

FISH COMMISSION OF OREGON
GROUNDFISH & SHRIMP INVESTIGATIONS

Report of Cruise 72-7, Shrimp

Vessel: M/V Kangaroo, chartered trawler.

Dates: September 2-6, 1972.

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

Methods: The M/V Kangaroo is a wooden western seiner-trawler 50.8-feet registered length, of 16 net tons capacity. She is powered by a 165 h.p. diesel engine. We furnished a 41-52 foot (headrope-footrope length) shrimp trawl (1 1/8-inch mesh except for a 1 1/2-inch mesh codend with a 1/2-inch bobinette innerliner).

We selected 29 sample stations within the survey area between the Siuslaw River and Cape Arago using a systematic random sampling scheme based on grid intersects 4.0 nautical miles apart. Each station was the center of a 1/2-mile (radius) circle in which the tow was set. 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. 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 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 29 stations. One (Table 1) tow resulted in a badly torn net. Shrimp were captured on 22 of the 29 tows. Catches were fair-good, and ranged from 2 to 723 pounds (excluding the seven 0-catches). Average catch was 147 pounds per tow. Age II shrimp dominated most catches and ranged from 38-96% by number. Table 1 shows the cruise log.

We collected specimens of fish species for several scientific agencies upon request.

Personnel: William Barss, Party Chief
Fred Holland, Vessel Captain
Verlin Sell, Crewman
Gary Tamlin, Crewman

Jack G. Robinson
Management & Research Division
October 17, 1972

Table 1. Log of Fish Commission of Oregon Shrimp Cruise 72-7, September 2-6, 1972, M/V Kangaroo.

Tow No.	Date	Time Start PDT	Duration (min)	Loran 110		Depth (fms)	Shrimp Catch (lbs.)	Remarks
				Start	Stop			
1	9-2-72	0730	30	1445	1458	58	Trace	Smelt, basket stars
2	"	0855	30	1440	1455	74-73	Trace	Hake
3	"	1020	35	1438	1452	120	3#	Hake, sea urchins
4	"	1135	35	1487	1502	145	2#	Smelt = 80#
5	"	1300	40	1487	1500	73-72	67#	Hake = 150#, smelt = 75#
6	"	1412	33	1488	1500	61	197#	Hake = 40#, smelt = 25#
7	"	1525	35	1540	1554	58	Trace	Smelt = 90#, hake = 32#
8	"	1630	35	1548	1535	71-70	723#	Smelt = 60#, basket stars
9	"	1755	35	1537	1550	99-100	663#	Hake = 160#, rock F. = 22#
10	9-3-72	0735	30	1595	1609	58	23#	Smelt = 30#, hake, ling
11	"	0840	30	1607	1595	65	143#	Smelt = 150#, dover
12	"	0950	30	1587	1602	84	7#	Cucumbers = 3-#, brittle star
13	"	1100	30	1636	1646	88	0	Tore net, rock F. = 100#
14	9-4-72	0735	30	1645	1658	58	316.7#	Hake = 160#, smelt, sole
15	"	0835	30	1641	1655	65	4#	Rex = 80#, smelt = 80#
16	"	1015	30	1688	1702	98	Trace	Hake = 100#, dover, cucumbers
17	"	1145	30	1784	1796	123-120	159#	Sable = 400#, rock F. = 170#
18	"	1250	32	1785	1798	95	97#	Rock F. = 150#, dover = 55#
19	"	1350	35	1833	1845	88	347#	Hake = 50#, dogfish, sable
20	"	1520	35	1885	1898	74	43#	Sable = 120#, hake = 100#
21	"	1620	32	1894	1882	78	90½#	Dover = 100#, salbe, hake
22	"	1810	30	1855	1844	58-56	36#	Rex = 210#, hake, jelly F.
23	9-5-72	0735	35	1804	1790	58	391#	Hake = 120#, eelpout = 45#
24	"	0845	35	1750	1738	59	217#	Dover = 80#, smelt = 60#
25	"	0955	35	1695	1683	59	358#	Hake = 100#, smelt, sm sole
26	"	1100	33	1695	1609	45	297#	Smelt = 74#, rex = 74#
27	9-6-72	0735	35	1410	1398	54-53	Trace	Rex = 3-#, sanddabs = 25#
28	"	0900	30	1487	1402	68	Trace	Basket stars, English = 20#
29	"	1012	34	1385	1400	103-102	75#	Dover = 140#, rock F. = 40#