

Oregon Department of Fish and Wildlife
Marine Region
Groundfish and Shrimp Investigations
Report of Cruise 79-4, Shrimp

Vessel: F/V Sea Blazer

Dates: May 22-25, 1979

- Objectives:
1. To determine biomass and number of shrimp (Pandalus jordani) within an offshore survey area between Columbia River and Tillamook Bay in 45-105 fathoms.
 2. To determine age and sex composition of this shrimp stock as well as average size (number/pound).
 3. To compare catches of two 75' square jib design box trawls. Special attention to be given to species and quantities of rockfishes taken as incidental catches.

Methods: The F/V Sea Blazer is a fibreglass Gulf style shrimp trawler. She is 75 ft. overall length with a beam of 21.0 ft. The vessel weighs 127 gross tons and is powered by a 365 hp diesel engine. The vessel uses 7 ft. square wood and steel trawl doors of an approximate weight of 1,000 pounds each.

The vessel is equipped with nylon material shrimp nets consisting of 15 thread 1.5" mesh in the forward section; 21 thread 1.5" mesh in the intermediate section; and 42 thread 1.5" mesh in the cod-end consisting of 200 by 200 meshes.

Twenty-four eight-inch floats were attached equally spaced on the 75 ft. long head rope with a 16 inch ball at the very center. Eleven droppers of 5/16 inch chain consisting of 18 links each were spaced on the 75 ft. long foot-rope.

We completed 30 tows of one mile or longer in the specified area as per a systematic sampling plan. We recorded all pertinent data relative to each survey operation. We sorted the catch of each of the two nets after each tow. Shrimp catches were weighed and recorded to the nearest pound. Rockfish catches were separated by species. Average weights were applied to numerically large catches. Smaller catches were weighed in total. Likewise other specimens were similarly listed by species and weight.

Results: Twenty-seven stations were occupied in the North area survey. One optional tow was added within the traditional boundaries and an additional one outside its boundaries. One optional tow was duplicated. Shrimp were caught on 25 of the total 30 tows. Catch/tow (both nets) ranged from 0 to 175 pounds. Table 1 summarizes unweighted catch data.

Personnel: E.L. Niska, Party Chief, ODFW; Allard Conger, Vessel Captain; John Conger, and Richard Loya, Crewmen.

Table 1. North Area catch and composition summary

Total catch	829 lbs. (both nets)		
Mean catch/tow (30 tows)	28 lbs. (both nets)		
Range	0 - 175 lbs.		
Average size	79 shrimp/lb.		
Age Composition (%/age)	<u>Age</u>	<u>No.</u>	<u>Wt.</u>
	1	18.6	8.5
	2	37.7	35.7
	3+	43.7	55.8

Table 2. (following) Summarizes the cruise log for the North area.

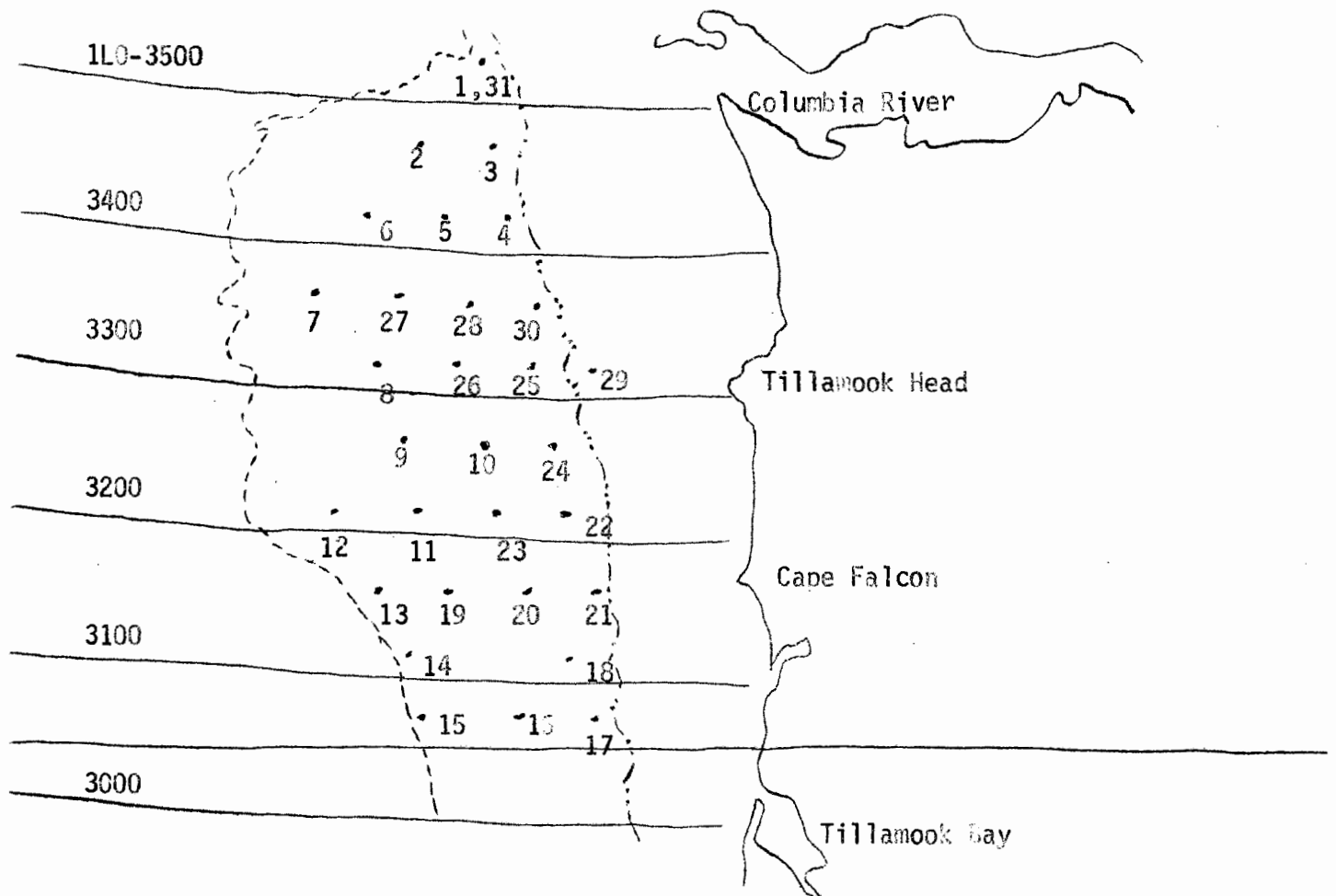


Figure 1. Location of tows made during shrimp cruise 79-4, May 22-25, 1979.

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 Groundfish & Shrimp Investigations
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Table 2.

NORTH AREA SHRIMP SURVEY
May 22-25, 1979

Tow	Date	Time Start PDT	Tow duration		Loran C (W)		Depth (Fms)	Shrimp catch (Lbs.)	Shrimp grade (No/lb)	% Age (yrs)/numbers		
			Min.	Miles	Down	Haul				1	2	3+
1	5/22	0651	47	1.7	12117	12125	67-66	0	-	-	-	-
2	5/22	0840	41	1.7	12153	12161	66-68	0	-	-	-	-
3	5/22	1015	49	1.3	12143	12149	61-59	22	67	7.0	27.5	65.5
4	5/22	1140	46	1.3	12164	12171	56	19	92	27.4	64.6	8.0
5	5/22	1322	48	1.4	12176	12176	65-69	2	71	2.5	43.5	54.0
6	5/22	1504	34	1.2	12188	12196	73-74	1	-	-	-	-
7	5/22	1644	39	1.4	12218	12227	83-84	Trace	-	-	-	-
8	5/22	1818	42	1.2	12241	12247	83-82	41	81	12.9	56.7	30.4
9	5/22	1958	42	1.4	12267	12274	83	34	74	5.0	44.4	50.6
10	5/23	0617	40	1.4	12255	12262	78	13	76	9.0	39.8	51.2
11	5/23	0835	37	1.3	12292	12299	83-85	52	67	2.5	41.5	56.0
12	5/23	1005	37	1.1	12304	12311	88-90	8	66	0.5	39.0	60.5
13 ^{1/}	5/23	1130	--	---	12325	---	94	--	--	--	--	--
14	5/23	1225	35	1.1	12354	12362	97-100	26	90	15.7	35.0	29.3
15 ^{2/}	5/23	1349	41	1.4	12382	12389	106	5	69	19.3	26.4	54.3
16	5/23	1555	41	1.5	12374	12371	80-76	Trace	--	--	--	--
17	5/23	1716	36	1.4	12366	12359	66-62	0	--	--	--	--
18	5/23	1843	37	1.4	12343	12334	72	21	135	70.5	20.5	9.0
19	5/24	0707	33	1.2	12318	12315	83-81	6	104	34.2	42.2	23.6
20	5/24	0821	31	1.0	12312	12310	79-76	94	74	9.4	25.1	65.5
21	5/24	0935	35	1.2	12304	12298	64-58	Trace	--	--	--	--
22	5/24	1100	33	1.1	12281	12274	65-66	10	175	84.0	16.0	--
23	5/24	1220	33	1.5	12284	12287	79-81	147	68	1.0	21.2	77.8
24	5/24	1410	36	1.4	12253	12244	67-65	72	82	20.3	44.9	34.8
25	5/24	1541	37	1.4	12224	12216	67-68	108	65	1.9	24.4	73.7
26	5/24	1715	40	1.1	12232	12225	77	6	69	10.4	35.1	54.5
27	5/24	1847	40	1.1	12214	12206	78-76	11	89	28.2	43.1	28.7
28	5/24	2012	40	1.2	12204	12202	71-67	128	79	12.9	48.5	38.5
29 ^{2/}	5/25	0630	38	1.1	12213	12204	53-47	0	--	--	--	--
30	5/25	0755	35	1.2	12196	12187	55-56	0	--	--	--	--
31	5/25	1037	38	1.2	12118	12112	60-54	3	--	--	--	--

^{1/} Tow not completed due to bad bottom.

^{2/} Outside traditional survey boundary.