

Spatial dynamics of narwhal in a rapidly changing environment – Post Doctoral Fellowship Position

University of Windsor, University of Manitoba, Department of Fisheries and Oceans and World Wildlife Fund – Canada.

We are seeking a highly motivated Post-Doctoral Research Fellow to join a dynamic Arctic research team including academic, government and non-governmental partners. The PDF will be responsible for synthesizing and analysing various types of satellite telemetry data (horizontal and vertical) obtained from instrumented narwhal (*Monodon monoceros*) across the Canadian Arctic. Through the Department of Fisheries and Oceans, long term marine mammal monitoring programme, narwhal have been equipped with telemetry devices at multiple locations over the past three decades (1989 to present). This monitoring includes recent intense tagging efforts as part of the Ecosystem Approach to Tremblay Sound program (2017-present; Eclipse Sound near the community of Pond Inlet/Mittimatalik). These tagging campaigns now provide a unique long-term telemetry data set to address key management and conservation questions for this iconic and culturally important endemic Arctic species.

The broad objectives of this project are to characterize the type, size and location of core habitat (winter and summering grounds), define migration routes and determine the drivers of narwhal residency/movement behavior. The project specifically aims to take advantage of this long term data series to examine (i) inter-individual variation in movement behaviours from single tagging locations within and among years and (ii) inter annual variation in timing of residency and migrations to assess the degree of change that has occurred/is occurring. These outcomes will allow predictions on how ongoing climate shifts will impact narwhal movement and behavior to assist management. The project will also use data rich GPS fastloc data to examine fine scale movements and habitat use of narwhal in a region where shipping is rapidly increasing with unknown consequences for narwhal behaviour and life history dynamics. The tasks of the successful candidate will initially include organization, cleansing and standardisation of data and an evaluation to ascertain data integrity to address identified questions. Following this first phase, the PDF will lead on addressing core questions agreed by all partners.

The position is initially funded for one year with the possibility of renewal based on performance and budget. The successful candidate will be based in Winnipeg, Manitoba, or Windsor, Ontario, Canada.

To apply, the candidate will possess a PhD in the area of ecology and will have a strong quantitative background including programming skills (using software such as R, Python, or MATLAB), familiarity with database management, and previous experience of telemetry data. The successful candidate will be expected to operate independently and as part of a broader interdisciplinary team, communicate with diverse stakeholders and be willing to share their expertise and enthusiasm among team members. The PDF will present findings at National/International Meetings and prepare manuscripts for publication.

Interested applicants should submit a cover letter stating their work/academic experience to date, research interests and how these meet the stated selection criteria, a complete curriculum vitae and contact information for two academic/research references. Please submit your application package to Marianne Marcoux (Marianne.marcoux@dfo-mpo.gc.ca) and Nigel Hussey (nehussey@uwindsor.ca).