

SHELLFISH INVESTIGATION
INFORMATION REPORT 70-5

HARVEST OF INTERTIDAL, NONFOOD INVERTEBRATES, 1968

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INTRODUCTION

Since 1962 people holding intertidal, nonfood invertebrate collecting permits have been required to report the number of animals harvested. This report summarizes collecting activities and trends for the calendar year 1968.

COLLECTING REPORT RESULTS

Commercial collectors taking tube worms (Eudistylia sp.) for bait caused a substantial rise in the number of animals reported collected in 1968. Permits were issued to 174 permittees or 7% more than in 1967. One hundred fifty-six, or 90%, returned reports showing a harvest of 217,043 animals (Tables 1 and 2). This represents a 55% increase from 1967 in animals collected (Tables 1 and 2). Polychaetes, including Eudistylia, made up 79% of the total animals taken in 1968. In general commercial harvest of intertidal species increased while scientific and educational collecting decreased.

Hydroids, tube worms, barnacles, and sponges are difficult to count and the reported harvest may vary widely. Those animals that can be counted accurately were chosen for separate analysis to determine collecting trends during the past year. The following groups were selected (1) Anthozoa (anemones), (2) Anomura (hermit and porcelain crabs, mud and ghost shrimp), (3) Brachyura (shore and spider crabs), (6) Asteroidea (starfish), (7) Echinoidea (sea urchins), (8) Ophiuroidea (brittle stars), and (9) Holothuroidea (sea cucumbers).

The results were as follows: The collecting of coelenterates, molluscs, and echinoderms decreased, 51, 39, and 20%, respectively. The harvesting of arthropods increased 59%. By grouping all considered phyla together,

the total numbers collected decreased 5% from 1967. This downward trend is mostly due to scientific and educational collecting which was reduced in all groups discussed with a total decrease of 8,021 animals (45%) from 1967 (Table 3). Both the Fish Commission and the educational programs at Oregon State University's Marine Science Center encourage school groups to hold collecting to a minimum and may partially account for this trend.

Table 1. Summary of Intertidal, Nonfood Invertebrate Catch Data from the Oregon Coast, January 1 to December 31, 1968

	Number	Per Cent
Number of permits issued	174	
Scientific and educational	167	96
Commercial	7	4
Number of collecting reports returned	156	90
Permits issued and animals taken	126	81
Permits issued but not used	30	19
Number of animals taken	217,043	
Scientific and educational	13,295	6
Commercial	203,748	94

Commercial collecting increased by 5,910 animals; an increase of 23% over 1967 (Table 3). This change is accredited to a larger harvest of brachyurans (shore crabs), a group of traditional interest to commercial collectors and the increased collecting of amphineurans (chitons) by a biological supply company. Commercial collectors are not permitted to collect specimens in "permit-only" areas.

As in previous years, Yaquina Head was the most popular collecting area. Boiler Bay was the second most utilized area with Cape Arago-Sunset Bay a close third. The central coast ^{1/} was the most heavily utilized non-permit area (Table 4).

^{1/} North coast: Columbia River to northern Tillamook Bay
 Central coast: Tillamook Bay to northern Coos Bay
 South coast: Coos Bay to California border

Table 2. Intertidal Nonfood Invertebrates Taken by Permit Holders Along the Oregon Coast from January 1 to December 31, 1968

Animal Group	Scientific and Education Catch			Commercial Catch			Total Catch		
	Number	% by Division	% of Total Sci. and Ed. Catch	Number	% by Division	% of Total Comm. Catch	Number	% by Division	% of Total Catch
Coelenterata									
Cl: Hydrozoa	228	1.7	5.7	-	-	-	228	0.1	0.3
Anthozoa	525	3.9		-	-		525	0.2	
Annelida									
Cl: Polychaeta	1,284	9.7	9.7	170,800	83.8	83.8	172,084	79.3	79.3
Arthropoda									
Cl: Cirripedia	991	7.5		1,350	0.7		2,341	1.1	
Cl: Malacostraca									
Subcl: Peracarida	522	3.9	33.0	-	-	7.4	522	0.3	9.0
Subcl: Eucarida									
Tribe: Anomura	1,579	11.9		5,000	2.5		6,579	3.0	
Tribe: Brachyura	1,290	9.7		8,788	4.3		10,078	4.6	
Mollusca									
Cl: Amphineura	994	7.5	21.1	1,253	0.6	0.7	2,247	1.0	1.9
Cl: Gastropoda	1,815	13.7		58	0.02		1,873	0.9	
Echinodermata									
Cl: Asteroidea	1,404	10.6		13,312	6.5		14,716	6.8	
Cl: Echinoidea	2,119	15.9	28.1	3,187	1.6		5,306	2.4	
Cl: Ophiuroidea	120	0.9		-	-	8.1	120	0.1	9.3
Cl: Holothuroidea	97	0.7		-	-		97	0.04	
Miscellaneous									
	327	2.4	2.4	-	-		327	0.2	0.2
Totals	13,295	100.0	100.0	203,748	100.0	100.0	217,043	100.0	100.0

Table 3. Selected Groups of Intertidal Nonfood Invertebrates Taken by Permit Holders Along the Oregon Coast from January 1 to December 31, 1968

Animal Group	Sci. and Ed. Catch				Commercial Catch				Total			
	Number	% by Div.	% of Total Sci. and Ed. Catch	% Change From 1967	Number	% by Div.	% of Total Comm. Catch	% Change From 1967	Number	% by Div.	% of Total Catch	% Change From 1967
Coelenterata												
Cl: Anthozoa	525	5.2	5.2	-38.2	-	-	-	-100	525	1.3	1.3	51.3
Arthropoda												
Cl: Malacostraca												
Tribe: Anomura	1,579	15.9	28.9	-14.5	5,000	15.8	43.6	-9.9	6,579	15.8	40.1	-11.1
Tribe: Brachyura	1,290	13.0		-53.2	8,788	27.8		+256.3	10,078	24.3		+226.5
Mollusca												
Cl: Amphineura	994	10.0	28.3	-11.1	1,253	4.0	4.2	+321.9	2,247	5.4	9.9	+58.8
Cl: Gastropoda	1,815	18.3		-65.3	58	0.2		-44.8	1,873	4.5		-64.9
Echinodermata												
Cl: Asteroidea	1,404	14.1		-27.0	13,312	42.1		+2.0	14,716	35.4		-1.7
Cl: Echinoidea	2,119	21.3	37.6	-43.9	3,187	10.1	52.2	-47.7	5,306	12.8	48.7	-46.2
Cl: Ophiuroidea	120	1.2		-42.6	-	-		-100.0	120	0.3		-49.8
Cl: Holothuroidea	97	1.0		-62.1	-	-		-100.0	97	0.2		-62.7
Totals	9,943	100.0	100.0	-44.7	31,598	100.0	100.0	+23.0	41,541	100.0	100.0	-4.8

SUMMARY

There was a 7% increase in the number of intertidal, nonfood invertebrate collecting permits issued in 1968. An estimated 217,000 animals were reported collected by 156 permittees. This is an increase of 55% from 1967. Polychaetes made up 79% of the catch. By considering only those animals whose numbers can be counted accurately, the same 156 permittees collected 41,541 animals, a decrease of 5% from 1967. Scientific and educational collecting decreased 45% and commercial collecting increased 23%. Yaquina Head was the most popular permit area. The central coast was the most popular nonpermit area.

Table 4. Summary of Collecting Intensity by Area Along the Oregon Coast, January 1 to December 31, 1968

Location	Permittees Collecting in Area	Per Cent of Total
Yaquina Head	47	29.2
Boiler Bay	31	19.3
Cape Arago-Sunset Bay	30	18.6
Central Coast	26	16.2
South Coast	12	7.5
North Coast	6	3.7
Neptune State Park	6	3.7
Harris Beach State Park	2	1.2
Depoe Bay	<u>1</u>	<u>0.6</u>
Total	161	100.0