Graduate student opportunities in the Arctic Marine Invertebrate Research Group

Climate change (CC) will lead to more variable oceanographic conditions, that in some cases may enhance and in others compromise, the productivity of commercial fisheries. The main expected outcomes of CC include a decrease in pH and dissolved oxygen and an increase in water temperature. Salinity is also expected to decrease at both poles. One such fishery in Canada that is expected to be affected by climate change is the Northern Shrimp (Pandalus borealis) fishery. Northern Shrimp are harvested in the Arctic, Newfoundland, Gulf, and Quebec regions and support a $400 million industry annually. Here, we propose to develop a bioenergetics model that will allow us to predict spatially-explicit physiological and biological responses of this species under different climate change and exploitation scenarios. The Arctic Marine Invertebrate Research group led by Dr. David Deslauriers is thus looking to fill a PhD graduate student position to begin in May of 2019. Based in Winnipeg, ! Manitoba, or Rimouski, Québec, the student will be affiliated with the Arctic and Aquatic Research Division of Fisheries and Oceans Canada (DFO) as well as with the University of Manitoba (Dr. Dirk Weihrauch) and the Université du Québec à Rimouski (Dr. Piero Calosi).

Challenges associated with the position:

- Design and conduct at-sea sampling protocols for shrimp throughout their range.
- Transport and care for live shrimp to be brought back at the Freshwater Institute/University of Manitoba/Université du Québec à Rimouski for temperature, acidification, and low dissolved oxygen exposure experiments.
- Design and conduct laboratory exposure experiments on live shrimp.
- Interact with community members in Nunavut by answering questions, addressing concerns, and presenting results on an annual basis.
- Present main study results on an annual basis at regional, national or international conferences.
- Collaborate and interact with DFO researchers from the Arctic, Quebec and Newfoundland regions.
- Analyse and interpret data, and publish results in government reports and peer-reviewed journals.

For more information on the position please contact Dr. David Deslauriers at David.Deslauriers@dfo-mpo.gc.ca