

Oregon Department of Fish and Wildlife
Marine Region

Groundfish Assessment
Report of Cruise 79-1

Rockfish Survey off of Northern Oregon

Vessel : *M/V New Life*

Dates : April 18 through April 27, 1979

Objectives: A rockfish survey was conducted off Oregon between Yaquina Head and Cape Lookout from 90-230 fathoms to:

1. Determine the abundance and distribution of selected species and improve on estimates of biomass.
2. Seek methods of improving on the experimental design of rockfish surveys.
3. Collect biological information such as age, length, sex, and maturity on selected species.

Methods : A random stratified sampling scheme was used to locate sampling stations. Stratification of sampling areas and the selection of trackline density within these areas were done in a manner which attempted to account for the locations of known Pacific Ocean perch (*Sebastes alutus*) abundance. Once the number of stations was determined for a given area stratum, the station locations were distributed in a random fashion over the depth range.

In addition to 53 tows made on predetermined stations, 8 additional special tows were made in locations agreed upon by the party chief and skipper. These tows were made in an attempt to target on Pacific Ocean perch or "perch complex" species after locating them with sonar. All tows were approximately 30 minutes long and 1.25 to 1.50 n.m. in length. Tows had to be within 1.5 n.m. radius of any predetermined station. Stations were located with LORAN C and a depth fathometer.

The gear used aboard the *M/V New Life* was a mystic trawl designed for 200-500 hp. The headline and footrope were 62 and 80 ft respectively, with a fishing line of 83 ft and false fishing line of 81 ft. The total fishing circle was 530 meshes of $4\frac{1}{2}$ -inch mesh. The net was attached by 120 ft bridles with a total distance of 240 ft from the steel "V" doors to the net. When fished, the horizontal and vertical distances of the opening were

approximately 28 and 22 ft respectively. The net had the equivalent of 40 eight-inch balls for lift. Disc and scuttle bobbin roller gear was used.

Catches were weighed and counted by species. Length, sex, maturity and age samples were taken on selected rockfish, sablefish and arrowtooth flounder.

Results: A total of 51 good tows were made on predetermined stations with two hang-ups for a total of 53 tows. Eight targeted tows were made. Tow locations and catch data are shown in Table 1.

Catch per mile of Pacific Ocean perch and other rockfish was 98.8 and 299.9 lbs/n.m. respectively on predetermined stations. Catch per mile on the 8 special tows was 1,318.5 and 576.1 lbs/n.m. for the same respectively.

Personnel:	Jim Golden, Party Chief, ODFW	4/18-4/22
	Terry Burbee, CETA, ODFW	4/23-4/27
	Robert Demory, Party Chief, ODFW	4/23-4/27
	Dennis Wise, EBA-1, ODFW	4/23-4/27
	Craig Cochran, Vessel Captain	4/18-4/27
	Paul , Crewman	4/18-4/27
	Gary , Crewman	4/18-4/27

Table 1. A summary of the catches of Pacific Ocean perch (*Sebastes alutus*) and other rockfish from ODFW's rockfish survey off of the central and northern Oregon coast, April 1979, by M/V *New Life*.

Date	Tow	LORAN C		Depth (fms)	Time (hrs)	P.O.P. (lbs.)	Other rockfish (lbs.)
		9940W	9940X				
4/18	1	12818.7	27891.7	95	0650	0	517
"	2	12829.7	27882.9	135	0812	0	160
"	3	12845.3	27878.1	145	0945	7	213
"	4	12846.1	27881.0	145	1125	0	60
"	5	12874.8	27878.4	104	1238	0	124
4/19	6	12879.3	27848.1	-	0950	0	104
"	7	12854.2	27861.4	185	1143	27	159
"	8	12872.1	27857.8	150	1338	50	114
"	9	12861.2	27872.9	167	1558	19	280
"	10	12824.6	27868.6	215	1802	2	182
4/20	11	12759.0	27871.6	204	0833	429	620
"	12	12765.6	27867.8	215	1005	115	42
"	13	12786.6	27867.6	220	1129	326	219
"	14	12799.4	27865.8	230	1345	9	19
"	15	12811.2	27884.3	163	1702	81	272
"	16	12796.9	27891.4	126	1830	7	198
4/21	17	12802.0	27892.1	111	0644	0	44
"	18	12777.4	27896.6	135	0759	2	142
"	19	12780.4	27901.0	101	0924	0	18
"	20	12570.6	27902.9	151	1054	1,350	452
"	21	12738.5	27910.4	127	1230	16	690
"	22	12722.3	27914.4	144	1347	80	142
"	23	12719.3	27913.8	161	1505	934	46
"	24	12703.5	27923.2	119	1629	14	43
"	25	12691.4	27932.0	93	1800	HUNG-UP	

Table 1 Cont.

Date	Tow	LORAN C		Depth (fms)	Time (hrs)	P.O.P. (lbs)	Other rockfish (lbs)
		9940W	9940X				
4/22	26	12663.9	27926.0	170	0724	179	209
"	27	12658.7	27930.1	151	0853	451	125
"	28	12645.5	27933.8	142	1010	143	159
"	29	12629.4	27935.2	172	1130	87	136
"	30	12611.5	21940.8	157	1258	46	100
"	31	12607.8	27943.4	128	1431	46	521
"	32	12585.0	27950.8	101	1548	0	0
4/24	33	12566.2	27957.3	94	0727	0	33
"	34	12562.9	27950.8	116	0850	1	143
"	35	12547.0	27950.1	137	1001	266	97
"	36	12542.0	27954.6	107	1130	0	41
"	37	12533.1	27952.2	123	1250	24	543
"	38	12517.6	27950.0	164	1425	77	101
"	39	12520.6	27948.6	179	1550	16	69
"	40	12555.6	27940.3	219	1725	66	148
4/25	41	12666.0	27899.4	165	0754	41	733
"	42	12615.7	27917.0	195	1404	121	63
"	43	12612.8	27922.7	188	1606	80	43
"	44	12639.6	27919.2	180	1759	658	348
4/26	45	12569.8	27945.2	191	0725	27	179
"	46	12584.1	27936.4	216	0915	158	131
"	47	12594.7	27933.6	215	1053	155	163
"	48	12653.3	27925.4	186	1243	108	323
"	49	12684.5	27915.8	206	1415	112	173
"	50	12710.5	27911.0	220	1534	67	157
"	51	12742.2	27901.8	200	1702	33	143
4/27	52	12739.9	27890.0	190	0701		
"	53	12755.9	27994.9	214	1040	134	HUNGUP 166

Table 1 Cont.

Date	Tow	LORAN C		Depth (fms)	Time (hrs)	P.O.P. (lbs)	Other rockfish (lbs)
		9940W	9940X				
SPECIAL TOWS							
4/18	54	12963.1	27840.0	153	1555	1,610	131
"	55	12956.6	27843.4	182	1720	51	244
4/19	56	12855.2	27856.0	152	0722	10,193	1,806
4/20	57	12752.6	27880.3	150	0652	4	792
4/25	58	12649.2	27900.0	180	0933	719	919
4/26	59	12760.7	27887.2	150	1930	56	1,205
4/27	60	12809.0	27877.2	148	1338	1,015	716
"	61	12829.2	27870.0	205	1605	4	178