

Scott Raborn

From: Scott Raborn
Sent: Saturday, June 11, 2022 7:10 PM
To: Michael Link
Cc: Scott Raborn
Subject: PMTF Catch Update #2, June 11, 2022
Attachments: HowStationCatchesRelateToInshoreDistricts.pdf

Hi Everyone,

The *Halfmoon Bay* was able to fish Stations 8-20. The *Ocean Cat* was not able to get started today, but should be on transect tomorrow. Michael Link is currently on board the *Halfmoon Bay* smoothing out the sampling protocols and getting the two boats in sync.

Every year we get quite a few questions early on regarding how the various stocks correlate to catches at specific stations. The answer of course is not simple, but because stocks have started to segregate at this point in the migration there are patterns in the stock composition across stations. In short, Ugashik and Egegik stocks tend to migrate more through the inner stations (S2-S12), while the Nushagak and Naknek-Kvichak stocks favor the outer stations (S14-S22). Attached is a more detailed characterization of this phenomenon that we drafted during the 2020 season. Included in this document is a map of the Port Moller Stations and a comparison of stock compositions between inner and outer stations during early, middle, and late periods for the 2019 season.

PMTF Stock Composition Status: I misspoke last night about when exactly the first genetics will be run. The decision to run the first set of fish for genetics is made in consultation with the Department's gene lab, area staff, and is based on more than just reaching a cumulative catch of 190 fish. The first stock composition estimates will be released when an adequate sample size representing the first push of fish into the Bay have been caught. These criteria are generally met by about June 16. In 2022, this could be a day or two later, or possibly a bit earlier. Once the first set of estimates is run, we collectively strive to provide estimates for every following 2-day period through about the end of the first week of July.

Index by Station

S8: 0
S10: 0
S12: 79
S14: 2
S16: 4
S18: 0
S20: 2

Scott and Michael

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Port Moller Test Fishery: Catch Update #2, 11 June 2022.All updates sent by email are also posted online at www.bbsri.org

Date	Daily Catch Index by Station (Est. catch from the 200 fathom net if it had fished for 1 hr)											Mean Daily Catch Index		Raw catches		Mean Length (mm)	
	S2	S4	S6	S8	S10	S12	S14	S16	S18	S20	S22	Best for assessing entry pattern this year (Stns 2-22)		4½" mesh	5½" mesh	4½" mesh	5½" mesh
10-Jun	-	-	-	-	-	2	32	0	2	0	0			14	5	498	562
11-Jun	-	-	-	0	0	79	2	4	0	2	-			1	53	501	527
12-Jun	-	-	-	-	-	-	-	-	-	-	-						
13-Jun	-	-	-	-	-	-	-	-	-	-	-						
14-Jun	-	-	-	-	-	-	-	-	-	-	-						
15-Jun	-	-	-	-	-	-	-	-	-	-	-						
16-Jun	-	-	-	-	-	-	-	-	-	-	-						
17-Jun	-	-	-	-	-	-	-	-	-	-	-						
18-Jun	-	-	-	-	-	-	-	-	-	-	-						
19-Jun	-	-	-	-	-	-	-	-	-	-	-						
20-Jun	-	-	-	-	-	-	-	-	-	-	-						

How Station Catches Relate to Inshore Fishing Districts

Every year, many people want to know how station-specific catches at Port Moller relate to the inshore districts. We generally get questions like, “Which district or districts are fish at Station 10 headed for?”. This is a simple and logical question, and utility of the test fishery would be greatly enhanced if there were a clear answer. Unfortunately, this is not the case as station-specific stock composition estimates are unavailable at the current level of sampling and funding. To establish station-specific estimates would require sampling stations multiple times per day with a 5-6 vessel effort and analyzing many more fish in the genetics lab. In a sense, it is a “million-dollar question” (a conservative cost projection at the least). However, we can provide a qualitative answer to this question given the current budget and logistical constraints.

All stocks are likely present at all stations, but there is a limit to the associations that can be made by station or narrow group of stations. A map of station locations is provided below (Figure 1), and a comparison of 2019 stock compositions across inner and outer stations for early, middle, and late periods that together accounted for 75% of the season’s catch indices is given in Figure 2. Generalizations are that Egegik and Ugashik stocks are more likely to pass through the inner stations (Stations 2-12) than they are the outer stations (Stations 14-24). Nushagak District and Naknek-Kvichak stocks are more likely to pass through the outer stations.

Again, there are limits on this understanding and to the methods available. We must group station samples to obtain genetics results, and historical results prior to 2019 are largely limited to Stations 2-10 or 2-12. Therefore, the relative historical passage rate through Stations 14-18 by each stock is impossible to ascertain. We fished the far outers stations starting in 2019 and found significant numbers of Egegik fish; yet, this stock dominated the inner stations. The 2019 season had a large Egegik run, so a given stock’s abundance relative to other stocks determines how much they might dominate a station or group of stations by day and by year.

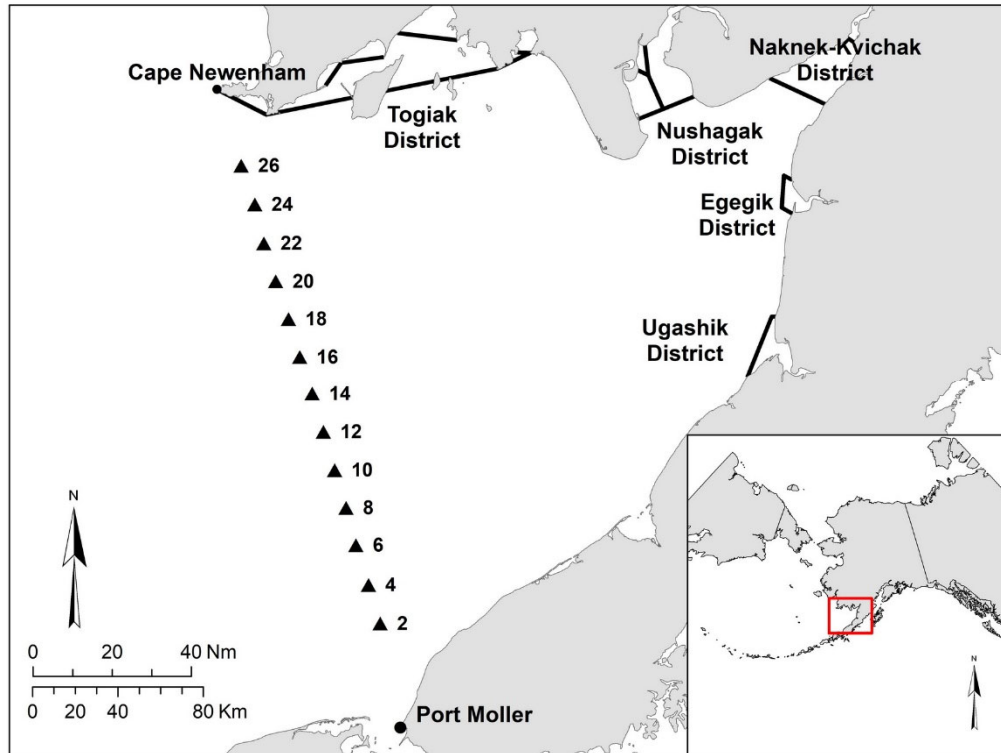


Figure 1. Map of the study area, showing the stations of the 2022 Port Moller Test Fishery and the locations of Bristol Bay fishing districts. Sockeye salmon passing the test fishery stations take approximately six to nine days to reach the Bristol Bay fishing districts in typical years.

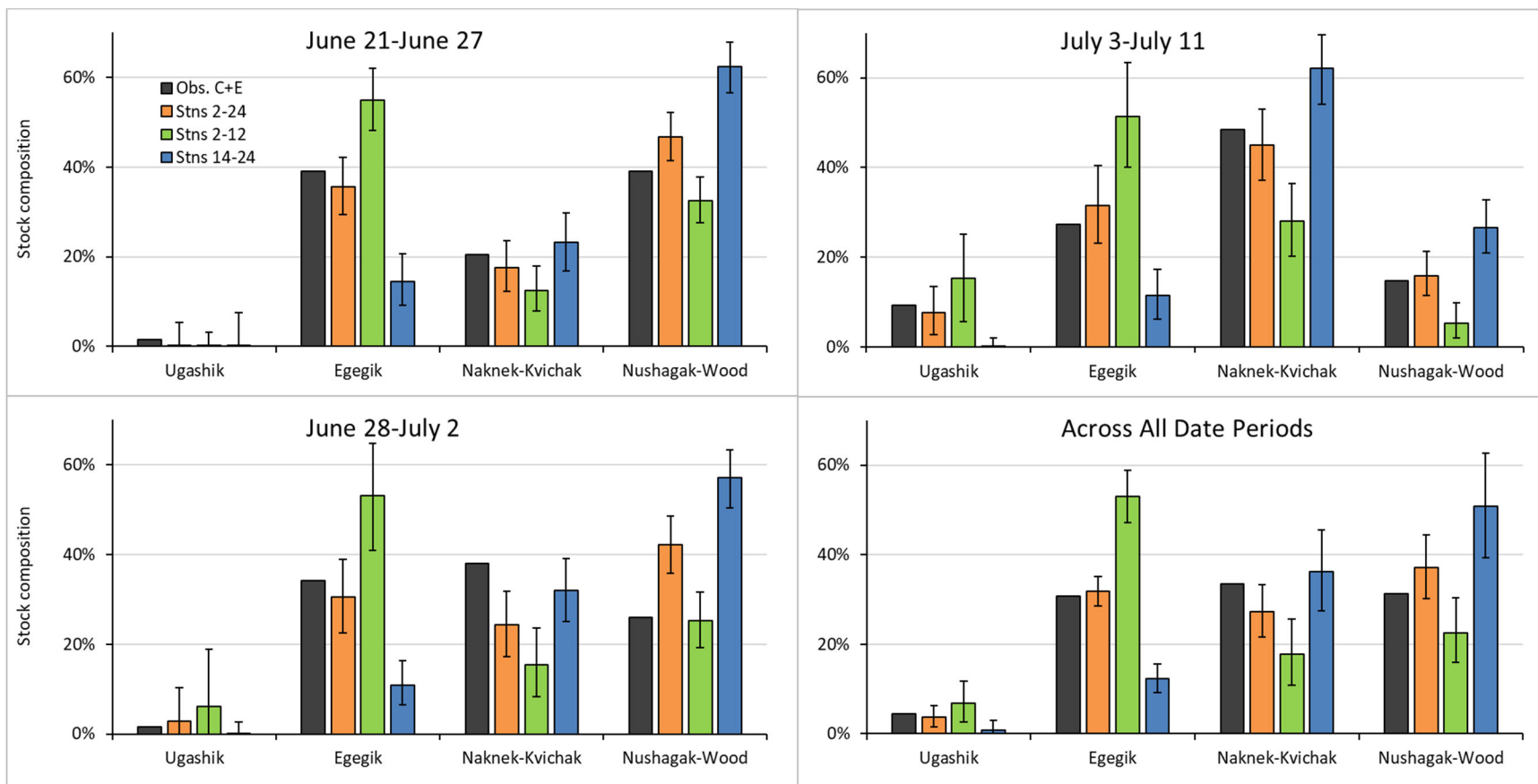


Figure 2. Postseason stock composition estimates from 2019 PMTF samples parsed by inner and outer station groupings, as well as the entire transect compared to catch + Escapement (C+E) lagged backwards to the test fishery by respective travel times. Early, middle and late periods (top and left panels) were chosen to reflect dates when the entire transect was sampled by two vessels (75% of season catch indices). Error bars represent 90% confidence intervals.