greater coverts. Both House Finch and Purple Finch have a more strongly curved culmen, as well.

Thus, we have narrowed the choice down to one of the two redpolls. Note the cinnamon wash across the streaking of the upper breast on our quiz bird (Figure 2), a mark often seen in juvenile redpolls. Note that the dark lores, black chin and red cap, that we associate with adult redpolls, do not begin to appear until the first prebasic molt is initiated.

Separation of the two redpolls in juvenal plumage can be complicated by the possibility of hybridization between them where their ranges overlap. In addition, final bill size may not have been attained on young juveniles, sometimes limiting the usefulness of bill assessment.

However, there are several field marks of use in separating the two species of redpolls. Hoary Redpoll has a decidedly stubbier bill with a straight culmen (like our quiz bird), whereas Common Redpoll has a larger bill with a noticeable curve to the culmen. Hoary Redpoll has a contrasting whitish rump, largely free of streaks, whereas Common Redpoll has a streaked rump that contrasts much less with the back. In Figure 1,

we don't see this bird's rump very well, as it is mostly hidden by the tertials. I did have an opportunity to examine this bird in-hand and it did have a very pale rump which contrasted with the streaked back (another nod to Hoary Redpoll). Hoary Redpoll has undertail coverts that have few or no dark shaft streaks, whereas Common Redpoll has more liberally streaked undertail coverts. We are not able to see this bird's undertail coverts in either of the photos; however, in-hand inspection revealed plain white coverts with no visible streaking. All the characters that I noted for this bird were consistent with an identification of juvenile **Hoary Redpoll**.

It is interesting to note that the standard North American field guides either don't illustrate juvenile redpolls or depict them poorly. It is probable that the reason redpoll fledged young were found in only five Ontario Breeding Bird Atlas squares was because most of the field work in suitable areas was done in the period before fledged young were likely to be present, as nests were found. However, lack of observer familiarity with juvenal redpoll plumage may have resulted in lower than expected numbers of fledged young being detected. In 2004, an atlas group working in far northwestern Ontario (near the Pen Islands) found several Hoary Redpoll nests, providing the first confirmed breeding evidence of this species for Ontario, pending review by the Ontario Bird Records Committee.

This juvenile Hoary Redpoll was photographed on 11 July 2001 in Cambridge Bay, Nunavut, by Jim Richards.

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The Distinguished Ornithologist Award is granted by the Ontario Field Ornithologists to individuals who have made outstanding and authoritative contributions to the scientific study of birds in Ontario and Canada, who have been a resource to OFO and the Ontario birding community, and whose research on birds has resulted in numerous publications and a significant increase in new ornithological knowledge. Recipients to date have been: Earl Godfrey (1997), Ross James (1998), Murray Speirs (2000), George Peck (2001), Bruce Falls (2002), Bob Curry (2003), Jim Rising (2004), and Ron Pittaway (2005). Bill Crins, Ron Pittaway and Ron Tozer form a committee responsible for proposing candidates for this award to the OFO Board of Directors.

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