

Fish Commission of Oregon
Trawl Investigations
Report of Cruise 69-5, Lingcod Tagging

Vessel: M/V Sunrise
Dates: September 26-29, 1969
Objectives: To tag lingcod for stock identification and stock interchange.
To determine growth and mortality rates.

Methods: Fish were caught with a 300-mesh trawl of 5-inch mesh (stretch measure) throughout. A 20-fathom bridle connected each wing of its respective door.

Fish were tagged with dart tags attached to 6-inch vinyl tubing. Fish were measured to the nearest cm.

Length of tow ranged from 1 to 2 hours, but was usually 1 hour.

Results: There were 50 fish tagged from a total of 12 tows, but tows 1 and 2 should be discounted since the gear was not functioning properly. Depth of fishing ranged from 25 to 55 fathoms but the best catches were made at depths of 45-47 fathoms. The area fished ranged from near the Columbia River lightship south to Tillamook Head then north to the area west of Willapa Bay.

Table 1 shows station location, depth, time and tag numbers put out by tow. Table 2 shows the length-frequency distribution of lingcod tagged by 5 cm interval.

Recommendations: Considering the amount of time spent in catching the 50 fish tagged, it is concluded that trawling is not the proper method of capture. The rates of fishing were five fish per tow (excluding tows 1 and 2) or 4.1 fish per hour of trawling. The method of capture should be changed to hook and line. The

Table 1. Location of station and dominate species caught, cruise 69-5, lingcod tagging

Date (1969)	Tow no.	Loran readings		Depth	Towing time (min.)	No. of lingcod tagged	Tag nos.	Dominate species
		2H4	2H5					
9-26	1	3505-3465	- -	17	60	0	-	No catch
9-26	2	3481-3444	3472-3466	38-50	60	0	-	Hake
9-26	3	3445-3475	- -	50-38	120	0	-	Hake
9-27	4	3311-3278	- -	32-33	60	4	08000-08003	Crabs
9-27	5	3259-3305	- -	36-37	100	3	08004-08006	<u>S. pinniger</u> ; <u>S. flavidus</u>
9-27	6	3358-3387	- -	25	60	0	-	Crabs
9-28	7	3721-3758	- -	35	60	2	08007-08008	Crabs, dogfish
9-28	8	3841-3881	- -	40-43	63	4	08009-08012	Dogfish
9-28	9	3885-3912	- -	45	60	20	08013-08032	Dogfish
9-28	10	3913-3871	- -	47	90	7	08033-08039	Hake
9-29	11	3883-3921	- -	45	57	8	08040-08047	Hake
9-29-	12	3812-3708	3458-3458	55	60	2	08048-08049	<u>S. pinniger</u> ; <u>S. flavidus</u>

Table 2. Length frequency of lingcod tagged by 5 cm intervals

Length interval	Frequency
45-49	1
50-54	0
55-59	2
60-64	0
65-69	9
70-74	17
75-79	5
80-84	3
85-89	3
90-94	4
95-99	1
100-104	2
105-109	3
Total	50

reasons are as follows: (1) capture by trawling is not predictable; (2) hook and line enables fishing lingcod in their preferred habitat--reefs and rocky areas, areas that are not fishable by trawl gear; and (3) hook and line fishing is more predictable since all fishing time could be devoted to areas of known lingcod habitat.

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Fish Commission of Oregon
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