

An Intern's view on the Barkley Sound Test Fishery



Uu-a-thluk intern, Jared Dick, is working with Uu-a-thluk for his third summer.

After completing my third year at the University of Victoria, I am back as the Uu-a-thluk intern for my third consecutive summer. Like previous summers, this summer offers many different projects and activities to learn from. One of the major projects that I've been working on is the Barkley Sound test fishing vessel for the Department of Fisheries and Oceans (DFO). DFO mandates the test vessel

Alberni Canal two days, or sometimes three, a week. The first day we usually sample on the "inside" between Port Alberni and Nahmint Bay. The second day we sample on the "outside," from Nahmint Bay to Pill Point near the ocean. Each day the vessel lays out its massive net six times, making six "sets," and we take 100 DNA samples and 50 scale samples. When analyzed, the DNA shows which lake the sockeye are heading to and the scales show the age.

When the sockeye fishery first begins, the commercial fleet is allowed to fish past Uchucklesaht Inlet on the "outside" of the Alberni Inlet and Barkley Sound. When we were testing in the beginning of the season, the DNA results showed that Henderson sockeye were present but at low levels. This meant the fishermen could keep fishing where they were as

for fishing, but Hupacasath First Nation administered the contract for the test fishing services for DFO. My role in this project is to count the number of sockeye caught during each set and to take DNA and scale samples from some of the sockeye caught. In order to understand the importance of the test fishing vessel, I'll begin with giving some useful background information.

Sockeye salmon that enter Barkley Sound and the Alberni canal are a "mixed stock" made up of three major populations: Henderson Lake, Sproat Lake, and Great Central Lake sockeye. Henderson Lake is located upstream of Henderson River at the end of Uchucklesaht Inlet. Unlike Sproat and Great Central, the Henderson Lake sockeye run is very small. The expected sockeye return to Henderson this year is only a small fraction of the 1.2 to 1.3 million expected to return to Sproat and Great Central. This drastic difference in population size is the reason we need to be careful when harvesting Sproat and Great Central sockeye to make sure we do not overfish the Henderson Lake sockeye.

The test fishing vessel, Nita Maria, is a seine boat contracted by DFO to fish the Al-

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the number of Henderson sockeye in the catch was small. As the weeks went by, the DNA results started showing the number of Henderson Lake sockeye caught in our sets was increasing. For this reason, DFO had the boundaries for the commercial fleet changed so that they are no longer allowed to fish past Pocahontas Point, which is a point along the Alberni Inlet before the entrance of Uchucklesaht Inlet. This boundary change is meant to reduce the bycatch of the Henderson sockeye.

Each year, DFO allocates the test fishing vessel a very small portion of the Barkley Sound Total Allowable Catch (TAC) to fund this project. This covers the costs of the crew, fuel, food, and the DNA and scale analysis. Once this allocation is caught, the crew and I count and estimate the amount of sockeye caught each set. The sockeye are then released by pulling up the net and letting the fish spill over the "cork line" of the net that's floating in the water. This excludes the 100 samples we need to take each day.

In summary, the weekly testing performed by the test fishing program is an effective tool in fisheries management. The information the DNA and scales provide helps us to minimize the impacts to the Henderson Lake sockeye while still providing optimum harvest of the Sproat and Great Central sockeye. I believe this is important because it will help ensure sustainable sockeye harvest for the future generations.

Jared.Dick@nuuchahnulth.org

Uu-a-thluk
P.O. Box 1383
Port Alberni, B.C.
V9Y 7M2

Ph: 250.724.5757
Fax: 250.724.2172
info@uuathluk.ca

www.uuathluk.ca

Henderson Lake sockeye are one of three "mixed stocks" that enter Barkley Sound and the Alberni Canal each spring and summer.