

Postdoctoral fellowship in fisheries

Co-appointment at the Prince William Sound Science Center and the University of Alaska Fairbanks, USA

Project overview:

There is an urgent need to understand how climate change will impact Pacific salmon (*Oncorhynchus* spp.) and fisheries in Alaska. Changes in the Gulf of Alaska, particularly from increasing competition for prey among salmon and following more recent marine heatwaves, have raised concerns about growth and productivity of Pacific salmon. The biological response to climate change in freshwater salmon ecosystems, particularly ones with significant glacial mass in Alaska, is likely to be complex. We have assembled a diverse, interdisciplinary working group to evaluate how climate change will impact an iconic run of salmon, Copper River sockeye salmon in southcentral Alaska, USA. The problems we will address are multidimensional, and relate to various phenomena, including glacier melting and retreat, changes in river temperatures and flows, physiological and bioenergetic responses at different critical life stages of salmon, and managing salmon harvest across different sectors. We are scheduling a series of workshops in 2025 with the objective of synthesizing data and building models to capture these dynamics. Our goal is to develop simulations to explore how different management approaches affect the productivity of salmon given the likely changes we will see in ocean and river conditions. We intend to apply a diverse set of metrics to define management success, including catch stability across different sectors, food security in Indigenous and rural communities, and biodiversity protection. This project has been made possible by Inflation Reduction Act funding awarded to the National Park Service Alaska Region to address critical ecosystem resilience needs.

Qualifications:

We are seeking an individual with a Ph.D. in fisheries or related discipline that has extensive experience working with large, complex data sets and confronting models with data. Successful candidates will have a history of scholarship and publications with experience building models that capture ecological and fisheries dynamics using a variety of modeling approaches (e.g. simulations, Bayesian inference models, structured decision making, spatial models, bioenergetic and physiological mechanistic models). Experience with outreach and working with and interacting with fisheries stakeholders and managers is also highly desirable.

Location:

Either in Cordova or Fairbanks, Alaska, USA, depending on preference of the individual. A period of residence at both locations will also be possible. The position will be jointly supervised by Pete Rand (Prince William Sound Science Center, Cordova) and Kristen Gorman (University of Alaska Fairbanks).

Term:

Full time position, beginning in August 2024 for a period of 24 months. Start time is flexible.

Salary:

\$66K annual salary + benefits

Applications need to include a cover letter, CV, and a list of three references (references will only be contacted after the initial interview stage). Send applications by email with subject heading "Copper River Postdoc Application" to: Pete Rand, Prince William Sound Science Center, prand@pwssc.org. Review of applications will begin 1 April 2024.