

Position Announcement - NN0110

Position Overview

Organization: School of Aquatic and Fishery Sciences / College of Ocean and Fishery Sciences

Title: Research Associate

Search #: NN0110

Position Details

The University of Washington's School of Aquatic and Fishery Sciences (SAFS) seeks to hire a **post-doctoral Research Associate** to work on the project "Ecological Forecasting of Walleye Pollock Recruitment in the Gulf of Alaska Based on Life-Stage Progression and the Environment".

Responsibilities: The objective of this project is to develop a stage-based mortality model that predicts recruitment of age-2 pollock in the Gulf of Alaska. The model will be cast in a Bayesian framework and posterior distributions for the model parameters will be used to calculate the probability associated with different forecasts of future recruitment. The post-doc will produce a system of state equations that incorporate explicit descriptions of the progression through egg, early larvae, late larvae, juvenile and age-1 stages. Life-stage equations will be related to biotic and abiotic environmental covariates and acknowledge measurement and process errors through a state-space formulation. Dynamic features of the underlying stage model will be retained through stage-specific net survivorship parameters that link life stages. Observation equations relate the predicted states to measured quantities in the data set. Model results, which can be presented as relationships between abundance, spawning success and climatic conditions, will be explored in an integrated and simultaneous Bayesian estimation framework. The successful applicant will review recent literature, develop one or several approaches to this problem, and implement computer code. The post-doc will be responsible for parameter estimation, sensitivity analysis, model validation, and design of model experiments to examine different hypotheses. The post-doc will analyze results, and summarize them in the form of reports, refereed journal publications, and/or meeting presentations and seminars.

Qualifications: Ph.D. in quantitative fisheries, biology, zoology, or a closely related field.

Essential: experience in numerical and mathematical modeling, experience with univariate and multivariate statistical methods and parameter estimation methods, especially Bayesian estimation methods, ability to effectively communicate in both written and oral formats, and the ability to work well both collaboratively and independently.

Desirable: Familiarity with WINBUGS or AD Model Builder software, experience exploring and analyzing biological/ecological time series data, familiarity with basic biological, ecological and fisheries-oceanography and marine science principles

Supervision: The supervisor of this position will be Dr John K. Horne (UW/School of Aquatic and Fisheries Sciences). Co-supervision and collaboration will be provided by Dr. Bernard A. Megrey (NOAA/AFSC), Dr. Carol Ladd (NOAA/PMEL), Dr. Martin W. Dorn (NOAA/AFSC), and Dr. Andre E. Punt (UW/School of Aquatic and Fishery Sciences).

Duration of appointment: This is a one-year full time position, with potential renewal dependent on availability of funds.

Limitation on appointment: Maximum appointment as a Research Associate is within six years after receipt of Ph.D. Candidate must have received Ph.D. within the past five years to qualify for this position.

Closing date: until filled.

Starting date: preferred before end of 2009

Position is located at the University of Washington, Seattle, WA and at the Alaska Fisheries Science Center in Seattle, WA. The University of Washington is an affirmative action, equal opportunity employer. The University is building a culturally diverse faculty and staff and strongly encourages applications from women, minorities, individuals with disabilities and covered veterans. University of Washington faculty engage in teaching, research and service.

Interested persons should *send* CV, letter of intent including names and contact information for 3 references via email to *Dr. John K. Horne*, University of Washington, School of Aquatic and Fishery Sciences, Box 355020, Seattle, Washington, 98195. E-mail: jhorne@u.washington.edu.

For successful candidates, a background check for criminal history is required.

If you have a question about the details of this search / position please contact the department directly. Thank you for your interest in this faculty position at the University of Washington.