

MARINE FISHERIES PROGRESS REPORT

November 1951 - January 1952

On December 27, the marine fisheries staff met with fishermen and industry representatives in Astoria to explain the research program being undertaken and the progress made. A similar meeting was held December 28 in Newport. Arnie Suomela presided at the meetings and introductions were made by Don McKernan. Jergen Westrheim, who was on Christmas vacation from the University of Washington, talked on otter trawl statistics and the ocean perch fishery. George Harry spoke on otter trawl, black cod, and shrimp. Ed Holmberg talked about the mesh escapement and the tuna research.

On January 4, Al Pruter left to take a position with the Washington State Department of Fisheries.

On January 14, Bill Ripley, who is in charge of California otter trawl research, was in the laboratory. He suggested that Oregon, Washington, and California carry out a joint experiment on escapement of fish through the cod-ends of otter trawl nets. Ripley's idea was to use the California research vessel off the coast of Oregon, with all three states contributing biological personnel. These ideas were developed more completely at the Pacific Marine Fisheries meeting of biologists held later in the month, and the mesh escapement experiments were planned for this summer.

On January 28, 29, and 30, there was a meeting of the Research Committee of the Pacific Marine Fisheries Commission in Portland. Ed Holmberg, George Harry, and Jack Van Hying attended from Astoria. Black cod, otter trawl, troll salmon, and tuna were the principal fisheries discussed.

OTTER TRAWL

During the period of this report the try-net has been fished in Yaquina Bay whenever a boat was available and the weather suitable. Between July 24 and December 10, 1951, five samples of small English sole were taken in Yaquina Bay (Fig.1). One sample was taken by a beach seine July 11-12, 1949. Most of these English sole were sexed. Some were tagged with 1/4" diameter Petersen discs and .028 dead soft stainless steel pins. The fish tagged were not sexed and are included in Figure 1.

After August 13, the fish either did not grow much or the larger ones migrated from the bay into the ocean. The latter seems to be the case for the period between October 23 and December 10 when the percentage of larger English sole in the samples decreased markedly. A complete analysis of the Yaquina Bay samples of English sole will be undertaken after fish have been taken over a period of one year.

Jergen Westrheim has continued his work at the University of Washington on the age and growth of the Pacific Ocean perch (*Sebastes alutus*). A few winter samples of ocean perch have been taken in Astoria.

SHRIMP

No field work has been attempted on shrimp during this period. When sampling ocean perch brought in from 150 fathoms, it was noticed that many of the stomachs were filled with a shrimp not collected before, probably Pasiphaea Pacifica. This species is slightly smaller than Pandalus Jordani (the shrimp found in abundance last fall). Their presence in the stomachs of fish brought up from 150

fathoms suggests the possibility that there may be important beds of shrimp located in waters deeper than those in which Pandalus jordani are found (from 50 to 100 fathoms).

BLACK COD

No field work has been carried out on black cod, but Al Pruter is writing up the research on this species and his report will be submitted shortly. Eldon Korpela has been working up the statistics of this fishery which Pruter needs before he can finish his report.

ALBACORE

Much of this period was given to the tedious process of mounting the albacore scales collected with the morphometric samples. An age breakdown of the morphometric data was anticipated. Scales were being mounted with sodium silicate for reading with the Rayoscope micro-projector. Sodium silicate is not a very satisfactory mounting medium, but fair results were obtained with a 75 percent solution.

In anticipation of a cooperative effort of the three states and Canada in the collection of fishing data from the albacore fishermen, consideration of log books and vessel interview systems was made. A relative few of the leading albacore fishermen were interviewed to determine the extent of existing voluntarily kept data available for the past seasons. The amount of data thus available was found to be meager and incomplete. Log books require much effort for the results obtained. Vessel interview at the time of landing the catch was considered to result in the greatest reliable fishing information. Any surface temperature records wanted can be obtained by a relative

few log books given to reliable fishermen. Thermometers have been ordered for this purpose.

George Harry

Ed Holmberg

Al Pruter

Jergen Westrheim

Aquatic Biologists

Figure 1. Length Frequency of English Sole Collected in Yaquina Bay.

