

Keeping a Century-Old Fishery Alive

by **HOLLY ISNOR** /// EAC Staff

A century-old fishery

Nova Scotia has a long history of swordfish fishing. The Mi'kmaq have fished swordfish (Kinisku'nej) for millennia, while records of the commercial harpoon fishery date back to 1903, in the small Cape Breton fishing community of Neil's Harbour. When the commercial fishery took off, dozens of fishing vessels from all over the province could be seen trying to catch swordfish. Swordfish were abundant, a thrill to catch, and had a high price tag.

The swordfish harpoon fishery is one of the cleanest, most skilled and storied fisheries in the world. It became one of the first fisheries to gain certification with the Marine Stewardship Council for their sustainable practices and, with the Ecology Action Centre's support, secured a commitment from Whole Foods to take all their harpoon-caught swordfish at a premium market price.

Today, harpooners can be found in many coastal communities around Nova Scotia, including Neil's Harbour, Lockeport, Sambro, and more, but numbers are dwindling. Government management decisions, warming ocean waters, and the introduction of larger, more efficient methods to catch swordfish have resulted in a shrinking harpoon fishery.

Modern-day challenges

In recent years, changing ocean conditions are making swordfish harder to find. Harpooning requires the fish come to the surface of the water, where they can be seen. Although we know swordfish are abundant, fishers are seeing fewer and fewer. That's because swordfish are highly dependent on water temperature, with an ideal temperature of 15°C. Warming waters mean they are staying further below the surface, making fishing grounds less predictable than in years past. Now, with a dominant longline fishery, changing conditions, and dwindling catches, the harpoon fishery faces economic pressure and risks shutting down altogether.

Harpoon buoy gear, used before bringing swordfish aboard.

PHOTO: Sebastián Pardo

Harpooning involves having a crew member up in the 'crow's nest', a lookout platform several meters high, scanning the horizon in search for a glimpse of a fin. Once spotted, the vessel tracks and follows the fish, and at just the right moment the harpooner deploys their gear from a long platform off the front of the boat.



View from the crow's nest, looking down at the harpoon platform on a clear and calm day at sea. PHOTO: Sebastián Pardo

Proactive solutions and adaptation

This low-impact and sustainable fishery is tackling this dilemma head-on, coming up with their own vision for a new, sustainable economic future. To adapt and stay in business, the swordfish fleet have proposed the adoption of new low impact gear—rod and reel—to access their catches when harpooning is not possible.

In addition to this new gear type, this proactive fishery is proposing a solution to their reduced catch: a charter operation where fishers can offer trips to tourists and give them a chance to experience this thrilling and unique method of fishing one of the most unique species in our region. A charter fishery would mean that fishers can increase their revenue from each trip and therefore, each fish caught, and stay in business—all while staying within their allocated quota.



Our fisheries scientist aboard a swordfish harpoon boat preparing to depart from Lockeport for the first trip of the trial.

PHOTO: Holly Isnor

Lending a helping hand

Thriving coastal communities are at the core of the EAC's work. We are working alongside these fishers to get their new venture approved and on the water. We have supported the fleet's voice in conversations with Fisheries and Oceans Canada (DFO) this year and helped with each step of writing protocols, getting documents through the maze of regulatory red-tape, and overcoming political barriers along the way.

In the summer of 2022, DFO finally approved the first trial to start this small fleet on their new journey. The trial is intended to prove that rod and reel fishing is a suitable, sustainable alternative for these fishers.

The first trip of the trial took place in August, with EAC's fisheries scientist onboard to assist! It provided us and the fishers with the opportunity to learn how to use the new gear and begin important data collection to keep this initiative moving forward. We are thrilled to be part of this important first step in helping these fishers adapt for the future!

Opportunities for value-adding

Chartering businesses provide an opportunity to add value to catches, and support local businesses through increased tourism. There are many tourism-based fisheries businesses in Nova Scotia and Atlantic Canada, including the lucrative bluefin tuna charter fishery, which we supported with our work in the past. In the United States, swordfish charters run all along the East Coast, and there is a real opportunity to bring this business to Nova Scotia.

Although there are challenges, like navigating a complex regulatory landscape, the swordfish harpoon fishers see the potential for chartering to add value to their long and storied fishery and to keep the fishery alive.

To further support the fishery and wider communities around the province, we are undertaking an economic impact analysis exploring the possible added value chartering can provide. Keep an eye out for our report to come!

An experience like no other

Our fisheries scientist, Sebastián Pardo, tells us what it was like to join the fishers for the trial in August!

“A swordfish harpooning trip is a unique experience. To begin with, you have to go out to the edge of the continental shelf, a 10-hour steam 150 kilometres offshore from southern Nova Scotia. You must go in the fairest of weather as even small waves make them almost impossible to spot. When you're on top of the crow's nest to search for them, all you see is a flat ocean in all directions for miles and miles. An amazing sight to behold.

There is also the excitement of the search. You're looking for something that seems harder to find than a needle in a haystack: a pair of fins sticking out of the water in a whole vast ocean. While scanning the waters you inevitably end up seeing all kinds of wildlife: dolphins, sunfish, tunas, petrels, and shearwaters, among others.

The fishers going on these trips often say it's an experience like no other; a unique way to reconnect with nature, while also bringing food to the table through a fishery that is sustainable and uniquely has zero bycatch. ”

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