

## **QC RV Ludy Pudluk**

### **Summary of Research and Training conducted in 2023**

Drop video camera and towed video camera surveys of the seabed as well as potting and towed bottom sampling rake surveys were carried out in waters adjacent to Sanikiluaq and Sanirajak.

These surveys identified the presence of scallops, sea cucumbers, sea urchins, cockles, clams, toad crabs, and their seabed habitats. These edible species can help to alleviate food insecurity in the study communities and where densities are high and our studies of life history traits (e.g., age, growth, size at maturity) show an ability to replenish harvested populations there is commercial potential. We are in the process of calculating densities for these species and have collected scallops and toad crabs to establish life history traits. It is important to establish life history traits that are likely to change with climate change (i.e., as waters warm and ice-free season becomes longer these species may grow quicker).

Bottom mapping surveys of the depth and seabed habitat were carried out in waters adjacent to Sanikiluaq, and Sanirajak. These surveys will help to aid in navigation in waters adjacent to the study communities and information is made available to the Canadian Hydrograph Service for updating future Marine Charts. These surveys are also important for establishing the extent of distribution of available habitat for the edible species listed above. Once we know the species densities on certain types of habitats and how much of this habitat there is from the bottom mapping surveys we can determine the available biomass in waters adjacent to a study community. This is important as it is the biomass that Fisheries and Oceans Canada (DFO) monitors to determine how much can be harvested. This also helps to better understand infrastructure needs of a community.

This research took place from community supplied vessels and the Qikiqtaaluk Corporation owned RV Ludy Pudluk. In each study community, two locally supplied vessels crewed by two Inuit from the community participated in all the work. This provided training opportunities in the use of the potting and towed bottom sampling fishing gear and how data is recorded for science.