



## **Intertidal biodiversity: Pattern, Process, and Change**

### ***A Sentinels of Change Alliance postdoctoral fellowship***

#### **About the Sentinels of Change Alliance Project:**

The Sentinels of Change Alliance brings together Hakai Institute scientists, University of British Columbia scientists and local communities to deepen our understanding of Salish Sea biodiversity change at an unprecedented scale and resolution. 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. Sentinels of Change Alliance is bridging resources and researchers at UBC and Hakai Institute, with Partners around the Salish Sea. The goals of the Sentinels Alliance 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. Sentinels 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 - Intertidal Biodiversity: Pattern, Process, and Change**

This focal project will use observational and experimental approaches to explore the combined role of abiotic and biotic drivers (e.g., temperature, pH, herbivory, biogenic habitat provision) in structuring benthic communities. Manipulations of temperature and community composition will be established at various rocky intertidal sites in the Salish Sea to determine how the strength of these processes varies within the larger oceanographic context of this complex inland sea. Field observations and



manipulations will be done in collaboration with Hakai technicians and community partners, and extensions to laboratory experiments and/or modeling are possible.

Experimental data is already available at multiple sites and will continue during the tenure of this postdoctoral role, with some time series completing before year 2. *While the successful applicant will work with these data, we also encourage them to incorporate their own ideas and ecological research questions to complement the focal project and other work associated with the broader program.*

#### **Postdoctoral responsibilities and Requirements:**

- Collaborate with the Sentinels team of scientists, postdocs, field and data technicians
- Publish results in peer-reviewed journals a timely fashion
- Be curious and engaged with the project and the work, willing to learn and grow
- Employ excellent communication skills with colleagues, collaborators, and mentors about all aspects of the projects (design, interpretation, challenges, solutions, timelines, and progress)
- Liaise with researchers from the Hakai Institute and UBC
- The successful candidate will have a PhD or equivalent in a relevant discipline
- Experience with experimental approaches in marine ecosystems preferred.
- Experience conducting field work is an asset (but not required).
- Required experience with statistical analysis in R.

#### **Project advising team:**

UBC PI - Dr. Chris Harley <https://www.zoology.ubc.ca/harleylab/>

Hakai PI - Dr. Alyssa Gehman <https://gehmana.weebly.com/>

**Additional details:** 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.

We hope to fill the position for a start date in early 2025. The position is for two years, with a performance review after one year.

Contact Alyssa Gehman [alyssa.gehman@hakai.org](mailto:alyssa.gehman@hakai.org) or Chris Harley [harley@zoology.ubc.ca](mailto:harley@zoology.ubc.ca) with questions.

**To apply**, please email Michelle McEwan ([sentinels@hakai.org](mailto:sentinels@hakai.org)) with the following:

- cover letter,
- CV,
- two reference letters, emailed directly to [sentinels@hakai.org](mailto:sentinels@hakai.org), subject: "PDF job Intertidal [your surname]"
- Two sample research publications

Your cover letter should address your main research interests and how they would apply to the context of this project and the Salish Sea intertidal zone, along with the particular skills and experience you can bring to the work.