



THE CARDINAL

No. 234

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Nature London

The McIlwraith Field Naturalists of London Inc.

"To Preserve and Enjoy Nature"



**150 YEARS
NATURE LONDON CELEBRATES**



Scenes from the party



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Membership categories are Regular (individual or household) \$30 and Student (full-time) \$10. Nature London members receive *The Cardinal* as a benefit of membership.

To become a member, send a cheque or money order (payable to Nature London) to Ann Day, Unit 35 – 5 Cadeau Terrace, London, Ontario N6K 4H9. Please include your name, address, postal code, telephone number, and e-mail address (last two items optional).

Views expressed in *The Cardinal* are not necessarily those of Nature London or the editors.

The Cardinal welcomes articles, notes, records, illustrations, and photographs of **local and regional natural history and conservation**. Most articles printed contain fewer than 3000 words, but longer submissions will be considered. Ideas, suggestions, and constructive criticisms are also welcome. All contributions are reviewed by the editorial committee.

Deadlines are December 31 (for February issue), February 28 (for April issue), June 30 (for August issue), and September 30 (for November issue). Please feel free to contact the editors in advance regarding proposed submissions. All material should be sent to

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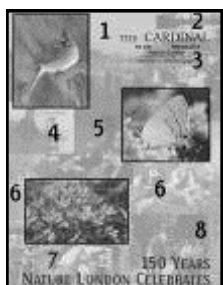
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BEAR WITH US . . .

The Cardinal is celebrating the 150th by bringing you colour photo montages on the front cover and opposite.

The downside of the montages is that you have to bear with lengthy captions.



150th Anniversary Cover

Background: To give a sense of time passing, which seems appropriate for an anniversary equal to that of the Charlottetown Conference of 1864, we have pulled older photos (1 to 7; most photographers unknown) from Nature London's archives. At the **top left (1)** a group of teachers learn about Saunders Pond in 1925. **Top right (2)** shows another water body of significance to Nature London, Redmond's Pond at Sifton Bog, in 1959. **Below the pond (3)**, W.E. Saunders relaxes with Mel Dale in the early part of the last century. **Below the cardinal (4)**, a young Frances Girling is spotting with a telescope in 1937, possibly at Rondeau (photo by Bill Girling). To the **right and below (5)** is William Saunders and family in Ottawa in the late 1800s (see also page 38.) **Below left and right (6)** are two parts of a photo taken during the 1936 Federation of Ontario Naturalists conference, held at another place of significance to Nature London, Wonnacotts' farm. At the **bottom left (7)** of the page, is a 1950s club outing to Hawk Cliff at Port Stanley. At the **bottom right (8)**, Mary Lord's photo shows a leader and participants on the 2012 club trip to Mount Pleasant Cemetery, a place with important ties to club founder William Saunders (see page 11).

Foreground: Colour photos highlight the major interests of Nature London's early incarnations (for more on the club's first 25 years, see page 40). The top photo, which we hope needs no identification, was taken by Gerard Pas and gives a nod to the ornithological section and later the McIlwraith Ornithological Club. Paying homage to the Entomological Society, the origin of our club, the centre

colour photo by Stan Caveney shows a Grey Hairstreak. At the bottom, the early botany section is recognized by Cathy Quinlan's photo of Butterfly Weed (Orange Milkweed).

Opposite: Scenes from the party

Our regular January meeting was a "kickoff" to get the anniversary year off to a rousing start. Kudos to the 150th Anniversary Committee for all their hard work putting on a successful gala. These photos were taken that night.

Top Left, from left – Bill Maddeford, Rick Martin and Pete Read examine Pete's *Birds of Ontario* by Thomas McIlwraith (c. 1894), while photographer Rob Rodger looks for subjects. (Photo by Jim Moorhead.)

Top Right – All dressed up with some place to go are (from left) Maureen Ryan, Dr Peter Bird, Winifred Wake, David Wake, Pat Tripp and Leslie Rockwell. (Photo by Jim Moorhead.)

The Cake – Before the lesson about division. (Photo by Mary Lord.)

The Cardinal flew in for a command performance. (Photo by Mary Lord.)

Right of Cardinal – Ready for the field of a few years ago, Norm Corrin enjoys the talks. (Photo by Mary Lord.)

Below Cake – Après gâteau are Maureen Ryan (left), Judy Shaw, Pat Tripp, Nathan Garber, Cathy Quinlan and Doug Bocking. (Photo by Jim Moorhead.)

Middle Left – Ahead of Jack Lorimer, Winnie and Dave Wake await their turn at the podium. (Photo by Gail McNeil.)

Middle Centre – Sue Read, oops, Mrs Peter Read, directing the evening's program. (Photo by Dave Wake.)

Middle Right – Dr Peter Bird (aka Daisy McCallum) in fine plumage. (Photo by Rob Rodger.)

Bottom Left – Barbara Bain enjoying the evening. (Photo by Jim Bristow.)

Bottom Centre – John Russell enjoying his cup. (Photo by Gail McNeil.)

Bottom Right – Mr and Mrs Peter Read reflecting on a successful kickoff. (Photo by Rob Rodger.)

Many thanks to all the photographers.

BACKGROUND PHOTOS FROM THE COVER



At the top left of the cover is this group of teachers gathered to learn about Saunders Pond in 1925.

(All photos are from the Nature London archives unless otherwise indicated.)



This photo from the *London Free Press* shows another water body of significance to Nature London, Redmond's Pond at Sifton Bog, in 1959. The bog was known as Byron Bog at that time.

Below Redmond's pond, W.E. Saunders relaxes with Mel Dale in the early part of the last century.

Below, a young Frances Girling is spotting with a telescope in 1937, possibly at Rondeau (photo by Bill Girling).





Above: On the cover, two parts of this photo were used. It was taken during the 1936 Federation of Ontario Naturalists conference, held at another place of significance to Nature London, Wonnacotts' farm.



William Saunders and his wife Sarah, their son Fred, and probably their daughter Annie, on the steps of the family home at the Experimental Farm in Ottawa.



Club outing to Hawk Cliff: on left, Jim and Edith Leach, both holding binoculars, with Florence (Tommy) Cummings in between. Gord Cummings (with pipe), is leaning against the car (probably of '52 to '54 vintage).

WINTER OF THE GREAT WHITE OWL

Pete Read

So Many Owls. I know of no other year in which we have had so many Snowy Owls in Middlesex County. We have had irruptions in some years, but nothing like this. Irruption is the term used in biology for describing a sudden increase in an animal population in a region. I have been keeping records for Middlesex since 1983, and birding the area since the early 1970s, and neither I nor any birder I know in Middlesex remembers a winter with so many owls.

In the Middlesex bird records I noted that Snowy Owls were not reported every year. Lately, however, there have been yearly sightings of modest numbers in particular areas. Some of these areas are the London landfill, fields near poultry operations such as those near Strathroy, and horse-breeding areas such as those near Lucan. We assume the owls are eating mostly rodents, which would be readily found in such areas. We don't know how the owls pick fields on which to winter. As many owls sighted over the years have been immature, the reason for their presence is probably not related to repeat migration to favoured spots. They just seem to know a good area when they find it.

In a few recent years we had what we thought were good numbers of these birds: 1993 with at least six, 2003 with perhaps five or more, 2006 with at least four, and many years further in the past with at least six reported.

The last big irruption happened in the winter of 2011/2012. At least six sites were involved, including the perennially good areas near Strathroy, Lucan, and the London dump on Manning Drive. There may have been more than 10 birds. As more people became interested in finding owls, we had better coverage, probably resulting in increased success. In the winter of 2012/2013 the traditional spots were active to a degree. One wonders if we overlooked some owls by concentrating on the traditional sites. Would a greater sweep of Middlesex have produced higher numbers in 2011/2012, until this year the Big Year for Snowies?

I was not expecting another large owl irruption for a while, as such events tend to be cyclically tied to the owl's biology. But this invasion is different in that it involves many more sightings and many more birds, and perhaps it happened for different reasons than previous supposed cyclic events.

The numbers recorded this time are, to a certain extent, a by-product of more effort. About 70 people have submit-

ted data to this point (mid-January). Perhaps we have more than 10 owls in the county every year and we just don't look hard enough. However, a few of our local birders cover much of the county on raptor searches each winter. Simply put, more owls are being reported this year.

One of the first clues to the higher numbers was the results of the two Christmas Bird Counts (CBCs) held in Middlesex (see page 30). The London (December 14) and Strathroy (December 23) CBCs turned up new records of five and four respectively; the sightings were far enough apart to represent nine different birds. We have not usually had Snowy Owls on these counts for years, if not decades. I

looked at statistics for these counts: the amount of effort recorded as number of participants and party hours. They were more or less the same each year as for both counts this year, which suggests similar effort looking for raptors. So the record numbers of Snowy Owls on our CBCs could only be the result of more owls being there to find.

How Many Owls? A look at the statistics I have gathered not only will confirm your expectation of a large irruption, but will show you that, compared to previous years, the scale of this irruption is astounding. I

now have almost 200 sightings reported by 72 observers from November 30 to January 10. Sightings were submitted to our Middlesex, Elgin and Oxford Listserv, sent to me personally, or were on eBird.

On a chart, I listed the sightings in order of date, gave each date a colour, and then mapped the colour and sighting number on maps of Middlesex County. You can see clearly from these maps a number of interesting things.

First, there are clusters of multiple sightings. These clusters are: the London Dump (more than 20 sightings), east of the dump on Old Victoria Road (about 16), east of the dump on Scotland Drive (about 20), Southdale Road between Colonel Talbot and Wonderland roads (about six), near Tempo at Highways 4 and 401 (about 16), Seed and School roads between Cuddy and Mullifarry drives north-west of Strathroy (almost 30), Hyde Park Road from the Thames River up to Fourteen Mile Road (about 13), Adelaide Street north of Egremont Drive to Ilderton Road (about nine), south of Melbourne in southwest Middlesex (about 6), and the Lucan area (about 20). There are other scattered locations throughout the county; therefore owl sightings were not completely localized. Reports came from more than just the usual areas.



Snowy Owl photographed by Gene Lobb.

By looking at the sightings plotted on the maps, I could see that the number of owl locations, which are at least two kilometres apart, is 76. Each location could represent at least one owl.

Of course, not all of the sightings or even locations represent different owls. Many sightings from the same location or relatively close locations could be of the same bird. Sometimes a single bird was seen multiple times on the same day. Often people found an owl when they saw someone else watching one.

The clustered sighting dates show that some owls have been in the same areas since early December and are likely on wintering territories, or at least the locations in which they are found have ample food to support them over time. Therefore, many of the sightings at these multiple-sighting locations are likely repeated viewings of the same territorial birds. But we do not know how many owls might actually be using the same territory.

To help figure out how many owls are involved in the clusters of sightings, we might speculate on the size of territory needed for food and on how tolerant owls are to nearby owls. To study those factors completely, a scientific study would have to be devised. However, using the data we have, we can make some conjectures.

We have to look at the timing of sightings as well. Perhaps some owls arrived, found other owls already on territory and moved farther south, or usurped an area from ones that were there. On December 25, for instance, Lucas Foerster found 10 owls near the dump, with five in the same view. Others who tried their luck found no more than four in the same area, so perhaps some moved on.

The clustered sighting areas seem to coincide with road boundaries to an extent, perhaps indicating that different field crops might be better than others for enticing owls. Many areas are blocks surrounded by roads. Most blocks are about one or two kilometres on each side, so at least two to four square kilometres might be a good size for a territory. Some clusters are near an intersection, perhaps showing that owls range up and down a road covering several blocks. Some fields could have an abundance of food and support many owls, as long as they tolerate each other. Conversely, a field with limited resources might result in owls being protective of their resources or even the departure of a wintering owl. It is difficult to determine abundance without knowing how big a territory might be and how many owls will tolerate each other at close quarters.

There is, however, something that is more definitive for determining the populations at those clustered sighting locations. This criterion is the most important one: multiple birds sighted by one observer in one area. If, for example, three birds were seen in the same field at once we know there must be at least three, even if all other sightings at that location were of only one owl. Of course what is not taken into account is any flow of birds in and out of the location.

On the chart that I used to try to estimate the number of owls, I weighted each sighting using simple criteria based on proximity, duration, and multiple sightings.

Distance between sightings is of some importance in establishing how many birds are present. If a sighting is far away from another sighting, and so very likely from a different wintering ground, the weighted value should reflect that distance, up to a point. I weighted each sighting loca-

tion by giving it a value from one to five, for distances up to five or more kilometres from another sighting location. It is certainly possible that a bird moved from that spot and was recounted in another area at a later date. But, if no one looked for the bird again, or it was in terrain that was difficult to search, e.g., rolling hills, it may not have been found again, leaving me with one date.

Another criterion I used was whether or not a bird was sighted again in the same general region on succeeding dates. This would establish whether the area was supporting at least one wintering bird. No matter how many single sightings there were, they would realistically represent only one owl. I gave one point for each sighting within a kilometre, up to maximum of five.

Finally, if an observer reported sightings of different owls in a specific area such as the dump, this could help solidify the actual number of birds in the area. Again, this would not account for owls coming and going in the area. I gave such a multiple sighting a weighted value of five, to show how important this factor was.

Here is an example, from one of the Seed and School road locations, of how I used these weighted values to tabulate how many owls were in a location with a cluster of sightings. Overall, there were about 16 sightings around the intersections of Seed Road and Egremont Drive (former Highway 22) and School Road and Egremont. Most of the sightings were of single birds, and given that a territory might encompass a whole block, and these two blocks share a road, only one owl might have been represented. So, on the chart, adding the values for distance and number of dates, I would have a result of one owl overall. However, a few times, two owls were seen, one on each road, within minutes. Rather than suspect that one bird might be going the 1.5 or so kilometres between roads, each location received the five bonus points for multiple sightings. Now we can see that there are at least two owls involved. Luckily this occurred more than once in some of the areas with really clustered sightings, which helped to determine more definitively how many owls we had in the county.

After assigning such criteria to each sighting and location, I found that the minimum number of owls involved in our irruption was likely 50. That takes into account all of the birds found in different locations that were involved in multiple and definitive sightings. Taking into account all sightings that met any criteria at all, there may have been as many as 99 Snowy Owls in our county.

Of course either total seems unbelievably large, but some regions of North America, particularly on the east coast, had even more owls clustered in some areas. From the internet I learned that the irruption is a widespread phenomenon. Most reports are from the Great Lakes area, the northern USA, and especially the east coast. For example, Bruce McTavish and friends found 301 Snowy Owls along the roads in southeast Newfoundland. At Cape Race alone they had more than 200.

Why This Year? Snowy Owl irruptions are thought to be due to cyclical predator/prey population changes. That is, when prey such as lemmings are common and in high numbers, predators are more successful, both in the breeding season and in winter survival in their home territories. Conversely, when prey is scarce, the birds do not breed well, and they must vacate during the winter. However,

another compelling reason for an irruption might be that the breeding success of the owls results in a movement away, especially by the young. Whether young are driven out by adults after nesting to protect winter food resources or whether innate behaviour causes dispersal, the result is that young move away.

Bruce McTavish found that from Greenland all across our Arctic, the only major region with successful breeding by Snowy Owls last summer was Northern Québec. Many of the owls that have invaded Southern Ontario as well as the rest of eastern North America may be a result of that successful nesting. On the eBird website you can see a map of Snowy Owl sightings across Canada.

Many of the birds sighted in our area are heavily marked with dark speckles, suggesting that they are immature. Older birds, even females, are whiter. The high proportion of first-winter owls in this invasion suggests that breeding success and subsequent dispersal of young might prove to be the main reason for the southward movements. If the reason was a food shortage, perhaps we would see more adult males and females among the many owls.

Keep Looking, Responsibly. Whatever the reason for this impressive irruption, we have a great opportunity to enjoy Snowy Owls. In many years we enjoy their company until mid-March. However, let us be sensible in our actions as we observe them. Proper etiquette for wildlife viewing should be followed, especially for owls.

We should not trespass on private property nor stress

the owls by approaching too closely for photos. Baiting with store-bought mice, to try to get owls to come closer, is a potential problem. It can endanger owls in two ways. These mice are not a natural food source, and we don't know how they may affect an owl's health. The baiting may encourage owls to come too close to roadways. Collisions with cars, and even planes, have already been reported. (For more on birding etiquette, see the February 2011 *Cardinal*.)

I will continue to monitor the owl sightings and see how each new one lines up with the locations of presumed territories. It will be interesting to see how long the owls stick around in this amazing Year of the Snowies!

My thanks to the many observers for reporting sightings across Middlesex County. More than ever before we have winter coverage of our area. But there are several areas in the county that are not well surveyed, including the north and west sections and especially the farthest reaches from London. I would also like information on other species of wintering birds. Let's keep up the efforts until the owls have left to get a more complete picture of the dynamics of this special avian event.

To look at the various charts and maps, or to pass on an owl sighting, please contact me at psread@xplornet.com or 519-472-2887.

(Pete Read is Nature London's Bird Records Secretary [see page 23], the London Christmas Bird Count compiler [page 30], and this year Snowy Owl statistician extraordinaire.)



Drawings by John Nicholson.

ON THE CHRISTMAS BIRD COUNT 2013

Pete Read is a wonderful chap. The long-serving Board member of McIlwraith Field Naturalists / Nature London and perennial coordinator of the London Christmas Bird Count, Pete is the avuncular face of birding in the City. So when our team incurred Pete's opprobrium at the 2012 CBC there was much internal recrimination.

We had started the 2012 count with such high hopes. Anything seemed possible – Cathy McCrae was adding new birds to the count list on an almost annual basis. Who knew what we might turn up: Burrowing Owl, Ivory Woodpecker? In the end what we turned up was a paltry 13 species of the usual suspects!

At the potluck dinner I drew the short straw and was

sent to give Pete the bad news. With some trepidation I handed over our list. He studied it . . . briefly, and with apparent confusion. "Only 13?" he blurted out in amazement. "Bit quiet out there," I replied weakly. "Did you pish?" he inquired. "Ah, um," I mumbled, "We thought that was prohibited." I slunk back to our table and let the team know that we had been found wanting! Truth is we hadn't pished or struggled valiantly to penetrate brambles, shrubs and undergrowth as apparently expected. We had ambled along the paths casually conversing about the upcoming holiday and, all in all, had a thoroughly pleasant stroll around Westminster Ponds. Obviously, we had not approached the task with sufficient gravity. Worst of all,

we had disappointed Pete! We resolved to make amends in 2013. Surely we could pish up a Lazuli Bunting if only we tried harder.

December 2013 arrived faster than expected. (That's because Einstein was wrong: time is not relative. It not only appears to pass more quickly each year, it actually is accelerating. But that's a story for another day.) We had abandoned Westminster Ponds – the site of our ignominy – and convinced Pete to let us try a new beat: the Thames River and Medway Creek north of the University Bridge. This time we prepared. Team members were dispatched to reconnoitre the route and we set about reviewing call notes. Not merely nuthatches and woodpeckers. We aspired to greatness. Hadn't Dave Martin and Linda Wladarski seen a Parasitic Jaeger in their yard just a few weeks earlier? Surely such a trophy bird might still be lurking about the

Thames.

The morning of the count proved to be a tad colder than expected. We bundled up in snow pants and ski jackets that emitted a variety of squeaks, which sounded disconcertingly like a distressed jaeger. While confusing, this cacophony did cause us to stop and listen with a productive regularity. We pished with abandon. Our binoculars scanned every nook and cranny of the Thames and Medway. Alas, no jaeger but we did turn up a somewhat more respectable 19 species. Not sure if this met Pete's expectations. Frankly, none of our team risked handing him our list. This year we submitted online! Still, can't wait until 2014. I am sure we will find that jaeger.

Dick O'Reilly, Frances Keogh, Suzanne Frank,
Marg Nicholson and John Nicholson

MY EXPERIENCE AT ONTARIO NATURE'S YOUTH SUMMIT 2013

On the weekend of September 20 to 22, 2013, I was given the wonderful opportunity to attend the 2013 Youth Summit for Biodiversity & Green Solutions, thanks very much to Nature London! The whole weekend was an enjoyable experience of learning, friend-making and gaining further appreciation for nature in general. The youth summit was put on at Geneva Park in Orillia, and was organized by Ontario Nature. Everything was wonderful, and I would like to share some of the many enjoyable activities I was able to participate in throughout the weekend.

The first night spent at the Youth Summit, staff from Scales Nature Park gave an interesting and fun talk and introduction to some of the reptiles that they care for. These reptiles included a variety of turtles (Snapping, etc.) and snakes (such as Milk Snakes). The fun part of this was the opportunity afterwards for interaction, where everyone was able to take turns holding and discovering the many reptiles. There was even the opportunity to try moving an extremely large Snapping Turtle, as practice for moving one off the road!

On Saturday night, I had the opportunity to participate in an "Owl Prowl" and "Night Hike". We walked throughout the park in search of owls, particularly Screech-Owls, in hopes of catching just a glimpse. Although we were not able to locate one of these stealthy creatures, it was beautiful to enjoy the brisk air and a very large and bright moon glowing as a lantern for our path.

Taking full advantage of these opportunities and of Lake Couchiching, I decided to wake up early and participate in activities both days; first the Polar Bear swim, then canoeing on Sunday morning. Through these activities I met many great people, and I had a wonderful conversation with my fellow canoeists during the peaceful morning on the lake.

Many workshops were offered, and each participant was able to participate in five throughout the weekend. My favourites of those I participated in were the photography workshop, and the "Slimes and Scales" workshop. After learning about a variety of turtles, snakes and frogs, we went into the forest and marshy field in hopes of finding salamanders, and to catch and release the abundant number of Leopard Frogs.

Also, one of the great highlights of the weekend was watching the film documentary *Sharkwater*, which was very interesting and empowering regarding society's misunderstanding of sharks, the dangers they face and their role in general, while showing efforts in the conservation of these creatures. In addition, on Sunday, one of our final activities was a visit and speech from Rob Stewart, the filmmaker of the documentary (and another: *Revolution*), who came to give us advice, speak about sharks and the film, and answer our questions. It was a very inspiring experience.

Overall, I want to say that I thoroughly enjoyed and appreciated the opportunity to participate in the Ontario Nature Youth Summit 2013. Thank you very much Nature London for funding my trip, and allowing me this wonderful experience!

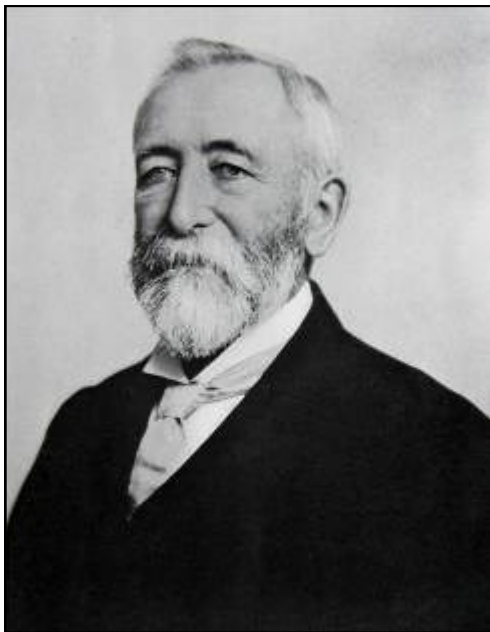
Amanda Summers



Bald-faced Hornet nest (above) and a Coral Fungus. (Photos by Amanda Summers at photography workshop.)



Each morning, we had the opportunity to wake up early to either participate in a nature hike, a Polar Bear swim, or canoeing for a limited number of people.



William Saunders in later life. "He was before all things a lover of nature, and his passion found an outlet in the study of insects and plants." (Photo from the Archival and Special Collections of the University of Guelph Library.)

time? William Saunders did so in a life of dazzling accomplishments. He was born in 1836, son of an English shoemaker, and the family emigrated to London, Canada when he was 12. He became an apprentice to James Salter, a druggist, a few years later. When he was 19 he opened his own drugstore on Dundas Street and that was the start of his very successful career.

William Saunders became dissatisfied with the drugs he could obtain for his store and started preparing his own medicinal extracts, the first person in Canada to do so. This led him to manufacture drugs which he sold to wholesale drug companies. He exhibited his drugs in various places including the World's Fair in Paris, 1886. He joined the American Pharmaceutical Association when he was 24 years old, became chair of the committee on the drug market in 1876, and in 1877 president of the Association. He was an original member of the Canadian Pharmaceutical Society which was formed in 1867, and after the Ontario College of Pharmacy Act in 1871, he helped found the Ontario College of Pharmacy (he was 35 years old). He served as its vice president for eight years, three years as president and then was on the Board of Examiners for five years. During this time he gave scholarly addresses on botanical drugs of the new world. When the new Western University of London Ontario (now Western University) opened in 1881, he taught *Materia Medica* in the medical faculty for the first two years. And his business success led to his election as a Director of the Huron and Erie Mortgage Corporation in 1876. He was president of the company from 1879 to 1887 and retired from the board in 1910.

The drug store, the pharmaceuticals – these were his career and he became very successful and highly respected. However, he earned even greater success and international distinction from what he considered his hobbies: an interest in the natural world and in horticulture. He collected a

WILLIAM SAUNDERS

FOUNDING FATHER OF NATURE LONDON

Roslyn Moorhead



Businessman, chemist, distinguished naturalist, agricultural researcher of note, academic lecturer, first director of Canadian Experimental Farms, president or director of several professional societies and founding member of two, distinguished award recipient: can you believe that a self-educated pioneer had accomplished all this in his life-

time? William Saunders did so in a life of dazzling accomplishments. He was born in 1836, son of an English shoemaker, and the family emigrated to London, Canada when he was 12. He became an apprentice to James Salter, a druggist, a few years later. When he was 19 he opened his own drugstore on Dundas Street and that was the start of his very successful career.

large number of natural specimens, particularly insects. His passion for entomology led him to co-found, along with Rev. C.J. Bethune, the Entomological Society of Canada in 1863 (see page 40). The following year, Saunders founded the London Branch of the ESC, the genesis of Nature London today. As important an event as that was for Nature London it was a minor item on the list of Saunders' achievements. He was president of the parent society in 1864/1865 and 1876 to 1887 and served as an officer for about 20 years. From 1873 to 1886 he was editor of the Society's internationally recognized scientific journal, *The Canadian Entomologist*, and contributed at least one paper in every issue after its inception until he resigned as editor in 1886. At the request of the Canadian government, the Society exhibited an insect collection at the Centennial Exhibition of 1876 in Philadelphia, and Saunders' collection of Lepidoptera formed a significant part of the display.

Gardening was a joy, and Saunders planted a huge number of fruit trees and bushes, as well as some flowers and native species, at first in his own garden, then on a 70-acre farm he acquired on Dundas Street just east of Pottersburg Creek and later on a six-acre plot he bought at what is now part of Mount Pleasant Cemetery. He was an early proponent of planting native trees for horticultural purposes. He developed a strong interest in plant diseases, drugs and insects and wrote many scientific papers carefully reporting his observations and findings. In 1870 (he was 34) the Ontario government asked him to investigate Colorado Potato Beetle which was becoming a major pest, and he wrote a thorough report detailing localities affected so far and steps taken in the US to deal with it.

Just as a lack of good drugs led him to start manufacturing his own, so too a scarcity of information prompted Saunders to publish *Insects Injurious to Fruits* (1883), which for decades served as the standard reference book on the topic. Similarly, the difficulty of finding good seeds for



William Saunders and his wife Sarah, their son Fred, and probably their daughter Annie, on the steps of the family home at the Experimental Farm in Ottawa. (Photo from Nature London archives.)

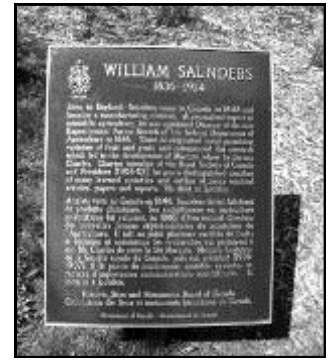
the Canadian climate led to his work on hybridizing plants. He reported the results of his pioneering work on gooseberry, blackberry, grape, raspberry and pear hybrids to the Ontario Fruit Growers' Association in 1872. In 1875 he received praise for his red and black currant, raspberry and gooseberry hybrids. He developed two new roses, and in 1885 exhibited 29 varieties of grapes and nine seedlings all produced by himself. He became a director of the Ontario Fruit Growers' Association in 1868 and the president in 1882. In 1885 the Association met in London and attention was drawn to the large number of trees which had been planted in the previous decade. For the first time London was referred to as the "Forest City". John Dearness wrote that "... many of the trees which are found on the streets of the city and its environs [are] due to the influence of William Saunders. He was one of the makers of London."

In 1885, the Minister of Agriculture in Ottawa asked Saunders if he would investigate and report on the state of agriculture and agricultural research in Canada. He submitted his report in early 1886 recommending the establishment of Agricultural Research Stations. Parliament adopted the recommendations a few months later and Saunders was appointed Director of Experimental Farms. He tendered his resignations as president of the Ontario Fruit Growers' Association and of the Entomological Society, and as editor of *The Canadian Entomologist*, and moved his household to Ottawa that year. Sons William and Henry stayed behind to run the business. His hobby had finally become his career and for the next 25 years he established and directed the Experimental Farms System, undoubtedly the crowning achievement of his many accomplishments. In his first year he established five experimental farms from British Columbia to Nova Scotia, which were known as the Dominion Experimental Farms. Other experimental stations were subsequently established. He did pioneering work in crossing species, and became one of the outstanding agriculturalists of his time. In 1911 he retired from his position as Director.

Saunders was the recipient of many honours. Among them was an honorary LL.D degree from Queen's University

in 1896 and from the University of Toronto in 1904. He was awarded the CMG by his Majesty, King Edward VII in 1903. The first edition of the *American Men of Science* (1906) listed not only his name, but those of four of his five sons (including Will for his work in Ornithology, Oology and Botany), a notable distinction for a family and gratification indeed. Also in 1906 he was elected president of the Royal Society of Canada.

After retirement, William Saunders and his wife went on a trip to England and then returned to London, to a home at 355 Dufferin Street. He died in London in 1914 and was buried in the family plot at Mount Pleasant Cemetery. In 1936 a bronze plaque commemorating William Saunders was unveiled at the new William Saunders Building at the Central Experimental Farm in Ottawa. In London, a plaque in his memory was erected in 1952 at the site of the Saunders family home, 380 Dundas Street.



Plaque to William Saunders at Campbell Park. (Photo by Dave Wake.)

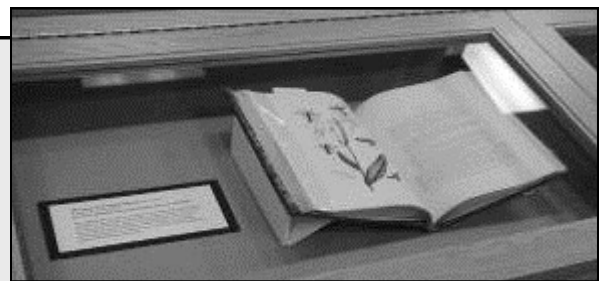
(Ros Moorhead wears many Nature London hats. She is a member of the 150th Anniversary Committee and the Cardinal Editorial Committee. See her article, written with different hats, on page 7.)

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 Stewart, I.M. 2003. Saunders, William. In *Dictionary of Canadian Biography*, vol. 14. University of Toronto / Université Laval. Accessed September 23, 2013 at www.biographi.ca/en/bio/saunders_william_14E.html.

During its 35 years in London (1871 to 1906), the library of the Entomological Society of Ontario grew steadily. Although most volumes pertained to insects, many were devoted to other aspects of natural history or to learning in general. The collection, now housed in the Archival and Special Collections of the University of Guelph Library, included many rare and old books, including these.

(Photos by Dave Wake.)



Above: *The Cabinet of Oriental Entomology*, Westwood, J.O. (London: W. Smith, 1848). John Obadiah Westwood was an English entomologist and archaeologist who left his career in law to pursue his scientific interests. This copy of his work was donated by Eleanor O. Ormerod (1828 to 1901), a prominent British entomologist, to the Entomological Society of Ontario in 1887.

Far Left: *Caroli Linnaei Faune Svecica*, Linnaeus, Carl Von (Lugduni Batavorum: C. Wishoff Et G.J. Wishoff, 1746).

Left: *Systema Naturae*, Linnaeus, Carl Von, 9th ed. (Lugduni Batavorum: T. Haak, 1756).

These are two of the original publications by Carl Linnaeus (1707 to 1778) that were part of the original ESO Library.





THE NATURE LONDON STORY

PART I: THE FIRST TWENTY-FIVE YEARS (1864 TO 1889)

Winifred Wake and David Wake

Tracing Nature London's history back to its roots entails a circuitous and fascinating journey. The story begins before 1864, with a remarkable young man named William Saunders, who operated a pharmacy in London (see page 38). On the side, Saunders was an accomplished botanist, entomologist and plant breeder. In 1862 Saunders and fellow insect enthusiast, the Rev. C.J.S. Bethune (then of Cobourg), teamed up to bring entomologists together in a formal organization. On April 16, 1863, they and seven others met in Toronto and founded the Entomological Society of Canada (hereafter referred to as the Society), with headquarters at the Canadian Institute in Toronto.

THE ENTOMOLOGICAL SOCIETY IN LONDON

The Early Years (1864 to 1867)

William Saunders' organizational skills and boundless energy soon resurfaced in his home city. On July 1, 1864, Saunders established the London Branch of the Entomological Society, with about a dozen members. Like Saunders, many were already proficient, self-taught entomologists. The list included John M. Denton (merchant tailor) and Edmund Baynes Reed (lawyer). Although the study of insects was the stated focus, many members also had interests and skills in other aspects of nature. Saunders, Reed and Denton were to provide many years of dedicated leadership to both the Branch and the parent Society.

In the early years, the London Branch held its monthly meetings in the homes of members. William Saunders was a regular and hospitable host. Sometime after his drugstore and living quarters were destroyed by fire in March 1864, he moved his growing family (eventually to number six children) to a large two-storey residence at 380 Dundas Street (currently the location of Campbell Park). Meetings were filled with lively discussions, and members assisted each other with identifications. At that time, the only way to accurately identify insects was by comparing them to specimens in a reference collection or to plates in the few, expensive books then available.

Members worked hard at developing both personal and Branch insect collections. Initially, the focus was primarily on Lepidoptera (butterflies and moths) and Coleoptera (beetles). The modus operandi involved catching insects

(often in nets), then transferring them to collecting jars. Dead insects were pierced by long-shanked pins and mounted on boards. Beneath each specimen a neatly printed label gave its name, location, date and collector. For easy transfer to show-and-tell sessions at meetings, pinned

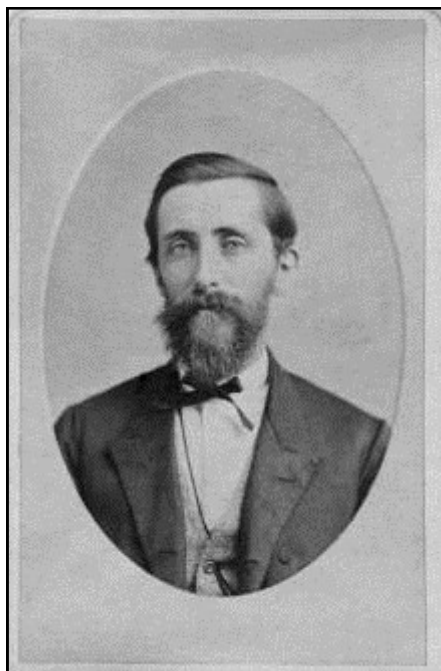
specimens were placed in cigar boxes, whose bottoms had been lined with sheet cork. Permanent collections were placed in cases made of wood and glass.

The Branch facilitated collecting efforts by buying large quantities of pins, setting boards, entomological cork and other supplies and reselling these to members at cost (e.g., 1000 pins for \$1). Among the exhibitors at the Provincial Agricultural Exhibition held in London in September 1865 were Reed (18 cases of native insects and six of English insects) and Saunders, still rebuilding his collection after the fire (15 cases of native insects). Over the years, these and other Branch members, including Denton and G.M. Innes (minister) were frequent prize winners at fairs and made it a policy to donate their earnings to the club.

There was much interest in studying the habits and life cycles of insects. In this pursuit, William Saunders played a prominent role. A report of a regular monthly meeting is illustrative. "Mr. Saunders exhibited specimens of the Tree Cricket, *Aecanthus niveus*, with examples of their destructive work on raspberry canes, and the

young wood of plum trees; this insect deposits its large eggs in a row in the centre of the twig or cane, and thus weakens it so as to cause it to break off from the weight of foliage in early spring . . ."

Weather permitting, field excursions were held on Monday mornings during the summer. The railway right-of-way, overgrown in weeds and shrubbery, was a favourite destination. Foliage was beaten with a stick to dislodge insects into an opened umbrella. The catch would be carefully examined and selected insects placed in jars. Saunders frequently brought home larvae plus accompanying food plants. Rising early each morning, he made notes on the progress of his charges. Attuned to the thinking of the times, Saunders was interested in assigning status to insects, categorizing them as either beneficial or injurious to humans and their crops. To do so, he amassed evidence of their behaviours and needs during all stages of their life cycles and in all seasons. He watched carefully for insects



William Saunders (1836 to 1914). As a young man he was so thin and spare of frame that others believed he would not live a long life. (Photo from the Archival and Special Collections of the University of Guelph Library.)

that were susceptible to disease or parasitism or predation. He examined the contents of birds' stomachs to study the role birds played in controlling noxious insects. His observations formed the basis of hundreds of scientific papers.

The City Hall Years (1867 to 1872)

In the spring of 1867, the Branch moved to permanent quarters. This seems to have been part of an ambitious plan to substantially raise the profile of the club in the city and to attract new members. City Council agreed to provide space, rent free, on the top floor of City Hall on Richmond Street. A flurry of activity ensued as the rooms were fitted up. There were expenditures for lamps, coal oil, a screen stand, whitewashing and wall-papering. Furnishings included a table, chairs, cabinet, book case and books. Rooms at City Hall provided a central location where the Branch's insect collection and library could be built up and a common space where members could meet. The new location also enabled the Branch to showcase its activities by opening its doors to the public from time to time.

As the Branch was sorting out details of the move, its best-documented foray into ownership of optical equipment was also getting underway. A "lantern" (oxyhydrogen microscope and dissolving-view apparatus) was imported from England at a cost of \$195 – approximately \$5000 in today's money! The purchase was financed through advances from seven members, principally Saunders, Denton and Reed. The decision to assume such a large debt appears to have been a calculated one: the lantern was expected to pay for itself by means of public entertainments at which it was used to popularize the study of entomology. The microscope part was illuminated by burning limestone under a current of oxyhydrogen gas (a rather flammable arrangement!). The associated dissolving-view apparatus allowed a slide or object such as an insect to be projected on the wall. A prime use for such equipment was wowing an audience with displays of hugely magnified insects.

Fortunately, Saunders was experienced in handling explosion-prone chemicals.

In April and May 1867 the lantern was featured at several highly successful public open house exhibitions at City Hall. The apparatus projected slides of scenery, entomological illustrations and even some comic views (as well as the projectionist's fingers). There were also exhibits (presumably of insects) with commentary by Saunders, Denton, Reed and others. And, to ensure there was entertainment for every interest, there was a string band, a pianist and a show of gaseous lights! On one evening alone, attendance was estimated at 300. Membership in the Branch shot up to more than 50.

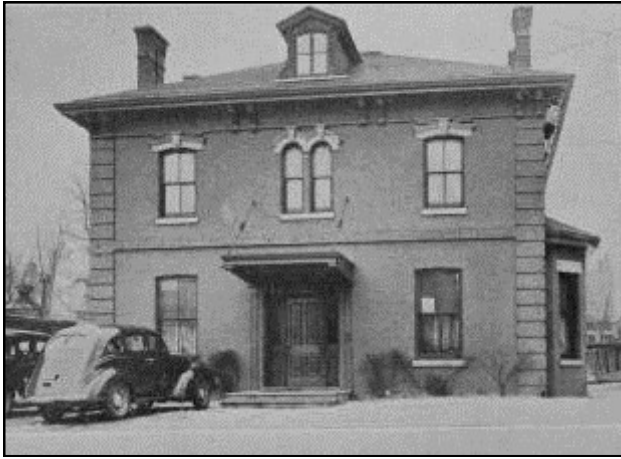
The parent Society in Toronto reacted with a sharply worded reprimand. It most decidedly did not approve of attracting new members through public entertainments of this sort. Without a sanctioned means of raising funds to pay for itself, the lantern became a white elephant. It was, however, later used intermittently for more modest educational efforts in other venues, including churches. The apparatus proved expensive to maintain and two years after purchase was put up for sale. There were no immediate takers, but finally, in February 1872, the Branch received \$100 for the lantern, and all outstanding loans were repaid.

More rewarding efforts at community outreach included popular talks about insects, delivered by Denton, who carried a large case of specimens with him. Saunders and Reed also visited Hellmuth College to judge collections of native insects made by students during summer vacation. The winning boy's entry contained 140 species in seven families, some species being new to the adjudicators!

A highlight each year for London entomologists was the local club's annual picnic. In 1868 the group also hosted the parent Society's annual meeting (which often took place in London). Five members from Toronto joined nine London members for the meeting, then stayed over to attend the Branch picnic the next day. "The following morn-



Field Day of the Entomological Society, east of London, July 8, 1868. **Standing**, left to right: Mr Symonds, Charles Chapman, John M. Denton, Rev. C.J.S. Bethune, William Saunders (with son, William E. Saunders in front), Dr J.H. Sangster, son of Dr J.H. Sangster, Professor Henry Croft, Rev. R.H. Starr; **sitting** on middle of fence: William Osler; **lying** on fence at right: Edmund Baynes Reed; **seated** on ground: Isaac Waterman and Mr Symonds. The Sangsters, Croft, Osler and Bethune were from the Toronto area; the others are from London. The photograph was taken by J.H. Griffiths, a member of the London Branch. (Photo from the Archival and Special Collections of the University of Guelph Library.)



380 Dundas Street, home of William Saunders and his family from the mid-1860s until 1886, was the venue for many meetings of the London Branch and of the Entomological Society of Canada/Ontario. The insect collection destined for the Philadelphia Exhibition of 1876 was prepared here. Over the years many internationally renowned entomologists were hospitably entertained. In the backyard, William studied the natural history of countless insect species and carried out experiments on hybridization of fruit trees. The site is now occupied by Campbell Park.
(Photo from *The Canadian Entomologist*, 1939.)

ing, Wednesday, July 8, the members met at 8:30, and drove a few miles into the country for an entomological field day and picnic. On arriving at the selected place all betook themselves to the woods, fields and river side, and spent a few hours in the capture of insects of various orders; many rare and interesting specimens were taken . . . Two photographs of the members, in a group, were taken by Mr. Griffiths, as a memento of this . . . pleasant gathering . . . The next day, Thursday, a few of the members made an excursion to 'The Ponds,' a few miles south of London, and captured a number of very interesting specimens, including several *Polyommatus epixanthe* [Bog Copper] . . . The members from a distance all expressed themselves highly delighted with the unbounded hospitality and kindness of their London friends."

From its founding in 1864, the London Branch stood out as the strongest and most active of the divisions of the Entomological Society of Canada. For a few years before and after 1870, membership hovered around 30. Local members were well represented on the Council (executive committee) of the parent Society and had a strong voice in decisions made. Meanwhile, the Society operated from its home base in Toronto, at first publishing its proceedings in the Canadian Institute's *Canadian Journal of Industry, Science and Art*. In 1864 a preliminary list of Canadian Lepidoptera (144 species) was compiled, followed by an 1865 update that added 350 more species. The year 1867 saw the publication of the first list of Coleoptera (prepared by Saunders), which covered 55 families, 432 genera and 1231 species. Members of the Society were committed to the study of both scientific and economic entomology. The latter was a relatively new field, which pertained to insect pests that had an economic impact on farms and forests.

At the urging of Bethune and Saunders, the Society decided to produce a monthly periodical, *The Canadian*

Entomologist. Bethune, who then lived in Erindale (20 miles west of Toronto), was appointed editor. The first number, eight pages in length, came off the press on August 1, 1868. Thus was established the oldest entomological journal on the continent. In 1871, the production of *The Canadian Entomologist* was transferred to London. Bethune continued as editor assisted by Saunders, Reed and Denton, allowing the journal to expand.

News of *The Canadian Entomologist* spread rapidly. By 1871 it had taken its place as a respected international journal; many leading academic and professional entomologists from across the United States regularly contributed to its pages. During the 1870s, subscriptions flowed in to London from the far corners of the United States, Europe and the world.

In 1870, in recognition of the importance of entomology to agriculture, the Society received a grant of \$400 from the Ontario government. The funding was used to produce a report on insects noxious to agriculture, to expand *The Canadian Entomologist* to 240 pages per year, and to enhance both publications with a greater number of wood cuts. Prepared on behalf of the Society by Bethune, Reed and Saunders, the 64-page "Annual Report" on insects injurious to field and fruit crops for 1870 came out in early 1871. It consisted of three papers – on apple, grape and plum. So thorough was the account and so well written at a popular level that a printing of 3000 copies was speedily exhausted.

The upshot of the great success of the first "Annual Report" was that, in early 1871, Hon. John Carling, Commissioner of Agriculture for Ontario (and member of the legislature representing London) had legislation passed to incorporate the Society. By law, the Society's name became the Entomological Society of Ontario, with the Society to receive a yearly grant of \$500. In return, the Society had to continue to publish *The Canadian Entomologist* and to submit an "Annual Report" on insects injurious to agriculture, together with suggested remedies. Despite the name change, the Society continued to operate as a national organization. Following incorporation of the parent, the London Branch altered its bylaws to conform with the Society's new constitution.

When the Colorado Potato Beetle first appeared in Ontario, the Entomological Society was asked to investigate. Saunders and Reed visited the affected area (near Amherstburg), assessed the situation, studied the beetle's life cycle and experimented with various methods of control. Within weeks they submitted a report to the government. Saunders, a practising chemist familiar with arsenic, found Paris Green to be effective. The government was so impressed with the detailed information and practical utility of the report that the Society was firmly established as the government's go-to agency whenever farmers needed timely advice on how to control any new insect pest. In 1874 the Society's annual grant was increased to \$750.

Over the years, the "Annual Reports" of the Society continued to be so valuable to the agricultural community that the government distributed them widely throughout the province, where they were eagerly read. The reports contained basic life history information on insects injurious to agricultural crops, including fruit trees. They also offered practical advice on methods of suppressing pests of current

concern, whether by rotating crops, destroying egg masses during the winter, spraying foliage with Paris Green in the spring, or applying a mixture of soap and washing soda to tree bark.

In the early 1870s, the Society underwent an unprecedented surge in activity as it fulfilled its obligations to the government. Although Bethune in Port Hope continued to play a major role, the Society's operations came to be concentrated in London, where they were capably executed by a small number of members of the local Branch. In May 1871 renovations were undertaken to improve the London Branch's quarters at City Hall. Also in that year the parent Society's extensive insect collection was transferred to London. But with most major undertakings of the parent Society being handled in London, the Branch's rooms at City Hall were no longer adequate.

The Years at 216 Dundas Street (1872 to 1880)

On July 1, 1872, the parent Society officially transferred its headquarters from Toronto to London. At this time, Society membership stood at 300, about half the members residing in Canada and half in the United States, plus a few in England. Most members were *de facto* subscribers to *The Canadian Entomologist* rather than active workers. To accommodate the final phase of establishing the Society's operations in London, the London Branch arranged for the rental of larger rooms to house Branch and parent in combined premises. These "more accessible and convenient apartments" were located on the second floor of 216 Dundas Street, above Brown and Morris Hardware. The new quarters were a bright and cheerful space, with south- and east-facing windows and a side entrance on Clarence. "Members and visitors will find in these rooms the cabinets and library of the Society, and every facility for the comparison and study of specimens." Library books, insect collections and associated furniture all had to be integrated. Branch members looked after curatorial duties.

Over the years, the Society's holdings gradually grew, by means of purchase, donation and bequest. During the 1870s, the Society earmarked funds of as much as \$100 annually to buy books, with a committee of London members empowered to make selections. While most acquisitions related to insects, wide-ranging interests in natural history are illustrated by samples of ores, books on birds and plants, and even the *Encyclopaedia Britannica*. In 1872, the Society was the recipient of a bequest of "a large cabinet of 15 drawers and a good useful microscope."

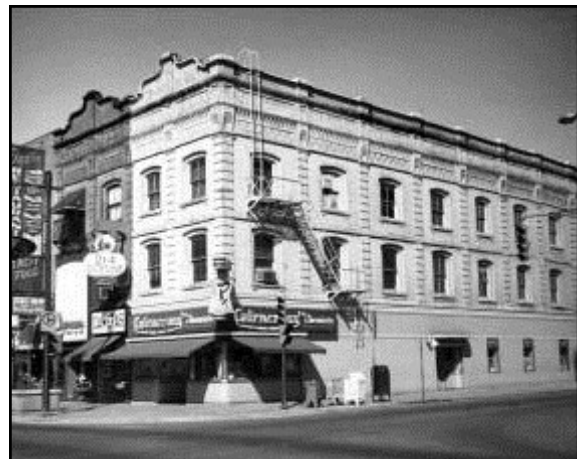
Insect collections were augmented when opportunities arose. In early 1874 donations of numerous Coleoptera specimens from New York and several boxes of European insects from the British Museum were received. Over the decades the Society's rooms in London welcomed many youngsters and adults who dropped in with a question about an insect or to spend time viewing the collections. One teenager, T.H. Hill, was so well mentored that he was inspired to develop a collection of 20 cases of local insects.

In 1873, Bethune resigned as editor of *The Canadian Entomologist* and was replaced by Saunders. Henceforth, all aspects of editing, publishing and distributing the journal were consolidated in London. Under Saunders' watch, *The Canadian Entomologist* maintained its position in the

foremost ranks of scientific journals of its type. Included in it were papers on both scientific and practical (economic) entomology, with an emphasis on the latter. Yet, perhaps mindful of grumblings from some quarters that the journal was too scientific, Saunders introduced monthly instalments of "Entomology for Beginners". Saunders himself was a prolific writer. From Volume 1, Number 1 in 1868 until he resigned as editor in 1886, he wrote at least one article in every issue for a cumulative total of hundreds of papers. A perusal of *The Canadian Entomologist* reveals papers were submitted for publication from far and wide. In reference to Volume 9 (1877), Saunders, ever the scientist, commented with measured pride: "The contributors [45] . . . included the names of nearly every Entomologist of note on the continent. During the year we have published two handsome lithographic plates, one on wood-boring beetles, illustrating eight species; the other, which is printed in colours, exhibits the full-grown larva of that rare and interesting moth, *Samia Columbia*." By 1876, the print run for the publication was 600.

During the 1870s and 1880s, the Society's "Annual Reports" to the Legislature of Ontario also originated in London. Although interested parties elsewhere in the province contributed information and, to some extent papers, many of the authors and papers hailed from London. Saunders and Bethune were invariably the primary writers, but contributions also came from Londoners such as Reed and Joseph Williams (chemist). While the editorial content and illustrations were assembled in London, the actual printing was done in Toronto, under the auspices of the Legislative Assembly. In 1874, thanks to the government grant, authors were paid \$2 per page (up from \$1 the previous year).

Seeing to the journal and the "Annual Report" to the government was time consuming. Shortly after the Society's headquarters and these two undertakings became established in London, the number of members in the local Branch dropped off. Perhaps not surprisingly, the names of some of the "missing" members appear among the hardest workers for the parent Society. In all likelihood, local entomologists lacked sufficient time and energy to contribute



216 Dundas Street, where rooms on the second floor served as home of the London Branch and its parent Society from 1872 to 1880. During this period the ground floor was occupied by Brown and Morris hardware.

(Photo taken in 1960s by W.W. Judd, from Nature London archives.)

significantly to both Branch and parent, and some chose to focus on just one. Amazingly, Saunders, despite enormous involvement with the Society (president from 1876 to 1887, editor from 1873 to 1886, and a primary overseer of the “Annual Report” of Injurious Insects from 1870 onward), was the most active and faithful of all Branch members during the 1870s.

After the arrival of the parent Society in London in 1872, the Branch continued to annually elect an executive, which included representatives to the Council (executive committee) of the parent. In addition, several other Londoners (some of them also active in the Branch) usually occupied key positions with the Society. By this arrangement, current and former members of the London Branch, through the medium of the Council (which met locally as needed throughout the year) made the decisions that governed the day-to-day running of the parent group. The full Society Council generally met once a year at the annual general meeting, which was often held in London.

In March 1875 a request from the Dominion Parliament was passed on to the London Branch, which agreed to oversee the preparation of an exhibit on behalf of the parent Society. The task was to assemble a large collection of insects, drawn from the private collections of Society members, to represent Canada at the Centennial Exhibition in Philadelphia in 1876. The collection, which ultimately consisted of 86 glass cases, including 45 of Lepidoptera, was assembled at the home of William Saunders. During the summer of 1875 two out-of-town members of the Society stayed at the Saunders home for many weeks, working on the display by day and playing chess by night.

In 1876, John Denton described the involvement of the London Branch in assembling the exhibit: “. . . interest and zeal was especially apparent during the earlier months of the year, when the collection of the Parent Society was being prepared for exhibition at Philadelphia. Then meetings were frequently held, and labours in connection with this undertaking assiduously followed day after day, and we believe that to the efforts of the members of the London branch may be attributed a large measure of the success which has attended the preparation of this collection . . .”

The exhibit was duly shipped to Philadelphia, where it attracted rave reviews, being pronounced by those in the know as the most complete collection of North American insects ever assembled. The government of Canada later minted a special silver medal, and presented it to the parent Society. In February 1877 the Branch held an open house to allow the public to view the recently returned exhibit from Philadelphia. This proved to be a great success.

Regular Branch meetings had been suspended in 1876 while members were busy preparing the Philadelphia ex-

hibit. When it returned, there was a brief resurgence of energy. “The experiment of placing the Centennial Collection on exhibition in the rooms was so favourably received by the public, that it has been decided to take steps to the more frequent admittance of non-members, and in this way it is hoped and believed something may be done to create a wider and deeper interest in our favourite branch of science.” Despite those brave words by a member of the Branch executive, thereafter the frequency of meetings tapered off.

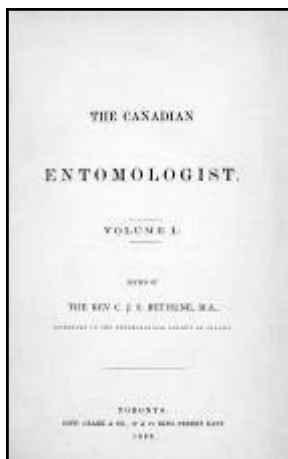
Victoria Hall at 394 Clarence Street (starting in 1880)

In 1880, the annual grant to the Society from the provincial government was raised to \$1000, and remained at that level through the decade. After eight years above the hardware store, in 1880 the parent Society requested a change, and new quarters were obtained. Members of the Branch moved Society possessions to the top floor of Victoria Hall at 394 Clarence Street, the recently opened headquarters of the Y.M.C.A. The London Branch remained there until it was disbanded, after which the parent Society occupied the rooms until 1896. Thus, in the Society’s quarters in Victoria Hall, on March 12, 1881, the Council of the parent group met to formally agree to the request by the London Branch that it be dissolved. On the surface, this would appear to be a sad occasion. It was tempered, however, by the announcement that, beginning that very evening, the Society would start holding regular meetings every month.

In suspending its operations, the London Branch merged its work and membership with that of the parent Society. A definite advantage of the demise of the Branch was the elimination of the need to keep two sets of books, elect two sets of officers, run two sets of meetings and to apportion expenses and ownership within shared premises. Whatever the actual reasons, it is certain that the move to suspend the Branch had the blessing of William Saunders, for he was both an active member of the Branch and the president of the Society.

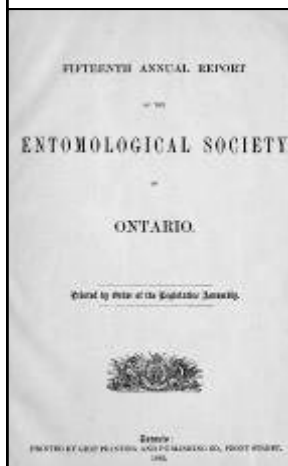
As the guiding light for both groups, Saunders ensured the transition to the model of holding regular “ordinary meetings” of the parent Society was a smooth one. It was decided to meet every second Friday evening. Interest in the Society grew and several new members signed up. Attendance increased, one evening reaching a high of ten. Donations of books and specimens were received, and a new microscope was purchased. The count of volumes in the library reached 550.

No ordinary meetings were reported during 1882 or 1883 and only two were documented in 1884. In 1882 the Federal Minister of Fisheries asked the Society to prepare a display of Canadian insects to send to the International



Above: Cover of *The Canadian Entomologist*, volume 1, published 1869 (including numbers 1 to 12, 1868-1869).

Below: Cover of the *Fifteenth Annual Report of the Entomological Society of Ontario*, 1884 (published 1885).
(Photos by Dave Wake.)



Fisheries Exhibition in London, England in 1883. Reed assembled and sent 40 cases of insects that were either injurious to fish or eaten by fish. The exhibit was awarded a very handsome silver medal. A government grant of \$200 covered costs.

In 1886 William Saunders left London to take up duties as the first director of the Dominion Experimental Farm system based in Ottawa. At that time he stepped down as President of the Society, and relinquished the editorship of *The Canadian Entomologist*. Bethune reoccupied the role of editor. Saunders, genial friend and driving force behind the London group, had never missed a Branch meeting or a regular meeting. Given the important work he was doing on many fronts, and especially with the Society, it is truly remarkable that he never wavered in his commitment to the little group of entomologists in London. Perhaps he realized that every truly great organization is underpinned by healthy grassroots that give it strength and depth. Saunders always had time for nurturing and educating others, for it was he who provided much of the content for meetings of London entomologists from the 1860s to the 1880s.

Although the Society maintained its official headquarters in London, it appears that the local members did not have the capacity to carry on regular club meetings after Saunders' departure. London members, occupying key positions on Council, continued to care for the library and collections and to run the Society's affairs. In the latter half of the decade, much of the work seems to have been carried out by Reed, Denton and W.E. Saunders, son of William Saunders.

Meetings, however, are not the only indicator of activity. For example, in 1886, at the request of the Dominion government, the Society's entire collection of Canadian insects (some 10,000 in all) was sent to the Indian and Colonial Exhibition in London, England. London entomologists assisted in preparing and shipping the exhibit.

The Society's rooms, with their well-filled cabinets of insects and well-stocked bookshelves, remained in place. Insect collections were augmented and the library grew steadily, with additions of volumes on mammals, birds and botany as well as insects. By 1889, under the care of the kindly and efficient Reed, the library contained more than 1000 volumes. In that year, the Society's rooms and collections "had frequently been opened to the public and . . . many very pleasant evenings had been spent among the microscopes, books and cabinets."

The Canadian Entomologist continued to be printed and mailed in London. The collection of electrotypes grew

over the years. Specimens in the Society's collection were the basis of engravings used to illustrate the "Annual Reports," which now relied on a greater diversity of authors than in the 1870s.

The Entomological Society, during its first 25 years, was sustained by a small but very competent and dedicated group of amateurs. Their efforts had raised its work and its reputation to professional levels, attaining international respect in scholarly and economic arenas. At the same time, the Society still accommodated in a small way those ordinary citizens who aspired to nothing more than a love of nature and insects as an abiding hobby.

As the 1880s drew to a close, big changes were in the wind for the Entomological Society. Watch the next issue of *The Cardinal* for an account of a reawakening of local organized activity of the Entomological Society in London.

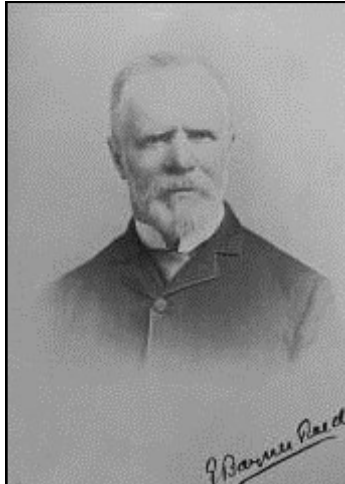
(Winifred and Dave Wake are Nature London's archivists and members of the club's 150th Anniversary Committee. They share a long-standing interest in the club's history.)

Acknowledgements: Many thanks to Pat Dewdney for editorial help in shortening a much longer earlier version of this article.

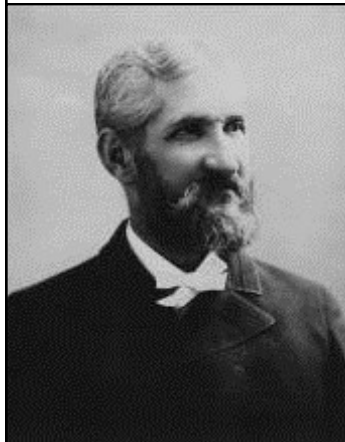
SOURCES

The number of sources in which we were able to find information pertinent to this article is truly amazing. Included are newspapers of the day, minute books and account books of the London Branch of the Entomological Society of Canada/Ontario, and minute books of the Entomological Society of Canada/Ontario. Also consulted were branch reports, council reports, financial statements, annual reports, librarian's reports, president's addresses, historical accounts, anniversary summaries, memorial tributes, etc. of the Entomological Society of Canada/Ontario contained in *The Canadian Entomologist*, the *Canadian Journal of Industry, Science and Art*, and the *Annual Report of the Entomological Society of Ontario*. Numerous miscellaneous documents and papers relating to the Entomological Society and its members have also been examined. The above material has been variously accessed in the Nature London archives, the London Room of the London Public Library, the Taylor Library

at Western University, the Archival and Special Collections of the University of Guelph Library, and online. We are indebted to W.W. Judd for his annotated minutes and account books, as well as his books on early naturalists and natural history societies, and to Elsie Pomeroy for her book on the Saunders family.



Two tireless workers in both the London Branch and the parent Entomological Society: Edmund Baynes Reed (above), a London lawyer, active until he moved to Victoria, BC in 1890, and John M. Denton, a merchant tailor, active until his death in 1896. (Reed photo from the Archival and Special Collections of the University of Guelph Library; Denton photo from the Nature London archives.)



ENGINEERING ANOTHER BIRD-FEEDING INNOVATION



Eric [Auzins] is trying to outsmart the turkeys to insure the little birds get something to eat too – those turkeys are real piggies! Anyway, he started putting feed under our old picnic table on the patio and that worked until the turkeys started going under there too. Then he put a fence around the table thinking that would stop the turkeys but still let the little birds in, but one turkey jumped on top of the table, then onto the seat and down she went and gobbled up all the seeds. So . . . he then put a strip of fencing over the top and that seems to have worked. Have a look at the “new little bird feeder”!

Karen Auzins

GIVING CREDIT . . .

When Nature London’s 150th Anniversary Committee proposed using colour in *The Cardinal* for the first time during our editorship, we wanted to include some of our favourite, brightly coloured photos from the Nature London image database, now 1000s of images strong. When our first round of selecting favourites came in at well over 100, we made some rules to get to the barely manageable group you see opposite. First the pictures had to be much better in colour than in greyscale. We wanted to emphasize biodiversity as much as possible (for example, all the terrestrial vertebrate classes are represented). Then we limited ourselves to photos taken by current Nature London members, and allowed each photographer just one picture. We also tried to balance the colours on the page.

We would like to thank all the photographers and artists who have contributed images to Nature London, not just those who are represented here. Many, many more images deserve to be seen in colour. Each of the photos opposite deserves at least half a page, but with just one colour page in 10 years for this purpose, we had to make some judicious crops to fit them all together. None of these photos looks as good as the original submitted to us but we hope that the photographers and you will agree that the effect of the montage is greater than the sum of its parts.

Have fun testing your knowledge by matching titles and photographers, listed in no particular order, with the images opposite:

Red Trillium by Stan Caveney
 Giant Swallowtail by Gary Irwin
 The Thames at Springbank Park by Jim Bristow
 Buttercup by Cathy Quinlan
 Monarch by Rose Braxton
 White-winged Crossbill by Mike Nelson
 Pond and lilies by Wayne Tingle
 Gray Treefrog by Gail McNeil
 Autumn splendour by Don Taves
 A Waxy Cap Fungus by Dave Wake
 Eared Grebe by Sue Southon
 Blackburnian Warbler by Gerard Pas
 Wood Duck by Rob Rodger
 Black and Yellow Argiope by Robin McLeod
 Variegated Fritillary chrysalis by Ann Vance

Hugh Casbourn and Betsy Baldwin, Acting Editors

. . . WHERE CREDIT IS DUE

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