

The DOT eDNA Sampler

Automation: repeatable and standardized, with cleaning protocols

Onboard sterilization acid & RNA later preservation

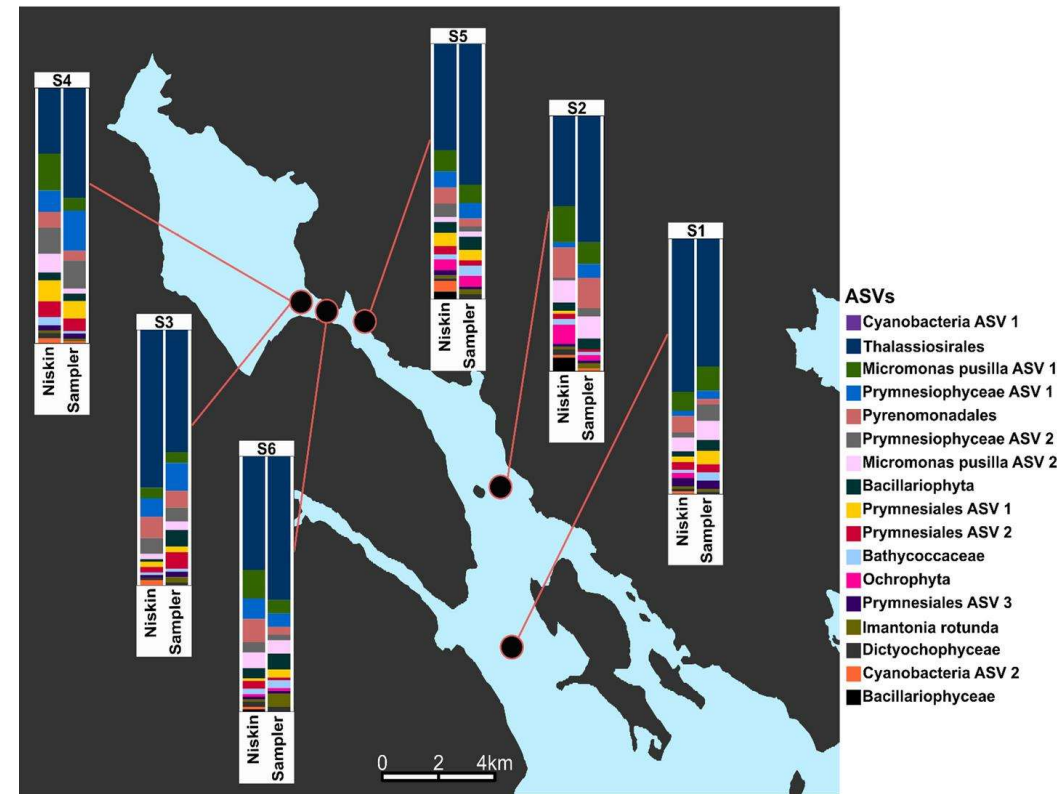
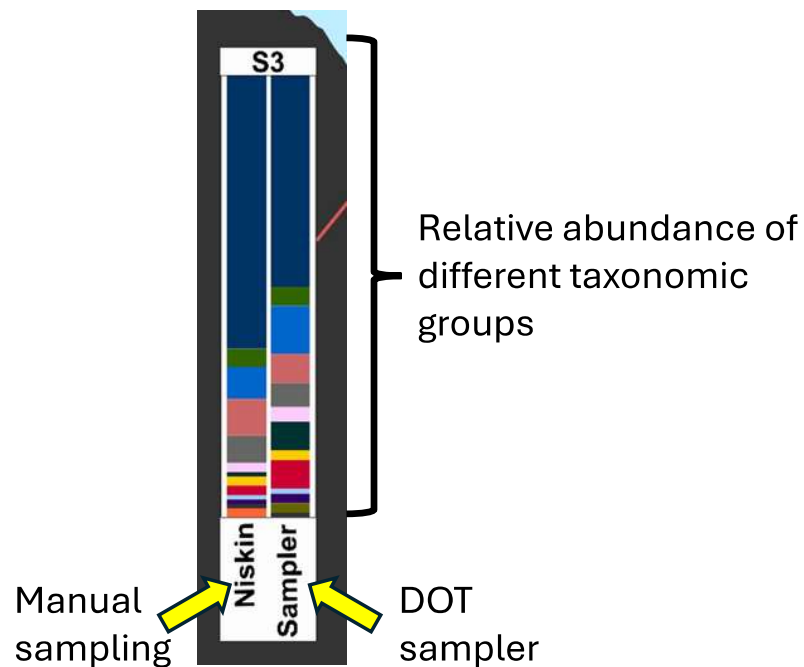
Field-swappable cartridge with multiple filters

Triggerable by cameras, acoustics, and fluorescence sensors or scheduled sampling



1. The DOT sampler compares well to manual protocols

2022: Summer transect at 6 stations in the Halifax Harbour



2. Performance in marine and freshwater environments

July 2023: Time-series sampling at four different locations

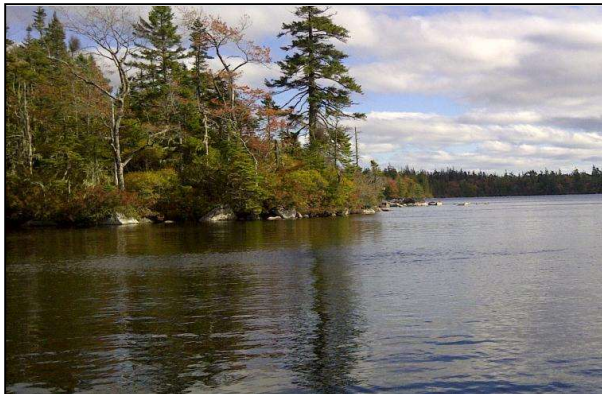
Sheep's Head Pond - brackish



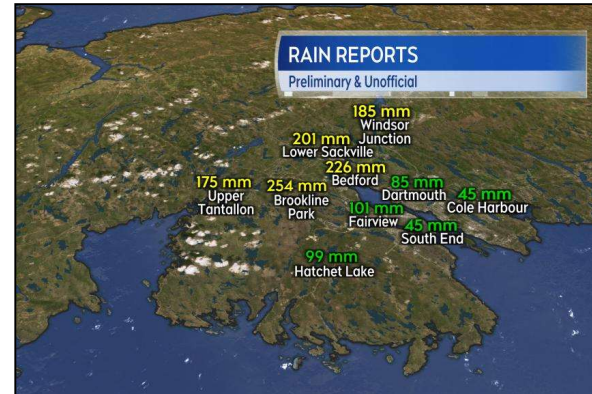
Lunenburg Harbour - marine



Grand Lake - freshwater



Halifax Harbour - marine



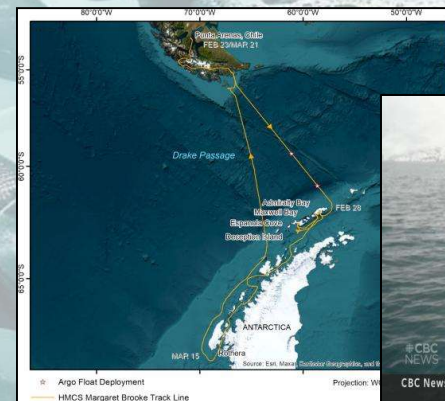
2024-2025: North (and South) of 60

2024: Bowhead whales in Cumberland Sound, Nunavut



Successful detection of bowhead whales and their food sources

2025: Canadian Antarctic Research Expedition



- HMCS Margaret Brooke
- Successful modifications: larger volumes, cold-water deployments
- Samples currently being processed and analyzed

2025 Integration of the DOT sampler in a Slocum glider



**Successful test run of integrated system at 0-80 m depth with deep-rated DOT sampler
Headed for more trials in Scotland**