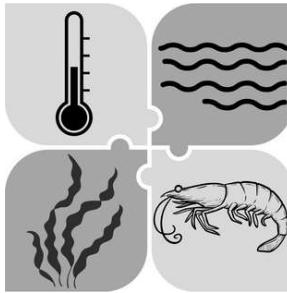


# Barkley Sound and Clayoquot Sound Krill Monitoring



Zooplankton night sampling in a West Coast Vancouver Island sound.

Barkley Sound and the adjacent continental shelf region is rich in marine life. Zooplankton are a foundational component of the area's marine food webs. The zooplankton group euphausiids, also known as "krill", are an important prey item for the survival of several SARA-listed species including Chinook.

The Barkley Sound and Clayoquot Sound Krill Monitoring program aims to examine the effect of salmon prey quantity and quality on adult salmon escapement levels.

The project also characterizes the biophysical processes that influence the environment of salmon prey and the salmon themselves. These parallel complementary approaches will lead to understanding linkages between physics and biology that will allow for the prediction of climate-driven effects on juvenile salmon and hence on adult returns.

This work restarts a long-term (1998-2014) krill monitoring program in Barkley Sound. This new work is critical in our current era of rapid environmental change for understanding how climate-

## Take-aways

- Krill, a type of zooplankton, are a critical component of the marine food webs and important part of juvenile salmon diets.
- This ecosystem monitoring program collects krill on a monthly basis in two key feeding areas for early marine juvenile salmon along the west coast of Vancouver Island.
- We are monitoring how the amount and nutritional value (fats, protein and total energy) of krill varies with season and ocean conditions (temperature, salinity, and oxygen).

driven changes in the ocean influence zooplankton composition and ecological processes at the base of the food web, and how that impacts salmon productivity. Generally speaking, our work aims to fill the knowledge gap regarding krill as an important prey item for juvenile salmon in both Barkley and Clayoquot Sounds.

Current funding supports fieldwork in Clayoquot in partnership with the Ha'oom Fisheries Society, and in Barkley Sound with the Bamfield Marine Science Center.



Photo of a euphausiid (krill) sample.

## Timeline

- ⌚ Apr 2024-Mar 2025: monthly fieldwork
- ⌚ Apr 2024-Mar 2025: submit water quality samples and data as collected; maintain zooplankton and phytoplankton database
- ⌚ Apr 2024-Mar 2025: ongoing data entry and QA/QC; process preserved zooplankton samples
- ⌚ Mar 2025: State of the Ocean presentation

DFO Science Division  
**Ocean Sciences**

DFO Science Section  
**Ecology and Biogeochemistry**

Project Leads  
**Akash Sastri**  
**Kelly Young**

Locations  
**Barkley Sound**  
**Clayoquot Sound**

Collaborations  
**Bamfield Marine Sciences Center**  
**Ha'oom Fisheries Society**  
**UBC, UVic**



Project ID  
**2413**