

Jérémie Bonneau

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EDUCATION

- PhD in Environmental Fluid Mechanics, The University of British Columbia
Started in September 2020, expected completion in September 2024. Supervised by B. Laval (UBC) and D. Mueller (Carleton). Project: Study of the ice-ocean interactions and coastal dynamics Canadian Arctic fjords.
- MASc in Environmental Fluid Mechanics (2020), The University of British Columbia
Supervised by B. Laval (UBC) and D. Mueller (Carleton). Project: Physical study of Milne Fiord epishelf lake.
- B.Eng in AgroEnvironmental Engineering (2017), Université Laval

WORK AND RESEARCH EXPERIENCES

Milne Fiord fieldwork **July 2018, July 2019, July 2022, (July 2023)**

Fieldwork in Milne Fiord (Northern Ellesmere Island) for my MASc and PhD research as well as collaborator's research. In charge of the planning and the physical oceanography data collection (moorings, CTD, bathymetry). Helped for glaciology data collection (Ice Penetrating Radar, cameras, ablation stakes, weather stations).

Nares Strait / Jones Sounds fieldwork **July-August 2021**

Hired for fieldwork by the University of Alberta. Sailing aboard the Vagabond S/Y in Jones Sound and Nares Strait (Nunavut). In charge of the physical oceanography data collection (moorings, CTD, bathymetry).

West Antarctica fieldwork **Dec 2019-March 2020**

Fieldwork in West Antarctica aboard the Korean Polar Institute (KOPRI) ice breaker. Provided assistance to collaborators from UC Davis and KOPRI for turbulence profiling in front of Twaites Glacier.

Quesnel Lake fieldwork **October 2019**

Mooring servicing and water profiling in British Columbia's deepest lake.

Deeks Lake fieldwork **2019-2022**

Monthly water profiling in Deeks Lake; through ice in winter, from small pack raft in summer. Mooring servicing in summer.

Teaching Assistant **2017-now**

Department of civil engineering, University of British Columbia. Responsible for the laboratory part of two classes: fluid mechanics II, and hydrology and open channel flow.

Research Intern **2016**

Laboratoire de mécanique des fluides numérique (LMFN), Université Laval. CFD simulation of air flow inside greenhouses. CFD simulation of fish inside hydroelectric turbines.

COMMUNITY AND SCIENTIFIC INVOLVEMENT

- Teaching glacier rescue and travel for the UBC outdoor club (2021-2023)
- Volunteer ski patrol at Mount Seymour (2021-2022)
- Member of the Varsity Outdoor Club huts and trails committee (2020-2021)

- Member of the scientific committee for the United Nation's ocean decade (2021)
- Reviewer for the sixth assessment report on climate change of the IPCC (2021)

SCHOLARSHIPS AND DISTINCTIONS

- The University of British Columbia Killam doctoral fellowship (2022-2024)
- The University of British Columbia 4YF doctoral fellowship (2021-2024)
- Fond de recherche du Québec Master's scholarship (2019)
- National science and engineering research council Master's scholarship (2018)
- Northern Scientific Training Program fieldwork grant (2019, 2020, 2021, 2022)

TRAINING

- Thin ice travel and rescue (2023)
- ROV pilot two day course, Deep Trekker (2022)
- Wilderness first responder first aid, 80 hours (2021)
- STCW personal survival technique (2019)
- Glacier travel and rescue (2019)
- Advanced glacier travel (2019)

PEER REVIEWED PUBLICATIONS

- Bonneau, J., Mueller, D., Laval, B.E., Forrest, A.L., Friedrichs, D.M., and Hamilton, A.K. (2021). Winter Dynamics in an Epishelf Lake: Quantitative Mixing Estimates and Ice Shelf Basal Channel Considerations. *Journal of Geophysical Research: Oceans* 126(9), e2021JC017324.

CONFERENCES

- Bonneau, J., Laval B.E., Mueller, D., (2022). Drainage of the Milne Fiord epishelf lake. Presentation at ArcticNet annual conference, Toronto.
- Bonneau, J., Laval B.E., Mueller, D., (2022). Water properties and circulation in a Canadian Arctic Glacial fjord. Poster at the International Glaciological Society meeting, Reykjavik.
- Bonneau, J., Mueller, D., Laval, B.E. Hamilton, A.K. (2021). Development of a buoyancy-corrected method for the estimation of meltwater fractions in glacial fjords. Presentation at ArcticNet annual conference, online.
- Bonneau, J., Laval B.E., Mueller, D., Hamilton, A.K., Friedrichs, A.M. and Forrest, A.L. (2020) Winter Dynamics in the last Epishelf of the Canadian Arctic. Presentation at PPNW conference, online.
- Bonneau, J., Laval B.E., Mueller, D., Hamilton, A.K. (2019) Mixing in the last Arctic epishelf lake. Poster for ArcticNet annual conference, Halifax.
- Bonneau, J., Laval B.E., Mueller, D., Hamilton, A.K. (2018) Physical study of the last Arctic epishelf lake. Poster for ArcticNet annual conference, Ottawa.