

Supplementary material for Cannings *et al.*, *Three Brothers in Biology*



Supplementary material, Figure S1. Osoyoos Lake, British Columbia, east shore. Photo by Rob Cannings



Supplementary material, Figure S2. Okanagan Lake: view east to Naramata past Trout Creek Point, Summerland, British Columbia. Photo by Rob Cannings



Supplementary material, Figure S3. Grassland adjacent to the Cannings home, West Bench, Penticton, British Columbia. Photo by Steve Cannings



Supplementary material, Figure S4. Steve Cannings, photographer, with a curious subject from the dairy herd, Agriculture Canada Research Station, Summerland, British Columbia, 1960s.
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Supplementary material, Figure S5. Steve Cannings overlooking Vaseux Lake, British Columbia, 1950s. His conservation efforts helped preserve this and other natural environments in the Okanagan Valley. Photo by Jean Cannings



Supplementary material, Figure S6. Jean Cannings relaxing in her wildlife garden beside the West Bench grasslands, Penticton, British Columbia, June 1978. Photo by Steve Cannings



Supplementary material, Figure S7. Geoff Scudder at the Canadian National Insect Collection, Ottawa, Ontario, May 1960. © His Majesty, the King, in right of Canada, as represented by the Minister of Agriculture and Agri-Food Canada



Supplementary material, Figure S8. Rob Cannings, M.Sc. fieldwork, Riske Creek, Chilcotin, British Columbia, July 1970. Photo by Syd Cannings



Supplementary material, Figure S9. Becher's Prairie, Riske Creek, Chilcotin, British Columbia, August 1978. Photo by Rob Cannings



Supplementary material, Figure S10. Rob and Dick Cannings collecting aquatic invertebrates, Riske Creek, Chilcotin, British Columbia, July 1978. Photo by Syd Cannings



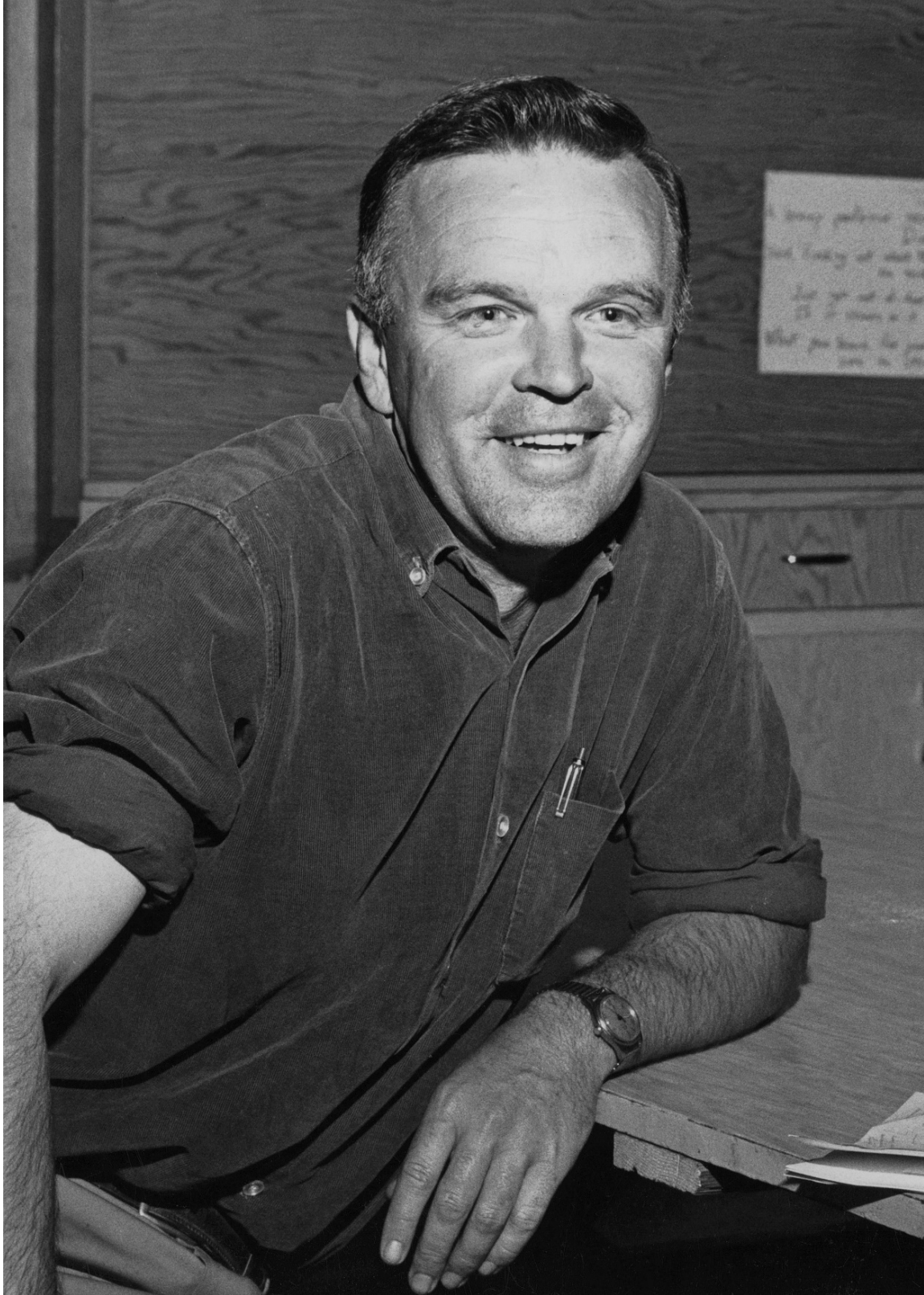
Supplementary material, Figure S11. Syd Cannings, 1983, drawing a figure for *Birds of the Okanagan Valley*. Photo by Rob Cannings



Supplementary material, Figure S12. Jean, Dick, Syd, and Rob Cannings, Manning Provincial Park, British Columbia, 1963. Photo by Steve Cannings



Supplementary material, Figure S13. Nature house, Miracle Beach Provincial Park, Vancouver Island, British Columbia. Photo I-07042 courtesy of the BC Archives, © Royal BC Museum



Supplementary material, Figure S14. Yorke Edwards, Canadian Audubon Camp, Peachland, British Columbia, June 1965. Photo by Steve Cannings



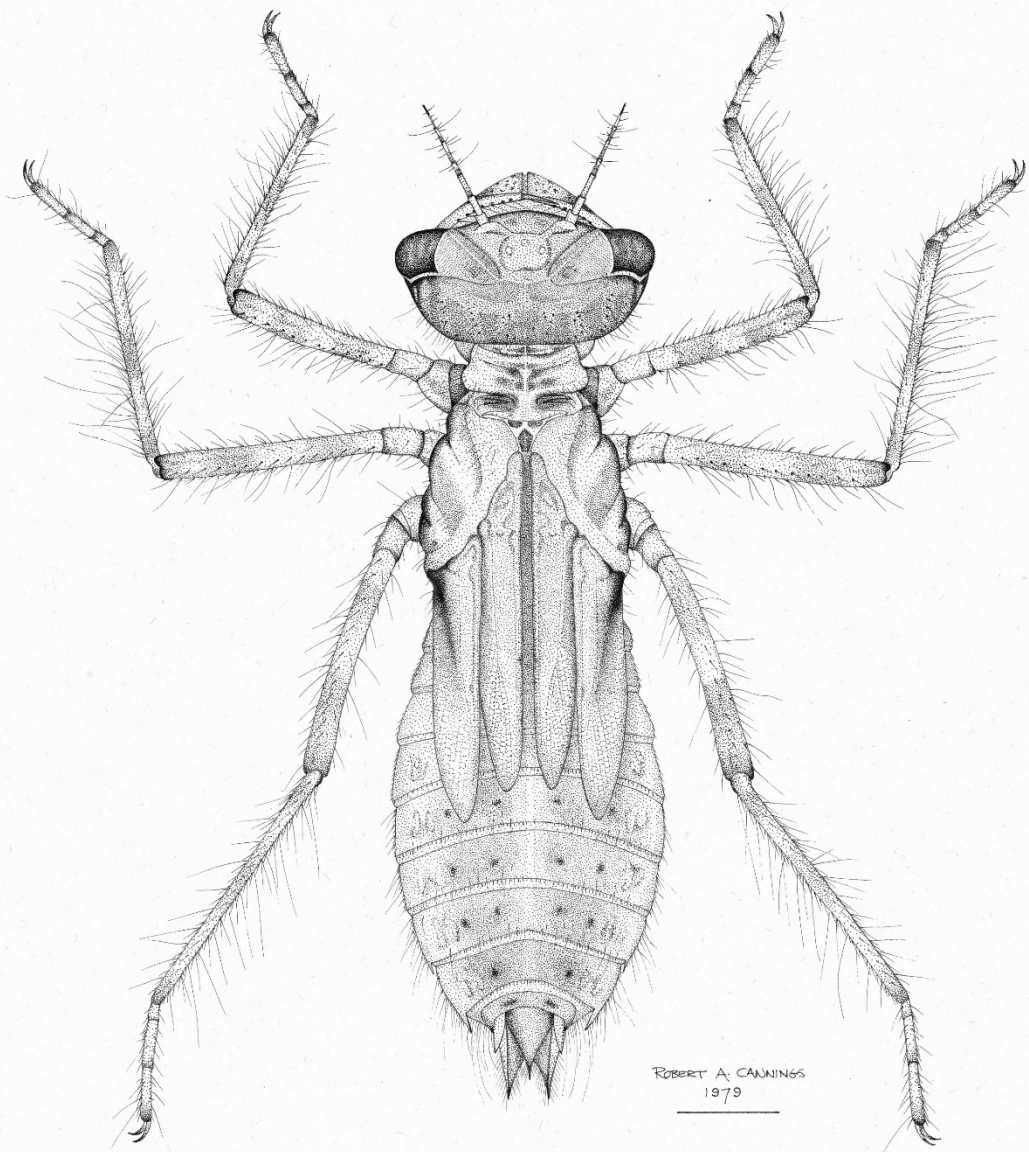
Supplementary material, Figure S15. Rob Cannings, BC Parks interpretation officer, exploring the east beaches of Naikoon Provincial Park, Haida Gwaii, British Columbia, August 1974. Photo by Rob Cannings



Supplementary material, Figure S16. Royal British Columbia Museum, Victoria, British Columbia. Photo © Royal British Columbia Museum



Supplementary material, Figure S17. Rob Cannings, entomology curator, Royal British Columbia Museum, 2006. Photo by Claudia Copley



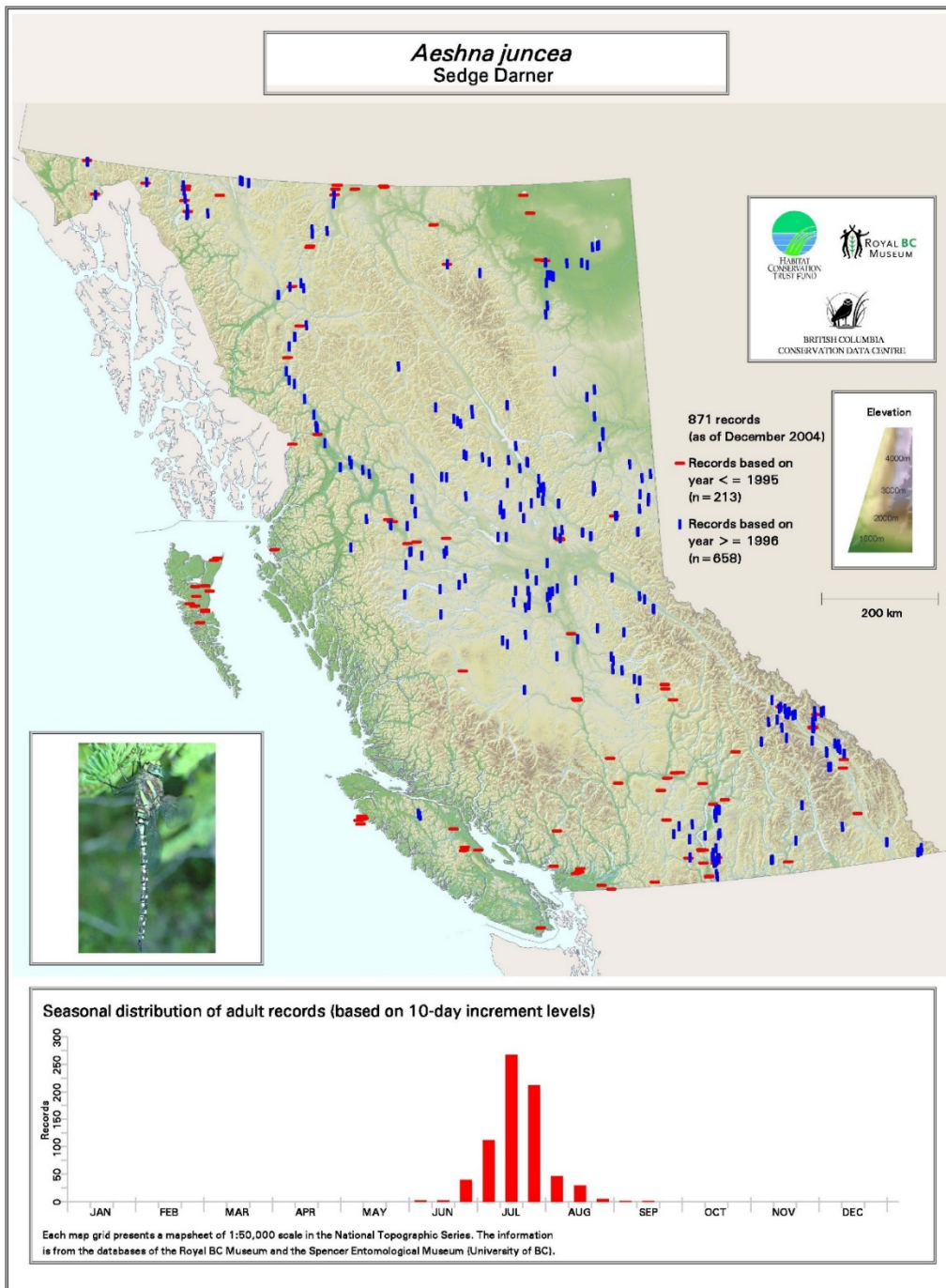
Supplementary material, Figure S18. *Sympetrum madidum* Hagen (Odonata: Libellulidae) larva, illustration by Rob Cannings, 1979. Photo by Rob Cannings



Supplementary material, Figure S19. Dragonfly travelling exhibit, Royal British Columbia Museum, May 1984. Photo © Royal British Columbia Museum



Supplementary material, Figure S20. Meeting of the Odonata Committee of the International Union of the Conservation of Nature, Kyoto, Japan. August 1980. World experts, left to right: Syoziro Asahina, Henri Dumont, Philip Corbet, George Bick, and Dennis Paulson. Photo by Rob Cannings



Supplementary material, Figure S21. Royal British Columbia Museum and BC Ministry of Environment Odonata inventory (1996–2005): *Aeshna juncea* (Sedge Darner), collection records before and after; seasonal distribution of adult records. Photo by Rob Cannings



Supplementary material, Figure S22. Bruce Archibald, paleontologist extraordinaire, with his COVID haircut, November 2022. Photo by Bruce Archibald

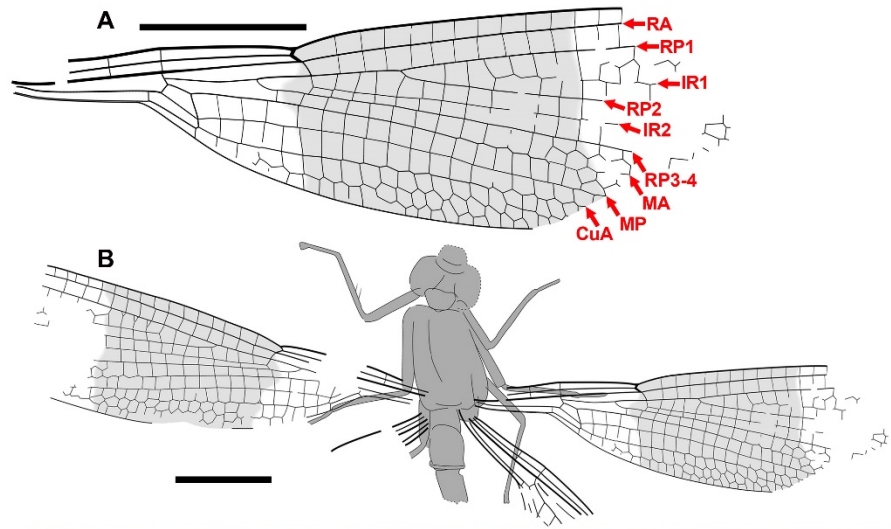


Figure 50. *Okanopteryx macabeensis* paratype 2, F-790

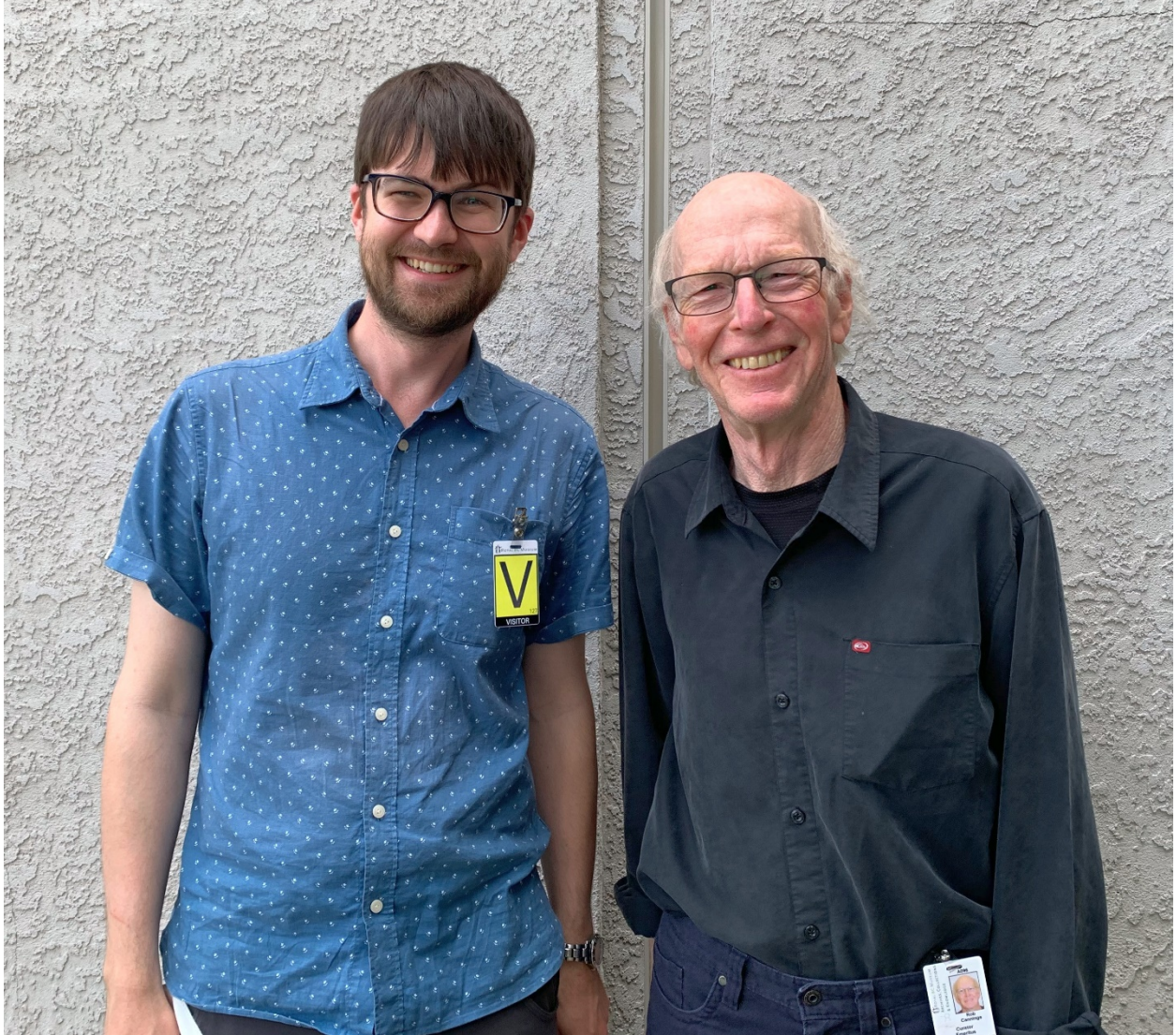
Supplementary material, Figure S23. Fossil Odonata: *Okanopteryx macabeensis* Archibald and Cannings (Odonata: Dysagrionidae), an extinct species from the British Columbia Eocene (Archibald *et al.* 2021, <https://doi.org/10.11646/zootaxa.4934.1.1>). **A**, labelled drawing of wing; **B**, drawing of specimen; **C**, photograph of specimen. Both scale bars: 5 mm. Image © Magnolia Press, published as Open Access; licensed under Creative Commons BY-N.C. 4.0 International



Supplementary material, Figure S24. Pavel Lehr, renowned Russian dipterologist, director of the Institute for Biology and Soil Science, Far East Division of the Russian Academy of Sciences (1981–1991); Vladivostok, Russia, July 1993. Photo by Rob Cannings



Supplementary material, Figure S25. Milan Hradský, expert in the Asilidae, and Rob Cannings, Zásmuky, Czech Republic, May 1993. Photo by Hannah Nadel



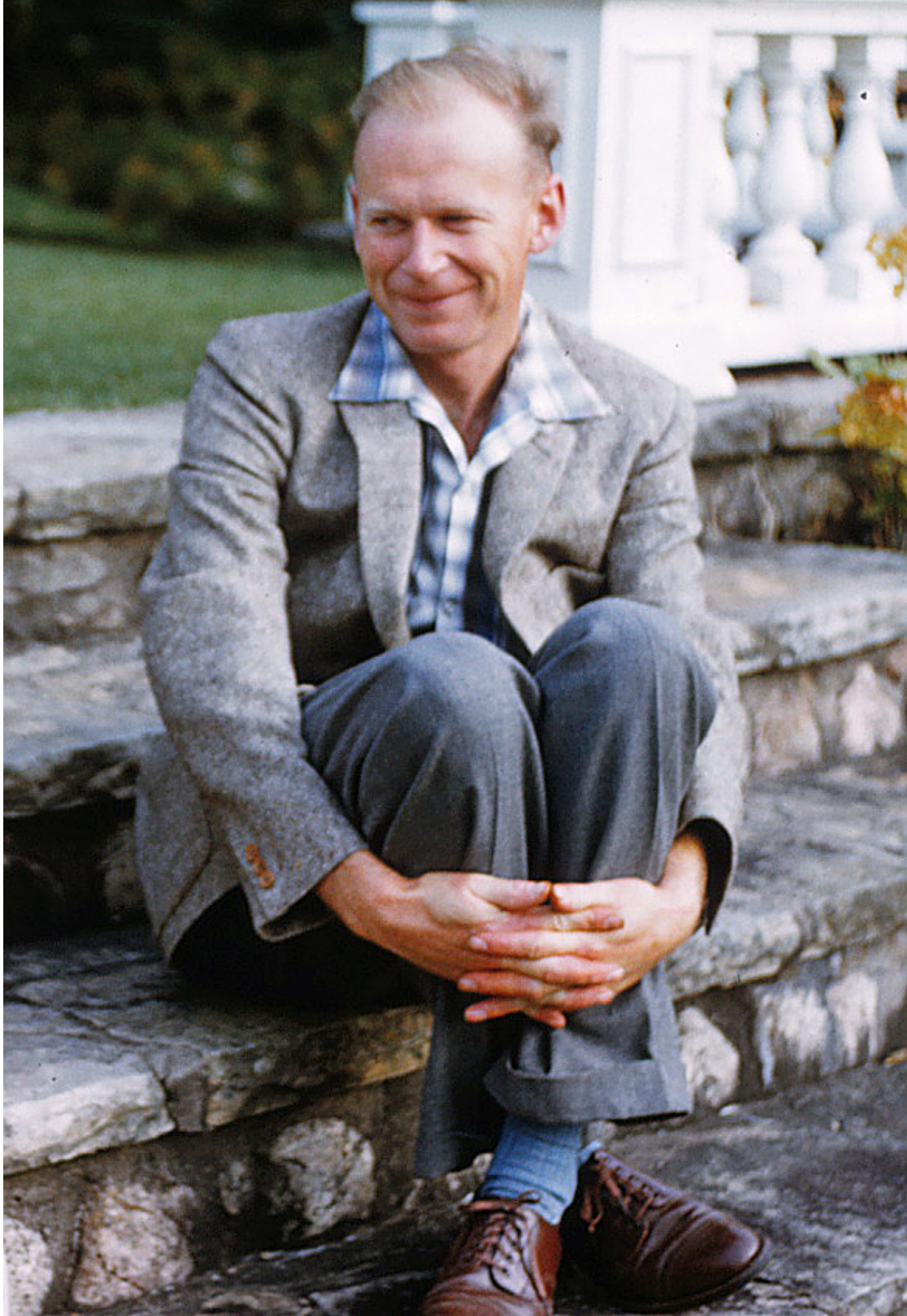
Supplementary material, Figure S26. Tristan McKnight and Rob Cannings, Victoria, British Columbia, June 2022. Photo by Gretchen McKnight



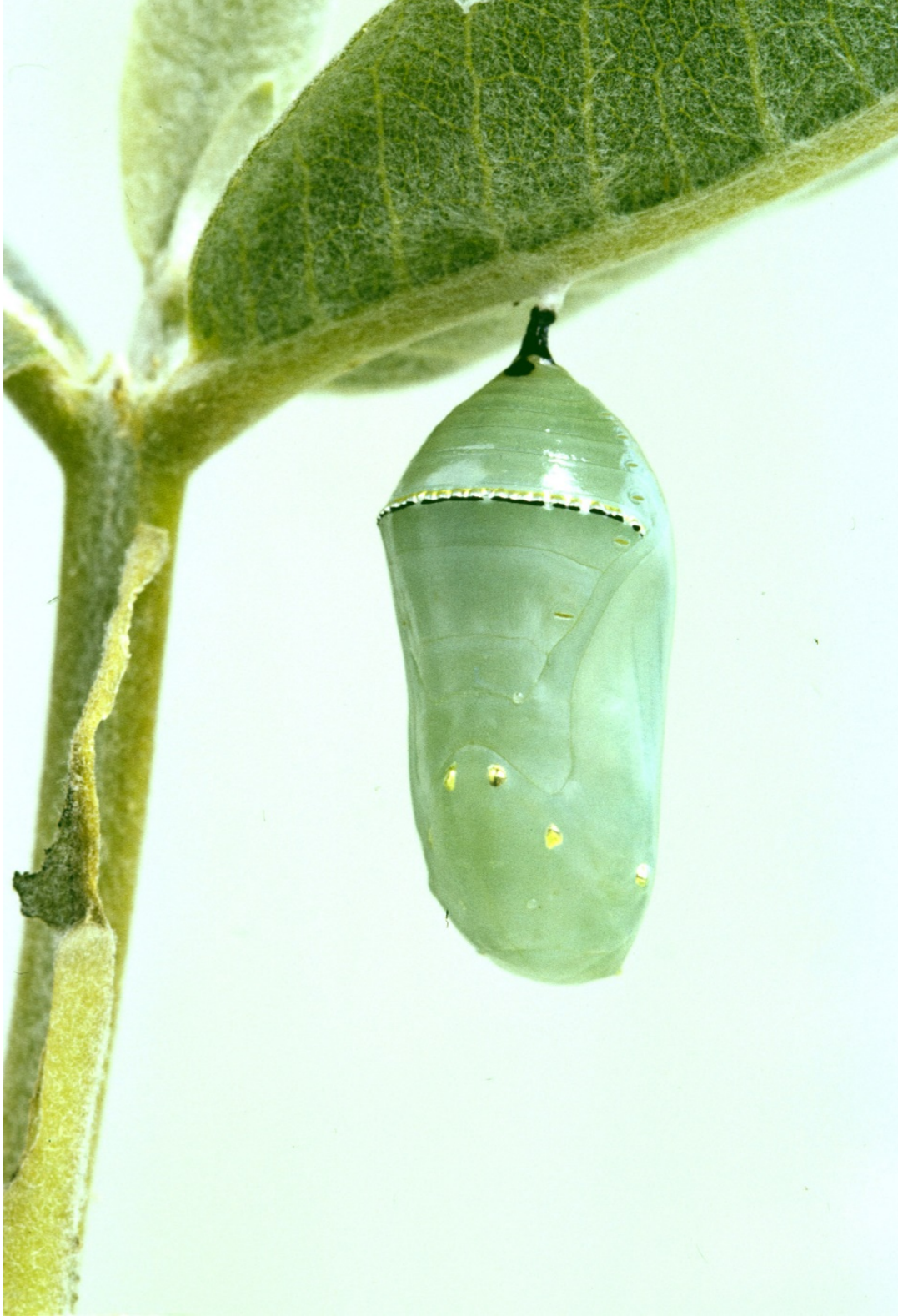
Supplementary material, Figure S27. *Efferia okanagana* (male), Oliver, British Columbia. Photo by Werner Eigelsreiter



Supplementary material, Figure S28. Monty Wood in the field, New Brunswick, October 1984.
Photo by Rob Cannings



Supplementary material, Figure S29. Jim Grant, Kingsmere, Québec, September 1958. Photo by Phil Jones



Supplementary material, Figure S30. Monarch (*Danaus plexippus*) pupa reared from a caterpillar given to Rob Cannings by Jim Grant, Penticton, British Columbia, early 1960s. Photo by Steve Cannings



Supplementary material, Figure S31. Walter Lazorko, physician and coleopterist, Vancouver, British Columbia, 1980s. Photo © Entomological Society of Canada



Supplementary material, Figure S32. Syd Cannings at Robson Glacier, Mount Robson Provincial Park, British Columbia, August 1973. The glacier is shockingly smaller now; it has receded one kilometre since this photo was taken 50 years ago. Photo by Rob Cannings



Supplementary material, Figure S33. Syd Cannings, park naturalist, giving a talk at Mount Robson Provincial Park, British Columbia, 1972. Photo by Steve Cannings



Supplementary material, Figure S34. Geoff Scudder, Westwick Lake, British Columbia, May 1970. Photo by Rob Cannings



Supplementary material, Figure S35. Á'äy Chù (Slims River) flows past Thechâl Dhâl (Sheep Mountain), Kluane National Park, Yukon. Rob Cannings admiring the view, June 1981. Photo by Syd Cannings



Supplementary material, Figure S36. The tree-line emerald, *Somatochlora sahlbergi*, a Beringian dragonfly found in North America only in mossy taiga pools in Alaska (United States of America), northern Yukon and northwestern Northwest Territories (Canada). Old Crow, Yukon, 1983. Photo by Rob Cannings



Supplementary material, Figure S37. Syd Cannings placing a pan trap in the fringed sage (*Artemisia frigida* Willdenow) (Asteraceae) steppe slopes above Old Crow, Yukon, 1983. Photo by Rob Cannings



Supplementary material, Figure S38. Polygon fen in the Bluefish Basin southwest of Old Crow, Yukon, 1983. Photo by Rob Cannings



Supplementary material, Figure S39. Syd Cannings collecting hill-topping flies on the summit of Old Crow Mountain, Yukon, 1983. Photo by Rob Cannings



Supplementary material, Figure S40. Herschel Island (Qikiqtaruk), Yukon, August 2022. Photo by Cameron Eckert



Supplementary material, Figure S41. Syd (left) and Dick Cannings processing specimens in the old Royal Canadian Mounted Police barracks on Herschel Island, Yukon, 1983. Photo by Rob Cannings



Supplementary material, Figure S42. Bert Brink, professor, Department of Agronomy, chair of the Division of Plant Science, University of British Columbia, and well-known conservationist. Photo: UBC Library Archives 1.0150919

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**The Blue
Darners**

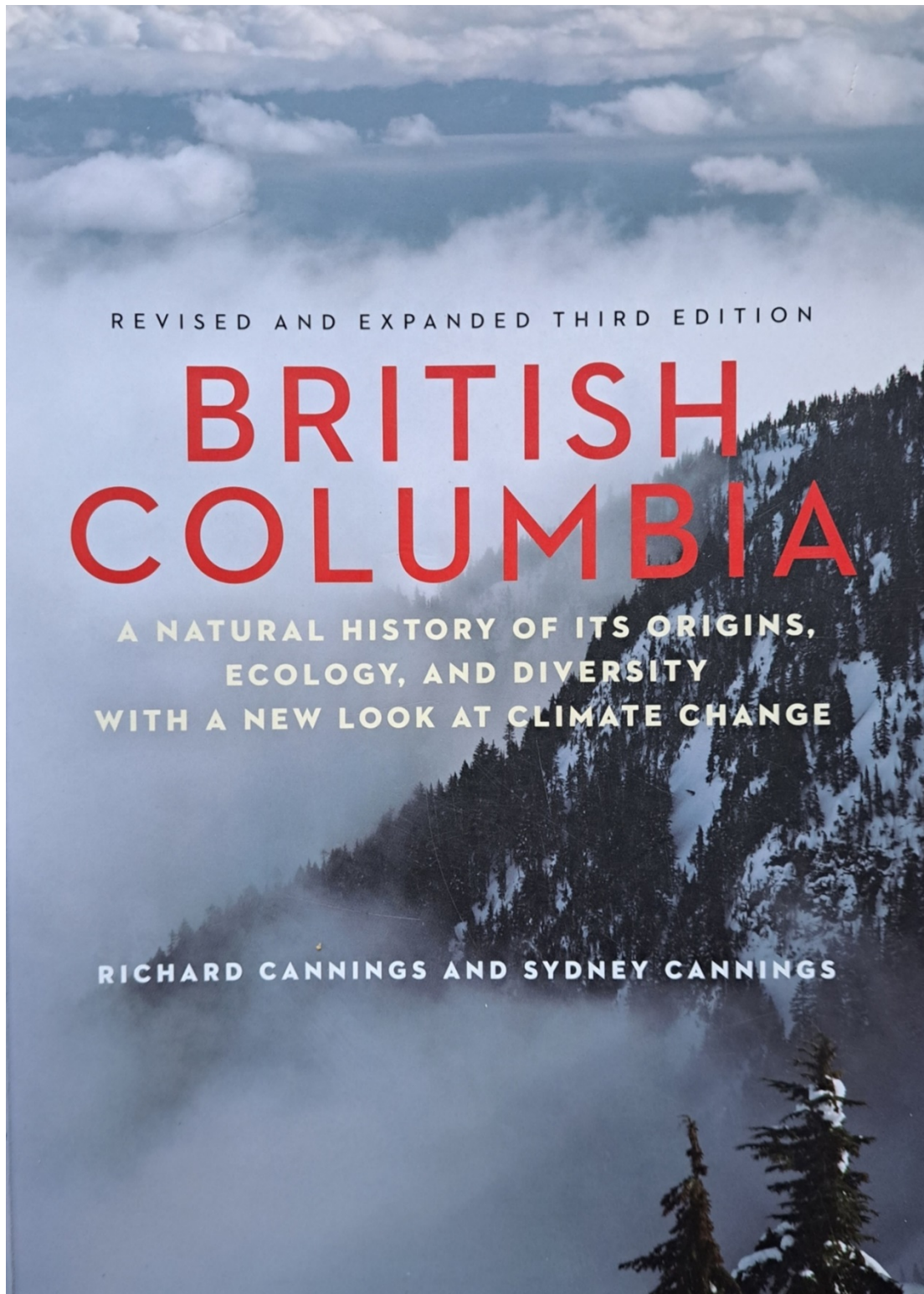
*Dragonflies of the
genus Aeshna in
British Columbia*

*Distribution of the
Green Sturgeon*

*The Early Life of
the Ancient
Murrelet*



Supplementary material, Figure S43. Cover of *Cordillera*, the journal of the Federation of BC Naturalists, 1996. Photo by Rob Cannings; cover image © BC Nature



Supplementary material, Figure S44. Cover of third edition (2015) of *British Columbia: A Natural History*. Photo by Syd Cannings; cover image © Greystone Books



Supplementary material, Figure S45. Syd Cannings collecting in Beringian steppe along the Yukon River near Minto Bluffs, Yukon, 2011. Photo by Shannon Stotyn



Supplementary material, Figure S46. *Bombus bohemicus* Seidl (Hymenoptera: Apidae), the gypsy (bohemian) cuckoo bumble bee, listed as endangered under the federal *Species at Risk Act*. Whitehorse, Yukon, June 2019. Photo by Syd Cannings



Supplementary material, Figure S47. Committee on the Status of Endangered Wildlife in Canada (COSEWIC) meeting, St. John's, Newfoundland, 2019. Photo by David McCorquodale



Supplementary material, Figure S48. Mating *Germaria angustata*, the dune tachinid fly, listed as of “special concern”. Carcross, Yukon, July 2018. Photo by Maria Leung



Supplementary material, Figure S49. Dick Cannings trapping voles at Westham Island, Delta, British Columbia, March 1975. Photo by Marilyn Bergen



Supplementary material, Figure S50. Horned lark, Riske Creek, British Columbia, 1978. Photo by Dick Cannings



Supplementary material, Figure S51. Lighthouse, Cape St. Mary's, Newfoundland, 1976. Photo by Dick Cannings



Supplementary material, Figure S52. Seabird colony, Cape St. Mary's, Newfoundland, 1976.
Photo by Dick Cannings



Supplementary material, Figure S53. University of British Columbia ecology field course, Kluane, Yukon. 2005. Photo by Dick Cannings



Supplementary material, Figure S54. Flammulated owl, designated a species of special concern. Max Lake, Penticton, British Columbia, 2008. Photo by Dick Cannings



Supplementary material, Figure S55. Dick Cannings coordinated the Canadian Christmas Bird Count program for many years. Mark Gardiner on the Apex-Hedley Christmas Bird Count, Similkameen Valley, British Columbia, 2005. Photo by Dick Cannings



Supplementary material, Figure S56. Dick Cannings is a best-selling author of books on birds and other natural history subjects. Photo by Dick Cannings



Supplementary material, Figure S57. Nature Conservancy of Canada fieldtrip visiting ranch land along the United States border west of Osoyoos, British Columbia, 2013. Dick Cannings served on the national and British Columbia boards of this organisation from 2006 to 2015 and helped to conserve properties such as this. Photo by Dick Cannings



Supplementary material, Figure S58. White Lake, Okanagan Falls, British Columbia, May 2023. Since 2002, Dick Cannings has been involved in the effort to create a new national park in the grasslands of the South Okanagan–Similkameen area. Photo by Dick Cannings



Supplementary material, Figure S59. Most years since 2015, Dick Cannings has bicycled around his riding (electoral district) of South Okanagan–West Kootenay to meet constituents in cafes and restaurants. It's about a 500-km trip and takes a week. Silverton, British Columbia, August 2016. Photo by Dick Cannings



Supplementary material, Figure S60. Dick Cannings chairing the House of Commons Natural Resources Committee, of which he was a member from 2016 to 2021. Ottawa, Ontario, 2017. Photo by Cam Holmstrom



Supplementary material, Figure S61. Dick Cannings in the House of Commons holding a leather case once owned by his grandfather, Walter Cannings, who was a labourer in a leather products factory in Bristol, United Kingdom, before he emigrated to Canada in 1907. Ottawa, Ontario, 2016. Photo by Dick Cannings



Supplementary material, Figure S62. Rob, Dick, Syd, Bette, and Jean Cannings, about 1958.
Photo by Steve Cannings