

FISH COMMISSION OF OREGON
GROUNDFISH & SHRIMP INVESTIGATIONS

Report of Cruise 73-8, Shrimp

Vessel: M/V Kangaroo, chartered trawler.

Dates: September 1-4, 1973

Objective: 1. To determine biomass and number of shrimp (*Pandalus jordani*) within the survey area between Coos Bay and Siuslaw River.

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 combination fishing vessel, 51-foot registered length of 16 net tons capacity. She is powered by a 335 h.p. Cummins diesel engine. We furnished a 41-52-foot (head-rope-footrope) shrimp trawl (1 1/8-inch mesh except for a 1 1/2-inch codend with a 1/2-inch bobinette interliner). The vessel furnished a 46-foot, 5/16-inch tickler chain.

We selected 27 sample stations within the survey area between Coos Bay and the Siuslaw River using a systematic random sampling scheme based on grid intersects of 4.0 nautical miles. Each station was the center of a 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. Only one subsample 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 27 stations in the survey area without problems. Shrimp were captured on 25 tows and were fairly abundant. Catches ranged from 0 to 395 pounds per tow and averaged 150. Catch by number was composed of 3.8% age 0 (1973 year class), 64.3% age I, 6.8% age II, and 25.1% age III shrimp. Catch by weight was composed of 0.3% age 0, 49.0% age I, 8.9% age II, and 41.8% age III shrimp. Table 1 summarizes the cruise log.

Personnel: Bill Barss, Party Chief
Fred Holland, Vessel Captain
Verlin Sell, Crewman

William H. Barss
Management & Research Division
September 25, 1973

Table 1. Log of Fish Commission of Oregon Cruise 73-8, September 1-4, 1973, M/V Kangaroo

Tow No.	Date	Time	Duration (min)	Loran 1L0		Depth (fms)	Shrimp Catch (lbs.)	Remarks
		Start PDT		Start	Stop			
1	9-1-73	0750	40	1394	1409	103	93	113# Dover, 110# small rockfish
2	9-1-73	0900	40	1442	1455	122-120	60	100# split lip rockfish, 30# Dover, 30# hake
3	9-1-73	1010	35	1484	1496	145	3½	80# rockfish, 40# hake, 35# Dover
4	9-1-73	1130	35	1533	1545	100	86	25# perch, 25# skate, 25# Dover
5	9-1-73	1240	35	1535	1557	71	141	30# stickfish, 50# small rex and slender sole
6	9-1-73	1420	40	1547	1560	58	274	200# stickfish, 50# Dover
7	9-1-73	1545	40	1498	1510	60	13	3# sanddabs, 3# hake, 2# stickfish
8	9-1-73	1710	40	1445	1458	58	331	550# hake, 35# sanddabs, 15# stickfish
9	9-2-73	0735	40	1392	1404	53	71	135# hake, 75# smelt, 60# sanddabs
10	9-2-73	0840	40	1391	1402	63	35	72# hake, 65# Dover, 60# small sole
11	9-2-73	1005	40	1444	1456	74	395	24# hake, 23# Dover, 21# ling, 30# skate
12	9-2-73	1125	40	1489	1502	72	217	110# hake, 30# stickfish, 9# hag fish
13	9-2-73	1310	40	1588	1603	84-82	92	40# Dover, 79# rockfish, 10# stickfish
14	9-2-73	1425	40	1592	1602	65	147	56# Dover, 10# small sole, 10# stickfish
15	9-2-73	1535	35	1600	1614	57	160	350# stickfish, 20# rex, 16# natfish
16	9-2-73	1650	40	1642	1654	64	96	500# stickfish, 36# Dover, 20 sea urchins
17	9-2-73	1810	40	1643	1656	58	296	300# stickfish, 40# Dover, 70# small sole
18	9-3-73	0745	40	1788	1802	95	50	Dirty tow, 60# Dover, 32# sable, 32# rockfish
19	9-3-73	0855	40	1790	1801	122-118	0	250# sable, 95# Dover, 80# small rockfish
20	9-3-73	1015	40	1838	1850	90	112	250# sable, 95# Dover, 55# small sole
21	9-3-73	1120	40	1881	1891	77	148	50# sable, 45# halibut, 35# Dover
22	9-3-73	1225	40	1882	1894	73-69	1/4	3# Dover, 3# hake, 4# small sole
23	9-3-73	1505	40	1841	1853	57-56	380	100# stickfish, 45# Dover, 20# hake
24	9-3-73	1630	40	1796	1807	57-58	253	50# Dover, 50# stickfish, 30# hake
25	9-4-73	0805	45	1688	1699	59	105	200# stickfish, 60# Dover, 20# skate, 10# eelpout
26	9-4-73	1030	40	1748	1760	59	355	200# stickfish, 25# Dover, 20# smelt, 20# hake
27	9-4-73	1200	40	1698	1713	46-47	142	200# hake, 0# Dover, 10# arrowtooth