

FORCE uses ASL's Acoustic Zooplankton Fish Profiler



FAST-3 underwater sensor platform gets ready for deployment near the FORCE test site in the Minas Passage, NS.

The Fundy Ocean Research Center for Energy (FORCE) purchased one of ASL's single frequency 125 kHz Acoustic Zooplankton Fish Profilers (AZFP) autonomous scientific echosounder for deployment on their instrumented mooring platform in Minas Passage in the Bay of Fundy, Nova Scotia.

FORCE is Canada's leading centre for in-stream tidal energy technology demonstration, located in the Bay of Fundy. The tidal flow through the Minas Passage boasts 14 billion tonnes of water, moving at speeds in excess of five meters per second.

Understanding this powerful environment is critical to successful turbine design, environmental effects monitoring, and ultimately unlocking Fundy's enormous energy potential. "We need to understand what effects in-stream tidal technologies may have on the marine ecosystem," said Tony Wright, general manager of FORCE. "If tidal energy is to grow to a larger scale, development must happen responsibly."

The AZFP instrument is an integral part of the Fundy Advanced Sensor Technology (FAST) project (Figure 1 & 2), discovering information about the presence and abundance of fish and zooplankton, and a valuable supplement to their Environmental Effects Monitoring Program (EEMP) designed to determine potential turbine effects on the marine environment with a focus on fish, lobster, marine birds, marine mammals, and acoustic effects.

As of July 2016, the AZFP instrument has been deployed for two separate month long periods. During both deployments the instrument pinged every second for the entire duration and recorded the backscatter data over the 35-meter (low tide) to 45-meter (high tide) water depths. Scientists from the Acadia Centre for Estuarine Research (ACER) at Acadia University expect to study the high temporal and spacial resolution AZFP data.



Murray Scotney (OceanMoor Technical Services) and Tyler Boucher (FORCE ocean technologist) install the acoustic zooplankton and fish profiler on the FAST-3 underwater sensor platform.



FAST 1 platform with the Dalhousie and FORCE field teams (left to right - Richard Cheel, Alex Hay, Joel Culina, Ben Feltmate, Murray Scotney). Photo credit: Darren Pittman

Huntley's Sub Aqua Construction - Deep Down you want the Best

Huntley's Sub Aqua Construction is a Marine Services and Diving Contractor based in Kentville. Growing up in the Minas Basin Community of Kingsport/Medford we have the expert knowledge of the Basin and the Minas Passage. Our Captain has spent his career Fish dragging in even Lobster fishing these waters. Growing up here we have

unique connection to the Fishing community and the Researchers

Our Diving Services are second to none and have been in these waters more then all other companies combined. We take great pride in our Services we provide FORCE and the research they are doing. Looking forward to many many more Surveys and Deployment/Recoveries

Deadline for the April issue of **South Cumberland NEWS** is March 21

OPEN SEAS Instrumentation Inc.

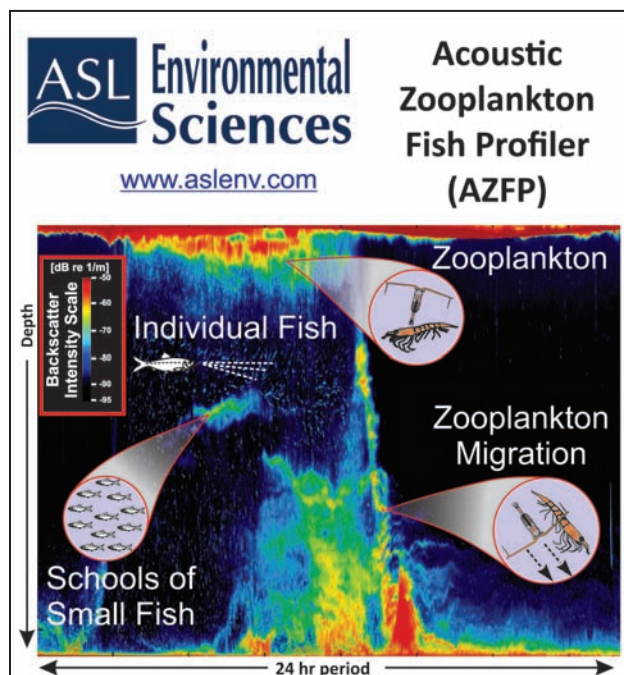
Open Seas is a manufacturer of equipment for physical oceanographers and marine biologists.



Marine Biology products are various types of fully instrumented zooplankton sampling systems. These are multiple net, with proprietary datalogger and deck operating software. They include the Bioness, Mininess, RMT and Tucker Trawls.

We are pleased to be working with FORCE on the FAST 3 monitoring platform.

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KONGSBERG MARITIME

The equipment being used by FORCE on their FAST platform is the WBAT a "cutting edge" subsea innovation rising from a need to monitor marine life autonomously.



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