

John Donald (“JD”) McPhail (1934–2023)

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When we lost Don McPhail this past summer at the age of 89, he was at home among his family. We lost not only an accomplished scientist and academic, but one with a trait often rare among his peers—a common touch. Don, or “JD” as he was affectionately known, had the ability to communicate information about a potentially dry biological observation in a story that held more general interest and importance. Don loved field trips with students and colleagues. Many will fondly recall his inspiring wonder of all things natural and the great stories he told of strange fishes and adventures during field trips in locales ranging from the northwest and Arctic of Canada to the US, Panama, and New Zealand.

John Donald McPhail was born in Vancouver in 1934 where he grew up exploring the creeks and forests of the lower mainland, honing his skills as a keen observer of biology often in the company of his father and brothers. He did an undergraduate degree in Arts and Sciences at the University of British Columbia (UBC) where he showed keen interest both in English and biology. Following that, Don entered a Master of Science program in the Department of Zoology at UBC. His supervisor was the late and incomparable Casimir C. Lindsey, who, when asked by Don what he should do at an interior BC field site one summer, famously responded, “Well, research of course”. Don’s MSc thesis (McPhail 1959) focused on the relationships within the always vexing “Arctic char species complex” and the diagnosis and geographic distribution of Arctic char and Dolly Varden within this complex (McPhail 1961). This work undoubtedly sparked Don’s interest in northern fishes, zoogeography, and speciation. Don and his wife Marjorie, by whom he is survived, moved to Montréal where Don entered a PhD program under the supervision of Max Dunbar at McGill University. His PhD (McPhail 1963a) research focused on the zoogeography of fishes of northwestern Canada and Alaska. The field work for this project led to the masterpiece “*Fishes of Northwestern Canada and Alaska*” (1970, Fisheries Research Board of Canada) co-authored with Lindsey. Bursting with fascinating biology, taxonomic conundrums, and zoogeographic and evolutionary hypotheses, this volume was the first treatment of freshwater and anadromous fishes across a “scarcely known” area of just over 5 million km² that inspired myriad subsequent studies, pa-

pers, theses, and careers—including the authors’ quest for the enigmatic “popcorn fish” (Banham 1980).

John Donald (“JD”) McPhail



Don’s first academic position was at the University of Washington’s (UW) then School of Fisheries as an assistant professor and curator of fishes where he was eagerly welcomed in August 1963. In addition to curating, maintaining, and expanding the UW fish collection (now part of the Burke Museum), his duties called for teaching and research, supervision of graduate students, and initiating the development of a collection of invertebrates. He quickly made his mark. In addition to a gallant effort to resurrect a badly deteriorated fish collection—adding nearly 3000 lots of Pacific Northwest freshwater and marine fishes—he took on an active teaching role, introducing several new courses to the UW curriculum, including Biogeography of Fishes as well as an undergraduate seminar. He established a rigorous research program, which resulted in a National Science Foundation grant in 1964 to study morphological variation in the threespine stickleback (*Gasterosteus aculeatus* Linnaeus, 1758). He published several important papers during his tenure at UW (e.g., McPhail 1963b, 1966). He was unanimously recommended for promo-

tion to associate professor in January 1966 but at the same time was recruited by the Institute of Fisheries at UBC. He accepted a position as associate professor in UBC's Department of Zoology in 1966.

After returning to UBC, Don established himself as a stellar contributor to teaching, service, and of course, research where he consistently received Natural Sciences and Engineering Research Council of Canada (NSERC) support (among others) for his work. He was quickly promoted to full professor (1972) and served stints as interim Head of the Department of Zoology and interim Director of the Institute of Animal Resource Ecology. He was also the long-time curator of the Fish Collection (now part of the Beaty Biodiversity Museum). One of the innovations that Don pursued at the Fish Collection was to help it become the first such museum with records made available online within Fishbase, arguably the most accessed database on fishes on the web. Don also served on the Executive of the Canadian Society of Zoologists (1973–1975) and retired from the Department of Zoology in 1999.

Don is perhaps best known for being the first to recognize the utility of the Threespine Stickleback system, especially the now famous benthic and limnetic sticklebacks of southwestern BC, as a key model system in which to test ideas about a fundamental question in biology—what is the nature of “species” and how do they arise? Don and his students combined field work and morphological measurements, and elegantly designed behavioural, ecological, and breeding studies to better understand the nature of reproductive isolation in sticklebacks (including lake–stream and anadromous–stream pairs). Perhaps most foundational among these studies are the “Enos Lake Trilogy” (McPhail 1984; Bentzen and McPhail 1984; Ridgway and McPhail 1984). Further, and critically important in our view, Don welcomed others, including many who have become some of our most well-known evolutionary ecologists, to explore and further develop the stickleback system. Arguably Don's inspirational stickleback work and his openness to have others work on it were the key factors that have turned the stickleback species complex into a global scientific phenomenon and “industry” (see Kennedy 2005; *Breakthrough of the Year*)—a fantastic legacy.

Notwithstanding his foundational work on sticklebacks, Don studied, and championed, myriad other fishes, especially freshwater species. From the perplexing freshwater sculpins to dace, char, salmon and trout, whitefishes, and even the brassy minnow (described perfectly by Don as a “dainty” fish), his interest and commitment to the biology and conservation of fishes reached one of its many peaks with the publishing of *Freshwater Fishes of British Columbia* (2007, University of Alberta Press), beautifully illustrated by his daughter Diana. As with *Freshwater Fishes of Northwestern Canada and Alaska*, his book on BC freshwater fishes is a treasure trove of fascinating biology and suggestions for potential research projects. This book, sponsored by several resource agencies, illustrates Don's career-long commitment to helping agencies manage and conserve fish and fisheries, and how much they valued Don's experience, knowledge, and contribution. Don's final book, *Wild Steelhead: Biology and Conservation* (2016, Frank Amato Publications), was mo-

tivated by his long history as both a biologist and angler and gives voice to the biology and status of a terrific fish much in need of conservation attention across western North America.

Clearly an academic inspiration, over the course of his research career, Don received numerous awards including a Fellowship from the Smithsonian Tropical Research Institute in Panama, a Killam Senior Fellowship, and the Murray A. Newman Award from the Vancouver Aquarium for lifetime achievement in aquatic research, and in 2016 he was inducted as one of the “Legends of Canadian Fisheries and Management” by the Canadian Aquatic Resources Section of the American Fisheries Society. Don is fondly remembered by those who were lucky enough to work with, or be taught by, him as a true “gentleman scientist” with a deep sense of humility and a dry wit. He loved a good story and could tell an even better one.

Acknowledgements

The authors thank R.M. Brigham and M.S. Ridgway for comments.

Article information

History dates

Received: 26 September 2023

Accepted: 3 October 2023

Version of record online: 17 January 2024

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