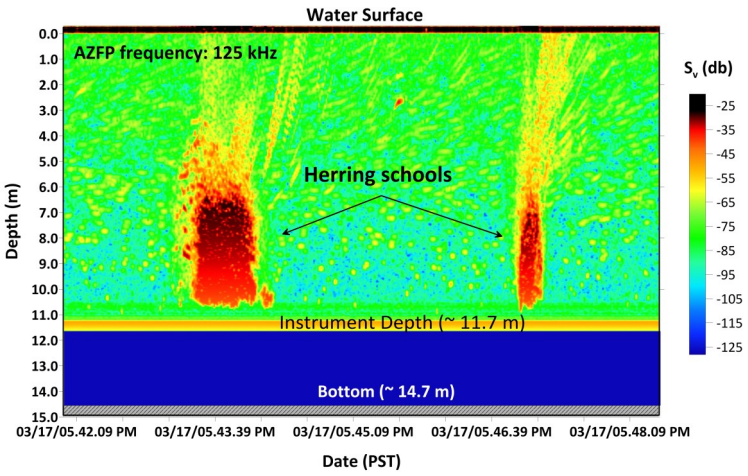
The Salish Sea Community Guardians Invites Community Collaboration to Enhance the Salish Seas Herring Spawning Recovery

Pacific herring (*Clupea pallasi*) play a vital role in the food web of B.C. Canada coastal waters. They are a significant food source for Chinook and Coho salmon, lingcod and a host of marine birds and mammals. Through these marine predator–prey relationships and their seasonal life cycles, the Pacific herring have far-reaching influence on terrestrial birds and mammals as well. This is most evident during the salmon spawning cycle as salmon, which feed on herring, travel up rivers and transfer their nutrients to the forests and the many bird and mammal inhabitants. In the Salish Sea, herring are of great cultural significance as a fishery and respected as a critical element that supports all species in the marine environment.

In recognition of the importance of the Pacific herring, the Salish Sea Community Guardians, an organization dedicated to all aspects of stewardship for Salish Seas First Nations, have created a cross-cultural action plan. This action plan would provide First Nations traditional herring spawning habitat recovery and protection in key herring spawning areas in waters around southern Vancouver Island. Part of this action plan involves the construction of two types of habitat curtains suspended below floating docks and log booms. These curtains, made from either synthetic materials or hemlock and cedar branches, provide ideal spawning sites for the depositing of herring eggs.

ASL Environmental Sciences Inc., in collaboration with the Salish Sea Community Guardians, deployed an Acoustic Zooplankton Fish Profiler (AZFP) on March 17, 2021. This multi-frequency echosounder was placed in a traditional herring spawning location in Saanichton Bay near Victoria B.C. The deployment was for approximately one month and coincided with the seasonal herring spawn. Its purpose was to detect herring populations. Data collected from the AZFP deployment will fulfill one of the key initiatives to monitor the herring spawn in these created habitats and will be complemented by surface surveys carried out using the Department of Fisheries and Oceans protocols. The instrument was successfully recovered on April 14, 2021 and preliminary analysis show encouraging signs of herring schools within the area.

Drone photo showing ASL's AZFP mooring just prior to its deployment. (Photo credit, Geoff Mullins, GKM Research)



Echogram plot of AZFP data showing herring schools adjacent to the installed habitat curtains. (March 17, 2021).