

**Postdoctoral Fellow in European Green Crab Population Monitoring and Ecophysiology**  
*A Sentinels of Change Alliance postdoctoral fellowship*

Biodiversity change in the Salish Sea is a major ecological concern. The need to understand these changes, and their causes, is a primary research objective so that knowledge can be mobilized to inform conservation and policy actions in the region. The Sentinels of Change Alliance brings together Hakai Institute scientists, university scientists and local communities to deepen our understanding of Salish Sea biodiversity change at an unprecedented scale and resolution. The goals are to implement standard observation systems for biodiversity across a range of taxa, to conduct experiments to test hypotheses about the causes of diversity change, and to integrate knowledge from observation and experimental systems into a sustainable ongoing biodiversity observation system for the Salish Sea.

The Sentinels of Change Alliance project will train postdoctoral researchers and technicians to implement a series of globally recognized biodiversity monitoring programs (e.g. Sentinels light traps, ARMS, MARINe Biodiversity monitoring and other systematic observation and experimental systems). Project personnel will use state of the art data science and statistical approaches in the context of emerging frameworks for detecting and attributing biodiversity change. Sentinel Postdoctoral researchers will be co-advised by UBC professors and Hakai scientists to develop projects that synthesize the information coming in from the monitoring program, as well as provide complementary theory development, mechanistic experiments and monitoring.

**Focal project**

British Columbia's coastal ecosystems provide crucial functions and services ranging from serving as habitat for ecologically and economically important species to mitigating climate change impacts. However, coastal environments across B.C., such as seagrass meadows and estuaries, are under threat from the rapid spread of the European Green Crab (EGC), an introduced species known to have significant negative impacts on ecosystem health and commercial activities. In order to monitor and predict European green crab movement throughout the Salish Sea, the Sentinels of Change Alliance is hiring a postdoctoral fellow to conduct research on ECG population recruitment and ecophysiology. Specifically, the postdoctoral fellow will assess ECG movements across the Salish Sea using a variety of methods, including crab-settlement devices, machine-learning techniques and other tools that will be developed by the fellow. Additionally, ecophysiology and thermal ecology approaches will be used to determine the thermal tolerance and physiological plasticity of local European green crab populations at different life stages in order to assess invasion impacts in B.C.

## **Postdoctoral Responsibilities and Requirements:**

The responsibilities for this position include, but are not limited to:

- Installing and monitoring crab-settlement devices across specific habitats within the Salish Sea.
- Collecting environmental data across all selected experimental sites.
- Assessing European green crab population abundances using the aforementioned and other methods.
- Collecting European green crab individuals at various life stages and conduct laboratory-based thermal physiology experiments.
- Liaising with researchers from the Hakai Institute and UBC.

Candidates must hold a Ph.D. in a relevant field, such as marine biology, ecology, or environmental science, and possess a strong background in ecological research, population dynamics, and marine species.

**Project advising team:** The successful candidate will be housed at UBC in the Moore Inclusive Conservation lab. The position will be co-supervised between Dr. Alex Moore at UBC and Dr. Margot Hessing-Lewis and Dr. Iria Gimenez from the Hakai Institute.

**Additional details:** We encourage applicants to apply for this position; equity and diversity are essential to research excellence. We encourage applications from members of groups that have been marginalized on any grounds enumerated under the B.C. Human Rights Code, including sex, sexual orientation, gender identity or expression, racialization, disability, political belief, religion, marital or family status, age, and/or status as a First Nation, Metis, Inuit, or Indigenous person. Candidates of any nationality are encouraged to apply.

The position is based at the Vancouver campus of the University of British Columbia, which lies on the traditional, ancestral, and unceded territory of the Musqueam people. Hakai is an independent research organization based in British Columbia with many scientists studying the fish, invertebrates, microbes, and seaweeds of coastal ecosystems. The postdoctoral fellow is expected to be able to travel within the Salish Sea Region to participate in experimental work, and accommodation at field stations will be provided.

Review of applications will begin on November 15th and we hope to fill the position for a start date of May 1, 2023 (negotiable). The position is for two years, with a performance review after one year.

To apply, please send a cover letter, CV, the two reference letters, and sample research publications to Kyoko Horiguchi ([kyoko.horiguchi@ubc.ca](mailto:kyoko.horiguchi@ubc.ca)). Your cover letter should address your motivation to excel in this project, and the particular skills and experience you can bring to the work.