GRADUATE STUDENT OPPORTUNITIES

The Conservation and Recovery Research on Oolichan (Eulachon, *Thaleichthys pacificus*) in Haisla Territory Project (CAROOHT)

The Conservation and Recovery Research on Oolichan (Eulachon, *Thaleichthys pacificus*) in Haisla Territory Project (CAROOHT) has been developed to address aspects of the fish and fish habitat offsetting plan related to Oolichan for the LNG Plant Processing Area and *Fisheries Act Authorization (FAA).*

Research will be conducted over five years in a collaboration between LNG Canada, Ecofish Research, Haisla Nation, DFO Science and Fisheries Management, as well as UNBC, UVic and SFU. The scientists involved will include Adam Lewis, Morgan Hocking and Alejandro Buren from Ecofish Research, Mark Shrimpton, Heather Bryan and Eduardo Martins from UNBC, Caren Helbing, Francis Juanes, and Mary Lesperance from UVic, and Jonathan Moore from SFU.

The Haisla Nation historically harvested Oolichan in the Kitimat and Kildala Rivers. Due to declining stocks in these rivers, every spring, Haisla family groups now travel to the Kemano River for Oolichan fishing. After a long, hard North Coast winter, Oolichan are the first fish returning to spawn in local rivers. Haisla people process Oolichan and make it into a clear grease, of which the quality is well known up and down BC's Coast. Haisla people still trade this valuable commodity with neighbouring villages.[1]

In the 1990s, there was a sudden decline in the Oolichan stock in the Fraser River, which prompted the development of multiple research projects and forums province wide. Initial studies determined that there are currently three Oolichan populations spawning along the BC coast: the Nass and Skeena River population (designated as threatened in May 2011), the Central Pacific Coast population (designated as endangered in May 2011), and the Fraser River population (designated as endangered in May 2011).[2] The CAROOHT research program will focus on the endangered Central Pacific Coast population located in the major rivers and estuary habitats entering Douglas Channel and Gardner Canal.

1. https://haisla.ca/community-2/about-the-haisla/
2. https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/cosewic-assessments-status- reports/eulachon-3-rivers.html#doc_info

CONTACT

Ecofish
Morgan Hocking - mhocking@ecofishresearch.com
Adam Lewis - fjalewis@ecofishresearch.com

Haisla
Candice Wilson - CaWilson@haisla.ca

UNBC
Mark Shrimpton - markshrimpton@unbc.ca

UVIC
Caren Helbing - chelbing@uvic.ca

Fieldwork will involve sampling adult and larval Oolichan in the major rivers and estuary habitats entering Douglas Channel (Kitimat, Dala and Kildala Rivers and Anderson, Moore and Wathl Creeks) and Gardner Canal (Foch, Giltoyees, Kemano, Wahoo, Kowesas River, and Kitlope and Rivers).

The primary goal of the CAROOHT research program is to advance scientific knowledge of Oolichan presence and distribution in the Traditional Territory of Haisla Nation to allow for more informed fisheries management and conservation decisions (e.g., sustainable harvest levels and listing decisions under *Species at Risk Act (SARA)*). To achieve this goal, the following research objectives were identified:

OBJECTIVES:

1. Determine Oolichan presence, distribution and run timing within Kitimat River and other selected rivers entering Douglas Channel and Gardner Canal. For these rivers, map and describe the location and extent of potential and known spawning habitats.
2. Identify and evaluate options to support the recovery and long-term management of Oolichan populations in the identified rivers.
3. Investigate opportunities and methods for Oolichan propagation and husbandry to support recovery of the Kitimat River population.

GRADUATE POSITIONS TO FILL:

- UVic Ph.D. - Developing environmental DNA (eDNA) as a tool for monitoring Oolichan populations in British Columbia
- UVic Ph.D. - Molecular animal health assessments (filled)
- UNBC Ph.D. - Modelling Oolichan population dynamics in marine and riverine environments
- UNBC M.Sc. - Abundance patterns, environmental stressors, and traditional knowledge
- UNBC M.Sc. - Drivers of survival in key life stages
- UNBC M.Sc. - Oolichan husbandry



CONTACT

Ecofish
Morgan Hocking - mhocking@ecofishresearch.com
Adam Lewis - fjalewis@ecofishresearch.com

Haisla
Candice Wilson - CaWilson@haisla.ca

UNBC
Mark Shrimpton - mark.shrimpton@unbc.ca

UVIC
Caren Helbing - chelbing@uvic.ca