

SHELLFISH INVESTIGATION  
INFORMATION REPORT 74-3

HARVEST OF INTERTIDAL, NONFOOD INVERTEBRATES 1972

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# HARVEST OF INTERTIDAL, NONFOOD INVERTEBRATES, 1972

## INTRODUCTION

Since 1962 persons desiring to harvest intertidal nonfood invertebrates in permit areas or in excess of personal-use bag limits have been required to obtain a collecting permit from the Fish Commission and report the number of animals collected and areas where taken. This report summarizes collecting activities for 1972.

## RESULTS

The Fish Commission issued 267 permits in 1972, a decrease of 6% from 1971. Collecting reports were returned by 93% of the permittees. The reported harvest increased 18% from 131,715 animals in 1971 to 161,354 in 1972 (Tables 1 and 2).

Table 1. Summary of Intertidal, Nonfood Invertebrate Catch Data from the Oregon Coast, 1972.

	<u>Number</u>	<u>Percentage</u>
Educational permits	260	97.4
Commercial permits	7	2.6
Total	<u>267</u>	<u>100.0</u>
Number of collecting reports returned	250	93.3
Number of permits used	190	76.3
Number of permits unused	60	23.7
Educational harvest	101,276	62.8
Commercial harvest	60,078	37.2
Total	<u>161,354</u>	<u>100.0</u>

Yaquina Head was the most frequently visited permit area although slightly more animals were taken from the Sunset Bay-Cape Arago area. The central coast (Tillamook Bay to Coos Bay) was the most heavily used "open" area for both educational and commercial collectors (Tables 3, 4, and 6). The polychaete tubeworm, *Eudistylia*, has in the past made up over half of the commercial harvest. With the death of one commercial collector in late 1971, the take of *Eudistylia* dropped from an estimated 57,500 animals in 1971 to 7,500 in 1972. Amphipods and other miscellaneous species made up 75% of the educational harvest (Table 2).

To get a more accurate indication of collecting trends, a separate analysis was made, eliminating such "annual" species as amphipods or barnacles. This analysis of index species showed that educational collecting decreased 40%, the commercial harvest was unchanged and the combined catch was down 12% from 1971 (Table 5). Large-scale changes in the educational harvest usually reflect the start or completion of a research program.

Table 2. Intertidal Nonfood Invertebrates Collected by Permit Holders Along the Oregon Coast, January 1 to December 31, 1972.

Animal Group	Educational Catch		Commercial Catch		Total Catch	
	Number	Percentage	Number	Percentage	Number	Percentage
Coelenterata						
Sea anemones	426	>0.1	0	0.0	426	0.3
Annelida						
Marine worms	9,064	8.9	7,520	12.5	16,584	10.3
Arthropoda						
Hermit & porcelain crabs	1,272	1.3	12,100	20.1	13,372	8.3
Ghost and mud shrimp	2,577	2.5	15,300	25.5	17,877	11.1
Shore, spider & kelp crabs	817	0.8	2,650	4.4	3,467	2.1
Mollusca						
Chitons	461	0.5	2,814	4.7	3,275	2.0
Snails, limpets	2,571	2.5	20	>0.1	2,591	1.6
Sea slugs	539	0.5	0	0.0	539	0.3
Echinodermata						
Sea stars	1,172	1.2	13,116	21.8	14,288	8.9
Sea urchins	2,122	2.1	3,849	6.4	5,971	3.7
Sand dollars	8	>0.1	0	0.0	8	>0.1
Brittle stars	38	0.1	0	0.0	38	>0.1
Sea cucumbers	156	0.2	109	0.2	265	0.2
Other groups	80,003	79.0	2,600	4.3	82,603	51.2
Total	101,276	100.0	60,078	100.0	161,354	100.0

Table 3. Intertidal Nonfood Invertebrates Harvested by Educational Collectors Along the Oregon Coast, by Area and Taxonomic Group, 1972.

Taxonomic Group	Boiler Bay	Shell Cove (Depoe Bay)	Yaquina Head	Neptune State Park	Sunset-Cape Arago	Harris Beach	North Coast <sup>1/</sup>	Central Coast <sup>2/</sup>	South Coast <sup>3/</sup>	Total	Percentage
<b>Coelenterata</b>											
Sea anemones	26	2	83	10	197	1	3	76	28	426	0.4
<b>Annelida</b>											
Marine worms	83	0	106	18	254	1	39	8,385	178	9,064	8.9
<b>Arthropoda</b>											
Hermit & porcelain crabs	140	7	354	5	601	8	18	134	5	1,272	1.3
Ghost and mud shrimp	1	0	32	2	62	1	438	2,040	1	2,577	2.5
Shore, spider & kelp crabs	71	1	238	10	271	3	9	192	22	817	0.8
<b>Mollusca</b>											
Chitons	62	4	136	10	149	7	29	45	19	461	0.5
Snails, limpets	249	15	809	30	794	15	68	570	31	2,571	2.5
Sea slugs	40	0	69	39	175	1	5	208	2	539	0.5
<b>Echinodermata</b>											
Sea stars	74	4	275	6	273	6	332	195	7	1,172	1.2
Sea urchins	407	22	1,034	5	430	1	3	203	17	2,122	2.1
Sand dollars	0	0	0	0	0	0	0	8	0	8	>0.1
Brittle stars	3	0	31	0	48	0	5	1	0	88	>0.1
Sea cucumbers	13	0	38	2	46	0	2	42	13	156	0.2
<b>Other groups</b>	108	27	1,136	1,305	1,503	11	27	75,884	2	80,003	79.0
<b>Total</b>	1,277	82	4,341	1,442	4,793	55	978	87,983	325	101,276	
<b>Percentage</b>	1.3	>0.1	4.3	1.4	4.7	>0.1	1.0	86.9	0.3		

<sup>1/</sup> Columbia River to Tillamook Bay.

<sup>2/</sup> Tillamook Bay to Coos Bay.

<sup>3/</sup> Coos Bay to California Border.

Table 4. Intertidal Nonfood Invertebrates Harvested by Commercial Collectors from the Oregon Coast, by Area and Taxonomic Group, 1972.

Taxonomic Group	Area			Total	Percentage
	North Coast	Central Coast	South Coast		
Coelenterata					
Sea anemones	0	0	0	0	0.0
Annelida					
Marine worms	0	7,520	0	7,520	12.5
Arthropoda					
Hermit and porcelain crabs	1,000	11,050	50	12,100	20.1
Ghost and mud shrimp	15,300	0	0	15,300	25.5
Shore, spider & kelp crabs	0	2,650	0	2,650	4.4
Mollusca					
Chitons	1,000	1,035	779	2,814	4.7
Snails, limpets	0	20	0	20	>0.1
Sea slugs	0	0	0	0	0.0
Echinodermata					
Sea stars	3,000	10,085	31	13,116	21.8
Sea urchins	0	2,430	1,419	3,849	6.4
Sand dollars	0	0	0	0	0.0
Brittle stars	0	0	0	0	0.0
Sea cucumbers	0	0	109	109	0.2
Other groups	0	2,600	0	2,600	4.3
Total	20,300	37,390	2,388	60,078	
Percentage	33.8	62.2	4.0	100.0	

Table 5. Selected Groups of Intertidal Nonfood Invertebrates Harvested by Permit Holders Along the Oregon Coast, 1972.

Animal Group	Educational Catch			Commercial Catch			Total Catch		
	Number	Percentage	% Change from 1971	Number	Percentage	% Change from 1971	Number	Percentage	% Change from 1971
Coelenterata									
Sea anemones	426	4.4	-19.5	0	0.0	0.0	426	1.0	-19.5
Arthropoda									
Hermit and porcelain crabs	1,272	13.2	-15.1	12,100	34.9	+95.2	13,372	30.2	+73.7
Shore, spider and kelp crabs	817	8.5	-61.2	2,650	7.6	-62.7	3,467	7.8	-62.3
Mollusca									
Chitons	461	4.8	+15.8	2,814	8.1	-19.6	3,275	7.4	-16.0
Snails, limpets	2,571	26.7	-47.2	20	0.1	-92.0	2,591	5.9	-49.4
Sea slugs	539	5.6	+44.1	0	0.0	0.0	539	1.2	+44.1
Echinodermata									
Sea stars	1,172	12.2	-29.4	13,116	37.8	-1.8	14,288	32.3	-4.8
Sea urchins	2,122	22.0	-50.7	3,849	11.1	-2.6	5,971	13.5	-27.7
Brittle stars	88	0.9	-29.0	0	0.0	0.0	88	0.2	-29.0
Sea cucumbers	156	1.6	+21.9	109	0.3	+100.0	265	0.6	+107.0
<b>Total</b>	<b>9,624</b>		<b>-39.8</b>	<b>34,658</b>		<b>+0.9</b>	<b>44,282</b>		<b>-12.0</b>

Table 6. Summary of Collecting Intensity by Area, Oregon Coast, 1972.

Location	Permittees collecting in area	Percentage
Yaquina Head	78	32.1
Sunset Bay-Cape Arago	55	22.5
Boiler Bay	31	12.7
Neptune State Park	8	3.3
Shell Cove (Depoe Bay)	4	1.6
Harris Beach Permit Area	2	0.8
Central Coast <sup>1/</sup>	42	17.2
North Coast <sup>2/</sup>	15	6.1
South Coast <sup>3/</sup>	9	3.7
Total	244	100.0

1/ Central Coast: Tillamook Bay to Coos Bay

2/ North Coast: Columbia River to Tillamook Bay

3/ South Coast: Coos Bay to California Border