

# News and Comment

## Great Canadian Field-Naturalists

As part of Canada's 150th birthday celebration, the Ottawa Field-Naturalists' Club (OFNC) is initiating the formal recognition of Canada's greatest field naturalists: individuals who made significant contributions to our knowledge of the natural history of Canada. This recognition will include:

- i) Developing a Great Canadian Field-Naturalist "Hall of Fame" on the OFNC website, and posting tributes with a description of each naturalist and a summary of his/her accomplishments;
- ii) Publishing the tribute in a special section in *The Canadian Field-Naturalist* (CFN);
- iii) Partnering with the Canadian Wildlife Federation and potentially other national conservation organizations, for dissemination through their websites, social media, and/or magazines.

### Selection Process:

The selection will be made by a sub-committee of the OFNC Publications Committee. The sub-committee will solicit and accept nominations. The call for nominations will be disseminated broadly, including through publication in CFN, posting on the OFNC website, and through the various channels of communication with partners. Nominations should consist of a few paragraphs outlining the candidate's accomplishments against the selection criteria and be sent to [editor@canadianfieldnaturalist.ca](mailto:editor@canadianfieldnaturalist.ca). Previously published Great Canadian Field-Naturalists tributes also should be reviewed for guidance. Nominations will be assessed as they are received. When a

nominee is selected, a Great Canadian Field-Naturalist tribute will be prepared, ideally by the person making the nomination. Nomination and selection will be ongoing.

### Criteria for Selection:

#### Potential Candidates:

- Deceased individuals who were Canadian citizens or long-time, including seasonally recurring, residents of Canada;
- Recognition acknowledges lifetime achievement or many years of contribution within the scientific community;
- Contributions can be in either a professional or amateur capacity.

#### Character of Contributions:

- Significant contributions to our knowledge of the natural history of Canada;
- Contributions predominantly through field biology investigations and analyses within a single (e.g., botany, entomology, or zoology) or multi-disciplinary (e.g., botany and entomology) field and, not predominantly geological, cultural/educational, conservation, or resource management in orientation;
- Activities/contributions predominantly made in Canada and at regional to national geographic scales, rather than a localized scale;
- Contributions were documented in credible literature and/or with fully curated, publicly accessible specimen collections.

OFNC PUBLICATIONS COMMITTEE

## Great Canadian Field-Naturalists: JAMES FLETCHER (28 March 1852–8 November 1908)

James Fletcher (Figure 1) was born in the hamlet of Ashe in southeastern England and privately developed considerable expertise in entomology (Lepidoptera) in this rural landscape. He received no specialized science training but graduated from Kings's School, Rochester with a well-rounded liberal education and with a particular proficiency in mathematics. He was initially employed at age 19 as an accounting clerk in England, immigrating to Canada (Montreal) in 1874, and then to Ottawa where he joined the staff of the Parliamentary Library as an accounting clerk in 1876. Under the mentorship of Parliamentary Librarian Alpheus Todd, he was also encouraged to conduct entomological research there. Fletcher was appointed Honourary Dominion Entomologist in 1884 and formally appointed as Dominion Entomologist and Botanist in 1886. He held that position until his untimely death in 1908. He is buried in Beechwood Cemetery in Ottawa, Ontario.

### Major Area(s) of Natural History Contribution

Entomology (Lepidoptera, economic entomology, taxonomy); botany (vascular plants); public education; organizational and institutional development; biodiversity documentation.

### Historical Summary

James Fletcher is credited with establishing the science of economic entomology as well as establishing the basis for plant pathology investigations in Canada. He is also notable for his establishment, in the absence of significant research resources, of a massive informational network of people engaged in agricultural activities throughout Canada. He maintained



FIGURE 1. James Fletcher with insect collecting net, Ottawa 1907. Photographer unknown; from Fletcher memorial issue, *The Ottawa Naturalist* 24(5) 1910.

correspondence with over 400 entomologists alone! Fletcher's contacts and associates included several internationally acclaimed intellectuals, including Alexander Graham Bell and evolutionist Alfred Russel Wallace.

At the same time, he was deeply involved with and promoted the study of Canadian native biodiversity for its own sake. He collected extensively across the country, ultimately donating these specimens (Figure 2) to form the foundation both for Canada's largest herbarium, the National Collection of Vascular Plants (DAO), and the largest insect collection in Canada, the Canadian National Collection of Insects (CNCI). Fletcher published extensively on native biodiversity, focusing on the natural history and taxonomy of insects and the control of agriculturally problematic species. He engaged as well in investigations on a wide variety of subjects, such as bird migration, geology, and environmental education. He



FIGURE 2. Voucher specimen of regionally rare Aquatic Beggarticks (*Bidens beckii*) collected by James Fletcher, W. H. Harrington, and H. Groh in Dows Lake, Ottawa, 7 September 1908 (DAO), likely the last plant specimen he collected. Image courtesy of Gisèle Mitrow, Agriculture and Agri Research Canada.

### Great Canadian Field-Naturalists: JOHN MACOUN (17 April 1831–18 July 1920)

John Macoun (Figure 1) was born in Northern Ireland to a farming family and immigrated with his parents and brother to Canada in 1850, to settle on a farm north of Belleville, Ontario. He had little formal education and certainly no academic training in natural sciences. Nonetheless, after brief study in 1859 at the Toronto Normal School (a teacher's college), he was accredited as an elementary school teacher and taught in several eastern Ontario communities over the following decade. During this period his botanical activities expanded from

was much in demand as a speaker and writer across Canada on such topics both in-person and through printed media.

Fletcher established innumerable first records through his personal field efforts and described a number of new insect species from that field work. A new species of dragonfly was named in honour of this work (Figure 3).



FIGURE 3. Fletcher's Dragonfly (*Williamsonia fletcheri*) perched on a field naturalist's hand, Alfred Bog, Ontario, 3 September 1984. Photo: Donald Cuddy.

His inspiration of individual field naturalists and his pivotal role in the establishment and development of regional, national, and international organizations such as the Ottawa Field-Naturalists' Club, The Entomological Society of Ontario, the Association of Economic Entomologists, and the Ottawa Horticultural Society, were equally significant contributions. Many of those organizations continue to contribute as he intended. In 1880 he served as the founding editor of the predecessor of *The Canadian Field-Naturalist*. He was also successful in enhancing the importance of investigations of Canadian natural sciences through his prominent positions and roles within influential national organizations such as the Royal Society of Canada.

All said and done, James Fletcher was likely the premier contributor amongst the group of largely self-taught resident 19th Century naturalists who pioneered the scientific investigation of Canadian biodiversity.

#### References

- Anonymous. 1909. [Fletcher Memorial Issue] *The Ottawa Naturalist* 22(10).
- Ansty, T. H. 1986. One Hundred Harvests. Research Branch, Agriculture Canada, Ottawa.
- Brunton, D. F. 2004. Origins and history of The Ottawa Field-Naturalists' Club. *Canadian Field-Naturalist* 118: 1–38. <http://doi.org/10.22621/cfn.v118i1.879>
- Brunton, D. F. 2016. James Fletcher is designated a Person of National Historic Significance. *Trail & Landscape* 50: 40–43.
- Riegert, P. W. 2000. James Fletcher, Dictionary of Canadian Biography. Accessed 31 January 2018. [http://www.biographi.ca/en/bio/fletcher\\_james\\_13E.html](http://www.biographi.ca/en/bio/fletcher_james_13E.html).

DANIEL F. BRUNTON

a casual interest into a serious passion. He largely developed his identification and remarkable field biology skills through contacting an increasingly wide circle of botanical associates in the 1860s.

In 1868 he was appointed Professor of Botany at the newly establishing Albert College in Belleville. He taught there for almost 15 years, also conducting surveys for the Geological Survey of Canada (GSC) and the Canadian Pacific Railway over several summers in the 1870s and early 1880s. Macoun



FIGURE 1. John Macoun with Geological Survey of Canada associates William Spreadborough (right) and (probably) C. H. Young (left), sorting marine specimens, Vancouver Island, British Columbia, 1908–1909. Photographer unknown.

was appointed Naturalist (Dominion Field Naturalist, in his words) to the GSC in 1882 and held that position (variously titled, including Assistant Director) until his retirement in 1911. He moved to Sidney, Vancouver Island, British Columbia for the remainder of his life. He is buried in Beechwood Cemetery in Ottawa.

**Major Area(s) of Natural History Contribution**

Botany (vascular plants, bryophytes, lichens); fungi; marine algae; ornithology; malacology; biodiversity documentation.

**Historical Summary**

While best known for his western explorations and discoveries, Macoun is the most significant collector of natural history specimens in more regions of Canada than anyone before or since his time. Perhaps dissuaded by his lack of formal scientific training or simply because of his stated preference for field work, he conducted no taxonomic investigations. Instead, he circulated duplicates of his collections widely to taxonomic authorities in the United States (there were none in Canada through most of his career) and, to a lesser degree, in Europe. Many native plants and at least one insect were named in his honour by these authorities. A number of these have stood the test of time and remain the preferred species name (Figures 2 and 3).

Macoun was an exceptionally perceptive collector with an intuitively keen eye for what was unusual or exceptional within whatever landscape he was exploring. This and the fact that his explorations were frequently conducted in primary growth (original) examples of virtually every significant non-arctic environment in Canada, resulted in the acquisition of innumer-



FIGURE 2. Macoun’s Gentian (*Gentianopsis macounii* (Holm) Iltis) Jurra Creek, Bow Valley, Alberta, 19 September 2009. Photo: D. F. Brunton.

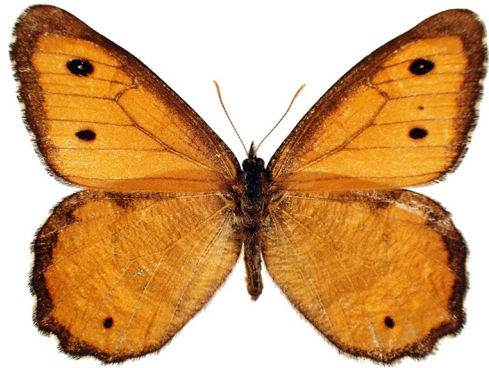


FIGURE 3. Macoun’s Arctic (*Oeneis macounii*) from Bonnhere, Algonquin Park, Nipissing District Ontario, 17 June 1972. Photo: P. M. Catling.

able exceptional specimens. A travel bursary of the Canadian Botanical Association is named for him to honour that inspirational performance.

It is almost certain that more plant species are known in Canada solely from Macoun’s collections than from the efforts of any other field naturalist in history. These include the remarkable Macoun’s Shining-moss (*Neomacounia nitida* (Lindberg) Ireland; Figures 4 and 5) an endemic southern Ontario species and genus now believed to be extinct. The total of his collections is not known but even excluding duplicates, they

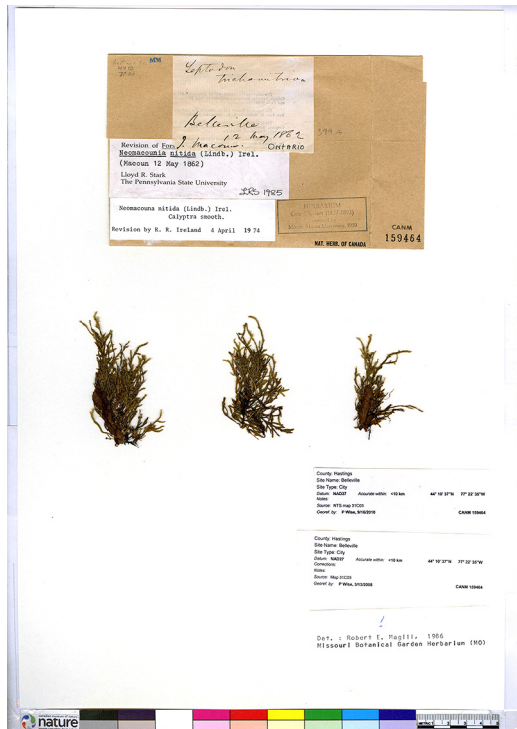


FIGURE 4. Macoun’s Shining Moss (*Neomacounia nitida* (Lindberg) Ireland), a species and genus known only from Macoun’s collections near Belleville between 1860 and 1893 and considered extinct as of November 2002 (SARA Registry 2018). Photo: Lyndsey Sharp, Canadian Museum of Nature.



FIGURE 5. Magnified image of Macoun's Shining Moss (*Neomacounia nitida* (Lindberg) Ireland). Photo: Lyndsey Sharp, Canadian Museum of Nature.

number in the tens of thousands. The Canadian Museum of Nature herbarium (CAN), now the second largest in Canada, is founded upon Macoun's massive collection of vascular and non-vascular plants. The herbarium housed over 100 000 specimens at the end of his career at the GSC.

As keen as he was on exploring and collecting native Canadian flora and fauna, he conducted virtually no field investigations outside the country. However, he was a prolific chronicler of Canadian biodiversity. His *Catalogue of Canadian Plants* was the first coast-to-coast inventory, covering all vascular and non-vascular species in a series of reports over a 20 year period. Much the same can be said of his *Catalogue of Canadian Birds* produced between 1900 and 1903, although William McIlwraith of Hamilton Ontario, Macoun's son James, and his long-time field associate William Spreadborough are likely due the major credit for the latter publication.

Macoun emphasised the practical aspects of field explorations (applied science) as opposed to pure research undertaken for its intrinsic contribution to human knowledge. He employed his field botanist insights and discoveries most famously in promoting the agricultural potential of the drylands of the Northwest Territories (today's Prairie Provinces) in a massive 1882 tome supporting the federal government's Western expansion policies and its preference for a southern route for the Canadian Pacific Railway.

Macoun was modestly involved in early efforts to generate conservation awareness. He called, for example, for protection of the extraordinary deciduous forest of southwestern Ontario in the area we know today as the Carolinian Zone. In 1893 he bemoaned that "the careless habits of the last generation" were destroying the forests of the Niagara Peninsula "so completely [that] its boasted title of the Garden of Canada would be a misnomer".

Though largely proven correct in subsequent years, his boosterism for Western development certainly exceeded what a more cautious science-based analysis would have concluded. It likely secured his appointment to his coveted position at the GSC, however, and thus established a uniquely productive career that was to last for more than 30 years. (He was less prescient in applying his field experience in parts of southern Ontario, declaring that the future of Lake Erie's Pelee Island "is not bound up in the making of wine"!).

Macoun was very physically strong and rarely ill, and many contemporaries spoke of his endurance, tirelessness, and enthusiasm as well as his remarkable memory and workaholic ways. Even with the limitations of a debilitating stroke he suffered in 1912 he continued collecting, amassing a vast collection of marine organisms during his southern Vancouver Island retirement.

John Macoun remains, simply put, the most significant collector of Canadian biodiversity ever.

## References

- CBA (Canadian Botanical Association).** 2018. John Macoun Travel Bursary. Accessed 22 February 2018. <http://www.cba-abc.ca/macoun.htm>.
- Holm, T.** 1921. John Macoun. *Botanical Gazette* 71: 236–237.
- Macoun, J.** 1882. *Manitoba and the Great North-West: The Field for Investment, the Home of the Emigrant*. The World Publishing Company, Guelph, Ontario, Canada.
- Macoun, J.** 1883–1902. *Catalogue of Canadian Plants Parts 1–7*. Dawson Brothers, Montreal, Quebec, Canada.
- Macoun, J.** 1893. Notes on the flora of the Niagara Peninsula and shores of Lake Erie. *Journal and Proceedings of the Hamilton Association* 9: 78–86.
- Macoun, J.** 1900–1903. *Catalogue of Canadian Birds Parts 1–3*. S. E. Dawson, Ottawa, Canada.
- Macoun, J.** 1979. *Autobiography of John Macoun, Canadian Explorer and Naturalist 1831–1920 (Second Edition)*. The Ottawa Field-Naturalists' Club, Ottawa, Ontario, Canada.
- SARA (Species at Risk) Registry.** 2018. Species profile, Macoun's Shining Moss. Accessed 21 February 2018. [http://sararegistry.gc.ca/species/speciesDetails\\_e.cfm?sid=731#ot18](http://sararegistry.gc.ca/species/speciesDetails_e.cfm?sid=731#ot18).
- Waiser, W. A.** 2003. Macoun, John. In *Dictionary of Canadian Biography*, Volume 14. University of Toronto/Université Laval, Ontario/Quebec, Canada. Accessed 18 February 2018. [http://www.biographi.ca/en/bio/macoun\\_john\\_14E.html](http://www.biographi.ca/en/bio/macoun_john_14E.html)

DANIEL F. BRUNTON and PAUL M. CATLING

## Upcoming Meetings and Workshops

### The Alberta Chapter of the Wildlife Society Conference

The Alberta Chapter of the Wildlife Society Conference to be held 9–11 March 2018 at the Lethbridge Lodge, Lethbridge, Alberta. The theme of the conference is: 'A Future with Renewable Energy: Implications for Wildlife Conservation with

a Special Symposium: Globalization and Invasive Species'. More information is available at <https://www.actws.ca/conference/>.

### Entomological Society of America, Eastern Branch Meeting

The 89th annual meeting of the Eastern Branch of the Entomological Society of America to be held 17–19 March 2018 at the Westin Annapolis Hotel, Annapolis, Maryland. Registra-

tion is currently open. More information is available at <http://www.entsoc.org/eastern/2018-branch-meeting>.

### Entomological Society of America, North Central Branch Meeting

The 73rd annual meeting of the North Central Branch of the Entomological Society of America to be held March 18–21 March 2018 at the Madison Marriott West Hotel, Madison,

Wisconsin. Registration is currently open. More information is available at <http://www.entsoc.org/northcentral/2018-branch-meeting>.

### Entomological Society of America, Southwestern Branch Meeting

The annual meeting of the Southwestern Branch of the Entomological Society of America to be held 25–29 March 2018 at the Hotel Albuquerque, Old Town, Albuquerque, New

Mexico. More information is available at <http://entsoc.org/event-calendar/esa-southwestern-branch-2018-meeting>.

### US Regional Association of the International Association for Landscape Ecology Annual Meeting

The annual meeting of the US Regional Association of the International Association for Landscape Ecology (US-IALE) to be held 8–12 April 2018 at the Palmer House Hilton, Chica-

go, Illinois. Registration is currently open. More information is available at <http://www.usiale.org/annual-meeting.html>.

### American Ornithology Meeting 2018

The 36th annual meeting of American Ornithology and the 2nd annual meeting of the American Ornithological Society to be held 9–14 April 2018 at the Hilton Tucson El Conquistador, Tucson, Arizona. The theme of the conference is: 'Celebrating

Connections: Birds Across Borders'. Registration is currently open. More information is available at <https://amornithmeeting2018.org/>.

### 2018 Northeast Natural History Conference

The 18th Northeast Natural History Conference to be held 13–15 April 2018 at the Hotel Burlington and Conference Center, Burlington, Vermont. Registration is currently open.

More information is available at [https://www.eaglehill.us/NENHC\\_2018/NENHC2018.shtml](https://www.eaglehill.us/NENHC_2018/NENHC2018.shtml).

### Annual Northeast Fish & Wildlife Conference

The 74th annual Northeast Fish & Wildlife Conference to be held 15–17 April 2018 at the Hilton Burlington Hotel, Burlington, Vermont. The theme of the conference is:

'Leading with Science for Conservation'. Registration is currently open. More information is available at <http://www.neafwa.org/conference.html>.

### James Fletcher Award Established

Late in 2017, inspired by the historical reflections all around us in this 150<sup>th</sup> anniversary year of Canadian Confederation, the Publications Committee of the Ottawa Field-Naturalists' Club (OFNC) established an award to acknowledge and celebrate excellent contemporary contributions to *The Canadian Field-Naturalist* (CFN) while also honouring the historic roots of the journal. The award is named in honour of OFNC founder James Fletcher (1852–1908), who was the founding editor of the CFN's earliest iteration, the *Transactions of the Ottawa Field-Naturalists' Club*, and who also served as editor of its succeeding journal, *The Ottawa Naturalist* (later, CFN), for over a decade.

The James Fletcher Award recognizes the best paper published in CFN in a particular volume, commencing with volume 130 (2016). "Best" is often a subjective and perhaps not always fair term, especially considering the diversity of research subjects and approaches reported within a typical CFN volume. Accordingly, the ultimate choice is made from a selection of up to three finalists, all deemed particularly excellent contributions in their own right.

A subcommittee of the Publications Committee recommended suitable choices to the full committee. The full Publications Committee made the final selection.

Three finalist papers were identified for the James Fletcher Award for CFN Volume 130 (2016):

**Diana Bizecki Robson, John H. Wiersema, C. Barre Hellquist, and Thomas Borsch.** Distribution and ecology of a new species of water-lily, *Nymphaea loriana* (Nymphaeaceae), in Western Canada. *Canadian Field-Naturalist* 130(1): 25–31. <https://doi.org/10.22621/cfn.v130i1.1787>;

– an extensive field investigation of the distribution and ecology of a newly described aquatic plant species endemic to the Prairie Boreal Region of Canada;

**Robert G. Forsyth, Paul Catling, Brenda Kostiuik, Sheila McKay-Kuja, and Allen Kuja.** Pre-settlement snail fauna on the Sandbanks baymouth bar, Lake Ontario, compared with nearby contemporary faunas. *Canadian Field-Naturalist* 130(2): 152–157. <https://doi.org/10.22621/cfn.v130i2.1839>

– a combination of contemporary field work and forensic lab analysis compares snail diversity detected within a deposit of 1000+ year old specimens against the current diversity at this lakeshore sand dune site;



**Peter B. Mills and Duncan J. E. Hill.** Ancient lake maxima and substrate-dependent riverine migration have defined the range of the Mudpuppy (*Necturus maculosus*) in southern Ontario following the Wisconsinan glaciation. *Canadian Field-Naturalist* 130(2): 158–163. <https://doi.org/10.22621/cfn.v130i2.1840>

– a large body of data gathered co-operatively through the Ontario Herpetological Atlas is combined with regional geographic/biogeographic information to hypothesize probable post-glacial migration routes.

The paper “Distribution and ecology of a new species of water-lily, *Nymphaea loriana* (Nymphaeaceae), in Western Canada” was selected from these finalists as the first recipient of The James Fletcher Award. It represents foundational research on a new taxonomically important species and will be referred to for decades to come.

Congratulations to authors Robson, Wiersema, Hellquist and Borsch, who have been sent personal copies of the award certificate (Figure), and to the other finalists. We are pleased to take this opportunity as well to express our appreciation of all authors who chose to share their valuable field-based research findings with the readers of *The Canadian Field-Naturalist* Volume 130.

DANIEL F. BRUNTON and JEFFERY M. SAARELA  
OFNC Publications Committee