

FISH COMMISSION OF OREGON
TRAWL INVESTIGATION

Report of Cruise 67-8, Shrimp

Vessel: MV Sunrise

Dates: August 28-30, 1967

- Objectives:
1. To compare catch rates of day and night shrimp tows.
 2. To compare size, sex ratio, and age composition of shrimp caught during day and night towing.

Methods: The shrimp trawl was a 41-foot headrope Gulf semi-balloon trawl. The catch was sorted after each tow. Fish were either counted or weighed or both by species as time permitted. A one-half to one pound random shrimp sample was weighed, measured, and sexed.

Results: Day towing produced higher catch rates than night towing. Table 1 shows the results of the 9 day and 6 night tows. The shrimp per pound caught during the day averaged 141 and ranged from 129 to 158. Night tows ranged in count from 120 to 136 shrimp per pound, averaging 129. The per cent of males caught during the day averaged 60% and ranged from 53% to 67%. Night tows had from 39% to 54% males averaging 47%. Forty-five per cent of the night-caught shrimp and 58% of the day-caught shrimp were one-year old males. A length-frequency distribution by sex of day and night caught shrimp is shown in Figure 1.

Personnel: Gary Milburn, Party Chief, 8/28-30/67
Bill Noonan, Student Trainee, 8/28-30/67
Rudy Lovvold, Vessel Captain
Mickey Atwood, Crewman

Gary Milburn
Fish Commission of Oregon
Research Division
September 19, 1967

Table 1. Summary of shrimp day and night towing, August 28-30, 1967.

Tow no.	Date	Time down (PST)	Time net on bottom (min)	Loran		Shrimp (lbs)		Depth	Fish catch (lbs)	Shrimp per pound
				Down	Up	Day	Night			
1	8-28	1645	16	3272	3265	150		68	111	146
2	8-28	2010	15	3262	3256		15	67	104	129
3	8-28	2301	15	3240	3250		25	70	140	134
4	8-29	0245	16	3260	3250		20	70-73	122	128
5	8-29	0522	15	3270	3262	60		70-71	179	122
6	8-29	0804	16	3255	3248	160		69	117	143
7	8-29	1103	15	3250	3258	150		70	135	158
8	8-29	1404	15	3270	3260	135		71-72	81	139
9	8-29	2056	15	3255	3245		7	71-70	178	120
10	8-30	0052	15	3250	3254		15	69-71	117	136
11	8-30	0316	14	3260	3268		10	68	90	133
12	8-30	0714	16	3265	3255	190		69	127	129
13	8-30	0904	14	3232	3225	160		69-70	126	143
14	8-30	1159	16	3238	3248	170		69-70	133	134
15	8-30	1436	18	3255	3260	160		70	154	146

Figure 1. Length-frequency distributions and sex composition of day and night tows, cruise 67-8.

