

Oregon Department of Fish and Wildlife
Marine Region
Groundfish and Shrimp Investigations
Report of Cruise 77-3, Shrimp

Vessel: M/V *Miss Yvonne*, chartered trawler

Dates: ~~May~~ ^{April} 27-29, 1977

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

Methods: The M/V *Miss Yvonne* is a wood Gulf-style shrimp trawler, built in Mobile, Alabama in 1965. She is 70 feet overall and has a breadth of 21 feet. The vessel is 62 gross tons and is powered by a 300 horsepower diesel engine. The vessel supplied 9' x 40" wood doors, tickler chain, lazy line, and pucker string. We supplied a 41-52 (headrope-footrope) shrimp trawl (1-1/8 inch mesh except for 1-1/2-inch codend with a 1/2-inch bobinetter inner-liner).

We selected 28 sampling stations in the North area (Tillamook Bay to the Astoria Canyon), based on a systematic sampling plan using 4.0 x 4.0 nautical mile-square grids. Tows were approximately one nautical mile long. We recorded Loran and depth (fathoms) at start and end of each tow, as well as time and ocean-weather conditions.

We sorted the catch of each tow and weighed or estimated the weight of major non-shrimp species in the catch. The shrimp catch was weighed and recorded to the nearest pound for each tow. A randomly drawn 2-5 pound sample was taken for analysis on shore. Samples were frozen pending analysis.

Results: Twenty-eight stations were occupied in the North area. Shrimp were caught in 19 stations. Catch/tow ranged from 0 to 793 pounds. Table 1 summarizes unweighted catch data. Overall our reserach net caught 15-25% more shrimp than the commercial net but it also caught a lot more smelt and sole.

Table 1. North Area Catch and Composition Summary

Total Catch	3,211 lbs.		
Mean Catch/tow, (24 tows)	134 lbs.		
Range	0-793 lbs.		
Age Composition, (% age)	Age	No.	Wt.
	1	4.9	1.7
	2	56.1	47.0
	3+	39.0	51.3
Average size (N/lb)	92		

Table 2 summarizes the cruise log for the North area. Figure 1 shows approximate locations of tows made.

Personnel: Gary Hettman, Party Chief
Jerry Stark, Vessel Captain
Richard Bolliger, Crewman
Wayne King, Crewman

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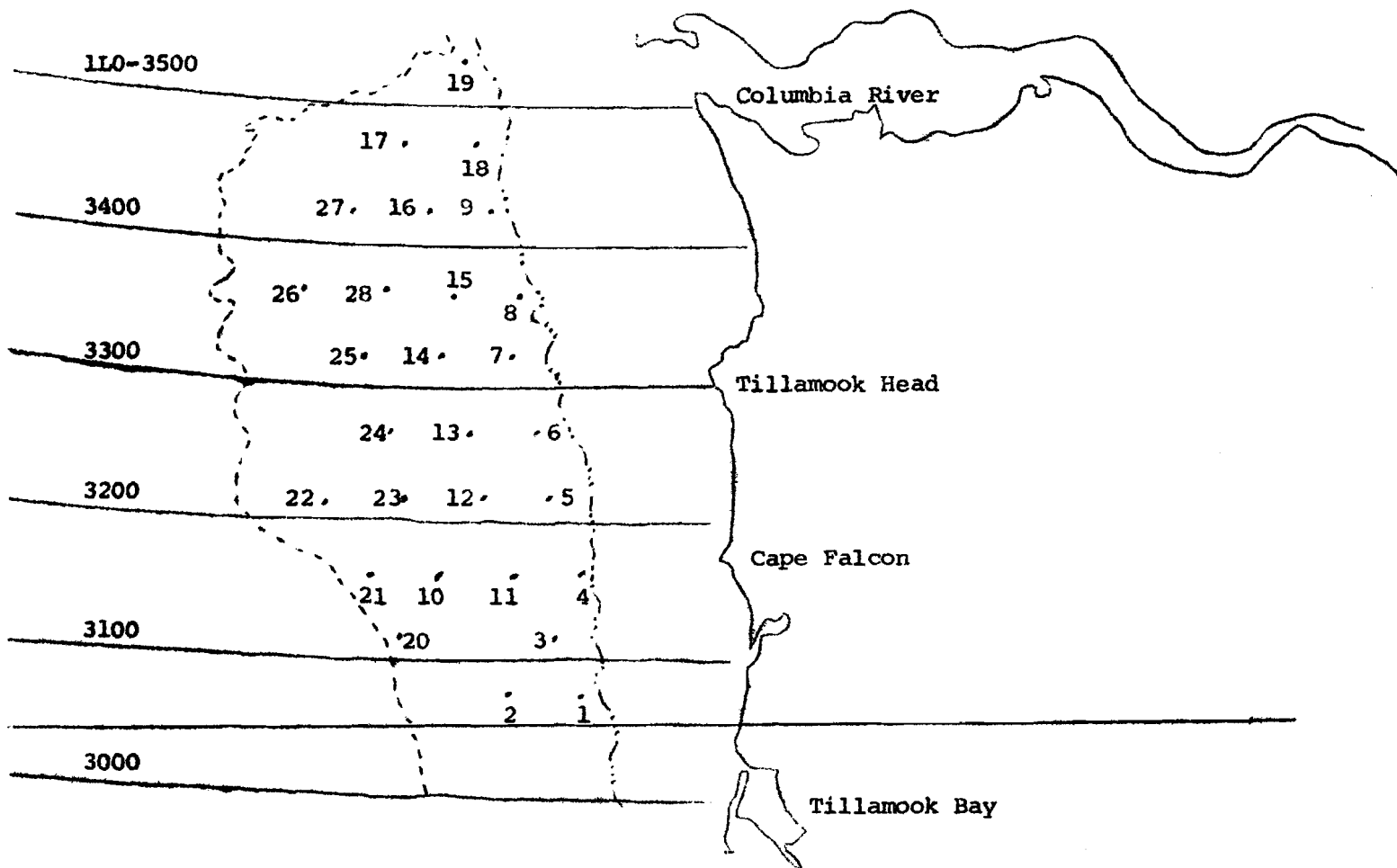


Figure 1. Location of Tows Made During Shrimp Cruise 77-3, April 27-29, 1977.

Table 2. Log of Oregon Department of Fish & Wildlife Shrimp Cruise 77-3, North Area, April 27-29, 1977, M/V *Miss Yvonne*.

Tow	Date	Time Start PDT	Tow		Loran		Depth (fms)	Shrimp Catch (lbs)	Shrimp Grade (N/lb)	Grade %			Predominant Species of fish caught
			Duration Min.	Miles	LLO Down	Haul				I	II	III	
1	3/27	0702	32	1.0	3075	3087	62-61	0	-	-	-	-	27# Miscellaneous fish
2	3/27	0830	30	1.0	3075	3087	81-80	0	-	-	-	-	3# Miscellaneous fish
3	3/27	1004	34	1.0	3124	3136	74	93	89	1.0	56.0	43.0	32# Smelt
4	3/27	1139	29	1.0	3187	3199	61	0	-	-	-	-	-
5	3/27	1246	36	1.0	3230	3242	65-64	0	-	-	-	-	107# Smelt
6	3/27	1407	32	1.0	3273	3285	64	35	94	4.5	69.0	23.5	40# Smelt
7	3/27	1529	33	1.0	3316	3328	65-64	52	98	8.5	67.0	24.5	17# Smelt
8	3/27	1646	32	1.0	3368	3380	55-54	0	-	-	-	-	2# Miscellaneous fish
9	3/27	1804	42	1.0	3409	3421	58-59	192	92	16.5	61.5	22.0	123# Miscellaneous sole
10	3/28	0718	29	1.0	3180	3192	83	65	92	4.5	56.9	37.6	10# Smelt, 40# Misc. sole
11	3/28	0852	29	1.0	3179	3191	77	173	79	4.0	31.5	64.5	85# Smelt
12	3/28	1004	32	1.0	3227	3239	78½-78	133	90	4.9	46.3	48.8	100# Smelt
13	3/28	1115	32	1.0	3272	3284	77-76	22	97	6.5	66.3	27.2	23# Smelt
14	3/28	1225	33	1.0	3315	3327	76-75½	44	84	3.0	43.0	54.0	68# Smelt
15	3/28	1339	33	1.0	3365	3447	69	11	90	3.5	52.8	44.7	121# Smelt
16	3/28	1452	32	1.0	3412	3424	67	Trace	-	-	-	-	200# Smelt
17	3/28	1604	30	1.0	3462	3474	68-69	0	-	-	-	-	60# Miscellaneous fish
18	3/28	1727	35	1.0	3470	3456	60	224	91	0.0	57.5	42.5	50# Miscellaneous fish
19	3/28	1844	27	1.0	3516	3528	58-59	71	90	1.0	46.5	52.5	20# Miscellaneous fish
20	3/29	0725	35	1.0	3120	3123	97-96	21	95	3.0	74.5	22.5	45# Miscellaneous fish
21	3/29	0835	36	1.0	3164	3176	93-92	29	98	3.0	68.0	29.0	20# Miscellaneous fish
22	3/29	0946	32	1.0	3211	3223	86-85	445	100	8.5	56.0	35.5	85# Smelt
23	3/29	1108	34	1.0	3221	3233	83-82	50	94	8.6	54.0	37.4	15# Smelt
24	3/29	1235	33	1.0	3275	3287	81	426	93	2.0	48.0	50.0	40# Smelt
25	3/29	1340	35	1.0	3314	3327	81	327	86	4.5	45.0	50.5	125# Smelt
26	3/29	1503	32	1.0	3357	3369	83	0	-	-	-	-	10# Miscellaneous fish
27	3/29	1630	31	1.0	3411	3423	74	0	-	-	-	-	10# Miscellaneous fish
28	3/29	1755	32	1.0	3374	3386	75	793	99	6.5	65.5	28.0	60# Smelt