



PDF Position - Modeling the Survival of Outmigrating Pacific Salmon Smolts

The Freshwater Fish Ecology Laboratory (ffishlab.ca) at the University of Northern British Columbia (UNBC), the Pacific Salmon Foundation (PSF, psf.ca), and the British Columbia Conservation Foundation (BCCF) are recruiting a Post-Doctoral Fellow (PDF) to develop and apply a model to analyze detection data of outmigrating Chinook salmon smolts. The PDF will refine an existing integrated model to estimate freshwater residence and survival in a Bayesian framework; then apply the model to existing PIT telemetry data sets from four populations (5,000-10,000 individuals tagged per population) of Vancouver Island Chinook salmon collected over 5-10 years. The goals of the analyses conducted by the PDF will be to investigate the primary drivers of freshwater survival (e.g. flow, temperature, density-dependence, predation, watershed degradation) in all study populations, as well as compare hatchery and wild Chinook salmon freshwater survival in one of the study populations. The PDF will also participate in the field component for this project involving PIT tagging of outmigrating smolts along the east coast of Vancouver Island in the spring of 2025.

This research project is part of the Bottlenecks to Survival Program (<https://www.survivalbottlenecks.ca>), which is jointly managed by the PSF and BCCF. The PDF will benefit from the breadth of experience and data collected through the initial years of the program and will interact with a dynamic and collaborative team of data scientists, biologists, ecologists, and GIS technicians to develop peer-reviewed publications and applied products for management purposes. The PDF will also have the opportunity to engage with several First Nations partners and gain insights into the intersection between western Science and Indigenous values. The PDF will be affiliated with UNBC and is expected to spend most of their time in Prince George, BC, where they will have the opportunity to collaborate and mentor a diverse team of graduate students conducting research on freshwater fish ecology.

Salary and benefits: The successful candidate will be supported by a salary of CAD \$ 61,000 / year plus statutory benefits, life benefits and extended health. The position will be funded for a total of 16 months.

Desired start date: January 15th, 2025.

The ideal candidate will have:

- PhD in fisheries, ecology, statistical ecology or another relevant field
- Strong publication record in peer-reviewed journals
- Strong quantitative skills
- Experience with generalized linear models, capture-recapture models and/or state-space models
- Proficiency with the software R
- Proficiency with Bayesian inference and related software (ideally based on the BUGS language)
- Experience conducting fieldwork
- Ability to work well independently and as part of a team
- Strong communication skills and experience in science outreach and engagement with non-scientific audiences

We are fully committed to promoting equity, diversity, and inclusion in science and strongly encourage applications from aboriginal peoples, women, the LGBTQ2S+ community, people with disabilities and visible minorities.

To apply: Please email your CV, a cover-letter highlighting your skills, research experience and interests and contact information for three references to Dr. Eduardo Martins (eduardo.martins@unbc.ca).

Applications will be accepted immediately until position is filled.