

The Canadian Field-Naturalist

A tribute to Paul-Michael Brunelle, odonatologist, 1952–2020

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Paul Michael Brunelle (Figure 1), 67-years-old, Atlantic Canadian odonatologist, and notable graphic designer, passed away unexpectedly on 18 January 2020. His frozen body was discovered by his former wife in his cabin-cum-laboratory in rural Middle New Cornwall, Nova Scotia. An autopsy revealed cause of death as heart failure.

Paul was born 7 November 1952 in Halifax, Nova Scotia, the eldest among two sons (the second dying shortly after birth) and a younger sister, the children of Paul Joseph Brunelle (1918–2012) and Gwendolyn Pearl Brunelle (1920–1997; nee Myers). Although for much of his adult life Paul's relationship with

his father, a one-time military man, was sometimes strained, they shared a diverting interest in natural history, and he acknowledged his parents support in one of his earlier published journal papers (Brunelle 1997). While the senior Brunelle pursued a retirement passion for the greenhouse culture of cacti and succulents, eventually donating his large collection to Dalhousie University, for the junior Brunelle, the biology of dragonflies and damselflies became so diverting, high consuming, that it led to a life of penury, privation, mild alcoholism, considerable accomplishment, and the esteem and affection of scientific colleagues continent-wide.

Paul graduated from Dartmouth High School in the then city of Dartmouth ("the City of Lakes"), Nova Scotia, since absorbed into the Halifax Regional Municipality. A talented artist, Paul attend the Nova Scotia College of Art and Design (since 2003 NSCAD University) at a period when NSCAD was recognized internationally as "the best art school in North America" (Levine 1973: 15). Opportunities to study aspects of design in England, Scotland, Holland, Germany, and Switzerland broadened his background. Graduating, with a Bachelor of Design in Communication Design in 1976, he founded Graphic Design Associates (GDA) in Halifax, with partner Dereck Day. A variety of significant regional and national design projects followed, including extensive work for Parks Canada, oversight of multi-volume environmental impact statements for Mobil Oil Canada's Venture Development Project and Newfoundland's Hibernia Offshore Development, the design of the Nova Scotia Health card featuring Kejimikujik National Park, and a series of fishing fly stamps for Canada Post. From 1992 to 1994 Paul served as President of the Graphic Designers of Canada (GDC), an organization of design professionals in media and design-related fields and Canada's national certification body for graphic and communication design. He also served as Presi-



FIGURE 1. Paul-Michael Brunelle 1952–2020, circa 1990. Photo: George Georgakakos.

dent of the Atlantic chapter of GDC from 1989 to 1990, establishing its organizational structure. The Atlantic Canadian Chapter of the Royal Society for the Encouragement of Arts, Manufactures and Commerce awarded Paul their Silver Medal for 1991 (MacLeod 1992). The category that year was graphic design. In 1999 Paul was awarded designation as a fellow of GDC, a mark of his accomplishments and influence on the design profession in Canada. A first-rate natural history illustrator, Paul was also a member of the Guild of Natural Science Illustrators, a North American organization concerned with communicating and clarifying scientific ideas visually. Among his influences, Paul counted J. Fenwick Lansdowne, Glen Loates, and other commercially successful, contemporary, wildlife artists (Editor 1987).

The late 1980s to early 1990s was a time of tumultuous change in Paul's life. He married Meredith Bell, a fellow graphic designer, and his only child, Michael was born (1991). Remarkably, then in his late 30s, Paul also gradually abandoned what was clearly an outstanding career in graphic design to pursue life as a free-lance odonatologist. Although his marriage was short-lived, ending in 1993, Paul and Meredith remained close for the rest of Paul's life (his cabin was located on Meredith's property, a stones-throw from her home). Nonetheless, it may have been Meredith's gift to Paul of a top-quality dissecting microscope, and his growing obsession with dragon-

flies, that doomed the union. Life as a free-lance entomologist proved to be a financially precarious one though. So much so, that in the decades that followed it left Paul lurching from debt (much of the time) to occasional plenty (when project or contract money was available). Nonetheless, Paul managed to pay the rent on a small apartment in Halifax and supported a more-than-modest smoking habit with his own rolled, loose leaf tobacco cigarettes and, when times were especially tight, subsisted largely on rice and beans. But by 2017, with contracts scarce and a focus on preparing his magnum opus (*Atlas of the Dragonflies and Damselflies of Acadia* [Maine and the Maritimes]), Paul moved out of the city with his beloved cat Merry to Middle New Cornwall, first into a barn, and eventually into a largely off-grid cabin constructed for him by his son.

Throughout Paul's life he had a passion for natural history and the outdoors, and like so many notable naturalists through the ages, was self-taught. A trip to the Amazon Basin (Manaus, Brazil) in ~1975 to study and acquire neotropical cichlids (Figure 2) led Paul, on his return to Nova Scotia, to expand an aquarium hobby to include local, non-game, fish. His stated goal was the production of an illustrated volume on the fishes of Nova Scotia (Editor 1987). Along the way, he encountered the strikingly large nymphal stage of Dragonhunter (*Hagenius brevistylus*), the adult of which feeds on large insects, including other dragon-

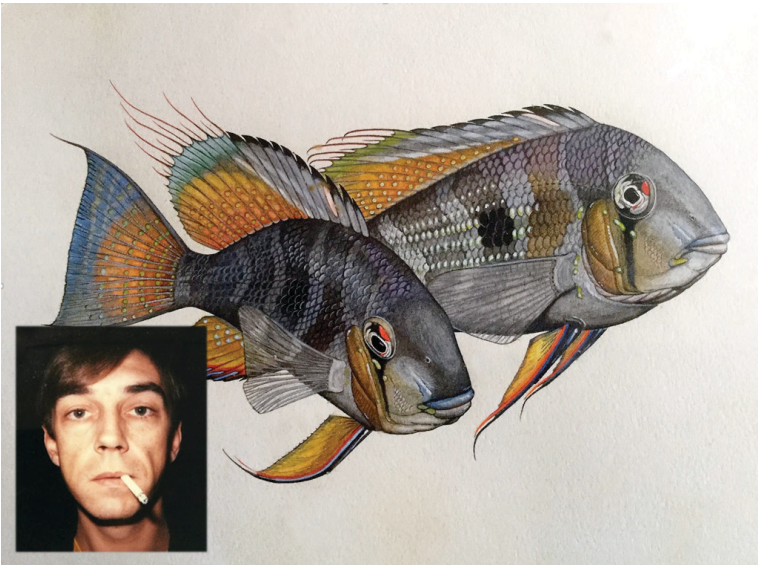


FIGURE 2. A finely executed Brunelle water colour of Threadfin Acara (*Acarichthys heckeleii*) one of a series of paintings of South American cichlids produced circa 1980–1985, which appeared in the Canadian Guild of Natural History Illustrators Newsletter for July 1987 and in the American Cichlid Association journal, Buntbarsche Bulletin. This particular painting graced the cover (sadly, not in colour) of Buntbarsche Bulletin 105 for December 1984. Inset: Paul, about 1978, shortly after he had returned from his Amazonian quest for neotropical cichlids Photo: unknown.

flies (hence the common name). Raised to emergence in one of his living-room fish tanks, a fascination with dragonflies took hold (Steeves 2001).

That fascination led Paul to devote the latter half of his life to the study of the dragonflies and damselflies of the northeast, at the time relatively poorly known (Figure 3). In the years prior to 1990, only about 4700 records of Odonata had accumulated for the entire Acadian region. In 1993, Paul establish the Atlantic Dragonfly Inventory Program (ADIP), an unfunded, volunteer survey to which interested persons were encourage to submit specimens and data to given standards. From 1999 to 2003 Paul was contracted by the State of Maine Department of Inland Fisheries and Wildlife to help co-ordinate (with Wildlife Biologist Dr. Philip deMaynadier) the Maine Damselfly and Dragonfly Survey (MDDS) for the same purpose. At the time of Paul's death, as result of his own efforts, his oversight of organized surveys (undertaken largely by amateurs), and his enthusiastic encouragement of anyone who could hold an insect net, he had meticulously databased in excess of 67 000 records of odonates from the Maritimes and Maine.

Through the early 1990s and until his death, Paul's interest in damselflies and dragonflies never flagged and became his primary vocation. Fortunately, this was a time when both government and public concern for the conservation status of wildlife was beginning to expand to encompass some of the more conspicuous invertebrate groups. Funded by a number of government agencies, commercial contracts, foundations, and species assessments, Paul's insect survey work took him to some of the most remote bogs, streams, and marshes of the Maritimes and the northeastern USA, usually alone, and often at risk of sinking into a quagmire. An early highlight was his 1995 discovery of a new species of dragonfly (Young 1999), Broad-tailed Shadowdragon (*Neurocordulia michaeli*), which he described in the scientific literature and named for his son (Brunelle 2000). A dusk-flying species, Paul discovered larvae in the Canoose, a cool, clear, rocky stream in Charlotte County, New Brunswick (Figure 4). The find was of such significance that it led dragonfly specialists from across the continent to make a trek to southeastern New Brunswick when the 1996 annual meeting



FIGURE 3. Paul in his Middle New Cornwall, Nova Scotia, cabin-cum-laboratory in September 2017. Inset: Brunelle illustration of Extra-striped Snaketail (*Ophiogomphus anomalus*). Paul drew heavily on his art and graphics skills to illustrate the 80+ papers and reports he produced dealing with dragonflies and damselflies of the northeast. Photo: Bruce Kierstead.



FIGURE 4. Paul at dusk in the Canoose Stream, Charlotte County, New Brunswick in about 2000. This is the site of his discovery of Broad-tailed Shadowdragon (*Neurocordulia michaeli*). Photo: J. Steeves.

of the Dragonfly Society of the Americas was held in St. Stephen. That same year, Paul was awarded the Entomological Society of Canada's Norman Criddle Award, which recognizes the contributions of an outstanding non-professional entomologist to entomology in Canada.

Paul was a teacher without peer who encouraged many others in the study of the flying dragons he found so marvelous. Through 1998–2003 Paul was an annual instructor of speciality courses on odonates delivered at the Humboldt Field Research Institute in Stueben, Maine—until his low tolerance for what he viewed as bureaucratic malfeasance and meddling by officials at the Canada–USA border got the better of him and he simply refused to enter the USA. Wry, opinionated, irreverent, more than occasionally profane, Paul particularly enjoyed working with young people, and they with him. A number of students he took under his wing are now pursuing graduate degrees in the study of insects at Canadian universities. The New Brunswick Museum (NBM) now holds one of the larger dragonfly and damselfly collections in Canada (~100 000 specimens), largely due to Paul's efforts. The scope of the NBM collection reflects not only Paul's decades of field study, but just as important, his huge impact on other naturalists in the region. Paul had a deep understanding of

the value of natural history collections and his data collection was meticulous. Most of his collections are housed in the NBM, where Paul held a long-standing appointment as a Research Associate. In fact, Paul was the first NBM Research Associate appointed when the museum established its Research Associate program in 1996. Over the coming decades, Paul became a mainstay of NBM field programs, including those in Protected Natural Areas and a multi-year Community-University Research Alliance program. His customized "odemoobile" jeep (Brunelle 1995, also see McAlpine 2020) banged its way over the roughest of tracks and forded washouts in the quest for the next productive wetland, often with some hapless student threatening to vomit out the side window. Paul's deep, baritone voice, well-aged with rum and cigarettes, provided the narration for a 2016 CBC-aired documentary describing some of this biological inventory work and was eventually screened at the United Nations COP13 biodiversity conference in Cancun, Mexico, and later in Croatia through the Canadian embassy there. It is fitting that the fossilized wing of an odonate, recently discovered on the shores of Grand Lake, New Brunswick (an area Paul knew well—see Brunelle [2011]), should be described as new and bear the Brunelle honourific (M. Stimson pers. comm. December 2020).

In the months prior to his death, Paul completed the draft of his *Atlas of the Dragonflies and Damselflies of Acadia*. The 360-page manuscript, written, designed, and replete with illustrations he prepared himself, will hopefully eventually be published, a fitting tribute and legacy to both Paul and the insects he loved.

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