

FISH COMMISSION OF OREGON
GROUNDFISH & SHRIMP INVESTIGATIONS

Report of Cruise 71-8, Shrimp

Vessel: M/V Trask, chartered trawler.

Dates: September 5-7, 1971

- Objectives:
1. To determine biomass and number of shrimp (Pandalus jordani) within the survey area between Tillamook Bay and the Columbia River.
 2. To determine age and sex composition of stocks as well as average size (number/pound) and length-frequency.

Methods: The M/V Trask is a wooden western seiner-trawler 64.0-foot (registered length) of 46 net tons capacity. She is powered by a 175 h.p. diesel engine. We furnished a $\frac{1}{2}$ -inch mesh nylon liner for the codend. The vessel furnished the trawl, a 57-72-foot (headrope-footrope length) shrimp net of $1\frac{1}{2}$ -inch mesh. We selected 31 sample stations within the survey area, using a systematic sampling scheme based on grid intersects 4.0 nautical miles apart. Each station was the center of a $\frac{1}{2}$ -mile (radius) circle in which the tow was made. Tows were about one nautical mile long. We recorded Loran (1L0) and depth (fathoms) at the start and end of each tow, time and ocean-weather conditions.

We sorted the catch of each tow to fish, miscellaneous invertebrates and shrimp. We then weighed the shrimp catch. Particularly fishy catches were sorted to large fish and shrimp-small fish. The mixed small fish and shrimp were then sub-sampled (20 pound sample), sorted and weighed. This estimate of the shrimp catch (in per cent) was then applied to the balance of the unsorted catch for an estimate of the total shrimp catch. Fish catch for the major species found in each tow was estimated.

We randomly drew a 2-4 pound sample from each shrimp catch. We placed it in a plastic bag and froze it ashore for later analysis.

Results: We occupied 31 stations in three days with no gear or other problems. Shrimp were scarce throughout the survey area and catches averaged only 42.5 pounds per tow. Catches ranged from 0 - 250 pounds. Age I shrimp were relatively low in this area (41% by number) but still contributed a large proportion to catches. Table 1 summarizes cruise data.

Personnel: Terry L. Link, Party Chief
A.L. Mather, Vessel Captain
2 Crewmen

Jack G. Robinson
Research Division
October 14, 1971

Table 1. Mean Unweighted Catch and Catch Composition in Area 4 - Columbia River to Tillamook Bay,
for Cruise 71-8

Area	Tows	% Age Composition by			No. and (Weight)			N/Lb.	Mean Catch
		I	II	III	I	II	III		
490 mi. ²	31	41	31	28	(24)	(33)	(43)	130	42.5 Lbs.