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Ontario Field Ornithologists

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Ontario Field Ornithologists is an organization dedicated to the study of birdlife in Ontario. It formed in 1982 to unify the ever-growing numbers of field ornithologists (birders/birdwatchers) across the province, and to provide a forum for the exchange of ideas and information among its members. The Ontario Field Ornithologists officially oversees the activities of the Ontario Bird Records Committee (OBRC), publishes a newsletter (*OFO News*) and a journal (*Ontario Birds*), operates a bird sightings listserve (ONTBIRDS, coordinated by Mike Street), hosts field trips throughout Ontario, and holds an Annual General Meeting in the autumn.

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

Material submitted for publication should be on computer disk, or typewritten (double-spaced). Please follow the style of this issue of *Ontario Birds*. All submissions are subject to review and editing. Submit items for publication to the Editors at the address noted above.

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by *Peter Burke*

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Anhinga Near Delaware, Ontario

Peter Read

When Louise McAsh found an adult male Anhinga (*Anhinga anhinga*) in a small marsh near Delaware, west of London,Ontario, at about 2100h on 16 July 2000, she set in motion a major "event" in the province's birding history. By 16 September (the probable last date of observation), a log book maintained by Ann White at the site showed that over 1,600 visitors, from more than 170 Ontario communities, four other provinces, six American states, and four overseas countries, had come to see the bird. Except for a week of vacation time, I was able to be there almost daily during the Anhinga's two-month stay, sometimes for the whole day, and I recorded many interesting aspects of its behaviour.

Location

The marsh is located about 10 km west of London on Brigham Road, near the town of Delaware, which overlooks the Thames River. It was created about 25 years ago by Ducks Unlimited, in conjunction with the Delaware Sportsmen's Conservation Association, who also have a clubhouse on their 53 hectares (130 acres), and use the property for a reserve and to hunt in season, both for waterfowl and mammals. The water sits in a natural depression, where its two outflow areas into nearby Dingman Creek have been dammed with earthen dams. These dams have backed the water up to its current depth of up to about 2 m, which has killed off many trees that are now standing in the water. Many have also fallen into the water, creating excellent habitat for fish and all marsh flora and fauna. The marsh is horseshoe-shaped, and the back of the marsh is not visible from the road because of the trees and cattails in the middle. Two beaver lodges exist, so that the water level is even higher sometimes.

Appearance

The Anhinga has an interesting plumage. It does not appear as smooth as other waterbirds. The feathers were easily fluffed by breezes, and seemed to be more like hair than feathers, especially on the head, neck and body. These and most other feathers were mainly quite black or blackish brown, but many contour feathers appeared to have a glossy green in good light. Primaries

and other wing and tail feathers appeared black and very coarse in nature. The black tail feathers were long and appeared to have ladder rung-like horizontal ridges. The terminal band on the tail was a creamy colour. The bird had a number of long filoplumes, widespread but not too numerous on the neck and head, giving the bird an eye-browed and fuzzy unkempt look.

Its silvery-white feathers located on the wings and upper back seemed to be made of almost a different material than the black feathers. When the bird was up on a perch drying, it was noted that these white feathers appeared to be on a different plane than the other feathers on the wings. They may have dried at a different rate, or stood out more, I am not sure. These coarse feathers, while looking like decoration, may serve to attract females, and could help with camouflage. I noticed that the dark body "disappeared" into the background colouring, especially the dark water of the marsh, which was reflecting shadows and vegetation at most times. The light colours of the other feathers, being mainly vertical, were similar to the barkless, bleached dead branches that were all around the bird. This "broken-up" body feather pattern made it hard to see the bird from a distance when it was still, especially near dusk, when the background contrasts were greater.

As it was sitting still once, near dusk, a Great Horned Owl *(Bubo virginianus)* actually flew over it about 6 m above its head, swooping up into a tree about 100 m away. It may not have noticed the quiet bird due to this "camouflage" pattern. It did take note of the bird only when the Anhinga started to display towards the owl. Thank goodness it did not then attack the Anhinga, or our log would not have had much in it.

The sword-like beak was long and yellowish, although the gape and gular sac appeared orangish, especially when the bird was displaying and light was playing through the skin. The gular pouch was hardly noticeable under the beak at the throat, until the bird displayed. The webbed feet were yellowish-orange and the toes dark.

Its neck was very animated and flexible, as it turned and arced at amazingly odd angles, for preening, fishing, looking in all directions, bowing forward before diving, displaying, flying, scratching, or checking the scenery. It could lower its head backwards onto its mantle, just as easily as it could twist the neck into an S-shape for lounging. The extremely long and slender neck of an Anhinga has "19–20 cervical vertebrae, with articular surfaces of (the) 8th and 9th modified" to allow this flexibility (Palmer 1962).

Roosting

Every time the Anhinga went to roost at dusk, it was seen first thing the next morning in the same spot.

Figure 1: Anhinga at marsh near Delaware, Ontario, 18 July 2000. Photo by *Alf Rider*.

It was nearly always in its preferred roost tree. This was an 8 m dead tree, about 300 m out from the main viewing area overlooking the marsh, and situated about 10 m past a Wood Duck box which faced away from observers. One of the back branches of the tree, nearest to the cattail edge, was broken down and drooped into the water. This allowed the bird to slip out of the water after a fishing trip. Once up on this branch, it could balance and dry itself and then work its way by hop-flying up to the next branch and so on until it arrived near the top which curved slightly over and allowed the bird to overhang the open water, and easily drop down into it. At that perch, the Anhinga would spread its wings for drying and basking and would preen and scratch for hours. It would usually roost overnight on the top curved branch of the tree, also. Anhingas are known to exhibit a "daily pattern of perching and hunting from (the) same perch" and to return to roosts habitually (Frederick and Siegel-Causey 2000).

Feeding Behaviour

The feeding actions began when the bird leaned forward with wings spread. It then tipped off its perch and flew down to the water, landing with feet out. It did not float, but rather, immediately sank beneath the water until only its head and neck were showing. It then pulled its head and neck underwater, either straight down or by lowering it downward. Sometimes, it would land on a floating log first, then tip its head down into the water a few times, appearing to be looking underwater, and then tip forward into the water, head first. The fact that the bird became totally soaked allowed it to easily remain underwater and not have to work to remain submerged. "Unlike most aquatic birds, Anhingas have fully wettable plumage and dense bones, adaptations that allow them to achieve neutral buoyancy in water" (Frederick and Siegel-Causey 2000). It could stalk its prey rather than go after it. After variable time, from just a few seconds to almost a minute, it would bring its head up, perhaps 75 per cent of the time with a fish. It might be right where we last observed it, or sometimes many metres away. It appeared to manoeuvre with its feet and push sometimes with its wings, although most of the action was underwater and not visible to us.

The catch would be impaled on the upper or lower mandible, or at times on both mandibles. Sometimes it held the captured fish between the mandibles, the distal portions of which "have fine, backward-pointing serrations for holding fish" (Frederick and Siegel-Causey 2000). With a flip of its head, it would toss the fish into the air and catch it head first in its open mouth so that the fish would slide down its throat. It sometimes had to

flip a few times as the fish was stuck on its beak. I saw it miss the catch about once each fishing endeavour, but usually when the fish landed in the water, it would strike at it and repeat the process. The movements of the toss and catch were rather fast so the exact manoeuvre can only be guessed at, but I suspect that skill may have a lower importance than just getting good height. Gravity would allow the fish to have its weightier head drop down first no matter how it was tossed, like lawn darts. The number of fish caught during a fishing trip varied from about 20 to 50. Almost all fish caught were less than 15 cm long, at times just barely fitting on the impaling mandible because they were so small. The fish consumed were mainly catfish, minnows, and bass. There are other species in the pond, such as sunfish, and even goldfish, but I did not see the Anhinga eat those. Once, as the Anhinga was sitting on a snag about 12 m above the water, I saw it eat what appeared to be a large black beetle. It pulled the insect out of the top of the snag, and after smashing it, tossed the beetle into the air and gulped it down. Other prey, such as frogs and larger fish were available, but I did not observe it eating those.

Once I saw the Anhinga pull off a small bit of wood from the top of a dead tree, almost the same size as a small fish. Sometimes it would pull at some inanimate object like the tree snag when it appeared to be agitated, and a bit of wood came off this time. Anyway, the Anhinga took the piece of wood and tossed it into the air and tossed it again. The bird dropped it on about the seventh toss, and leaned over to watch it disappear into the cattails below. It never made any attempt to swallow the stick or drop off the perch to retrieve it.

Preening and Basking

After its fishing trips, the Anhinga would rise out of the water onto some branch that was going down into the water, almost walking out. It was often the preferred tree that was used for loafing. This waterbird is not waterproof as are others with a more developed oil gland. "The breast feathers lack hooklets that interlock barbules, allowing water to penetrate to the skin" (Frederick and Siegel-Causey 2000). It usually shook water off by shuddering somewhat dog-like. Then it would flap its fully stretched wings, alternately with its fanned tail, thereby bouncing, but balancing well on its perch. Sometimes it did this very rapidly. Next it would preen by drawing practically every feather separately through its bill. This could take hours. At times, the Anhinga would scratch itself on various body parts with such finesse and precision that it was comical to watch. For instance, it would lower its head to just below where its feet were on the perch, then rotate its neck so that the head was towards

the feet and just lift the foot, to scratch the top of its upside down head vigorously. On several occasions, it moved its head slightly to see something that caught its attention, without stopping the foot movement. After a few seconds, when it lost interest in the interruption, it then put its head back under the still moving foot.

The Anhinga often would sit on a perch with its wings outstretched, its tail somewhat fanned, and with its back to the sun for basking. This occurred not just after coming out of the water, but also in early morning or before its flight. Anhingas use this "spread-wing" stance to dry, but primarily to regulate the body temperature (Frederick and Siegel-Causey 2000). Due to the absence of oils in the feathers and a low metabolic rate, Anhingas need to gain radiant heat to avoid excess cooling and the need for shivering which would use up valuable energy maintaining body temperature. Spreading the black wing and tail feathers helps in this heat gathering. When it was drying, the wings were so spread out that spaces could be seen between the flight feathers, but when basking, the wings were not held quite that way, not as much space was noted between feathers, and the tail was not as widely splayed either. It is thought that the Double-crested Cormorant *(Phalacrocorax auritus)*, which also maintains this open-wing stance, can inhabit areas farther into the north, as its wing opening is exclusively for drying, whereas the Anhinga needs to maintain body temperature as well. It is suggested that the metabolic rate could not be maintained adequately in the north (Frederick and Siegel-Causey 2000). Yet this bird at the Delaware Marsh seemed to do well, even though this summer was particularly low in available heat due to the rainy conditions. Throughout the day, the bird would rotate through a half circle, following the sun with its back, basking regularly. However, even on a particularly cool day, it would still maintain its regular activities.

Display

The bird sometimes became agitated and when it did, it often "displayed". This consisted of a fanning of the tail and an expansion of the wings, in conjunction with a radical movement of the head and neck, usually with the head mostly elevated. The gular sac, under the chin, puffed out and its mouth opened. The neck swayed back and forth. The gape and gular sac appeared bright orange in good light. Although they are "generally silent" (Frederick and Siegel-Causey 2000), I heard a somewhat low "aaaag" sometimes. It usually performed at specific times, especially when a supposed antagonist or predator was in the immediate area. This appears to be the "threat display" described by Frederick and Siegel-

Causey (2000).

The Anhinga displayed on two separate occasions for hot air balloons flying over the marsh, several times for Great Blue Herons *(Ardea herodias)*, once for a Great Horned Owl, and once when it saw something below in the marsh which we could not see. A couple of times, it appeared to do the display when nothing precipitated it, and soon after, flew out on its morning flight, leading me to believe that the flights as well as the displays may at times be related to territorial expression.

Flight

Soon after the discovery of the bird, it was noted that it would fly out of the marsh in suitable conditions and either return right away or at times not until the next day. Often, it was not in the marsh from 1000h to about 1500h. The bird appeared to leave for good on 25 July after its usual flight. Many disappointed birders arrived and left on 26 July, but interestingly, the bird returned later in the afternoon on 27 July and again roosted in the preferred tree. It left on overnight jaunts at least two other times.

When gone for a long time, it was supposed that it landed elsewhere. I followed it by car one day, but could not catch up to it nor keep it in sight for long. It was at least 5 km away before I lost it over the horizon. I watched long enough to know that it did not land anywhere close. There are other somewhat similar ponds in the area, and the Thames River, but none exactly like the marsh. Sometimes when it was missing overnight, people actually saw it fly back into the marsh, usually from the south or west and usually in the afternoon. However, sometimes it may have flown into a secluded part of the marsh and may not have been gone overnight. While it was extremely visible most times on its roost tree, many times it was out of sight in the marsh, either behind some obstruction, or in the water. With only the head and neck showing at times it could not easily be found. Because of the nature of the marsh, it was best seen only in its favourite tree, which thankfully was most of the time.

Flight time seemed to be quite regular, at about 1000h, but at times, perhaps for different reasons, it would fly out later. If it had not flown by 1300h, it would not leave the marsh that day. The flight appeared to coincide with some conditions. It had to be a bright day, with thermals being created by the sun. Clouds could be tolerated, but never totally overcast or rainy skies. Wind could be light or fairly strong, but not gusty. After it had received direct sun, when the sun rose over the tree height and bathed the outstretched wings, it would get ready to fly. Rarely did it fly before basking like this. Only a few times did it go in fishing first before its flight. Then, it would dry and bask before flying. Frequently, after its sunning,

it would first take short flights within the marsh from tree to tree. Sometimes it would display as it perched on each succeeding tree. Then it would take a more ambitious flight. Alternately flapping and gliding like an accipiter, it wheeled around inside the confines of the marsh, gaining altitude as it circled, and then it would head out of the marsh. Sometimes it flapped continually until it rose above the tree level also. The neck and head were held out in front of the body, but the head was often slightly lower than the body, somewhat like a flying loon. Once higher, the head rose to a more level plane.

The overall effect during flight, due to body and wing proportions, was that of a "flying cross". The wings were held in a slight dihedral as it began to soar in larger arcs, catching the thermals above the marsh, seldom flapping when at high altitudes. Often it rose until it was just a speck in the sky against some puffy cloud. Some days, it disappeared far to the southwest or west. Sometimes its high flight was rather short in duration. We could see the speck in the sky turn one last time and then pull back its wings like a stooping hawk, and swiftly drop straight back to the marsh, losing altitude quickly and then wheeling as it arrived over the marsh. As it circled back it would continue to drop, much more slowly, and often would "side-slip" like landing Canada Geese, until it could safely approach and land either in the water, or more likely onto a branch, even its own roost tree.

Birder Behaviour

The members of the Delaware Sportsmen's Conservation Association were very accommodating, encouraging birders and allowing me to access the property to check on the bird's status. They even put up signs to prevent hunting when it was thought that the Anhinga might stay into the waterfowl hunting season. The neighbours were over often to meet and greet new people, and one even sold his car to one of the birders. At one point, there were drinks and snacks available to visitors but the 8-year-old vendor soon tired of the sales pressure and retired to his summer.

There must have been considerable economic benefit to the area during the Anhinga's two-month stay. In order to evaluate this issue, Fred Helleiner posted a request on ONTBIRDS (28 August 2000) for anyone who went to look for the Anhinga to report their expenditures (gas, food, lodging, gifts, and other) in the local area (London/Delaware). Helleiner (pers. comm.) later compiled the data from the 66 respondents to this informal survey. Parties visiting the site reported expenditures in the local area ranging from $0 to $300, and averaging $43.94. These 66 parties contained 130 individuals, and the average expenditure per person was $22.31. If these

respondents were a representative sample of the more than 1,600 Anhinga visitors (which is unlikely), a total expenditure of over $35,000 may have occurred. In any case, it is clear that several thousands of dollars were spent locally as a result of the Anhinga's presence.

The bird was seen until the middle of September, with Saturday, 16 September, probably the last day. The no hunting signs came down about a week and a half later after no more sightings were noticed. The members of the club and the people of the neighbourhood were very impressed that over 1,600 people had visited the little marsh on their road, and had been so responsible. It does our birding group proud that we were able to impact the area so little. Very little garbage was found, and few marsh incursions to get closer to the bird were noted. I cannot think of another bird that has drawn so much attention, and has been so relatively easy to see. The members of the club told me that next year, when it returns, they will be equally pleased to help steward the bird, and even offered the use of their port-a-potties. I like their optimism, and hope to make use of those facilities.

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Anhinga Status in Ontario

Ron Tozer

The report of an adult male Anhinga (*Anhinga anhinga*) in a marsh near Delaware, Ontario, from 16 July to 16 September 2000 (Read 2000) has been accepted by the Ontario Bird Records Committee (Kayo Roy, pers. comm.). It could be considered the first fully confirmed and documented record of this species for Ontario, and Canada, since questions have been raised about the validity of previous reports. This note reviews the literature and expert opinion concerning these earlier occurrences, which are classic examples of the difficulties in evaluating some "historical" records, even when specimens are involved.

The Anhinga breeds from the southeastern United States through the lowlands of Mexico, Central America, and South America to northern Argentina, Uruguay, and Ecuador, and formerly bred north to southeastern Missouri and southern Illinois (AOU 1998). It has been recorded as a casual wanderer north of the breeding range from New Mexico and California to the Eastern Seaboard, including Wisconsin, Ohio, Pennsylvania, New York, Connecticut, New Hampshire and Maine (AOU 1998, Bain 2000). Large numbers of vagrants have sometimes occurred, with perhaps the most amazing recent record involving at least 33 birds observed and photographed at Hickory Hills, Maryland, in May 1996 (Iliff 1996). There are two old Anhinga reports from Ontario.

The first involved an adult female Anhinga specimen (#91960) in the University of Michigan Museum of Zoology (UMMZ) which was reportedly collected near Sault Ste. Marie about 1881. There has been debate as to whether the bird was collected on the Ontario or the Michigan side of the St. Mary's River, or even at that locality. The original specimen label, in Charles Dury's hand, reads: "Sault Ste. Marie, Mich. / Given me by / Patrick E. Roach / the year the canal / was finished at Ste." (Van Tyne 1950). Dury, of Cincinnati, Ohio, prepared bird specimens for the Cuvier Club, and Roach was a club member who "contributed to their collection a number of birds from widely scattered localities in the United States" (Van Tyne 1950). Roach was "one of the firm of contractors that built the first lock" at Sault Ste. Marie, "which was finished and opened for traffic September 1, 1881", and he "had purchased the specimen at the time it was collected" (Van Tyne 1950). The Cuvier Club bird collection was later deposited in the Cincinnati Museum of Natural History, and the UMMZ received the Anhinga

specimen in exchange with that institution in 1936 (Van Tyne 1950).

Barrows (1912) stated that it was "extremely improbable" that this Anhinga was actually collected at Sault Ste. Marie, "there being only the barest possibility that a bird of this kind, accustomed only to tropical waters, could have survived more than a few hours in the icy current of St. Mary's River, even had it in some mysterious manner reached that northern point". Instead, Barrows (1912) thought it was "far more probable that this was a Florida specimen included among the wares of some curio dealer who was willing to ascribe any locality to the bird which would secure its sale".

In a review of this record conducted in 1936 by Van Tyne (1950), Judge Joseph H. Steere ("an elderly amateur ornithologist of Sault Ste. Marie who knew about the specimen") stated that the bird had been shot by a native on the St. Mary's River at Garden River, *Algoma*, Ontario, 12 miles down the river from Sault Ste. Marie. Van Tyne (1950) concluded that "there seems to be no reason to doubt the authenticity of the record", but conceded that the bird could have been taken "on either side of the International Boundary line; the evidence, however, is in favor of Ontario".

Godfrey (1966, 1986) cited this record, the first Anhinga for Ontario and Canada, although he suggested in a 1969 letter to Sprague that there might be "the slightest doubt remaining" as to whether the bird was collected on the Ontario or the Michigan side of the St. Mary's River (Sprague and Weir 1984). James et al. (1976) accepted the specimen as the first Ontario record, citing Van Tyne (1950). However, Payne (1983) rejected this record on the Michigan checklist, stating that the specimen "was probably a curio shop import (Barrows, 1912)", and did not mention Van Tyne's discussion of it. Dr. Payne (pers. comm.) has since confirmed that this was "a personal evaluation; there is no evidence one way or the other". In his revised checklist of the birds of Ontario, James (1991) cited Van Tyne again, but dismissed this specimen as an authentic Ontario occurrence, stating that it "has been rejected (see Payne 1983) as a valid record". James (pers. comm.) has since characterized this record as "likely, but not entirely without some doubt".

In summary, there is no question about the identity of the 1881 Anhinga (the specimen exists) and there is no evidence to support anything but wild origin. However, there is some doubt concerning the actual locality where the bird was collected, whether it was taken in Michigan or Ontario, or perhaps even elsewhere.

The other old Ontario record was of an Anhinga reported shot by a native, Billy Brant, on West Lake near the village of Wellington, *Prince Edward*, on 7 September 1904, and later identified by William Carrell, "a sportsman-naturalist, who is well acquainted with birds and who at that time lived in Wellington"

(Snyder 1941). Brant's dog mangled the bird but Carrell secured the head, one foot and some feathers, and described them as follows: "bill slender, sharply pointed and sharply toothed; eyes, red; feet, yellow with four toes, with web joined to all four toes" (Snyder 1941).

Godfrey (1966, 1986) cited this occurrence, the second record for Ontario and Canada. It was listed by James et al. (1976) as a valid Ontario record. James (1991) continued to accept the record, considering it "reasonable based on Snyder's comments".

In evaluating the 1904 Anhinga, there seems to be no reason to doubt the locality or its wild origin. The material evidence is missing (James et al. 1976), and apparently it was never examined by a professional ornithologist. However, Snyder did obtain some descriptive notes taken at the time (see above) in correspondence with the original observer of the specimen. James (pers. comm.) has concluded about the record, that "while not as well documented as we might like today, I think it is good".

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First Breeding Record of Canvasback for Toronto

Roy B.H. Smith

On 18 July 1999, a female Canvasback (*Aythya valisneria*) with three downy young was found on Toronto's Leslie Street Spit. This observation establishes the first breeding record for Toronto and constitutes one of only a handful of records of confirmed breeding in Ontario (Coady 2000).

It was not until 1983 that the Canvasback was officially added to the list of Ontario breeding species, when a brood was photographed at Luther Marsh by Liz Yerex (James 1984). Prior to that time, there had been reports of breeding at Lake St. Clair going back to 1897, but no material evidence (Peck and James 1987). There had also been a number of instances of summering at Luther Marsh, and brood sightings there in 1965 and 1981 (Coady 2000). During the Ontario Breeding Bird Atlas period (1981 to 1985), breeding was also confirmed at Berens Lake, north of Red Lake in northwestern Ontario, in 1984 (Cadman et al. 1987).

Since the Canvasback is primarily a prairie species, one would not expect there to be breeding records east of Ontario, but the Quebec Atlas mentions two possible occurrences (Tardif and Gagnon 1996). The first was at Lake Chicobi, Abitibi, in 1973, and the second from Lac du Milieu in Ashuapmushuan Wildlife Reserve in late summer of 1980. Both involved sightings of females with broods but lack substantiating documentation, hence breeding has not been officially confirmed for Quebec.

In the Toronto area, the Canvasback historically has been very rare in summer, while in winter only very small numbers (typically <10) are present along the Toronto waterfront. A century ago, it was described as a "rare winter resident" (Fleming 1906). Summering records are few and far between in the Greater Toronto Area, and during the period 1984 to 1996, there were only five such instances recorded in the Toronto Ornithological Club's database. These involved: a single male at Canington Sewage Lagoons (S.L.), *Durham*, on 3 June 1990 (Brian Henshaw); a male at the Holland River mouth, Cook's Bay, *York*, on 21 June 1991 (Alvaro Jaramillo); a male at Cranberry Marsh, *Durham*, from 1 to 11 July 1992 (many observers); a male at Nonquon S.L., *Durham*, from 9 June to 8 September 1996 (many observers); and a report of three (two females, one male) at Beaverton S.L., *Durham*, on 23 June 1996 (Norm

Murr, Larry Morse).

For Lake Ontario shoreline sites during the same years, the database had no records of Canvasback during the June and July period, but starting in 1997, a few birds summered at Leslie Street Spit, with up to five (two males, three females) being reported that year. Again in 1998, up to five were reported on various dates. In 1999, there were three reports (involving up to four birds) from the Leslie Street Spit, prior to the breeding record.

The site where the brood was found is known locally as the "Goldfish Pond". This is a small pond (about 30 m x 30 m), roughly triangular in shape, with some emergent vegetation at its north end. The banks consist of steeply sloping concrete rubble, such that the pond lies in a depression about 5 m below the surrounding landfill. On 18 July, the pond was about 30 percent covered with a floating mat of green algae, which had increased to cover about 50 percent of the area by 25 July. The pond is thought to be not more than about 2 m deep at its deepest points, and most of it is much shallower. The Leslie Street Spit itself is a man-made peninsula extending about 5 km into Lake Ontario, and was created by dumping of excavated soil and building rubble over a 30 to 40 year period.

It is likely that 18 July was the first date that downy young were actually present at the Goldfish Pond. On the previous evening, Glenn Coady had walked past this pond and had not noticed anything unusual. It seems unlikely that an experienced observer like Coady would have missed the birds had they been present. When found at 1130h on the 18th, the young were initially estimated to be two to three days old, but with hindsight it seems probable that they had hatched only that morning. Interestingly, they could dive well at that young age, but were reluctant to do so when aware of the observer. Neither were they seen feeding initially, but there were very few insects present on the water surface that day. A full description of the downy young was recorded, and photographs taken to document this record (Figure 1). That same evening, Glenn Coady visited the site and obtained about seven minutes of video to provide additional documentation. He also noted that the young could dive well, and found an eclipse (basic) male Canvasback in another pond nearby.

Some species of ducks, notably Redhead (*Aythya americana*), are known to "dump" eggs in other's nests, so we wanted to make sure that these ducklings really were young Canvasbacks. Both Smith and Coady noted that the brown of the crown extended across the forehead to the bill, forming a continuous band. This feature is reported to be diagnostic (Palmer 1976), and confirms the identification of the ducklings.

Figure 1: Female Canvasback with three downy young, 18 July 1999, at Toronto. Photo by *Roy B.H. Smith*.

On 23 July, Coady returned to the site but found only one duckling present, along with the female. It is suspected that Black-crowned Night-Herons (*Nycticorax nycticorax*) may have been involved in predation, since there is a large breeding colony on the Spit, and there were numbers of recently-fledged juveniles around. On 25 July, the pond was checked again. The single duckling was now about 1.5 times larger than a week prior, and the yellow tones in its plumage had faded considerably. The formerly yellow areas were now mostly off-white to buffish-white, with most of the remaining yellow being on the cheeks and ear coverts. The dark eyeline had virtually disappeared, while the bill had noticeably lengthened, such that the triangular head and bill profile, so distinctive in the adult, was starting to be detectable. Additional photographic documentation was obtained.

On 2 August, a second brood (female plus seven downy young) was found in "Bay A" by Verna Higgins and Harriet Davidson (pers. comm.). The young were estimated to be two to three days old, but by 8 August only one remained (Glenn Coady, pers. comm.), and later that

day it too could not be found. Unlike the protected, enclosed site provided by the Goldfish Pond, the relatively open waters of this bay probably left the ducklings highly exposed to gull predation.

Meanwhile, the situation at the Goldfish Pond had mysteriously changed. The initial surviving young was still present, now larger and browner and with its sloping bill profile quite obvious, but the female (assuming it was the same bird) was now accompanying a small downy young (still very yellow, so estimated to be three days or younger), and was acting somewhat aggressively toward the older youngster. Whenever the latter got too close to the duckling (typically 1 to 2 m), the adult female chased it off, but without making physical contact. Several possible hypotheses have been suggested to account for these observations. Firstly, the "new" downy young could have been a straggler from the Bay A brood which did not make it when the rest were led there, yet found its way into the Goldfish Pond and was "adopted" by the resident female. Or, perhaps it may have been the only survivor of a third brood which was never detected. Another possibility is that the female accompanying it was not the mother of the older youngster, but had supplanted that bird in residence at the Goldfish Pond. One point we are sure of is that it was not the single survivor of the Bay A brood, last seen and videoed by Coady on the afternoon of 8 August. Based on the timing of his observations, Coady is certain that different birds were involved.

On 15 August, another visit was made to check on the situation, which was basically the same as the previous weekend. The large young was now about one-third grown, very brown, but still with extensive down present on the back, although it had developed much more of the "adult look" to the head and bill proportions. The resident female was still acting aggressively toward it if it came too close to the duckling. The latter was much more yellow than the original young had been at that age, especially on the cheeks and flank spots. It seemed to be hardly any larger than the previous weekend, but was diving and foraging well.

A week later, on 22 August, the larger young was judged to be half grown and seemed to be acquiring a cinnamon wash on the head, suggesting it could be a male. The adult female was still acting aggressively toward it if it came too close to the smaller young. The latter had by now lost almost all yellow tones, but the brown and white flank spot pattern was still present, and the sloping bill profile was starting to appear.

By 29 August, the larger young was about three-quarters grown, and the smaller one had also grown significantly. It still showed a trace

of yellow at the base of the bill, but nowhere else. I was unable to visit the site again until 19 September. Sometime during the intervening period, the adult female had abandoned the two young birds, which were now staying close together and showing no antagonism toward each other. The larger one was just about adult size, with primaries and secondaries well developed. It was now at least 64 days old. The secondaries and tertials had prominent grey inner webs, and some grey merging to medium brown on the outer web. The smaller one still retained down on the lower back and rump, and seemed to be about two-thirds grown. Its primaries were still in pin, with about 1 cm of feathers emerged. On both birds, the legs and toes appeared to be olive-green (formerly dark grey or black), but the webs were still black. During two hours of observations (1100 to 1300h), the birds were not seen to dive once, nor to engage in any feeding activity except for casually snapping at a few damsel flies which hovered close by. This was not deemed to be a serious attempt to capture prey. They spent most of their time resting on the water, preening, stretching, yawning and sleeping. They completely ignored a Painted Turtle which several times came up to the water surface and basked nearby.

Sometime after 19 September and before 26 September, the larger young must have departed. Only the smaller one was present on the 26th; its primaries were then about one-third grown. On 10 October 1999, its primaries were over three-quarters grown, and there was a trace of red in the mainly brown eye colour. It was last noted on 16 October (Coady et al., pers. comm.). Since it was not present on 24 October, its fledging period lasted somewhere between 70 and 79 days, assuming it survived. This is slightly longer than the 56 to 68 day fledging period recorded for Manitoba (Bellrose 1976).

It is interesting to note that the Canvasback has recently started breeding in New York State. There have been brood records from the Montezuma Marshes in 1962, 1965, 1980, 1981, 1991 and 1992. Apparently, a release program was carried out at the Montezuma NWR during the 1993 to 1995 period, and "any birds hatched after 1993 should be considered to be from introduced stock" (Brock 1998). It seems possible that the summering birds found at Leslie St. Spit since 1997 could have originated from this stock.

Acknowledgements

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First Nest Records of Canvasback in Ontario

Glenn Coady

Introduction

The Canvasback (*Aythya valisineria*) has a long history as a very rare and localized breeding bird in Ontario. McIlwraith (1894) did not consider it an Ontario breeding bird, but it was added to the provincial list of breeding birds by Baillie (1962) based on anecdotal reports of both nests and hatched broods on Lake St. Clair in 1897, 1948, 1953 and 1954. Peck (1976) and Peck and James (1983) relegated it to the status of hypothetical breeder since none of these records was based on any form of material evidence. It was restored to the list of breeding birds (James 1984) when a brood was documented with photographs at Luther Marsh in 1983. Despite the discovery of many hatched broods in Ontario prior to the beginning of the 2000 nesting season, there were no documented nests of Canvasback known for Ontario (Peck 2000).

In June 2000, three nests of Canvasback were discovered at the Leslie St. Spit in Toronto (Worthington 2000). The purpose of this paper is to document these first nest records for Ontario, summarize the previous breeding records in Ontario, and review the status of the Canvasback in adjacent jurisdictions.

Nest Records of Canvasback in 2000

Smith (2000) detailed the recent increase in summering Canvasbacks at the Leslie St. Spit since 1997 which culminated in Toronto's first breeding record in 1999, when at least two (and likely three) broods of young Canvasbacks were found and documented by both photograph and videotape by Roy Smith and Glenn Coady.

Knowing how site tenacious Canvasbacks can be, both Smith and Coady were determined to find a Canvasback nest during the 2000 breeding season, a task which seemed very attainable due to the limited amount of suitable habitat, virtually all of which could be easily surveyed.

In the spring of 2000, several promising reports were made to the Toronto Ornithological Club bird sightings database. On 26 March, Smith saw a pair of Canvasbacks in an area of the Leslie St. Spit known as "Goldfish Pond" and an additional three males in Cell #2 inside the endikement. On 30 April, Smith observed four pairs in the Goldfish Pond, and two pairs there on 7 May. While both Smith and Coady were away between 13 May and 4 June, Theo Hofmann observed a pair of Canvasbacks in an area of the Leslie St. Spit known as Triangle

Pond on 20 May.

On 10 June, Coady went to the Leslie St. Spit both to search for Canvasback nests and to attend the ceremony recognizing the area as an Important Bird Area (IBA). At this ceremony, Coady learned that Toronto and Region Conservation Authority staff had likely found a Canvasback nest (Craig Mather, pers. comm.) in the Triangle Pond. Upon reaching Triangle Pond, Coady soon observed a female Canvasback on a nest in an emergent cattail stand in the northeast corner of Triangle Pond, and then met Gord MacPherson, Coastal Ecology Coordinator of the Toronto and Region Conservation Authority (TRCA), who had this nest site under observation. MacPherson was then made aware of the 1999 breeding records at the Leslie St. Spit and of the significance of this being the first nest record of Canvasback for Ontario. Accordingly, the TRCA was very protective of this nesting and most helpful in facilitating the documentation of this record. A male Canvasback was in the vicinity of this female and swam toward her when the nest was approached.

On 11 June, this nest was visited by Coady, Smith and Mark Peck of the Centre for Biodiversity and Conservation Biology of the Royal Ontario Museum (ROM). The nest contents were observed and photographed (see Figure 1), measurements were taken, and the female Canvasback quickly resumed incubation. The female joined the male still in attendance in the brief time she was off the nest.

The nest was in an emergent stand of cattail about 7 m wide and 2 m deep, about 3 m off the shoreline of the northeast corner of the shallow Triangle Pond. The nest was woven of, supported by, and hidden behind, emergent cattail leaves, about 0.6 m back within the cattail stand. It had a very small amount of supporting mud at the base partially anchoring it, but was floating and attached to live emergent cattail leaves. Several days later, it was determined that the nest had an outer height of 20 cm, an inner height of 14 cm, an outer diameter of 59 cm and an inner diameter of 27 cm. The nest contents included a very small amount of greyish-brown down and a small cellophane wrapper. The nest contained nine dull, pale green sub-elliptical eggs of relatively uniform appearance and size.

On 12 June, Coady, Jim Richards and Bruno Kern visited the nest. Richards obtained photographs of the female incubating the nest (see Figure 2) and Kern and Coady obtained similar videotape documentation. The same male bird was nearby and swam toward the nest during photography, during which the female sat tightly on the nest.

On 14 June, Coady noticed that the female no longer appeared to

Figure 1: Nest and 9 eggs of the first documented Canvasback nest in Ontario, 11 June 2000. Photo by *Mark K. Peck*.

Figure 2: Incubating female on the first documented Canvasback nest in Ontario, 12 June 2000. Photo by *James M. Richards*.

be incubating the nest. She was present and resting on a nearby island for about an hour with the same male Canvasback. It was readily apparent that the record amount of rainfall in late May and early June had increased this shallow pond's depth very appreciably. An examination of the nest showed that water was beginning to flood the bottom of the nest around the bottom egg. The top eggs were still warm, indicating the female had only recently deserted the nest. On 15 June, the nest was much more seriously inundated with water, the pond's depth having risen about 20 cm between 10 and 15 June. All the eggs were within water and were cold. The female was absent from the pond, and returned much later, but did not visit the nest again. Given that the nest had failed due to flooding, Mark Peck was informed and arranged with the TRCA to collect the eggs on 16 June. The dimensions of the collected eggs (in millimetres) were: 64.21 x 45.10; 60.07 x 44.12; 61.10 x 44.37; 63.04 x 44.11; 62.25 x 44.58; 61.26 x 43.20; 63.50 x 44.94; 62.18 x 44.36; 61.44 x 43.86. These are now in the Royal Ontario Museum egg collection (ROM# 500550).

Also on 16 June, Mark Peck and TRCA staff observed a second female Canvasback incubating a second nest with unknown contents. In addition, they found a third female Canvasback beginning to build yet another nest. Both of these nests were in the southeast end of Triangle Pond. The following day, 17 June, TRCA staff member Tom O'Hallaran noted a female and four very recently hatched young at the nest which was discovered second (based on the hatch date, it was certainly the first nest chronologically even though it was not first in order of discovery). On 18 and 19 June, this female and her brood of four young were observed by Smith and Coady, respectively. On 19 June, Coady noted there were no additional eggs remaining in the second nest. By 24 June, Smith noticed this brood was reduced to three downy young, and by 3 July, to two young. Two young from this brood were still present on a visit by Coady on 22 July, when the female was no longer with them. At least one young survived into August, by which time it was three-quarters grown. The nest from which this brood hatched was similarly in a small stand of emergent cattail leaves, was made of loosely woven cattail leaves, and was lined with smaller bits of cattail leaves and some greyish-brown down. This second nest's measurements were: outer height 24 cm; inner height 12 cm; outer diameter 55 cm; inner diameter 24 cm.

Meanwhile, at the third nest seen being constructed on 16 June, Smith observed on 24 June that construction was still underway, and that as of 3 July, a female had begun incubation. By 22 July, this female

was seen by Coady still incubating this nest with unknown contents. On 27 and 31 July, Coady observed that this female was incubating nine pale green eggs, none of which were pipped as of 31 July. On 3 August, Coady found this female incubating three intact eggs, six eggs having mysteriously disappeared. On 6 August, both Coady and Smith found this nest empty (apart from a few eggshells). No young were ever seen from this nest and it was assumed to have been depredated. This third nest was also in a small stand of emergent cattail only two metres off the shore of the south-east corner of Triangle Pond. The dimensions of this nest were: outer height 24 cm; inner height 13 cm; outer diameter 56 cm; inner diameter 25 cm. Aided by the videotape taken of the first nest, it was possible to exclude with confidence the possibility that this third nest represented a second nest attempt by the female from the first failed nest.

Cards for all three of these nests in 2000, with all pertinent details, have been placed on file with the Ontario Nest Records Scheme by Coady. All three nest records were also documented by photographs or video or both.

Also of interest is the fact that an apparent adult male Canvasback x Redhead (*Aythya americana*) hybrid was occasionally present in the Triangle Pond area. It was first noted in a pond south of the Goldfish Pond by Peck and Coady on 11 June, and was seen at Triangle Pond on 15 and 16 June by Coady, and on 18 June by Smith, and re-appeared there briefly on 31 July, when it was seen by Coady and Leslie Johnston.

This presumed hybrid showed the light grey body (wing coverts, scapulars, flanks, back) colour of a typical male Redhead, lacking the bright whitish coloration of an adult male Canvasback. The head and bill profile of the bird was intermediate between that of a Redhead and a Canvasback, but the bill was all black in colour like a typical male Canvasback. The head colour was intermediate between that of a male Redhead and a male Canvasback (tending more toward that of a Canvasback). The nostril was positioned more to the rear on the bill, closer to that of a typical Redhead than that of a Canvasback. This presumed hybrid tended to be shunned by the female Canvasbacks in favour of the typical male Canvasbacks present.

As Smith (2000) noted, all the newly hatched golden downy young seen with female Canvasbacks in 1999 showed dark feathering extending sagittally over the crown, across the forehead and meeting the top of the bill in a continuous band. This was also true of all four young seen in 2000. This character is diagnostic of young Canvasbacks at this age (Palmer 1976). Taken together with the fact that those birds which reached full size (or

close to it) turned out to be typically-appearing Canvasbacks with no intermediate characters, and that there appeared to be evidence of selection pressure against the presumed hybrid bird, it is probably safely assumed that these nests did not themselves involve hybrid pairings or egg dumping by Redheads.

Summary of Previous Breeding Records in Ontario

The following is a summary of the known breeding records of Canvasback for Ontario sorted chronologically for each County/Regional Municipality:

Lambton

1897 John Maughan Jr., in a letter to Charles William Nash dated 7 August 1900 (ROM Canvasback file), reported that Canvasbacks had nested at St. Anne's Island, St. Clair Flats, Lambton (Baillie 1962). This record involved no descriptions or material evidence.

1948 In a letter to James L. Baillie Jr. dated 5 October 1948 (ROM Canvasback file), Albert Andrew Wood related that Bernard Smith claimed to have seen downy young on Walpole Island, a claim Conservation Officer E. Arthur Roberts believed was credible from that observer. The record involves no descriptions or material evidence (Baillie 1962).

1953 Waterfowl expert Dr. Miles Pirnie of the Department of Fisheries and Wildlife of Michigan State University saw an adult Canvasback with an indeterminate number of young at the Bunches, at the outlet of the Johnston Channel on Walpole Island on 31 July. Baillie (1962) mistakenly reported this record as 1952 and this was corrected by Dr. Pirnie in a letter to Lester Lynne Snyder of the ROM dated 20 March 1962 (ROM Canvasback file). It is likely this same brood was also seen in the same place by Conservation Officer E. Arthur Roberts as reported by Baillie (1962) when he was under the mistaken impression the two sightings occurred a year apart. This record involves no descriptions or material evidence.

Carl Rankin reported a female with six young from Walpole Island on the "Kent County side" on 24 August (Baillie 1962; ROM Canvasback file). No descriptions or material evidence were provided.

1983 A pair of Canvasbacks was observed in suitable habitat on Walpole Island by P. Allen Woodliffe on 11 June on the edge of a cattaill marsh along the south end of Bassett Channel between Bassett Island and Squirrel Island (Cadman et. al. 1987; Ontario Breeding Bird Atlas database; P. Allen Woodliffe, pers. comm.).

Another pair of Canvasbacks was observed in suitable habitat on 11 June on the southwestern portion of Walpole Island by P. Allen Woodliffe (Cadman et. al. 1987; Ontario Breeding Bird Atlas database; P. Allen Woodliffe, pers. comm.).

An adult female Canvasback with 5 to 6 fledged young was observed by P. Allen Woodliffe at the north end of Walpole Island on 12 June (Cadman et. al. 1987; Ontario Breeding Bird Atlas database; P. Allen Woodliffe, pers. comm.). No material evidence was obtained.

Kent

1954 E. Arthur Roberts reported two nests with eggs at Mitchell's Bay on 24 May (Baillie 1962; ROM Canvasback file). No descriptions or material evidence were provided.

1982 P. Allen Woodliffe observed a pair in suitable habitat at Rondeau Provincial Park throughout June (Ontario Breeding Bird Atlas database).

1983 Duncan Gow reported fledged young at the St.Clair National Wildlife Area (Cadman et. al. 1987; Ontario Breeding Bird Atlas database). No descriptions or material evidence were provided.

1984 P. Allen Woodliffe observed a pair in suitable habitat at Rondeau Provincial Park (Cadman et. al. 1987; Ontario Breeding Bird Atlas database).

Elgin

1989 H. and J. Patterson recorded a pair present on the Port Stanley sewage lagoons on 9 July (Ontario Birds at Risk program database).

1999 John Lemon of Lively, Ontario reported an adult female and seven half-feathered young Canvasbacks at the Port Stanley sewage lagoons on the morning of 17 July (Ontario Nest Records Scheme). No descriptions or material evidence were provided.

Wellington

1965 R. Badger reported a female with downy young at Luther Marsh (Goodwin 1965). No descriptions or material evidence were provided. It would appear that both Brewer (1977) and Sandilands (1984) have mistakenly attributed this report to western New York observer Richard Brownstein.

1981 R. Bauman saw a brood of fledged young at Luther Marsh (Sandilands 1984). No descriptions or material evidence were provided.

1982 Liz Yerex and Stephanie McQuay observed a female with a brood of eight young (age class 1c based on Gollop and Marshall 1954) from 29 June to 28 July at Luther Marsh. Yerex provided a very detailed Unusual Species Report Form to the Ontario Breeding Bird Atlas (ROM Canvasback file). She had previous experience banding Canvasbacks of a similar age at the Fairlake Game Farm near Ayr. On 12 July, a second brood of five young (age class 1c) and an adult were also found by Yerex and McQuay at Luther Marsh (Cadman et. al. 1987; Ontario Breeding Bird Atlas database; Liz Yerex, pers. comm.). No material evidence was obtained for either brood.

1983 Liz Yerex observed a female and brood of six young (age class 1a as per Gollop and Marshall 1954) at Luther Marsh on 10 July. She obtained photographs of this brood which were forwarded to Ross James and placed on file with the ROM (ROM PR 1473-1479). These constituted the first material evidence of breeding by Canvasback in Ontario (James 1984; Cadman et. al. 1987; Ontario Breeding Bird Atlas database; Liz Yerex, pers. comm.).

1984 Liz Yerex observed a female and brood of five young (age class 1a as per Gollop and Marshall 1954) at Luther Marsh on 2 August (Ontario Breeding Bird Atlas database; Liz Yerex, pers. comm.). No material evidence was obtained for this brood.

1985 No Canvasback broods were observed at Luther Marsh (Liz Yerex, pers. comm.) in 1985.

1986 Liz Yerex observed a female and brood of four young (age class 2a as per Gollop and Marshall 1954) at Luther Marsh on 30 July (Liz Yerex, pers. comm.). No material evidence was obtained for this brood.

1987 Liz Yerex observed three different females with broods at Luther Marsh. On 6 July, a brood of seven young was observed (age class 1a as per Gollop and Marshall 1954); on 17 July, a brood of nine young was observed (age class 1b as per Gollop and Marshall 1954); on 28 July, a brood of eight young was observed (age class 1b as per Gollop and Marshall 1954). No material evidence was obtained for these broods (Liz Yerex, pers. comm.).

1988 No Canvasback broods were observed in the last year of formal waterfowl work at Luther Marsh (Liz Yerex, pers. comm.). Furthermore, no evidence of Canvasbacks was found on a four hour visit to Luther Marsh by Bryan Wyatt on 29 July 1989, a one hour visit by Mike Cadman on 16 June 1990, or a half-hour visit by V. McKay on 16 June 1991 (Ontario Birds at Risk database).

Toronto

1999 Smith (2000) described in detail the first breeding records of Canvasback for Toronto. On 18 July, a female with a brood of three very small downy young was discovered at the Goldfish Pond at the Leslie St. Spit by Roy Smith. These were documented with still photographs by Smith and by over seven minutes of videotape by Glenn Coady on that date. By 23 July, Coady found only one young present with the female, the others presumed to have been depredated by ever-present juvenile Black-crowned Night-Herons (*Nycticorax nycticorax*) from the adjacent colony. This duckling was last seen on 19 September, when it was about adult-size with primaries and secondaries well developed. A second brood (a female and seven downy young) was discovered by Verna Higgins and Harriet Davidson in embayment A on 2 August. On 8 August, only one of these young could be found by Coady and even it was missing later that day. The relatively open waters of this bay left the young Canvasbacks highly exposed to gull predation from the very large adjacent Ring-billed Gull (*Larus delawarensis*) colony. Also on 2 August, a lone additional young Canvasback was found in the Goldfish Pond, representing either a straggler from the Bay A brood or a lone survivor from a third brood. It was last noted in the Goldfish Pond on 16 October by Coady, at which time it was fully grown with well formed primaries and secondaries. It was not present on 24 October. All broods were documented with photographs or videotape or both.

2000 Three nests of Canvasback were discovered in the Triangle Pond at the Leslie St. Spit in June, as described above. Out of a total of at least 22 eggs laid in these three nests, only four hatched and only one duckling is likely to have survived to full grown stage. This very poor productivity was due to a combination of depredation and pronounced flooding of the nesting pond. These three nests represent the first documented nest records for Ontario, with one full clutch of nine eggs having been preserved in the ROM egg collection.

Kenora

1984 Dennis Barry and Margaret Carney reported an adult female and a 2/3 grown young Canvasback near a small island in Berens Lake (90 km. north of Red Lake) on 10 July (Cadman et. al. 1987; Ontario Breeding Bird Atlas database). Dennis Barry completed a convincing Unusual Species Report Form during the Ontario Breeding Bird Atlas to document this sight record (ROM Canvasback file).

Breeding Status in Adjacent Provinces and States

Godfrey (1986) listed the Canvasback as a common breeder in middle and southern Manitoba (encompassing The Pas, Lake St. Martin, Riding Mountain and southern Lake Winnipeg). Janssen (1987) and Green and Janssen (1975) stated that the Canvasback is a regular breeder only in northwestern Minnesota, with sporadic breeding records from southwestern and south-central Minnesota. It would seem logical that any Canvasbacks found breeding in Kenora District likely originate from these populations.

Robbins (1991) stated that Canvasbacks seldom breed in Wisconsin, with about a dozen breeding records in total for the state (four in the 19th century) and none between 1977 and 1990. Reeves (1991) stated that the only confirmed nesting of the Canvasback up until the end of the Michigan Breeding Bird Atlas occurred during the atlas at the Pte. Mouillee State Game Area in northern Monroe Co. near Lake Erie. Baillie (1962), however, cited several nests reported by a W.H. Collins on the Michigan side of the St. Clair Flats in 1880. There have been no confirmed nest records or breeding records for Canvasback in Ohio (Victor Fazio, pers. comm.). Brauning (1992) and McWilliams and Brauning (2000) confirmed that there are no recent or historical breeding records for Canvasback in Pennsylvania. In New York state, there have been breeding records involving broods of Canvasbacks in the Montezuma Marshes in 1962, 1965, 1980, 1981 (Bonnie and Burrill 1988), 1992 and 1993 (Brock 1998). A release program for Canvasback was carried out at Montezuma NWR from 1993–1995, and Brock (1998) suggested any birds hatched after 1993 should be considered to be from introduced stock. Surprisingly, the Quebec Breeding Bird Atlas mentioned two possible breeding records for Quebec involving females with broods, one from Lake Chicobi, Abitibi in August 1973, and the other from Lac du Milieu in Ashuapmushuan Wildlife Reserve in late summer 1980 (Tardif and Gagnon 1996). Since neither of these records is supported by material evidence, breeding is therefore not considered officially confirmed in Quebec. Erskine (1992) cited no current or historical breeding records for Canvasback in the Maritime Provinces. Laughlin and Kibbe (1985) cited no current or historical breeding records for Canvasback in Vermont.

Smith (2000) suggested that the small population of nesting Canvasbacks in Toronto might well have originated from the introduced stock in central New York state. Given its long history as both a very rare and ephemeral breeder in southern Ontario, combined with

an east-west migratory path directly over our jurisdiction, it would seem equally possible (if not more likely) that the infrequent breeding records in our area represent a naturally occurring phenomenon.

Summary

The Canvasback remained for nearly a century a controversial and poorly documented breeding species in Ontario. It has been a very rare and localized breeding bird in Ontario, supported by a paucity of material evidence of breeding. In June 2000, the first three well documented nests of this species were found at the Leslie St. Spit in Toronto and are supported by still photographs, videotape, and a complete clutch of eggs, in addition to detailed notes from prolonged observation.

Acknowledgements

I thank the following people for their invaluable assistance in the preparation of this paper: Roy Smith and Leslie Johnston, who provided assistance in monitoring the three Canvasback nests; Mark Peck of the Centre for Biodiversity and Conservation Biology of the Royal Ontario Museum, who provided photographic documentation, arranged collection of the abandoned clutch of eggs and provided access to the Canvasback file from the museum species files; Glenn Murphy, who prepared and measured the collected eggs; Jon McCracken, who provided historical data from the databases of the Ontario Breeding Bird Atlas and the Ontario Birds at Risk program; Liz Yerex, David Brewer and Mike Cadman, who provided data on breeding records for Luther Marsh; George Peck, who provided data from the Ontario Nest Records Scheme; James M. Richards, who provided photographic documentation; Bruno Kern, who provided videotaped documentation; Allen Woodliffe, who provided data from Walpole Island and Rondeau Provincial Park; Alan Wormington, who checked for records from his files; Vic Fazio, for confirming the status of Canvasback in Ohio; and Gord MacPherson, Coastal Ecology Coordinator of the Environmental Services Section of the Toronto and Region Conservation Authority, who shared information on the nests at the Leslie St. Spit.

The Toronto and Region Conservation Authority deserves recognition for their exceptional habitat creation efforts at the Triangle Pond location on the Leslie St. Spit, which are clearly producing desirable results.

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Notes

J. Murray Speirs: Distinguished Ornithologist

J. Bruce Falls

Murray Speirs has made important and lasting contributions to ornithology and natural history in Ontario. He is the recipient of the OFO Distinguished Ornithologist Award for the year 2000.

Born in 1909, Murray was fascinated by birds as a lad; at age six he identified his first Ruby-crowned Kinglet. In his teen years, he was one of the most active birdwatchers in Toronto and by age 15 he was keeping records of the species and numbers of birds he saw, a practice he kept up until he was 90. His interest in science took him through the Mathematics and Physics course at the University of Toronto but he soon turned his quantitative skills to *Fluctuations in the Number of Birds in the Toronto Region*, the subject of his Master's thesis in the Department of Zoology. For this study, he gathered together field notes and publications of many other observers along with his own, an approach that was to characterize many of his later projects. His doctoral studies with Dr. Charles Kendeigh, a well-known ecologist at the University of Illinois, were interrupted by a stint as meteorologist with the RCAF during World War II. He completed his PhD thesis on *Local and Migratory Movements of the American Robin in Eastern North America* in 1946.

When Murray Speirs began his bird studies, it was customary to collect specimens. While he acknowledged the value of museum collections, his own efforts were directed to precise field identification aided by a keen ear for the distinctive sounds of different species. This was the basis of his quadrat censuses. He was a pioneer in Ontario in focusing his research on populations and communities of birds in different habitats. In 1937, with other young birdwatchers of the Toronto Ornithological Field Group, he conducted the first counts of birds in a surveyed quadrat at York Downs near Toronto. Following his doctoral studies, he carried out bird surveys for the Federal and Provincial Governments in Northern Ontario (effects of DDT spraying) and on the Georgian Bay Islands. After he and his wife, Doris Huestis Speirs, moved to Pickering in 1948, he began serious population studies of the birds of what was then Ontario County (now part of Durham

Figure 1: J. Murray Speirs in 1985. Photo by *Phill Holder.*

Region). With student assistants, he drove the roads, paddled the waterways and conducted quadrat censuses in different habitats. Based on the results of these studies and reports of other observers, he published a six-volume series, *Birds of Ontario County* (1973-1978), detailing the seasonal distribution of birds. This was followed in 1985 by two large volumes entitled *Birds of Ontario*, including a meticulous compilation of records through the seasons and throughout the province. These and other publications, together with 75 years (over 40 years in the Pickering area) of detailed field notes of his daily observations, constitute an invaluable contribution to Ontario ornithology — a legacy that will be valued for years to come by those who would trace changes in the distribution and abundance of Ontario birds.

In addition to his population studies, Murray and Doris Speirs investigated the life histories of several species, including American Robin, Black-capped Chickadee, Evening Grosbeak and Lincoln's Sparrow. Murray and Doris wrote the account of the Lincoln's Sparrow in Bent's *Life Histories of North American Birds,* published by the Smithsonian Institution in 1968.

While Murray Speirs was carrying out his field studies, he was mentor to many students and serious amateurs who acted as his assistants. Young ornithologists that he assisted and encouraged include Jim Richards, Ron Tozer, Rob Nisbet, Ron Orenstein and Matt Holder, and artist-naturalists Robert Bateman and Barry Kent MacKay.

Much of his career (1947–1974) was spent in the Department of Zoology at the University of Toronto, where he combined library and bibliographic work in the Fisheries Research Laboratory with teaching in animal ecology. He and I worked together introducing ecology students to field biology. Many of our trips were to Cobble Hill, his home in Pickering, where we compared the habitats of field and forest. Much to the benefit and pleasure of the students, these tours continued for years after Dr. Speirs retired.

Murray is a long-standing member of all the major ornithological societies in North America: American Ornithologists' Union, Association of Field Ornithologists, Cooper Ornithological Society, Society of Canadian Ornithologists and Wilson Ornithological Society. He has taken a special interest in local naturalists' organizations in Ontario. He is a charter (now honorary) member of the Toronto Ornithological Club, a co-founder of the Pickering Naturalists and a founding (now honorary) member of the Federation of Ontario Naturalists (FON). He was very active in the FON, editing *The Bulletin* (forerunner of *Seasons*

magazine) from 1953 to 1961, and with W. W. Judd, editing *A Naturalist's Guide to Ontario* in 1964. He and his wife received the highest award of the FON for service to conservation. He has also been a strong supporter of Long Point Bird Observatory.

With his interest in bird populations, it was natural for Dr. Speirs to take part in many volunteer-based bird surveys. For 40 years, he compiled the Pickering Christmas Bird Count. When the Breeding Bird Survey began in the 1960s, he was an early participant and soon coordinated the BBS for Ontario. He contributed the account for the Lincoln's Sparrow to the *Atlas of the Breeding Birds of Ontario* (Cadman et al. 1987).

In 1995, he donated 2.8 hectares of his own property to protect a portion of the Altona Woods, one of the least disturbed tracts in the Toronto region. The 11- hectare forest now bears his name as the J. Murray Speirs Ecological Reserve.

For all his achievements, Dr. Speirs has recently been appointed a Member of the Order of Canada.

I cannot close this account without reference to the quiet unassuming way in which Murray Speirs interacts with others. He is a true gentleman. Two of his earlier assistants tell a story of when they were unable to locate the plot where they were supposed to be censusing birds. With some trepidation, they phoned to say they were lost and unable to carry out the survey. Murray's reply was "oh". One said to the other, "I have never known him to be so angry."

I have known and admired Murray Speirs as a friend for nearly 60 years. He is indeed a distinguished ornithologist and naturalist and a fine gentleman.

Acknowledgements

I thank Rayfield Pye for his help in preparing this account.

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Caspian Tern Night Roost on Roof

Jean Iron

At 2030h on 18 August 2000, I arrived at Polson Street on Lake Ontario in Toronto, Ontario. Getting out of my car I heard the distinctive calls of adult and juvenile Caspian Terns (*Sterna caspia*) flying noisily overhead toward the nearby flat roof of a recycling plant on the east side of Toronto Harbour (Figure 1). Between 2030h and 2105h, I counted 119 Caspians going to roost. Even as it got dark, it was easy to pick out the Caspians from the Ring-billed Gulls (*Larus delawarensis*) by sight and their distinctive calls.

Realizing that I had missed many early roosting Caspians the day before, I returned to count the birds between 1900h and 2100h on 19 August. I counted 175 Caspian Terns coming from Lake Ontario out of the southwest, south and southeast to roost on the flat roof. There were many vocal juveniles. The majority of birds arrived during the 40 minutes before dark. Great Black-backed (*L. marinus*), Herring (*L. argentatus*) and Ring-billed Gulls also roosted on the roof. The roof must have been packed with birds. The Heermann's Gull (*L. heermanni*), which was present at the Toronto Harbour from 14 November 1999 to 16 September 2000 (Pittaway 2000), probably roosted regularly on the roof. At 2000h on 31 August, I saw the Heermann's fly from Polson Street and land on the roof among the gulls and Caspian Terns.

The peak count of Caspians was on 24 August 2000 with 256 Caspian Terns landing on the roof between 1946h and 2045h. At 2015h, a large flock of 83 came in together. In the twilight, several adult Caspians flew about calling raucously with fish in their bills. On 27 August, Tania Havelka of Canadian Wildlife Service and I counted 151 Caspian Terns flying to the roof.

Discussion

Caspian Terns normally roost on rocks, beaches, sandbars, natural mudflats, spits and small islands (Cuthbert and Wires 1999). I have also observed them resting during the day on artificial structures; for example, concrete and rock jetties, levees at sewage lagoons, artificial islands, and the parking lot at Polson Street. Pittaway (1987) observed Caspian Terns resting during the day at a dump with Ring-billed Gulls. A search of the literature found no reference to roof roosting (see Bent 1921, Cramp 1985, Cuthbert and Wires 1999). D.V. Chip Weseloh (pers. comm.), a colonial waterbird expert with the Canadian Wildlife Service, has not heard of roof roosting in Caspian

Table 1: Caspian Tern high count on 24 August 2000 at Toronto roost.

Time	Flying North to Roof Roost	Flying South to Lake Ontario
1900h – 1930h	0	0
1930h – 1945h	0	9
1946h – 2003h	29	0
2004h – 2014h	28	0
2015h – 2023h	135	0
2024h – 2034h	58	6
2035h – 2045h	6	0
Total	256	15

Table 2: Caspian Tern roost counts, August and September 2000, at Toronto.

Date	Time	Number
18 August	2030h – 2105h	119
19 August	1900h – 2100h	175
24 August	1900h – 2045h	256
27 August	1915h – 2040h	151
29 August	1900h – 2030h	121
31 August	1910h – 2030h	70
5 September	1920h – 2030h	46
11 September	1800h – 1935h	1
18 September	1800h – 1930h	2
19 September	1900h – 1930h	0

Terns. However, roof roosting and nesting is reported in Herring and Ring-billed Gulls (Blokpoel and Smith 1988, Blokpoel et al. 1990).

Most of the Caspian Terns observed roosting in Toronto probably originate from the large colonies on Georgian Bay. Pittaway (1987) described a migration route from Georgian Bay and Lake Simcoe to Lake Ontario. In recent years, Caspians have colonized artificial sites such as in Hamilton Harbour and Toronto's Leslie Street Spit (Tommy Thompson Park), but breeding numbers are small on Lake Ontario. For example, Glenn Coady (pers. comm.) reported 18 Caspian Tern nests on the Leslie Street Spit in Toronto in 2000. Caspian Terns are increasing on the Great Lakes and the outlook for them appears good (Iron 1995).

After fledging, juvenile and adult Caspian Terns disperse to linger at traditional feeding areas (Cuthbert and Wires 1999) such as along the shores of Lake Ontario in the Toronto area. Coady and Smith (2000) report the peak number of

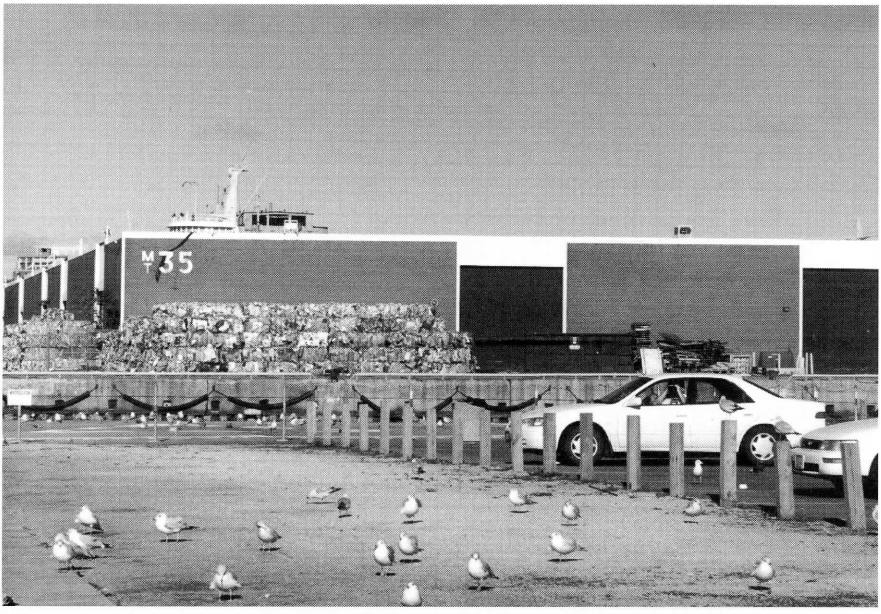

Figure 1: Flat-roofed building at Toronto Harbour utilized by Caspian Terns as a night roost site. Photo by *Jean Iron.*

Caspian Terns in Toronto was 311 on 25 August 1987. On the Leslie Street Spit on 6 August 2000, Glenn Coady (pers. comm.) reported 129 Caspians at midday and Roy Smith (pers. comm.) reported 105 in early afternoon, so numbers were increasing before my evening counts began. The Spit is about five minutes flying time from the roof night roost. Coady and Smith (pers. comm.) saw Caspian Terns perched on the roof roost during the day, but they were unaware at the time that it was used for night roosting.

Little information exists about the important stopover sites and habitats used on migration by Caspian Terns (Cuthbert and Wires 1999). The Toronto night roost site contributes new information about a significant stopover spot. Protection of this site is important because hundreds of birds depend upon it as a safe night roost. Toronto's waterfront development plans and its bid for the 2008 Olympics could put this important roost in jeopardy.

In conclusion, migrating adult and juvenile Caspian Terns, peaking at 256 birds on 24 August 2000, roosted on the flat roof of a recycling plant in Toronto. This location is ideal as it is elevated and undisturbed, and has a protective raised wall around the rim, making it safe from disturbance from people, dogs, cats, coyotes, foxes and raccoons. The

roost is also close to productive feeding areas on Lake Ontario off the Leslie Street Spit. My observations in Toronto document the first report of Caspian Terns night roosting on the flat roof of a large building. Night roof roosting has probably been happening here for a long time and it probably occurs elsewhere as well.

Acknowledgements

I thank Chip Weseloh and Tania Havelka of the Canadian Wildlife Service for information on Caspian Terns. Glenn Coady and Roy Smith provided me with numbers from the Toronto database and their own sightings. Michel Gosselin, Barbara Mann, Ron Pittaway and Ron Tozer located Caspian Tern references.

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2001
OFO Annual General Meeting

We are pleased to announce that the Ontario Field Ornithologists' AGM will be returning to Point Pelee National Park on Saturday and Sunday, 29 and 30 September 2001. Mark your calendars now to enjoy this great weekend of fall birding. There will be field trips with a focus on identification, featuring small groups and experienced leaders. We will come together on Saturday evening for a banquet and special program at the Leamington Dock restaurant. Watch for further details in the coming months. Don't miss it! *Jean Iron*

Unusual Mating Behaviour by a Tree Swallow

Geoff Carpentier

The Tree Swallow (*Tachycineta bicolor*) is known to be an aggressive and prolific breeder, competing both intraspecifically and interspecifically (Bent 1942). Common throughout virtually all of Ontario (Quinney and Dunn 1987), the Tree Swallow often breeds in nest boxes in urban and suburban areas (Peck and James 1987).

On 13 May 1997, Bill Stone, Tony Bigg and I were birding at the Port Rowan sewage lagoons in *Haldimand-Norfolk* RM, Ontario. This large open area adjacent to water was suitable habitat for Tree Swallows to breed. The fields, wet scrub and open water harboured an abundant food supply for the nesting birds. Numerous nest boxes had been erected along the perimeter of the lagoons to facilitate breeding. At the time of these observations, most of the boxes were occupied by breeding pairs of Tree Swallows.

A male Tree Swallow, sexed by its behaviour, was observed fluttering on the gravel roadway, apparently sitting atop something on the road. We watched the bird for a few minutes and eventually determined that it was sitting on a dead Tree Swallow, which we presumed was a female. The male repeatedly attempted to copulate with the dead swallow. The dead bird was in excellent condition, as rigor mortis had not set in and it presumably had died very recently from an unknown cause.

The dead bird was positioned in a manner such that the belly was pressed against the ground and the wings were spread to the sides, almost fully extended. The image was representative of a bird in flight. The male, sitting atop the dead female, repeatedly oriented itself above and centred over her rump. The position was typical of the posturing one would expect had the male been mating with a live bird. Throughout the observation period (seven or eight minutes), the male periodically made minor adjustments to its position, but always maintained some level of physical contact with the dead bird. Eventually we approached more closely, but the male immediately flew off to the northeast, toward the lagoons. It did not subsequently return to the dead bird.

Discussion

Bent (1942) described the courtship flight of the Tree Swallow, during which the pair flies well above ground level and eventually the male grasps the female with its feet and both birds tumble downward, finally separating near the ground. Could the death of the female have been the result of a fatal courtship

flight, where the birds did not separate in time? The excellent condition of the plumage and the lack of any visible injuries lend some credence to this possibility. The male's interest in the female might also contribute to the circumstantial evidence that she died in a fatal courtship flight.The road on which the female lay was very sporadically travelled, so it was unlikely that an impact with a car was the cause of its death. Robertson et al. (1992) reported that during the breeding season, "both sexes often grapple with conspecifics inside cavity, in air, on ground, or even on water", and that the "combatants have been found injured or dead inside boxes or on ground after such fights". A physical interaction of this type may be the most likely explanation for the death of the female swallow we found.

The female's posture in death was very similar to that which it would have exhibited if alive and receptive to the male's mating attempts. This posture apparently illicited the copulatory response by the male. I found no reference in the literature to necrophilia in Tree Swallows, however.

Acknowledgements

I thank Robert Ryan for his insightful editing of earlier drafts, and Ron Tozer for his assistance with the literature and helpful comments.

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An Observation of Solitary Sandpiper Feeding Behaviour

Bill Crins

The Solitary Sandpiper (*Tringa solitaria*) is a familiar and common migrant in much of Ontario, and often is found in wet places that are rarely frequented by other migrating shorebirds, such as beaver pond edges and small farm ponds. Given our familiarity with this species during migration, it may come as a surprise that many aspects of its biology are quite poorly known, or have not been well documented. As Moskoff (1995) recently stated, "much remains to be learned about this species."

Shorebirds exhibit diverse and characteristic feeding behaviours, and the Solitary Sandpiper is no exception. Usually, it can be seen probing in shallow water or mud with its bill as it works along the edges of ponds, ditches, and other open or shaded wet depressions (Bent 1929, Palmer 1967, Terres 1982, Moskoff 1995). It has been described as a "snatcher" (Palmer 1967), catching insects such as dragonfly nymphs, aquatic beetles and bugs, grasshoppers, and caterpillars, other invertebrates such as spiders, worms, and small crustaceans, and small frogs as it moves along (Bent 1929, Palmer 1967).

There are also a few reports of a more specialized feeding behaviour in the Solitary Sandpiper. This involves the rapid but subtle movement of the leading foot below the surface of shallow water to stir up food items, which the bird then captures (Bent 1929, Palmer 1967, Terres 1982). Variously known as *foot-paddling, foot-stirring,* or *foot-trembling*, this foraging activity has been reported in herons, gulls, and several shorebirds (Terres 1982).

On 9 May 1999, I had the opportunity to observe this type of feeding behaviour by a Solitary Sandpiper at the Miller Creek Conservation Area near Lakefield in Peterborough County. It consistently waded in shallow water at the edge of an open mudflat in a cattail marsh, quickly but delicately shaking and probing its feet, one at a time, in the organic matter. It continued this behaviour as it slowly probed in successively deeper water until something was dislodged or disturbed, at which time it would capture the disturbed item with its bill. Several items were captured in this manner. During the five minute observation period (0910h–0915h), ten fairly large dragonfly nymphs (perhaps *Libellula* sp.) were eaten, as well as several smaller unidentified invertebrates. By the end of the observation period, the crop of this

Solitary Sandpiper was clearly distended, indicating that this method of feeding had been very successful.

Moskoff (1995) implied that this feeding behaviour had been observed only in fall migration, but the observation reported here indicates that it also is used in spring migration. It seems likely that this behaviour is used whenever habitat conditions dictate.

Acknowledgements

I thank Ron Pittaway and Ron Tozer for providing literature and comments on a draft of this note.

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PUBLICATION NOTICE

McLaughlin Bay Wildlife Reserve and Second Marsh Wildlife Area Visitor's Guide. 2000. By *Jim Richards*. Friends of Second Marsh, Oshawa, Ontario. Softcover, 74 pages. $6.00.

This attractive and informative little book (pocket-sized for easy use in the field) provides a fascinating introduction and guide to the natural history (especially the birds) of Oshawa Second Marsh, McLaughlin Bay Wildlife Reserve, and Darlington Provincial Park in Durham Region. It has over 75 colour photographs, plus detailed maps and descriptions of the system of trails at Second Marsh and McLaughlin Bay. The text describes community and corporate involvement in the protection and enhancement of these areas, natural features along the many trails, and the extensive restoration activities which have been undertaken. The guide includes checklists of the herptiles, mammals, fish and birds recorded to date. The many colour photographs (by the author) of birds, and detailed information on access and where to find particular species will be of great interest to birders.

The guide can be purchased for $6.00 (tax included) from Friends of Second Marsh, 206 King Street East, Box 26066, RPO King Street, Oshawa, Ontario L1H 1C0. Mail orders (cheques only) should add $2.00 for postage and handling. *Ron Tozer*

CORRIGENDA

Ontario Birds 18(2) August 2000
We apologize to our readers and the authors involved for the following errors, which were made by the editors:

"Varella" should be "Varrela" as follows: **Table of Contents** (second article author), **Page 63** (last reference under Slaty-backed Gull), **Page 72** (last reference), **Page 73** (second author), **Page 76** (photo captions), and **Page 77** (second author).

Page 62
Under Heermann's Gull, the first sentence of commentary should be: "This remarkable first record for Ontario is also the second and most easterly record for eastern North America".

Page 79
In Table 1, the Total in the third column should be "2603", not "2606".

Book Reviews

Handbook of the Birds of the World. Volume 5: Barn-owls to Hummingbirds. 1999. Edited by *Josep del Hoyo, Andrew Elliott and Jordi Sargatal.* Lynx Edicions, Barcelona, Spain. Hardcover, 759 pages. $185 U.S. (ISBN 84-87334-25-3).

Once in a while, one comes across a publication that simply leaves one breathless and incredulous, due to its appearance, content, readability and functionality. I was fortunate enough, recently, to have such an experience, whereby the fifth volume of the *Handbook of the Birds of the World* series was offered to me with a request to do a review. This is not just a field guide to the birds, but rather a compilation that covers many of the essential components of their lives and their interactions with humans. The book is not only eye-pleasing, but its fact-filled pages will make it hard to put down. It has 759 pages, which in itself represents a major undertaking. The book is significantly enhanced by its 12" x 10" size, which makes it all the more impressive, while permitting the inclusion of much more information.

This ambitious project was undertaken approximately seven years ago and has involved an expert team of editors, an Editorial Council and, in the case of Volume 5, 38 world famous experts who authored individual species accounts. Volumes 1 through 4 covered the Ostrich to Ducks, New World Vultures to Guineafowl, Hoatzin to Auks and Sandgrouse to Cuckoos, thereby setting the framework for this volume. Perhaps it is even better than its predecessors, if that is possible!

The book begins with a foreword and introduction dissimilar to any I have seen for some time. Included therein are the usual thank-yous and acknowledgements. However, also to be found are informative mini-articles on risk indicators, population size and fragmentation considerations, ecological insights in the sense that the choices made by species will affect their ability to survive in the modern world, and finally, a fascinating presentation on a system for status assessment. The IUCN-World Conservation Union developed a system in the early 1990s to evaluate the probability of a taxon becoming extinct. Frightening as this concept is, that is the fate of today's wildlife and it is good that someone is doing qualitative and quantitative assessments of risk so that we can better anticipate problems and deal with them proactively where possible. All this information was presented in the first 32 pages of the book; there are still 727

pages to go!

The rest of the book offers a detailed compilation of information related to every species of barn-owl, typical owl, oilbird, owlet-nightjar, frogmouth, potoo, nightjar, swift, tree-swift and hummingbird. The section dealing with each family begins with several pages of text, liberally interspersed with numerous high quality photographs of the species discussed. These articles are not placed herein merely as fillers. Rather, they provide concise, informative, detailed and relevant information about the families. For example, the section on typical owls is 75 pages long and discusses the following topics: systematics, morphology, habitat, general habits, voice, food and feeding, breeding, movements, relationship with man, status and conservation and a general bibliography, all highlighted with 110 spectacular colour photographs! The authors have not focussed on the larger families in their treatments, but have afforded all families a similar level of coverage. For example, the Oilbirds, which are represented by a single species, have seven pages of text and four photographs dedicated to them. Likewise, the Frogmouths, with twelve species, are covered by fifteen pages of text and nineteen photographs! These accounts are fact-filled and absorbing.

Following these introductory sections, individual species accounts for every known species, including potentially extinct species, are presented. These accounts carry enough detail that the reader leaves feeling that he/she actually knows something about the species beyond just its field marks. Each species account includes information on its taxonomy, distribution (supplemented with an excellent range map), description, voice, habitat, food and feeding, breeding, movements, status and conservation, and a specific bibliography. The colour plates produced to support the information in the text are again of superior quality and detail. Wherever possible, the most similar members of the tribe or genus are depicted on the same plate. In keeping with the modern ideal, with respect to field guides, several views of the birds are shown on each plate. For example, the plate on *Discosura* hummingbirds depicts nine species of hummingbirds, but shows twenty-eight individual views of males, females and certain subspecies. In fact, when it is all added together, approximately 1,600 paintings and four hundred photographs supplement the 747 species accounts.

It is difficult to find fault with the book. In its entirety, it is well presented, detailed, inclusive and informative. However, I wonder why none of the colour plates shows juvenal or immature plumages. For some of the species depicted, this book will represent the only reference many birders own and as such, representations of

the young birds would have been beneficial. Additionally, there appears to be little information on extralimital sightings of birds, such as the Great Gray Owl winter invasions. In this regard, the authors acknowledge the movements, but are not very accurate with respect to the extent and range covered. However, this is not too surprising, in that so many species are covered in the book and one cannot expect it to include everything known about a species. Enough accurate information is available to ensure that the reader has a good foundation in fact when researching the species. I checked a couple of the accounts for species that I am very familiar with and was very pleased to see the accuracy and scope of the species reports. I was also pleased to see Canadian content, both in the map references, the text and the citations. The book is extremely current and includes not only much of the most recent information on all known species but also up to date information on new species recently discovered or split from other species.

The book includes approximately 8,400 references. Included in these are two by R.R. Sargent from the early 1990s. However, his most recent work (1999) was not cited, yet this is perhaps one of his most important publications, in which he describes movements of western species of hummingbirds into the southeastern USA in winter in unprecedented numbers and locations. However, considering the number of citations included, is it really very surprising that many would be missed? But one must wonder why some breeding bird atlases were included (e.g., Britain and Ireland), while others (e.g., Ontario) were missed. These publications are invaluable, fact-filled sources of information that should not be overlooked.

All said and done, this remains one of the most amazing books that I have had the pleasure to study and it should be included in every serious birder's library! It may be ordered by e-mail: <lynx@hbw.com>.

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Letters to the Editors

California Gull

I enjoyed reading the very well written Photo Quiz by Willie D'Anna in the April issue of *Ontario Birds* (18: 48–51). I feel one statement made by the writer needs some additional comment. D'Anna, referring to aberrant Herring Gull-type birds, states "one character I have never seen on these birds, and I suspect I never will, is the unique bill pattern of the adult winter California Gull." In early April 2000, I observed an aberrant gull on the Niagara River with an identical bill pattern to that of an adult winter California Gull. The bird's bill pattern, mantle, irid and leg color were typical of an adult California Gull. However, structural difference and large size (exceeding *Larus argentatus smithsonianus*) combined with slate gray primary tips eliminated California Gull. The bird observed was so unique that it would be impossible to mistake it for either a Herring Gull or California after careful observation.

Except for the one occasion, I have never seen the unique bill pattern on any bird that could not be identified as a California Gull. However, one final note of caution on bill patterns is due. Many third-year Herring show dusky subterminal markings on the anterior side of the red spot near the tip. The dusky markings are most extensive on the lower mandible but often extend to the upper mandible, creating the illusion of a band. This pattern is also observed on a small minority of adult winter Herring Gulls. At close range, this pattern is never as thin, nor as clearly and sharply defined as on California Gull. Also, the subterminal markings on Herring Gull are usually grayer and only rarely extend to the top of the upper mandible as shown by California Gull. When viewed at a distance, it becomes difficult to separate the bill pattern of California Gull from some Herring Gulls. I suspect that similar bill patterns could exist on some adult Thayer's Gulls, although never observed by myself. Bill pattern is an excellent field mark for identifying adult winter California Gulls. However, a combination of characteristics such as leg, mantle, and irid color, primary pattern, shape and size, must be used to identify all out-of-range California Gulls.

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Willie D'Anna comments:
I want to thank Brendan Klick for his comments about bill pattern and identifying adult California Gulls in

winter. I heartily endorse his view that out-of-range California Gulls (such as those found in Ontario) should only be identified with a combination of characters. Like Brendan, I have observed aberrant gulls on the Niagara River that appeared in many respects to be like a California Gull but upon closer inspection failed to pass the whole test. Not surprisingly, these gulls have sometimes been misidentified as California Gulls by unwitting birders. In my article, I described many of the field marks that have been observed on these aberrant gulls which are known characters for California Gull. In hindsight, my statement that the bill pattern of adult winter California Gulls was unique was an unfortunate choice of words. Although I have not yet observed this mark on an aberrant gull, the combination of black and red on the bill is frequent enough in Herring Gulls that it stands to reason that an aberrant gull might show something similar. As for Brendan's odd gull, it is yet another example of the perplexing variability shown by the large gulls. The bird would seem to me to be unidentifiable. With so many characters that are a match for California Gull, it is a fine example of the need for great caution when identifying this rarity in Ontario.

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Robin Behaviour

On 11 May 2000, I watched an American Robin fly across our yard from a nest next door, carrying a large item which it dropped in the dense vegetation of my fern garden. Presuming that it was an eggshell (albeit, a big one), indicating that its young had hatched, I went over to have a look. To my surprise, it was the cold but still flexible corpse of a nestling. There was physical injury (and bleeding) at the head and back, but I think that resulted from the female carrying the body in its beak. The adult bird flew strongly and normally, which is one reason that I presumed it was carrying an eggshell. Flying over 20 metres with the ±20 gram body of a young in its beak was not something I would have expected, however.

I always assumed a dead young was either pushed or pulled out of a nest, and then was dragged away from beneath by whatever scavenger came along. I have certainly found dead robin nestlings beneath nests before. That the adult (the female) would carry the body off was quite a surprise, let alone that it would carry the body so far with so little apparent difficulty.

Perhaps this is a common occurrence, but it's a new one to me. Ever heard of or seen such a thing?

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Ron Tozer comments:
An adult bird removing a dead young from its nest and then transporting the corpse a significant distance away may occur regularly, but it certainly appears to be rarely observed or reported, especially among passerines. I am aware of two other occurrences. Dan Strickland (pers. comm.) observed a Gray Jay remove a dead young from the nest and carry it in flight for at least 15 metres before disappearing from view among the trees. It was Dan's only observation of this behaviour during nearly 35 years of studying Gray Jay breeding biology in Algonquin Provincial Park. Patricia Rossi (BIRDCHAT, 9 August 2000) reported that a male Northern Mockingbird dropped a dead nestling from its nest, and then dragged the corpse across a street in Levittown, Pennsylvania.

Oshawa Guide Update

Since the publishing of OFO Bird Finding Guide # 7 (*Ontario Birds* 17: 133–151), dealing with Second Marsh Wildlife Area and McLaughlin Bay Wildlife Reserve, a number of new records have become known. While some are newly established sightings, most are previously published and unpublished records that were overlooked by the author. I am indebted to those who have made their records known to me, and especially to Tyler Hoar who has shared his vast database for Darlington Provincial Park.

While the new records do not change the overall list for the Regional Municipality of Durham, I had incorrectly published the Regional list as totalling 349 species, when in fact it stands at 353. The new records do change the Bird Finding Guide breeding bird list from 98 to 101 species, with the addition of Ring-billed Gull, Golden-crowned Kinglet, and Orchard Oriole.

The Guide area species total goes from 276 to 288, with the following additions: Western Grebe, Barrow's Goldeneye, Northern Bobwhite, Parasitic Jaeger, Thayer's Gull, Ivory Gull, Great Gray Owl, Common Raven, Carolina Wren, Bohemian Waxwing, Worm-eating Warbler, and Summer Tanager. Please continue to forward your records from this area to the author.

Finally, websites about Second Marsh <www.secondmarsh.com> and McLaughlin Bay Wildlife Reserve <www.gmcanada.com> are now on-line.

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Nikon
Photo Quiz
(sponsored by Nikon Canada)

Gulls have always been preferred subjects of bird photographers. Their reasonable tolerance of encroaching humans armed with various types of optical equipment has also played a key role in the precipitous rise in popularity of gull study over the past two decades.

The essentially brown plumage and checkered look of the upperwing coverts of this photogenic bird point to it being an immature of one of the medium- to large-sized, dark-winged species. I will divulge first off that it is a regularly occurring North American species, photographed in the autumn of its year of hatching.

Of the small- to mid-sized species, only juvenile Sabine's, Franklin's, Laughing, and Heermann's Gulls have substantially brown upperparts, and none of these have any of the whitish spot-

ting or barring so evident on the folded wings of our subject bird. Juvenile Ring-billed Gull needs to be considered, as freshly fledged individuals are rather brown overall. Such a sharply marked, black-tipped, pink-based bill, coupled with dark body plumage, would be a most unusual condition for that species. Quite importantly, a juvenile Ring-billed Gull would lack the uniformly spotted appearance on the upperwing coverts of our bird. There would be a contrast between pale-fringed, dark-centred median coverts and greyer greater coverts. Any barring present would be found on the inner greater coverts, diminishing on the outers, those next to the belly. Much the same can be said of juvenile Mew Gull, which also would possess a strikingly petite bill, lacking the bright pink base shown on this bird.

We are left with a still sizable list of candidates, those being Yellow-footed, Western, Glaucous-winged, Lesser Black-backed, Great Black-backed, Thayer's, California, and Herring Gulls. We will focus on combinations of bill structure and colour to promptly discount the first six species. They all have bills which are more or less solid black up to the end of the first calendar year. The markedly two-toned bill on our bird also is much too slender and lacks the bulbous distal portion shown by the three exclusively western species and Great Black-backed Gull.

We are now left with only two species to consider. Herring Gull is abundant in Ontario and is highly variable in appearance. The resident population of southern birds, in various stages of first pre-basic molt, are joined in late fall by fresh, dark, northern juveniles. California Gull has appeared annually in Ontario, usually in late fall and winter, since the early 1990s. Most records are from the Niagara River, and nearly all of them pertain to birds in definitive basic plumage. Juvenile and first basic plumages are almost unknown in Ontario, with no photographic records existing, to my knowledge. Thus, a Great Lakes observer, encountering a bird resembling our quiz bird, is presented not only with an identification dilemma, but with a significant rarity to document.

Noting the bill pattern and structure, along with the round-headed, long-winged "jizz", many readers already will have identified our bird as a California Gull. However, caution must be exercised. An occasional Herring Gull, in its first calendar year, will exhibit an essentially identical bill pattern, including the "hook-back" of black towards the tip of the lower mandible. There is at least one well documented case of a runt first year Herring Gull in the literature, showing a small bill, head, and physique, including an attenuated rear end (Buckley 1998). The general pattern on the wing coverts is so

similar in the two species that this is a shaky separating feature. Leg colour is of no value either, as both species will show pink legs in the first year. How do we know that we are not dealing with a somewhat aberrant Herring Gull here?

Two characters, evident in the photo, are determinative. One strongly suggestive feature is the white subterminal patch on the tertials. To me, this white area occupies a greater amount of the tertial, extending toward the base. In fresh juvenile Herring Gull, it appears as more of a subterminal bar, not covering as much of the feather, and the tertial has two clearly separated white spots on the outer edge. The other trait shown in the photo involves the scapulars, and is quite diagnostic. A number of fresh first basic scapulars have emerged just above the inner lesser coverts. Their pattern consists of a pale greyish feather centre, a very thin dark shaft streak, along with a thin, dark subterminal line, and a narrow whitish fringe. This character, which has only recently been depicted in the literature (National Geographic Society 1999), is rather akin to the upperpart pattern possessed by a quite unrelated species, juvenile Red Knot. First basic scapulars in Herring Gull are somewhat variable in appearance, largely due to the effects of wear. They consist of a dark basal "anchor", the distal portion of the feather whitish with a thin dark shaft streak, thin dark subterminal bar and white tip. With wear, the tips of many scapulars become a whitish patch, ahead of a dark base. This pattern differs from that shown by our quiz bird.

For an excellent photograph showing the first basic plumage of California Gull, see Lethaby and Bangma (1998). A fresh juvenile California Gull, still retaining a largely all-dark bill, is shown standing and in flight in Bain and Shanahan (1998).

This **California Gull**, in first prebasic molt, was photographed in Gibsons, British Columbia, on 19 September 1998, by Glenn Coady.

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