

THE
BRODIE
CLUB



ROYAL ONTARIO
MUSEUM OF ZOOLOGY

THE 1009TH MEETING OF THE BRODIE CLUB

The 1009th meeting of The Brodie Club was held on Feb. 20, 2007 at the Ramsay Wright Zoology Laboratories of the University of Toronto.

Chairman: William Rapley
Secretary: Oliver Bertin

There were 21 members and seven guests.
Kathryn Falls, guest of Ann Falls,
Sharon Hick, guest of Jock McAndrews
Paul Harpley, guest of Bill Rapley
James Tasker, guest of Ron Tasker
Dierdre Tomlinson, guest of David Tomlinson
Brenda Gibson, guest of John Sparling
Peggy Haist, guest of Oliver Bertin

NEW BUSINESS:

Marc Johnson, a recent PhD graduate and The Brodie Club's youngest member, has won a two-year post-doc at Duke University in North Carolina. He will study co-evolution between insects and evening primrose.

Ed Addison introduced Ontario Nature's on-line newsletter. It can be found at www.ontarionature.org/resources/nnnews.html.

Bruce Falls announced that James Fullard of UofT's Mississauga campus will speak on the sensory ecology of bats and insects at the next meeting, on March 20. ROM archaeologist Peter Storck will take us back to the Ice-Age palaeo-Indians in April, while May is still open.

SPEAKER:

The speaker was David Tomlinson, a long-time Brodie Club member, landscaper and owner of Merlin's Garden, in Aurora. He spoke on:

Selecting, Designing, Managing and Monitoring Urban Wildlife Areas

To introduce his talk, Tomlinson mentioned the categories in which he places birds:

- 1) Resident and regular breeding summers visitors
- 2) Hustlers — birds that extending their range;
- 3) Lost or stupid birds like the Guillemot on the Spanish River. This is the least important group from an ecological viewpoint but the group that fascinates many bird watchers.

The first group has always been my main interest from the days when I identified my first bird, a Blue Tit, at the age of 12, up to the present day. Several birds that were common when I was young around Didsbury, the urbanized village in Manchester, England where I was born, were Spotted Flycatchers, Yellow Wagtail and Lapwing are now no longer breeding. As a teenager in the early 50s, I kept a record of all the nests I found (over 200 a year) around the village. A local vicar in the early 1900s also kept a record of birds he saw in the village. These, together with current records constitute an accurate record of the bird population changes in the village during the past 100 years. Some birds, like the Long-tailed Tit and Lesser Whitethroat, are new breeders, but these are the exception. Far more breeding species have been lost or greatly reduced, many due to land-use changes when the water meadows were turned into a garbage dump, then re-instated to create a country park.

When I left school at 14, I became a gardener. My last job in England before emigrating to Canada in 1973 was as a landscape architect at Milton Keynes New City, a planned city in the distant commuting zone about one hour northeast of London. It had a forward-looking natural history club whose members were carrying out a detailed population study of plants, birds, mammals and moths in a 30-acre block of old coppiced woodland. My main interest was bird populations, and these were recorded using the Common Bird Census method developed by the British Trust of Ornithology. The Wren proved to be the commonest bird with just under a pair to an acre. The secretive Hawfinch was the most difficult to plot. Two pairs of Nightingales regularly nested in the wood, but only one was successful.

Milton Keynes was very forward looking and one of my projects was the design and landscaping of a dry storm-water pond, at that time an innovative idea to control flooding. Following discussions with the chief engineer and architect, they agreed to deepen the pond so that it would be permanently wet, and plant it with common reed (*Phragmites*), to be transplanted from a local gravel pit that was to be tipped with surplus subsoil. The aim was to form an extensive reed bed that would provide new habitat for Reed Warblers that were to be displaced from the gravel pit. Where wildlife is concerned, Ontario storm water ponds are often poorly designed. Many are population sinks for Red-winged Blackbirds, due to the high nest predation in the narrow band of cattail along the edges. They do, however, provide valuable habitat for amphibians, particularly green frogs and American toads, dragonflies and other aquatic insects.

On emigrating to Canada, I used the survey techniques learned in the U.K. and carried out two Common Bird Censuses in 1975 of a local 30-acre sugar bush (Shepherd's Bush) near Aurora, Ont., and a newly created Provincially Important Wetland (Mackenzie Marsh). At that time, Red-headed Woodpecker, Barred Owl, Red-shouldered Hawk and Yellow-billed Cuckoo all nested in the bush, but not any longer. The marsh was rich in water birds, including seven pairs of Coot, Moorhen, Virginia and Sora Rail. Oddly, very few Goldfinches or Mourning Doves bred on both sites.

Soon after completing these surveys, I did little birdwatching for the next 20 years while I built our garden, Merlin's Hollow. During this period, I designed several nature-related projects, including Fletcher Wildlife Park at the Experimental Farm in Ottawa for the Ottawa Field Naturalists. This started at six acres and eventually covered 18 acres. This project included elements of woodland, shelter belts, woodland edge, old field and wetland. Part of the site was infested with Strangling Dogvine (*Cyanchum nigrum*), and they were advised to eradicate this plant at the first opportunity using Roundup. They didn't want to use chemicals, a bad mistake as the whole 18 acres is now dominated by this alien plant. It is vital to be able to use herbicides and pesticides in natural areas, if pernicious plants and insects are to be controlled. Due to the high cost of labour, the vegetation in many U.K. nature reserves has to be controlled in this way.

During this period, particularly in the late summer, I occasionally bird-watched along a series of three ponds along a shallow valley between Bayview Ave. and Leslie St. in Aurora. These ponds, together with the surrounding area of mature woodland, conifer plantations, wetland and grassland, were particularly rich in wildlife. In the late 1990s, the Town Council changed the planning designation of this block of land from rural to residential, and this resulted in many development applications to build on the west side of the ponds.

By now, I had collected a considerable amount of data on the wildlife in the area, and had presented a proposal to the Aurora Town Council in 1998 to create a Community Wildlife Park around the ponds that was unanimously approved by Council. Soon after, the provincial government designated the area as a Provincially Significant Wetland. The provincial policy on wetlands recommend a 120-metre buffer zone be provided between wetlands and development unless it can be proved that a narrower zone would provide adequate protection. The developers proposed a 10-metre buffer zone. Many objections followed, including those raised by Harry Lumsden and Ed Addison. Eventually it was reluctantly increased to 35 metres. This increase was totally inadequate and I challenged the developers through the Ontario Municipal Board to produce the scientific evidence to support their 35-metre zone. They failed to do this, arguing that it would be adequate in their opinion.

To gather evidence for the hearing, I re-surveyed the vegetation and birds in the Mackenzie Marsh which, since my survey in 1975, had been built around with a buffer zone of 30 metres. The result of the survey was dramatic. Virtually all the more unusual grassland, woodland and wetland bird species no longer nested, and many others had declined. But the more common urban birds had increased.

By 1975, the bird pairs included: Coot 7; Moorhen 10; Virginia Rail 6; Sora Rail 2; Black Duck 1; Blue-winged Teal 4; Green Heron 1. Not a single pair from this group was still nesting in 2000.

Grassland birds showed similar declines: Kestrel, Bobolink, Meadowlark, Killdeer, Plover and Rough-winged Swallow, all failed to nest in 2000.

However, many woodland-edge birds increased dramatically, in pairs:

Cardinal	2 to 4	Robin	11 to 26
Yellow Warbler	9 to 20	Song Sparrow	18 to 26
Goldfinch	7 to 12	Mourning Dove	4 to 16

This information, along with many scientific papers supporting my position, had no effect on the developer-friendly adjudicator appointed by Michael Harris. His first comment to me on presenting my scientific papers was: "You don't expect me to read these do you?" Predictably, his decision did not recommend that the buffer zone should be extended.

This motivated me to find out just what happens to bird populations as development gradually encroaches into wetland, grassland and woodland habitat, and what effect it has on the population in the so-called protected area.

For the past six years, I have surveyed the area annually, and have systematically recorded the number of breeding-bird territories, also noting frog population based on calls, all mammals I have seen, together with other wildlife. Interestingly, I have not recorded a single grey squirrel in the wooded area during the past three year, maybe because of a resident pair of Great Horned Owls or a lack of bird feeders.

The first species to be lost was the Meadowlark — three pairs nested in 2001. The ploughing of the grassland on the east side a month or two after the OMB decision resulted in the loss of two pair. One pair remained in 2003, but this was also lost as more grassland was ploughed on the east side to produce more arable land. The result was no breeding Meadowlark in 2006. Bobolink have shown a similar decline as grassland was destroyed and development slowly encroached on the west side. Savannah Sparrow show the same trend, but Song Sparrow were very different.

Meadowlark	2001 – 3 pair	2003 – 1 pair	2006 – 0 pair
Bobolink	2001 – 8 males	2003 – 6 males	2006 – 3 males
Savannah Sparrow	2001 – 26 males	2003 – 22 males	2006 – 18 males
Song Sparrow	2001 – 12 males	2003 – 53 males	2006 – 47 males

Was the increase in the Song Sparrow because displaced birds were being squeezed into the valley or because the ploughed grassland became an area of old-field herbaceous providing better habitat? By 2006, virtually all the breeding birds from all the surrounding land on the west side appeared to have been squeezed into the protected area.

Over the first three-year period, the number of breeding bird pairs in the valley gradually increased, followed by a levelling out during the last two years. The number of breeding pairs by year was:

2001 – 229 2002 – 312 2003 – 321
2004 – 393 2005 – 365 2006 – 361

It will be interesting to see how these trends develop. Last year, topsoil was stripped up to the edge of the buffer zone on the east side and house construction should start in full view of the wetlands.

It is still the Town of Aurora's intention to create a wildlife part in this valley, hopefully with the co-operation of Ducks Unlimited, who were given a gift of more than 50 acres in the centre of the proposed wildlife park. Recently, I produced a master plan for the park based on the principle adopted in the U.K. for the design of nature reserves. At the OMB hearing, one of my arguments was that where birds are concerned, it is not the extent of the buffer zones that is of prime concern, but visual disturbance by humans and domestic animals in gardens visible from the adjoining wetlands. Birds, in my experience, will not return to these nests when humans or dogs are visible to the off-nest bird. This principle is well-understood in the U.K. and parts of Europe where access to nature reserves where many species breed is encouraged but, by careful berming and screening, visitors cannot be seen by the wildlife.

Using these principles, I have now produced a revised Master Plan for the Wildlife Park that will enable access along screened trails, while allowing visitors to view the wildlife from tower blinds without disturbing the birds. The revised plan also links the wildlife park with surrounding woodlots and creeks, and provides for a traffic-free trail through the park and surrounding areas. Following discussions, this proposal should go before our new Town Council in the near future.

An important aspect of the plan is to carefully manage the habitats and monitor the effects that management has on wildlife populations. This will be achieved by continuing the annual Common Bird Census, frog counts and moth trapping, and by developing a constant-effort bird-banding scheme.

As well as providing wildlife parks in the urban areas of Ontario, it is equally important to assist South American conservation groups to establish parks in their countries. We need to bear in mind that almost three-quarters of our summer visitors spend most of the year trying to survive in ever-decreasing areas of tropical grassland and woodland.

QUESTIONS:

- Coots and other marsh birds moved elsewhere because they don't like to be disturbed by humans and dogs on the skyline.
- Falls noted that there used to be lots of dragonflies in the Don Valley Brickyards, north of the Bloor St. Viaduct. They suddenly disappeared following the introduction of goldfish into the ponds. Tomlinson added that frogs breed only in shallow water where fish can't get to them.
- Bertin said he visited Milton Keynes in the early 1980s, 10 years after Tomlinson laid the park out. Local residents were very proud of their nature reserves. Hundreds would visit on Sunday afternoons for a walk in the woods.

- Curry said he expected the bird population in the Aurora marshes to collapse as it is squeezed by the increasing human population.
- Tomlinson said buckthorn, an invasive species, is an important source of food for local birds because it tends to fruit early and hold its fruit through the winter, providing a source of food for Cedar Waxwings and other birds when native species are unavailable. Domestic service berries peak in late summer, while other native species end to fruit in the fall.
- Tomlinson suggests that some invasive species be encouraged. We have destroyed many of our native species and the habitat in which they grew, and now we must preserve the best of the domestic and exotic plants that we have left.

The speaker was thanked by Sparling.

NOTES & OBSERVATIONS:

- Jock McAndrews said he was walking with his dog on fresh snow at Codrington, Ont., on Feb. 10, 2007 when he came across fresh tracks of two animals that were a bit smaller than his dog. Unlike his dog, which places its feet laterally, these animals were placing their feet more or less in line. Sometimes one animal followed the other and sometimes it would run beside. He suggested he was trailing a pair of consorting foxes.
- McAndrews: "Although my knowledge of wild birds is rudimentary, I have always been impressed by how well preened they appear to be. I was surprised by a colleague who cited Darwin's *Origin of Species* on how Charles was able to germinate many seeds from the mud taken from a duck's foot. Upon checking the Origin, I found he had conflated two passages. Indeed, Charles did germinate seeds from mud, but the mud was from a marsh, and yes, he did worry about how ducks might transport seed by the mud on their feet, but he cited no observation. Ken Abraham came up with a publication about how ducks that had been shot in a New Jersey marsh were shown to have marsh seeds on their feathers but no seeds on dirty feet. It was interesting that one of the seeds was from wild rice. I have always wondered how wild rice migrated because I doubted that a viable seed of such a thin-coated species could survive a duck's gut. Now, I know the seed could travel on an unpreened duck."
- Falls noted a strange bird in his backyard. It resembled a House Finch with a bar across its large bill, that was reminiscent of an Evening Grosbeak's. The bird was the size of a house sparrow and was associating with them in a cedar hedge. He wondered it was a hybrid.
- John Sparling showed some photographs of a variety of birds taken while on a recent trip to Trinidad and Tobago. They included Barred Antshrike, Green Honey-creeper, Carib Grackle, Tufted Coquette hummingbird, Red-billed Tropicbird with young in down, Grassland Yellow Finch, Palm Tanager and White-lined Tanager.
- Glenda Slessor noted that it is nearly hummingbird season, adding that they arrive in April. She mentioned the Ontario Hummingbird Project, a group which is trying to understand the life cycle of the Ontario Hummingbird. They can be reached at www.Ontariohummingbirds.ca.
- The Hamilton Naturalist Club had invited Glenn Olsen to speak at its next meeting, on March 19. But unfortunately his trip to Long Point was postponed because of the ice in Lake Erie. Olsen is a wildlife veterinarian with USGS in Patuxent, Maryland, and president of the West

Coast Working Group. He was to speak on the status of the Whooping Crane and the work that is being done to reintroduce them into the wild. Details can be found at www.hamiltonnature.org/birds/birdstudygroup.htm.

- Ed Addison found the remains of a cottontail rabbit in his garden in Aurora, probably post-fox. He later noticed a red fox pulling a dead squirrel out of the snow, where it had apparently been stored for later consumption. The fox was also seen sitting under the bird feeder for 20 minutes at a time watching the birds.
- Harpley has seen lots of Bald Eagles in Lake Simcoe's Cook's Bay, a few more each year as they move north. Ravens are also coming as far south as Pefferlaw, south of Lake Simcoe, where he sees them all year.
- Jean Iron saw 11 "Kumlien's" Iceland Gulls (*Larus glaucooides kumlieni*) of all ages floating on ice floes at Ashbridge's Bay on the Toronto waterfront. She also saw an adult Thayer's Gull (*L. thayeri*) among them. Kumlien's Gull (grey wingtips) is a variable hybrid population between Iceland Gull (white wingtips) and Thayer's Gull (black wingtips). Kumlien's Gull is listed as a subspecies of the Iceland Gull by the American Ornithologists' Union Check-list (1957), but she said it's really a hybrid.
- David Tomlinson has seen coyotes carrying cats and little white dogs in Shepherd's Bush, in Aurora.
- Bill Rapley has seen bald eagles wintering near the Rouge River, for the first time since 1981, when they observed a Golden Eagle and two Bald Eagles. Bald Eagles appear to be coming back very strongly in southern Ontario, in the Kawarthas, the Bruce Peninsula and the Balsam Lake area, where he has seen 30 or so.
- Rapley has just returned from the West Coast where he took part in a Spotted Owl program. There are only 17 of the birds left in Canada, and only three nests, of which only two are functioning. There is talk of a captive breeding program similar to one that has been tried in Oregon.
- Bob Curry (from February) mentioned that Christmas counts along the shores of Lakes Ontario and Erie in the extreme south recorded as many species as ever, but that numbers were well down, presumably due to the mild early winter. It would appear that birds are still farther north and inland on open waters, without deep snow to drive them south.
- Curry said the literature (*Birds of North America* species accounts) indicates that Black-backed Woodpeckers forage for wood-boring beetles on standing dead trees, usually one or two years after they have been burned, and that they feed nearer to the ground on the lower parts of these trees. American Three-toed Woodpeckers seek bark beetles. They are not as dependent on burns, and tend to feed nearer to the tops of dead and still-living trees. Curry's experience in Algonquin Park this winter somewhat contradicted this. Observers are noting American Three-toed Woodpeckers on fallen dead trees and Black-backed Woodpeckers on standing trees. It may be that the observations on which the literature is based pertain to observations on the breeding grounds and that during irruptions, such as is the case this year, other feeding strategies are employed.

The meeting adjourned at 9:08 p.m.

NEXT MEETING:

Prof. James Fullard of UofT's Mississauga campus will speak at the next meeting, at 7:30 p.m. on March 20 in Room 432 of the Ramsay Wright Zoological Laboratories. His topic will be "*The Sensory Ecology of Bats and Insects.*"

A Forest Saved

By Yorke Edwards
Our Western Correspondent

At a third up the west coast of Vancouver Island, there is a town named Tofino, which is entered by just one road from the south. It is a town by the sea, not far from Long Beach, its summer attraction. North of the town is a huge rain forest by the sea that covers about a quarter of the island. Its trees are big and old, and few people go into it. There are Large mammals in it, black-tail deers, cougars, wolves and bears that mostly are black, but some are brown.

The B.C. government was once persuaded by a U.S.A. company wanting to take away trees from the huge forest just by Tofino. Big logs on big trucks were soon going through the village, but at the same time, many Vancouver Island people began arriving to stay in a small bit of forest by the road a mile or two from town. They soon put up tents and made small fires for cooking, while at the same time the people were stopping the trucks with logs, day and night, by putting a line of five or six people, standing in a line across the road. Trucks stopped and they stayed there. For weeks, the people were stopping trucks, while families kept coming and going. When food was needed, they drove to the town of Ucluelet, not far south. All summer, the trucks with logs were stopped while the stopping people kept coming in, then going home after a short helping.

Later, about 800 people were put in jail. The 44 people that had been on the road stopping trucks were put in jail for 60 days and were fined from \$1,500 to \$3,000. A second and much larger group were put in jail for 21 days and each one was fined \$500. They wanted the forest to be saved and it was not much damaged. In fact they may have won because there is now a scatter of new parks all north of Tofino, some in the big forest, others on many islands. One patch of forest is not far from Alaska.

The Clayoquot First Nation people saw that their forest valley was being wrecked. There were trucks beside the river, damaging the river's shores, killing the spawning salmon. They were cutting down trees, destroying the First Nation people's ancient area. The First Nation people demanded their forest and it was saved. A few years later, that area became a B.C. park.

All seven parks have old forest by the sea., all called Clayoquot Parks. Three big ones are in the main rain forest; others are on islands not far from the mainland. There can be no roads into those parks. Most of the parks are on the many big and small islands, some in the mainland forest. One is far to the north. Every one is in the rain forest.

In 2006, the big Clayoquot forest was beginning to be cut down for wood for the U.S.A. Now, we have many parks that have ancient trees. Most of the rest of the forest is waiting to be taken south. Y