

# Hakai Institute—Smithsonian MarineGEO

## Postdoctoral Fellowship in Marine Biodiversity



The Hakai Institute and the Smithsonian Institution's MarineGEO program seek candidates for a Postdoctoral Fellow based at the University of British Columbia to lead a detailed assessment and analysis of biodiversity in coastal benthic habitats of the [Calvert Island Marine Station](#) on the Central Coast of British Columbia.



Calvert Island Field Station



Central Coast BC

The position is part of an ongoing research program aiming to understand nearshore biodiversity of this unique region. We seek a Postdoctoral Fellow to lead a detailed biological inventory of this region ('BioBlitz'), and develop research that takes advantage of this inventory and existing biological datasets to advance our comparative understanding and quantitative estimates of biodiversity in the North Pacific region.

The Fellow's time will be split equally between leading the "BioBlitz" and complementary biodiversity research, with data analysis/manuscript preparation stemming from these two activities.

### **BioBlitz**

The Fellow will lead the BioBlitz in the summer of 2017, an intensive field characterization and analysis of biodiversity along Calvert Island's shorelines and representative habitats of British Columbia's Central Coast region. The BioBlitz will be conducted in collaboration with the Hakai Institute's group of researchers (Nearshore Marine Ecology, Oceanography, Geospatial groups) and with a team of experts from the BC region, Smithsonian Institution, and around the world. There are two key components of the BioBlitz:

- 1) A 2-week, detailed inventory of representative nearshore habitats: seagrass meadows, soft sediment substrates, intertidal rocky reef and kelp forests. These inventories will complement and add taxonomic resolution to on-going interannual and seasonal monitoring of indicator species and functional diversity in these habitats. The Fellow will have the opportunity to specialize in particular methods or habitats of their interest, but will work with a much larger team of taxonomic generalists and specialists to broadly cover the nearshore environment.
- 2) Analysis and comparison of benthic subtidal rocky reef biodiversity using standardized settlement plates (Autonomous Reef Monitoring Structures, ARMS). ARMS have been deployed to sample differences in community structure between kelp forests (dominated by both *Nereocystis* and *Macrocystis* kelps) and de-forested urchin barrens in near proximity to the Calvert Island Research Station.

Together, these BioBlitz components aim to integrate taxonomic descriptions of species with genetic analyses and community-level data. Ultimately, this will produce an unprecedented level of understanding and baseline of habitat-associated marine biodiversity in the Northeast Pacific.

### **Proposed Research**

In conjunction with the BioBlitz, there is considerable scope for independent research employing the BioBlitz collections data, and taking advantage of existing nearshore habitat monitoring datasets (seagrass, kelp, soft sediment, rocky intertidal datasets) and oceanographic/atmospheric data.

Using this diverse dataset and collaboration, applicants will propose research questions (1-page document) pertaining to, but not limited to:

- spatial scaling of biodiversity
- habitat connectivity and complexity
- functional and taxonomic diversity; relationships to ecosystem services
- drivers of change in benthic diversity

Research may focus on either specific habitats or taxa, or address comparative, cross-habitat questions. The proposed research should contribute to biodiversity knowledge of the Northeast Pacific region, with global context and comparative relevance through Smithsonian's MarineGEO global network.

### **The Fellowship**

The Fellow will be supervised by Margot Hessing-Lewis (Hakai Institute), Patrick Martone (UBC Botany) and Mary O'Connor (UBC Zoology), with residency at the University of British Columbia (UBC). They will collaborate closely with other scientists from the Hakai Institute, the Smithsonian Institution (Washington D.C.) and UBC (Biodiversity Research Center and Beatty Biodiversity Museum, Institute for Oceans and Fisheries).

The candidate must have a Ph.D. in biology, marine science, or other appropriate field, experience in marine field ecology, and clear evidence of research achievement and promise. Because the project involves a collaborative partnership, strong organizational, communication, writing, and people skills are essential. Advanced quantitative skills, including analysis of genomic datasets and taxonomic expertise, or community biodiversity data are also a plus.

## **To Apply**

Applications should include (1) a current Curriculum Vitae; (2) a 1 page summary of relevant career goals, interests, experience and publications; (3) a 1-page proposal of research questions relevant to the stated goals of the research program; and (4) names and full contact information (postal address, email address, and phone number) for two references (we will contact them directly to request letters of recommendation).

*Please submit your application electronically as a single PDF document to the three supervisors listed below with the file name and email subject heading 'Hakai MarineGEO Postdoc application – SURNAME' with your surname in capital letters.*

The position is a Mitacs Accelerate Post Doc, available immediately for up to two years, contingent on satisfactory progress. The stipend is \$55,000 per year, plus Mandatory Employment Related Benefits. Additional funds for research and travel related to the BioBlitz will also be provided.

***Review of applications will begin on March 27, 2017 and will continue until the position is filled.***

***The 2-year position will start in Spring 2017. Specific start dates will be negotiated with the successful candidate. The BioBlitz is planned for August 2017.***

### Project supervisors

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