

Final Flight

**Ian McTaggart-Cowan (1910-2010):
A Century with Wildlife**

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Note: The following revised and expanded account is reprinted with permission of Alan H. Brush, Memorials Editor, *Auk*, from an article submitted by R.W. Campbell, R.D. Jakimchuk, and D.A. Demarchi in 2011.¹

Ian McTaggart-Cowan (Figure 1), American Ornithologists' Union (AOU) member since 1939, Elective Member (1941), died on 24 April 2010 after a brief bout of pneumonia, 79 days before his 100th birthday.



Figure 1. Ian's competitiveness, passion for nature, and communication skills enabled him to contribute eight decades of his life to learning about British Columbia's wildlife and protecting vital habitats. He was the right person, at the right time, in the right position and his legacy is filled with professional and personal accomplishments. *Photo by Mark Nyhof, Swan Lake (Victoria), BC, 21 August 2000.*

During eight decades, Ian experienced first-hand the transition from the "golden years" of field collecting, descriptive note-taking, and library research, into to the present realm of restrictive collecting and "listing" rather than extended field observations and electronic data entry. A few years before he passed away, Ian remarked with concern: "In the blink of an eye, my lifetime on this planet, we have moved from natural history, descriptive biology, and studying the whole animal to relying on computer-simulated models, and other expedient methods, to provide solutions to major conservation and management issues. I have yet to see a model that works – they all lack basic natural history (Figure 2)."



Figure 2. Ian was a strong proponent of natural history research and its application to wildlife management. In the 1970s, he received a manuscript to review on a management model for sea lions along the northeast Pacific coast from a marine biologist. The paper was rejected because the mathematical model ignored basic sea lion biology including the natural history and position of major predators like sharks and Killer Whales. *Photo by R. Wayne Campbell.*

Ian, a naturalist and collector from an early age, was professionally recognized as a mammalogist, ornithologist, malacologist, and herpetologist. He also had a reputation as a philatelist, book collector, and a grower of award-winning alpine plants.

He was born in Edinburgh, Scotland, on 25 June 1910 and when four moved with the family to the southwest mainland coast of British Columbia. He grew up on the marine shores of English Bay in Vancouver and around 1919 moved to nearby North Vancouver where the coastal coniferous forests provided a rich avenue for exploration. Although neither of his parents was dedicated naturalists, Ian had an innate sense of wonder and awe for the natural world and its creatures. He was smitten with patterns and colours in nature (Figure 3).



Figure 3. As a lad, Ian had early exposure to marine life growing up on the shores of English Bay in Vancouver, BC. Later, he became known as a marine malacologist and was fascinated with the variations in colour and patterns of organisms living in the ocean, including sea stars. *Photo by R. Wayne Campbell.*

Ian, like many other keen young naturalists of the period, eagerly waited for weekends, holidays, and other free time to investigate local animal life. He relished observing, but he had a deeper curiosity for how the natural world worked. By holding an animal in the hand, the experience was more intimate and revealing. Driven by this curiosity, he established a trap line for small furbearers and maintained it in the nearby forests. Later, at age 12 when Ian received his first rifle, he expanded his field collecting to include larger birds such as grouse and owls (Figure 4).



Figure 4. In his early years at UBC, Ian often remarked to colleagues and students that as a youngster he had collected every owl species that occurred in the Lower Mainland. *Photo by R. Wayne Campbell.*

To support and encourage his interest in natural history and camping, Ian's mother registered him in the Boy Scouts. Ian was influenced by the descriptive writings of Ernest Thompson Seton² whose ideas were incorporated into the Boy Scouts of America. In scouts, as part of a "bird warden" badge, Ian had to keep a diary of birds seen around his home for a year. As part of the process to validate the badge, James A Munro, the migratory bird officer for Canada, reviewed Ian's notes and corrected some of his identifications. Not surprisingly, two of the species changed were flycatchers.

In 1927, at 17 years of age, Ian graduated from North Vancouver High School having served on the publications committee and as assistant business manager for the school's yearbook. In his senior year, he attended a lecture sponsored by the Burrard Field Naturalists by Kenneth Racey, a mining executive and well-known local naturalist. The talk was on mammals of the Lower Mainland region of southwestern British Columbia and was based on Racey's collecting experiences. Afterwards, Racey invited Ian to view his collection of study skins which culminated in a long-term personal relationship, until Racey died in 1959. At 20 years of age, Ian published his first journal, "Note on Yellow-Bellied Marmot" in 1929³ (Figure 5). Racey received a copy of Ian's article and encouraged him to continue publishing. The following year, in 1930, Ian published "Mammals of Point Grey"⁴ and "Notes on Some Mammals in

British Columbia,”⁵ both in the peer-reviewed journal *Canadian Field-Naturalist*. He continued writing and publishing for the next 72 years, producing a list of over 310 titles.



Figure 5. Ian was 20 years old when he published his first peer-reviewed paper, on Yellow-bellied Marmot. Fifty years later, he supervised graduate student Judith Donaldson on her M.Sc. study of the population ecology of the large rodent in the southern Cariboo region of British Columbia. *Photo by R. Wayne Campbell.*

Ian’s post-secondary years were filled with discovery and excitement which proved to be the catalyst that launched his career path. He enrolled in an honors zoology program immediately after high school matriculation and quickly became involved in the biology club, holding various executive positions including president. By his third year, Ian had established a reputation as an ardent collector and meticulous preparator, comfortable in the outdoors, and an excellent marksman.

In 1930, Ian was offered a job to assist private collector and well-known naturalist Hamilton Mack Laing on a collecting expedition sponsored by the National Museum of Canada. The pair spent time at Newgate, near the British Columbia-United States border (Figure 6), and later established camps in Jasper and Banff National Parks in Alberta. Soon after arrival in the Rocky Mountain parks, Mack was offered a job as a park naturalist and Ian was left alone to complete the summer’s work. Later Mack commented that Ian was “a born naturalist – not one of those biologists made in college and interested only

in the cheque his Ph.D. will pull in for him.”⁶ Ian participated in other summer collecting excursions including a trip to the west coast of Vancouver Island with Kenneth Racey in 1931.



Figure 6. Incidental to collecting specimens of birds and mammals in the vicinity of Newgate, in southeastern British Columbia, in spring 1930, Ian also recorded evidence of nesting birds, including Mallard. *Photo by R. Wayne Campbell.*

As he approached university graduation, Ian began corresponding with Dr. Joseph Grinnell at the University of California, Berkeley, regarding graduate studies. During that exchange, Ian mentioned that he was enthused with the systematic and taxonomic work of Harry Swarth and his published summaries of collecting expeditions, especially in British Columbia. Joseph sent Ian copies of all relevant works that were issued by the University of California Publications in Zoology. These included *Report on a Collection of Birds and Mammals from Vancouver Island* (1912),⁷ *Revision of the Avian Genus Passerella, with Special Reference to the Distribution and Migration of the Races in California* (1920),⁸ *Birds and Mammals of the Skeena River Region of Northern British Columbia* (1924),⁹ and *Report on a Collection of Birds and Mammals from the Atlin Region Northern British Columbia* (1926).¹⁰ These reports would later inspire Ian to produce similar publications for British Columbia.

In 1935, Ian graduated from Berkeley with a Ph.D. and the benefit of a mentorship from Grinnell that would help guide him for the next seven decades. Ian’s dissertation, *Distribution and Variation in Deer (Genus Odocoileus) of the Pacific Coastal*

*Region of North America*¹¹ was published verbatim the following year in the journal *California Fish & Game*. Ian returned to British Columbia in 1935 to accept a position with the British Columbia Provincial Museum [now Royal BC Museum] as its first biologist. He immediately initiated major collecting expeditions to expand the incomplete and un-curved vertebrate collections. The most significant trip was a 57-day exploration documenting wildlife in the south Peace River region of the province in 1938 (Figure 7). Ian, and his assistant Patrick W. Martin, recorded 132 species of birds of which Nelson's Sharp-tailed Sparrow [Nelson's Sparrow], Bay-breasted Warbler, and Cape May Warbler were new records for the province. Following Swarth's examples, Ian prepared a manuscript *The Vertebrate Fauna of the Peace River District of British Columbia*¹² which initiated the museum's Occasional Paper Series in 1938. In later years, the series included publication of several theses of his students^{13,14}.



Figure 7. The vertebrate fauna of the Peace River region of British Columbia was essentially unknown by the 1930s, hence there was great opportunity to discover new species for the province. During a 57-day collecting trip in 1938, Ian and field assistant Pat Martin recorded several new species of birds but as important were birds they did not observe. For example, Gadwall was not seen but 40 years later the species is breeding in the region and it is considered a common spring and autumn migrant and summer visitor¹⁵. *Photo by R. Wayne Campbell.*

In 1940, Ian left the provincial museum as assistant director to accept a position as assistant professor of zoology at the University of British Columbia (UBC) in Vancouver. With the same verve

that characterized his approach to life and passion for natural history, Ian immediately began to mold the zoology department into the first major research institution with a focus on wildlife biology in Canada. In his early years as a professor, Ian returned to the national parks in 1943 to continue research on mammals and birds (Figure 8).



Figure 8. Fourteen years after his first collecting trip to Jasper National Park, Ian returned as a professor to study the inter-relationships of big game, including Rocky Mountain Elk. *Photo by R. Wayne Campbell.*

Ian fostered an appreciation for conservation and wildlife management in his students and in 1945 was promoted to professor of zoology. Eight years later, in 1953, he became head of the department. Over the next decade, Ian established UBC as the top academic institution in Canada for students and faculty interested in zoological research. By then administrative responsibilities replaced field time although he made an effort to visit his students at least once, whether they were in Africa, Texas, or on Vancouver Island. Ian also brought depth to the department of zoology by recruiting faculty in the

disciplines of mammalogy, ornithology, fisheries, genetics, ecology, parasitology, and physiology.

In the late 1950s, Kenneth Racey donated his private collection of birds and mammals specimens to UBC which was followed by donations of large British Columbia collections from Walter S. Maguire and J. Wynne and smaller collections of skulls from hunters and biologists. Later, Ian also received the large H. R. MacMillan ornithological collection of exotic specimens. With these significant collections in hand he established a vertebrate museum within the department of zoology which housed about 45,000 specimens of mammals, birds (including eggs), amphibians, and reptiles. The collection, later named the Cowan Vertebrate Museum, is now part of the much larger Beaty Biodiversity Museum at UBC.

After 11 years as head of the zoology department, Ian was appointed Dean of the Faculty of Graduate Studies at UBC in 1964, a position he held until retirement in 1975. During his years with the zoology department, Ian maintained a vibrant research program but also embraced teaching. He supervised 121 undergraduate and graduate students and served on many additional graduate student committees. His students conducted research in four Canadian provinces, both northern territories, four of the United States, Mexico, and Africa. Most of these (90; 74%) were on mammals, a good portion on Columbian Black-tailed Deer (Figure 9), while birds comprised most of the remainder.



Figure 9. After completing his Ph.D. on Pacific coastal deer, Ian continued his primary research, mainly on Columbian Black-tailed Deer, through graduate students and colleagues. *Photo by R. Wayne Campbell.*

Ian was a talented communicator which was the key to his success as a teacher and educator. He taught undergraduate and graduate courses at UBC for more than three decades and even when head of the zoology department and dean of graduate studies he took time from his administrative duties to teach the introductory course in zoology. In the early years, this course was a prerequisite for medical students. For some it was the last time they thought of medicine as a career. One of those pre-med students was Rudolf H. Drent, AOU Honorary Fellow (1980), who changed his career focus after attending a single lecture by Ian. After Rudi completed his M.A. at UBC¹⁶ (Figure 10) and his Ph.D. in The Netherlands, Dr. Cowan invited him to return to UBC as an assistant professor in 1967. Rudi accepted the position, remained five years, and in 1972 returned to the University of Groningen in his homeland. Ian later remarked, "Of all the young professors I recruited, Rudi is the one I will miss most as his approach to ornithological research was refreshing and directly applicable to conservation issues in British Columbia."¹⁷



Figure 10. Most of Ian's experience with birds was terrestrial in nature so he welcomed Rudi Drent's graduate research on Pigeon Guillemot. Incidental to Rudi's student research, Dr. Cowan enthusiastically encouraged and supported him on a project to compile a list of British Columbia's seabird colonies. It was later published in the Provincial Museum's Occasional Paper series¹⁷ that Ian had started in 1939.¹² *Photo by R. Wayne Campbell.*

Teaching was always a priority and Ian was unsurpassed as a lecturer. He encouraged faculty not to “recycle” lectures each year, but to constantly integrate new information into courses, and use props whenever possible to emphasize a point. He often noted that, “the lecture hall deliverance of some professors was unbearable.” When time permitted, he would leave his administrative office 5 to 10 minutes early with an armful, or cartful, of props for his lecture. During the trek across campus, he frequently caught the attention of passing students and some of the more curious stopped him to ask what he had. Ian believed that “teaching did not start and end in the classroom.” One morning, Ian was stopped by an engineering student who said “that looks like a sabre-toothed tiger [Ian’s favorite prop].” Ian replied, “You’re right, are you a biology student?” Then the teaching began and Ian asked if could identify the other large skull. “Looks like a Walrus with those tusks”, the student said. For the next few minutes Ian explained why it belonged to a Hippopotamus and the adaptations it needed to survive where it lived. The student skipped his scheduled lecture, attended Ian’s on the skeletal system. Many years later Ian was informed that the very successful civil engineer had bequeathed a large sum of money to the university, still recalling the enlightening few minutes he shared with “the professor.”

Students quickly learned after Ian’s first class that if they wanted a seat in the lecture hall they had to arrive early or at least on time for subsequent lectures. His lectures were dynamic, popular, and attracted many students from other disciplines and frequently other professors who were looking for tips to be better lecturers. He was the only professor at UBC who was regularly visited by the fire marshal to clear the aisles of students. Each time the audience shuffled and gathered tightly in front of Ian.

Ian had a quick wit as the following recollection from his former student demonstrates. While conducting pioneering research on American Mink (*Neovison vison*) in the marine environment,¹⁸ Ph.D. student David Hatler invited Dr. Cowan to visit his research shack on the west coast of Vancouver Island. While cooking dinner, Dave lightheartedly asked Ian how he liked his “spam.” Without a moment’s hesitation, he replied “rare – and by that I mean not

very often!”

Throughout his life, Ian strongly believed that publishing was a professional responsibility that too many biologists and graduate students disregarded. He frequently recounted that “Good writing is hard work and if I complete a manuscript page a day it has been a productive 24 hours.” He led by example, producing over 310 titles over 72 years. Over half of his written works involved mammals, including *Mammals of British Columbia*¹⁹ with Charles J. Guiguet in 1965 (Figure 11). He also authored books and articles (67 titles) on conservation and management of wildlife. These publications earned him the reputation as “The Father of Wildlife Management in Canada” among colleagues and sportsmen.



Figure 11. Much of the research that Ian and Charles completed for *Mammals of British Columbia* was obtained from specimen catalogues in North American museums. For some species, like the diurnal and visible Columbian Ground Squirrel, information was extracted from diaries and notebooks of naturalists and collectors. Photo by R. Wayne Campbell.

Although Ian enjoyed a reputation as one of North America’s premier mammalogists, it did not reflect the scope of his interest and contributions in other fields. Ian contributed to five classic books on British Columbia’s birds. In the late 1930s, he met with James A. Munro at the British Columbia Provincial Museum to discuss updating the 1925 publication *A Distributional List of the Birds of British Columbia* by Allan Brooks and Harry S. Swarth. They prepared a simple species outline that included a status designation followed by a list of noteworthy

records for each season. Initially Ian helped with data gathering, but in 1940, after his appointment to UBC as a new faculty member, he became immersed with new responsibilities while Munro continued to complete the manuscript. The 285-page book, *A Review of the Bird Fauna of British Columbia*,²⁰ was published by the Provincial Museum in December, 1947 and remained the standard reference for British Columbia's birds for 44 years.

In 1964, Ian was appointed dean of graduate studies at UBC but retained his role as curator of the vertebrate museum. His success in expanding the zoology department impacted the future of the museum as limited office and research space for faculty and graduate students was becoming a problem. By the late 1960s, there was increasing pressure to utilize museum space for offices. Ian forestalled that encroachment by hiring Wayne Campbell as a full-time assistant curator in order to demonstrate active use of the space.

In November, 1972, Ian invited Wayne and his wife to dinner to discuss updating the provincial bird book that Ian co-authored with James Munro 26 years earlier. Ian knew that Wayne had already published over 100 papers, mostly on birds, but he did

not know that Wayne had started the basis for a new provincial book by amassing over 250,000 records and nearly 900 articles on the province's birds. Ian felt that the book revision would be best served if Wayne was employed by the British Columbia Provincial Museum where collections and other resources were available. In addition, Wayne's application for a newly established position as assistant curator of Birds and Mammals at the Provincial Museum was also supported by director Bristol Foster and curator Charles Guiguet. Wayne was the successful candidate for the position, and in December, 1972, just before he moved to Victoria, he met again with Ian to discuss the book project.

Wayne wanted a "new approach" to the book that included more thorough aspects of nonbreeding and breeding habitats, ecology, natural history, and breeding biology (Figure 12) rather than simply a listing of records. Ian agreed. Wayne had identified major gaps in information that required attention before writing could start. Ian was apprehensive of the scope proposed for the book but said enthusiasm and commitment would go a long way to completing the task. He remarked "Your vision is ambitious and I will support you as I can."



Figure 12. With interest declining in the British Columbia Nest Record Scheme (BCNRS) housed in the Vertebrate Museum at UBC, Ian entrusted full responsibility for managing and operating the program to Wayne Campbell because of his background in egg-collecting. Over the next two decades, BCNRS provided the source information on the breeding biology of birds for *The Birds of British Columbia* project^{26,27,28,29}. Photo by R. Wayne Campbell.

Over the next 14 years, details for 140,000 specimens were obtained from collections of British Columbia bird specimens housed in museums around the world. Over 6,700 articles on the technical and unpublished literature were gathered and searched for information (see *A Bibliography of British Columbia Ornithology*, Volume 1 and 2).^{21,22} During this period, remote areas of the province, such as Kotcho Lake²³ and Alsek-Tatshenshini rivers, were investigated for bird life and coastal islands were surveyed for nesting seabirds²⁴. In addition, a database, including submissions from over 7,000 naturalists, and consisting of over 2,000,000 records, was established on 3 x 4 inch file cards (Figure 13).

Ian's timely telephone calls and letters to administrators and occasional visits to the museum to provide encouragement helped keep the project viable. Ian became more directly involved as the project progressed, including writing several species accounts and as lead author of the synopsis "Avian Biodiversity, Ecological Distribution, and Patterns of Change"²⁵ in the last chapter of the final volume. At the reception in 2001 celebrating publication of the final book in the four-volume set (2,584 pages) *The Birds of British Columbia*,^{26,27,28,29} Ian commented that this body of work was the most significant

involvement of his career and would have a great and far-reaching impact on the conservation and understanding of birds in the province.

While his participation in the provincial bird books was a major contribution to ornithology in British Columbia, Ian also published 51 additional papers on birds. As well and not widely known was his expertise in molluscs, amphibians, reptiles, and postage and law stamps. He authored 33 papers on these topics including two books on law stamps of Yukon and British Columbia.^{30,31}

Ian received numerous international, national, and provincial awards from his peers, and others, for his long and prominent career in education, research, publishing, mentoring, and wildlife conservation. In 1946, only six years after he joined the faculty at UBC, he was recognized as a distinguished Canadian scholar by the Royal Society of Canada. He was the twenty-second recipient of the prestigious Aldo Leopold Memorial Award from The Wildlife Society, he was awarded the Fry Medal from the Canadian Society of Zoologists-La Société Canadienne de Zoologie and The Doris Huestis Speirs Award from the Society of Canadian Ornithologists/Société des Ornithologistes du Canada, the latter for his contributions to ornithology. In the 1970s, Ian received the highest



Figure 13. Stacks of thousands of 3" x 5" cards, containing bird observations for hundreds of species, needed a group of dedicated volunteers to help sort and file them for future use. *Photo by R. Wayne Campbell.*

civilian honors bestowed by governments, becoming an Officer of the Order of Canada (1971) and Officer of the Order of British Columbia (1991). He also received honorary D.Sc. or LL.D. degrees from the University of British Columbia, University of Alberta, Simon Fraser University, University of Waterloo, and University of Northern British Columbia.



Figure 14. On a bright sunny day in September 1993, Ian participated in the official designation of a RAMSAR site in the Creston Valley, BC. *Photo by R. Wayne Campbell.*

Often overlooked in one's career contributions is the constant demand on high profile individuals to volunteer their time to review manuscripts, give public lectures, lead field trips, support initiatives for conservation and natural history groups (Figure 14), and become part of the executive for non-profit organizations to enhance their effectiveness. Ian

contributed an inordinate amount of personal time to all of these. For example, he held executive positions, often as president or chair, on at least 27 different organizations, both professional and amateur, investing a combined commitment over his career and during retirement of 137 years cumulative service. He never attended a meeting unprepared and after leaving field work in the 1950s to become an administrator, he kept in constant contact with informed individuals to keep updated on the distribution and population changes in wildlife in British Columbia and Canada.



Figure 15. During the latter years of Ian's life, he became more troubled by the rapid changes in technology that were luring potential young naturalists into an electronic world and away from "hands on" experiences in the natural world. Exploring natural history, as he knew it, was becoming an endangered pursuit. *Photo by R. Wayne Campbell.*

Ian's contributions to wildlife biology, conservation, and education have been enormous at all levels of society and throughout many professional and amateur organizations in North America. It is unfortunate, and of concern, that many of today's young biologists will not sufficiently value the foundation of natural history as did Ian, in developing ecological understanding (Figure 15). Ian's philosophy regarding the role of an individual was straightforward: "You must be the change you wish to see in the natural world."

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