

Michael Link

From: Michael Link
Sent: Thursday, June 10, 2021 1:13 PM
To: Michael Link
Subject: Preseason Update, Port Moller Test Fishery (PMTF), June 10, 2021
Attachments: OC Gene Lab summary in the RSDA newsletter.pdf

All,

The Pandalus arrived in Port Moller a couple hours ago (June 10th). If all goes well at the dock this afternoon and evening, they could start fishing at station 2 on June 11th (tomorrow).

The Ocean Cat is west of Perryville at the moment. If seas and weather cooperate, its ETA to Port Moller is late afternoon June 11th (tomorrow). They too need some time at the dock and once away they will transit to the outer transect on 12th June and start fishing late that day or early June 13.

Believe it or not, in the last six weeks we have procured and equipped the Ocean Cat with a genetics laboratory. Financial support for the lab's equipment, supplies, and construction came from BBSRI, the BBRSDA, and all of the Bay salmon processors. The onboard ADF&G geneticist has already begun some testing in the OC lab the last couple of days while in transit. See the attached news update from the RSDA for a succinct summary of the feasibility study. We will provide periodic updates on the effort as we learn more over the course of the season. I use the term "we" here to denote the entire team, including personnel from ADF&G, BBSRI, and the vessel crew.

Michael

Update about the At-sea Genetics Project, published on BBRSDA website April 30, 2021.

Feasibility Study of Doing Genetics on the Port Moller Vessel, 2021

April 30, 2021

In April, BBRSDA committed financial support to test the feasibility of doing the in-season genetic analysis for stock composition estimates from the Port Moller Test Fishery (PMTF) onboard one of the test boats. BBRSDA again leveraged its financial commitment with support from the Bristol Bay Science and Research Institute (BBSRI) and Bay salmon processors.

The project is a joint effort by BBSRI and ADF&G's genetics lab. If proven successful in 2021, this will be a major step forward for the PMTF program. In future seasons, the stock composition results would become available days earlier than is now possible with it being necessary for the test boat to bring samples ashore to ship them by air to ADF&G's Gene Conservation Laboratory (GCL) in Anchorage. In addition, at-sea genotyping fish would eliminate the need for considerable vessel time spent running samples to the Alaska Peninsula for shipping. This will reduce project costs and/or increase the number of stations that can be fished each day. About 30% or more of one vessel's time is now spent bringing samples to land from the inner stations, which are 30-40 miles offshore of Peter Pan's plant at Port Moller.

This past winter a desk-top feasibility analysis showed that existing technology and ADF&G's current DNA baseline for Bristol Bay sockeye might work. Following that, a genetics equipment manufacturer (Fluidigm) conducted tests at its engineering facility in Singapore to test various vibration dampening equipment and other modifications to stabilize equipment that is designed for land-based laboratories. With success in the engineering facility, the study team embarked on a very ambitious schedule to see if the technology could be tested this summer.

If everything in a tight schedule goes well in May, the DNA sequencing equipment will be installed on the R/V *Ocean Cat* and the crew will analyze tissue samples during test fishing in June and early July. The 2021 samples must also be run in the Anchorage facility to confirm whether at-sea results are accurate across all sea states and conditions typically encountered. Therefore, stock composition estimates this summer will follow the schedule done in previous seasons. Stay tuned this summer for progress reports on how things are going in BBSRI's PMTF updates.