

FISH COMMISSION OF OREGON
TRAWL INVESTIGATIONS

Cruise Report 66-6 - Pacific Ocean Perch Survey

Vessel: MV Sunrise of Astoria

Dates: September 3-12, 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 second 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.

Twenty, 1-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' except where water depth was shallower.

- Results:
1. Nineteen 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).
 2. A sample of S. alutus was taken from each tow having greater than 25-30 pounds, and was sexed and measured (Tables 2 and 3).
 3. Twelve B. T. casts were made and surface temperatures taken (Table 4).

Personnel: Halbert Bailey - Party Chief
 Rudy Lovvold - Skipper of Sunrise
 Tom Lovvold - Crewman
 Kurt Wesley - Crewman

Halbert Bailey
October 12, 1966

Distribution

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

Date	Tow no.	Depth fms.	Loran		Pacific ocean perch	Other rockfish	Flat-fish	Misc.	Time hours
			2H4	2H5					
9-3	1	96	3425	3410	0	0	0	0	10 min. (Hung up)
9-4	2	140	3400-3360	3390-3395	25 (25)	10 (10)	14 (14)	60 (60)	100
9-4	3	142	3355-3385	3395-3395	350 (350)	15 (15)	25 (25)	275 (275)	1.0
9-5	4	145	3115-3128	3400-3392	1,000 (1,000)	75 (75)	55 (55)	25 (25)	1.0
9-5	5	155	3115-3330	3400-3390	150 (163)	20 (22)	15 (16)	5 (5)	55 min. (.92 hr.)
9-5	6	115	3075-3050	-	175 (175)	80 (80)	60 (60)	0 (0)	1.0
9-5	7	115	3070-3035	3420	100 (93)	25 (23)	4 (4)	10 (9)	1 hr. 5 min. (1.08 hr.)
9-8	8	110	3035-3005	3420-3420	20 (20)	30 (30)	0 (0)	100 (100)	1.0
9-8	9	110	3010-3040	3420-3420	300 (300)	610 (610)	90 (90)	100 (100)	1.0
9-8	10	136	2670-2635	3410-3410	0	0	0	0	1.0
9-8	11	140	2640-2662	3410-3415	300 (300)	30 (30)	10 (10)	100 (100)	1.0
9-9	12	150	2505-2530	3362-3360	7,000 (7,000)	0 (0)	0 (0)	0 (0)	1.0

cont.

Table 1 (Continued)

Date	Tow no.	Depth fms.	Loran		Pacific ocean perch	Other rockfish	Flat-fish	Misc.	Time hours
			2H4	2H5					
9-9	13	150	2510-2530	3360-3360	1,500 (1,630)	0 (0)	0 (0)	0 (0)	5.5 (.92 hr.)
9-10	14	133	2125-2150	3355-3355	400 (400)	100 (100)	5 (5)	10 (10)	1.0
9-10	15	133	2142-2110	3358-3355	30 (30)	75 (75)	0 (0)	15 (15)	1.0
9-10	16	110	2153-2180	3355-3360	20 (20)	120 (120)	55 (55)	15 (15)	1.0
9-11	17	135	1260-1237	3348-3350	10 (10)	0 (0)	5 (5)	30 (30)	1.0
9-11	18	145	1225-1243	3344-3342	1,000 (1,087)	300 (326)	25 (27)	20 (22)	55 min. (.92 hr.)
9-11	19	170	1245-1215	3338-3338	20 (20)	200 (200)	5 (5)	105 (105)	1.0
9-11	20	170	1220-1235	3332-3338	30 (30)	100 (100)	30 (30)	375 (375)	1.0
9-9	10	126	2170-2128	3410-3410	0	0	0	0	1.0
9-9	11	150	2060-2062	3410-3418	300 (300)	30 (30)	10 (10)	100 (100)	1.0
9-9	12	130	2205-2120	3345-3360	2,500 (7,000)	0 (0)	0 (0)	0 (0)	1.0

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

Length (cm)	Tow 2	3	4	5	6	8&9	11	12	13	14	18	Total
25	11	10	25	25	25	1,000		0	0	0	3.2	
26						(1,000)		(0)	(0)	(0)	(1.0)	
27												
28	41	10	1	25	25	400	2	100	5	10	4.0	1
29	1	0	0		1	(400)		(100)	(0)	(10)		1
30	0	3			1		2					6
31	1	0	0		0	1	4	75	0	15	1.0	6
32	0	2	1	2	0	1	8	(0)	(0)	(10)	0	14
33	0	5	6	4	3	5	4	2	1		0	30
34	1	5	12	11	5	1	8	10	4	15	3	58
35	1	6	19	11	8	2	1	(7)	13	1	3	72
36	0	8	14	14	9	4	7	5	10	3	9	83
37	4	7	9	11	10	7	3	5	11	2	4	73
38	3	4	9	6	11	6	3	(6)	9	5	7	69
39	0	4	2	5	8	2	1	1	3	2	0	28
40	1	2		3	3	1		1	0	1	0	11
41	0					(1,000)		(1)	(1)	1	1	4
42	1									0	1	2
43	10	10	10	10	10	10	10	10	10	10	10	1
44						(10)		(10)	(0)	(10)		
45												
46	30	10	10	10	10	10	10	10	10	10	10	
47						(10)		(10)	(10)	(10)		
48												
49												
50												
Total	10	47	72	67	58	30	41	37	52	16	29	459
\bar{x}	36.8	35.4	35.6	36.0	36.6	36.0	34.0	35.9	36.4	38.1	36.5	$\bar{x} = 36.1$

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

Length (cm)	Tow	2	3	4	5	6	8&9	11	12	13	14	18	Total
24			1										1
25			0										0
26			0										0
27			0										0
28			0										0
29			0			1		1					2
30			0			0		0				1	1
31			0			1	1	1				1	3
32			2			1	2	1		1	1	0	11
33			2			2	2	5		0	1	3	12
34	1		5	5	3	0	1	9		1	0	0	31
35	1		5	6	3	3	7	15		1	0	0	44
36	2		6	7	7	3	9	18		1	3	0	63
37	0		6	6	4	7	7	10		1	4	2	53
38	1		6	12	3	5	6	13		9	5	4	73
39	0		6	10	5	4	4	1		8	9	9	60
40	2		6	3	2	2	8	6		16	9	5	70
41	2		4	2	2	1	1	1		9	5	6	43
42	1		7	1	3	0	4	1		9	2	2	38
43	3		5	1		0	2			2	3	2	22
44	1		1			2						2	7
45			0				1						0
46			1										1
47													
48													
49													
50		10	47	72	87	30	30	41	27	37	20	20	438
Total		14	63	53	32	32	55	82	63	43	44	54	535
\bar{x}		39.7	38.1	37.5	37.6	37.0	37.6	36.1	39.4	39.2	38.2	39.5	$\bar{x} = 38.2$

Table 4. Bathythermograph stations.

Date	Loran		Depth fms.	Surface Temp. °F	Feet of line out	Time of day	Station no.
	2H4	2H5					
9-3-66	Buoy #1		13	59.2	50	1247	1
9-3-66	3530	3470	31	59.2	150	1308	2
9-3-66	3528	3460	47	58.5	150	1338	3
9-3-66	3528	3455	64	58.6	150	1400	4
9-3-66	3530	3448	118	58.5	150	1424	5
9-3-66	3523	3438		58.8	150	1452	6
9-12-66	3375	3448	61	59.8	150	1532	7
9-12-66	3405	3455	55	60.8	150	1555	8
9-12-66	3425	3458	49	58.7	150	1615	9
9-12-66	3460	3467	44	57.0	150	1645	10
9-12-66	Lightship		34	57.0	150	1710	11
9-12-66	3517	3473	18		50	1740	12

Total 14 13 33 32 32 33 22 43 43 44 54 325
 58.7 58.1 57.9 57.6 57.8 57.9 58.1 58.4 58.2 58.2 59.5 58.2