

FISH COMMISSION OF OREGON  
TRAWL INVESTIGATION

Cruise Report 66-5 - Pacific Ocean Perch Survey

Vessel: MV Sunrise of Astoria

Dates: August 22-29, 1966

- Objectives:
1. To obtain Pacific ocean perch catch ratios in pounds per hour in areas for which catch rates are known for previous years.
  2. To obtain length-frequency samples from the above areas.
  3. To make a series of bathythermograph casts off the mouth of the Columbia River while in passage to and from the perch grounds.

This cruise was the first of a series of cruises to be made by the MV Sunrise over areas known to produce large landings of Pacific ocean perch, S. alutus (and others), in years immediately prior to 1966.

Materials and Methods: A 3½-inch mesh Eastern otter trawl with a 54-foot head rope, a 76-foot foot rope with rollers, and a 320-mesh body was used.

Six, 2-hour tows were to be made in preselected areas. Length-frequency and sex samples of 100 S. alutus were to be taken from each tow. B.T. casts were to be made to 150 feet except where water depth was shallower.

Results: Ten tows were successfully completed. Loran readings, depth in fathoms, time, and estimated poundages were recorded and pounds per hour were computed and recorded (Table 1).

A sample of S. alutus was taken from each tow and was sexed and measured (Tables 2 and 3).

Eleven B.T. casts were made and surface temperatures taken (Table 4).

Personnel: Halbert Bailey - Party Chief  
 Rudy Lovvold - Skipper of Sunrise  
 Mike Tagliavento - Crewman  
 Tom Lovvold - Crewman

Halbert Bailey  
October 12, 1966

Distribution

Astoria Lab - 12  
 Charleston Lab ✓  
 OFC - Portland  
 BCF - Seattle  
 Alverson  
 Moore  
 Jow - CFG

Newport Lab - 5  
 Library  
 Van Hying  
 Kruse  
 Percy  
 WDF - Olympia  
 Verhoeven

Table 1. Location and catch of tows in pounds/tow (pounds/hour).

Date	Tow no.	Depth fms.	Loran		Pacific ocean perch	Other rock-fish	Flat-fish	Misc.	Time hrs.
			2H4	2H5					
8-23	1	140	3110-3132	3400-3380	2,770 (1,350)	80 (40)	310 (155)	156 (78)	2
8-23	2	148	3115-3110	3400-3400	1,200 (600)	160 (80)	90 (45)		2
8-24	3	110	3070-3010	3420-3420	500 (250)	725 (363)	120 (60)	100 (50)	2
8-25	4	140	2660-2590	3415-3415	200 (100)	110 (55)	20 (10)	520 (260)	2
8-25	5	145	2505-2520	3360-3368	1,500 (2,000)			30 (40)	3/4
8-25	6	150	2505-2502	3360-3360	4,000 (2,667)			50 (33)	1-1/2
8-27	7	135	2110-2170	3350-3360	600 (300)	800 (400)	75 (38)	150 (75)	2
8-27	8	135	2175-2115	3350-3350	150 (75)	600 (300)	450 (225)		2
8-27	9	115	2120-2175	3355-3355	150 (75)		155 (78)	700 (350)	2
8-29	10	112	3020-3070	3420-3465	120 (60)	50 (25)	110 (55)	210 (105)	2

Table 2. Pacific ocean perch length-frequency distributions.  
Males

Length (cm)	Tow	1	2	3	4	5	6	7	8	9	10	Total
25												
26												
27					2			1				3
28			3		4			0			1	8
29			0		0	1		0			0	1
30			8		6	0		2			1	17
31			2		3	2		2			0	10
32		2	3	2	6	1	3	1	0		1	21
33		0	3	6	7	0	1	1	1		0	20
34		5	8	7	5	11	7	4	1		3	54
35		2	14	7	2	17	12	7	1		5	68
36		8	16	1	7	8	5	3	2		3	56
37		5	12	3	2	8	5	8	7		4	56
38		6	6	3	1	6	2	10	4		3	43
39		5	2	1	2	1	4	2	2		5	26
40		2	2	0	3	3	6	3	1		2	23
41				1		1	1	0	1		1	5
42						1		1			1	3
43											2	2
44												
45												
46												
47												
48												
49												
50												
Total		36	66	44	50	60	46	45	21	30	19	416
$\bar{x}$		36.6	35.8	33.4	33.3	35.8	36.2	36.0	36.9	37.4	35.2	35.5

Table 3. Pacific ocean perch length-frequency distributions.  
Females

Length (cm)	Tow	1	2	3	4	5	6	7	8	9	10	Total
25												
26					1							1
27				1	0							1
28				1	1					1		3
29				1	2			1		4		8
30				1	0	1		2		1		5
31				1	1	0		1		0	2	5
32			2	1	2	0		0		0	2	7
33			1	2	2	0		0	1	2	0	8
34		2	0	3	1	0		0	0	0	1	7
35		3	4	4	4	2	1	4	0	1	1	24
36		0	2	10	6	6	6	7	2	0	3	42
37		4	5	8	6	4	3	5	3	0	1	39
38		5	5	8	6	9	12	9	3	3	2	62
39		4	2	2	4	8	9	10	3	5	4	51
40		3	5	1	4	15	11	7	2	3	2	53
41		4	2	2	5	3	12	6	3	4		41
42		3		2	7	5	4	5	2	3		31
43					2	1	2	3	2	2		12
44					1	1	1	3		0		6
45							0			1		1
46							1					1
47							0					0
48							1					1
49												
50												
Total		28	28	48	55	55	63	63	21	30	18	409
$\bar{X}$		38.5	37.3	36.0	37.4	38.9	39.6	38.5	39.0	37.5	36.2	38.0

Table 4. Bathythermograph stations.

Date	Loran		Depth fms.	Surface temp. F	Feet of line out	Time of day	Station no.
	2H4	2H5					
8-22-66	Buoy #1		13	56	50'	1710	1
8-22-66	3530	3470	32	56.5	150+	1740	2
8-22-66	3530	3462	47	56.5	150	1805	3
8-22-66	3530	3458	64	55.8	150	1830	4
8-22-66	3528	3448	100	56.8	150	1907	5
8-22-66	3525	3436		58.2	150	1950	6
8-29-66	3380	3450	59	55.5	150	1240	8
8-29-66	3435	3460	51	56	150	1335	9
8-29-66	3460	3462	45	56.5	150	1403	10
8-29-66	Lightship		34	56.8	150	1425	11
8-29-66	3519	3475	20	56.3	50	1448	12