EST. 1785
UNIVERSITY OF NEW BRUNSWICK

DEPARTMENT OF
BIOLOGICAL SCIENCES
Science, Applied Science and
Engineering

Ph.D. position to study benthic movements of adult lobsters *Homarus americanus* in the Bay of Fundy

Note: This opportunity is contingent on the success of recent funding applications to the Department of Fisheries and Oceans and the New Brunswick Innovation Foundation.

Project description: The project will construct individual-based models to infer migration paths of adult American lobster in the Bay of Fundy/Gulf of Maine based on archival tag data and an ocean model of the study domain's bathymetry and temperature. It will provide the most detailed data existing concerning these movements, which will improve our understanding of their contribution to connectivity between inshore-offshore populations and between Lobster Fishing Areas, as well as of the timing and location of female hatch. This work is a collaboration with fishermen associations in the Bay of Fundy.

Necessary qualifications: This project requires a highly motivated student with an M.Sc. degree, a strong quantitative background as well as programming experience using R, Matlab, Python, or a similar language. It also requires a student with field work experience; experience with work at sea is not necessary but would be an asset.

Academic setting: The Ph.D. student will be co-supervised by Drs. Rémy Rochette (UNB Saint John) and Eric P. Bjorkstedt (NOAA Southwest Fisheries Science Center and Humboldt State University). They will be based in the Department of Biological Sciences at UNB Saint John, which provides education and research programs at the undergraduate, Master's and PhD levels. The Department has a strong and collegial group of researchers, with a particular research strength in marine and coastal ecosystems. The student will spend 8-12 weeks at Humboldt State University receiving training from E. Bjorkstedt on modeling components of the project.

Financial support: Funding includes 4 years of Ph.D. student stipend, at $22,000/year, as well as all materials, equipment and travels required for the project, including a high-performance computer. International students would see the International Differential Tuition fee waived for the first three years and could be eligible for a Ph.D. International Student Recruitment Award. Students would have the opportunity to apply for other competitive "top up" awards.

How to apply: Send a letter of interest, copy of undergraduate and M.Sc. transcripts, a CV, and the contact information for three references at rochette@unb.ca. Review of applicants will begin on 12 July 2021 and will continue until the position is filled. The start data will either be September 2021 or January 2022.

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