

FISH COMMISSION OF OREGON  
GROUNDFISH & SHRIMP INVESTIGATIONS

Report of Cruise 71-4, Shrimp

Vessel: M/V Amak, chartered trawler.

Dates: September 3-6, 1971

Objectives: 1. To determine biomass and number of shrimp (Pandalus jordani) within the survey area between Cape Arago and the Rogue River.

2. To determine age and sex composition of stocks as well as average size (number/pound) and length-frequency.

Methods: The M/V Amak was chartered for the cruise. She is a wooden schooner, 65.2-foot long (registered length) of 36 net tons capacity powered by a 135 h.p. diesel engine. We furnished a ½-inch mesh nylon liner for the codend. The vessel furnished an 85-105-foot (headrope-footrope) shrimp trawl of 1-9/16-inch mesh.

We selected 20 sample stations within the survey area (9 north of Cape Blanco, 11 south) using a systematic random sampling scheme based on grid intersects of 2.5 and 3.0 nautical miles (south and north of Cape Blanco, respectively). Each station was the center of a ½-mile (radius) circle in which the tow was made. Tows were approximately 1 nautical mile long. Data recorded was Loran (1H6) and depth (fathoms) at start and end of each tow, time and ocean weather conditions.

The catch from each tow was sorted to fish, invertebrates and shrimp. Shrimp catch was then estimated using shrimp boxes of known capacity (110 pounds) and pails (25 pounds). Fish catch was estimated, in pounds, for the major species of each catch. We randomly drew a 2-4 pound sample from each shrimp catch. This was placed in a plastic bag and frozen ashore for later age-sex-length frequency analysis.

Results: We occupied nine stations north of Cape Blanco, 12 south of that point, including one extra station. The first tow of the cruise resulted in loss of the entire codend and intermediate of the net. A second net was put on and remaining tows were made without incident.

Shrimp were scarce north of Cape Blanco to Cape Arago. Largest catch was 30 pounds. Shrimp catches south of Cape Blanco were better, with a high of 400 pounds, but were spotty and infrequent. Table 1 summarizes data for Cruise 71-4.

Personnel: Jack Robinson, Party Chief  
Charles Ells, Vessel Captain  
Alexander Ells, Crewman  
Robert Jackson, Crewman

Jack G. Robinson  
Research Division  
October 14, 1971

Table 1. Mean Unweighted Catch and Catch Composition in Area 1 - Rogue River to Cape Arago, for Cruise 71-4.

Area	Area	Tows	% Age Composition by No. and (Weight)						N/Lb.	Mean Catch
			I	II	III	I	II	III		
Cape Arago- Cape Blanco	88 mi. <sup>2</sup>	9	36	22	32	(20)	(19)	(61)	87	6 Lbs.
Cape Blanco- Rogue River	50 mi. <sup>2</sup>	12	79	10	11	(64)	(15)	(21)	125	71 Lbs.