

FISH COMMISSION OF OREGON
GROUNDFISH & SHRIMP INVESTIGATIONS

Report of Cruise 72-5, Shrimp

Vessel: M/V Ruth Ellen, chartered trawler.

Dates: September 3-5, 1972

Objective: 1. To determine biomass and number of shrimp (*Pandalus jordani*) within the survey area between Yaquina Head and Tillamook Bay.

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

Methods: The M/V Ruth Ellen is a wooden western seiner-trawler, 51.2-foot registered length of 27 net tons capacity. She is powered by a 350 h.p. diesel engine. We furnished a 41-52-foot (headrope-footrope) shrimp trawl (1 1/8-inch mesh except for a 1 1/2-inch codend with a 1/2-inch bobinette innerliner).

We selected 24 sample stations within the survey area between Yaquina Head and Tillamook Bay using a systematic random sampling scheme based on grid intersects of 4.0 nautical miles. Each station was the center of 1 1/2-mile (radius) circle in which the tow was made. Tows were approximately 1 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. No subsampling was necessary due to fairly clean catches. Fish catch was estimated in pounds, for major species in each catch. We randomly drew a 2-4 pound sample from each shrimp catch. This we placed in a plastic bag and froze ashore for later analysis.

Results: We occupied 24 stations in the survey area without problems. Shrimp were captured on 20 tows and were fairly abundant. Catches ranged from 4 to 357 pounds per tow and averaged 115. Catches were composed of over 90% age II (1970 year class) shrimp on most tows. Table 1 summarizes the cruise log.

Personnel: Jack G. Robinson, Party Chief
Thomas Gatens, Vessel Captain
Jim Gatens, Crewman
Elmer Overpeck, Crewman

Jack G. Robinson
Management & Research Division
October 24, 1972

Table 1. Log of Fish Commission of Oregon Cruise 72-5, September 3-5, 1972, M/V Ruth Ellen

Tow No.	Date	Time Start PDT	Duration (min)	Loran Start	LO Stop	Depth (fms)	Shrimp Catch (lbs.)	Remarks
1	9-3-72	0845	22	2480	2493	79-80	289	Clean tow, about 15# Dover
2	"	0950	20	2522	2534	86-87	164	200# hake, 20# sablefish
3	"	1055	26	2578	2591	82	234	300# hake, few smelt
4	"	1202	25	2629	2641	91	276	30# hake
5	"	1322	25	2683	2695	66-68	0	50# smelt
6	"	1427	27	2733	2748	65-62	0	140# smelt
7	"	1543	27	2782	2795	82-81	211	50# hake, 30# small rockfish, stickfish
8	"	1644	29	2826	2842	88-89	171	28# small rockfish, 25# hake
9	"	1739	25	2870	2882	86-84	357	Fairly clean, hake and dogfish = 20# ea.
10	"	1837	23	2884	2898	99-100	171	Fishy. Hake, sablefish, turbot
11	9-4-72	0732	30	3026	3014	106	199	Fairly clean tow
12	"	0850	33	2982	2970	95-96	133	Clean. Electric ray
13	"	1013	30	2984	2970	78-80	58	200# hake, dogfish, jack mackerel
14	"	1123	29	2935	2923	83-84	48	25# hake
15	"	1234	33	2938	2926	96	111	50# hake
16	"	1416	28	2833	2821	105-106	135	15# Pacific ocean perch
17	"	1519	28	2783	2770	104-105	45	15# Pacific ocean perch, 25# hake
18	"	1620	27	2742	2730	93	57	Lots jellyfish, few sea urchins
19	"	1727	25	2683	2671	98-96	9	20# hake, few smelt
20	"	1835	44	2639	2622	125-124	43	50# hake, 10# perch, one large skate
21	9-5-72	0737	33	2585	2569	105	1	Near water haul. Two hake
22	"	0907	41	2535	2547	150-143	4	200# hake, 45# perch, sablefish, turbot
23	"	1035	34	2529	2517	90	0	20# hake, one big lingcod, 5# smelt
24	"	1145	25	2490	2478	98-97	51	25# hake, 5# smelt