

SHELLFISH INVESTIGATION
INFORMATION REPORT 74-2

HARVEST OF INTERTIDAL, NONFOOD INVERTEBRATES 1971

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HARVEST OF INTERTIDAL, NONFOOD INVERTEBRATES, 1971

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 for 1971.

RESULTS

The Fish Commission issued 285 intertidal collecting permits in 1971, an increase of 20% over 1970. Collecting reports were returned by 84% of the permittees. Collecting reports from the six commercial collectors were accidentally destroyed before they were summarized. The commercial catch was therefore estimated by talking to the collectors or comparing their 1970 and 1972 collecting reports. The reported overall harvest of intertidal invertebrates decreased 12% from 150,413 animals in 1970 to 131,715 animals in 1971 (Tables 1 and 2).

Table 1. Summary of Intertidal Nonfood Invertebrate Catch Data from the Oregon Coast, 1971.

	<u>Number</u>	<u>Percentage</u>
Educational permits	279	97.9
Commercial permits	6	2.1
Total	285	100.0
Number of collecting reports returned	240	84.2
Number used	172	71.7
Number unused	68	28.3
Educational harvest	39,465	30.0
Commercial harvest	92,250	70.0
Total	131,715	100.0

The polychaete tubeworm *Eudistylia* again formed the largest single group taken. It is collected commercially and sold as fresh fish bait in the Yachats area.

Since miscellaneous species such as barnacles and amphipods made up almost half of the educational catch, a separate analysis was made, using index species that can be counted individually. This analysis showed that educational collecting decreased 8%, the commercial harvest was down 16% for an overall 13% decrease in the take of index species (Table 5).

Although Table 3 suggests that Sunset Bay-Cape Arago experiences the heaviest collecting pressure among the permit areas, 81% of the animals taken from this area were miscellaneous species such as amphipods. By considering only index species, Yaquina Head experienced the heaviest collecting pressure among permit areas. The central coast was the most heavily utilized open area (Table 3).

Table 2. Intertidal Nonfood Invertebrates Taken by Permit Holders Along the Oregon Coast from January 1 to December 31, 1971.

Animal Group	Educational Catch		Commercial Catch		Total Catch	
	Number	Percentage	Number	Percentage	Number	Percentage
Coelenterata						
Sea anemones	529	1.3	0	0.0	529	0.4
Annelida						
Marine worms	1,021	2.6	57,500	62.3	58,521	44.4
Arthropoda						
Hermit & porcelain crabs	1,498	3.8	6,200	6.7	7,698	5.8
Ghost and mud shrimp	3,320	8.4	0	0.0	3,320	2.5
Shore, spider & kelp crabs	2,103	5.3	7,100	7.7	9,203	7.0
Mollusca						
Chitons	398	1.0	3,500	3.8	3,898	3.0
Snails, limpets	4,866	12.3	250	0.3	5,116	3.9
Sea slugs	374	1.0	0	0.0	374	0.3
Echinodermata						
Sea stars	1,659	4.2	13,350	14.5	15,009	11.4
Sea urchins	4,308	10.9	3,950	4.3	8,258	6.3
Sand dollars	23	0.1	150	0.2	173	0.1
Brittle stars	124	0.3	0	0.0	124	0.1
Sea cucumbers	128	0.3	0	0.0	128	0.1
Other groups	19,114	48.4	250	0.3	19,364	14.7
Total	39,465	99.9	92,250	100.1	131,715	100.0

Table 3. Intertidal Nonfood Invertebrates Taken by Educational Collectors Along the Oregon Coast, by Area and Taxonomic Group, 1971.

Taxonomic Group	Boiler Bay	Shell Cove (Depoe Bay)	Yaquina Head	Neptune State Park	Sunset Cape	Bay Arago	Harris Beach	North Coast ^{1/}	Central Coast ^{2/}	South Coast ^{3/}	Total	Percentage
Coelenterata												
Sea anemones	54	2	112	11	148	19	82	91	10	529	1.3	
Annelida												
Marine worms	131	0	336	81	131	12	3	304	23	1,021	2.6	
Arthropoda												
Hermit & porcelain crab	125	0	621	51	462	19	162	56	2	1,498	3.8	
Ghost and mud shrimp	0	0	2	6	37	0	0	3,274	8	3,320	8.4	
Shore, spider & kelp crab	142	0	387	39	852	17	20	617	29	2,103	5.3	
Mollusca												
Chitons	36	5	141	11	149	9	18	20	9	398	1.0	
Snails, limpets	905	21	986	89	795	30	79	1,918	43	4,866	12.3	
Sea slugs	47	4	119	21	111	2	10	60	0	374	1.0	
Echinodermata												
Sea stars	37	0	449	21	423	28	561	118	22	1,659	4.2	
Sea urchins	709	36	2,580	5	453	29	24	445	27	4,308	10.9	
Sand dollars	2	0	16	0	0	1	2	2	0	23	0.1	
Brittle stars	18	0	34	0	49	3	7	8	5	124	0.3	
Sea cucumbers	21	0	29	0	31	0	12	12	23	128	0.3	
Other groups	140	0	502	54	15,316	3	90	2,977	32	19,114	48.4	
Total	2,367	68	6,314	389	18,950	172	1,070	9,902	233	39,465	99.9	
Percentage	6.0	0.2	16.0	1.0	48.0	0.4	2.7	25.1	0.6	100.0		

^{1/} Columbia River to Tillamook Bay.

^{2/} Tillamook Bay to Coos Bay.

^{3/} Coos Bay to California Border.

Table 4. Intertidal Nonfood Invertebrates Estimated Taken by Commercial Collectors from the Oregon Coast by Area and Taxonomic Group, 1971.

Taxonomic Group	Area			Total	Percentage
	North Coast	Central Coast	South Coast		
Coelenterata					
Sea anemones	0	0	0	0	0.0
Annelida					
Marine worms	0	57,500	0	57,500	62.3
Arthropoda					
Hermit and porcelain crabs	1,000	5,200	0	6,200	6.7
Ghost and mud shrimp	0	0	0	0	
Shore, spider and kelp crabs	0	7,100	0	7,100	7.7
Mollusca					
Chitons	1,500	0	2,000	3,500	3.8
Snails, limpets	0	250	0	250	0.3
Sea slugs	0	0	0	0	0.0
Echinodermata					
Sea stars	5,500	7,850	0	13,350	14.5
Sea urchins	0	2,450	1,500	3,950	4.3
Sand dollars	0	150	0	150	0.2
Brittle stars	0	0	0	0	0.0
Sea cucumbers	0	0	0	0	0.0
Other groups	0	250	0	250	0.3
Total	8,000	80,750	3,500	92,250	100.1
Percentage	8.7	87.5	3.8	100.0	

Table 5. Selected Groups of Intertidal Nonfood Invertebrates Taken by Permit Holders Along the Oregon Coast, 1971.

Animal Group	Educational Catch			Commercial Catch			Total Catch		
	Number	Percentage	% Change from 1970	Number	Percentage	% Change from 1970	Number	Percentage	% Change from 1970
Coelenterata									
Sea anemones	529	3.3	-46.0	0	0.0	0.0	529	1.1	-46.0
Arthropoda									
Hermit and porcelain crabs	1,498	9.4	-24.2	6,200	18.0	+19.2	7,698	15.3	+11.0
Shore, spider and kelp crabs	2,103	13.2	+6.4	7,100	20.7	-48.4	9,203	18.3	+41.5
Mollusca									
Chitons	398	2.5	-57.6	3,500	10.2	-12.1	3,898	7.7	-20.8
Snails, limpets	4,866	30.4	-4.1	250	0.7	-50.0	5,116	10.2	-8.2
Sea slugs	374	2.3	-15.5	0	0.0	0.0	374	0.7	-28.1
Echinodermata									
Sea stars	1,659	10.4	+31.0	13,350	38.9	+1.1	15,009	29.8	+3.7
Sea urchins	4,308	26.9	+0.6	3,950	11.5	-2.6	8,258	16.4	-0.9
Brittle stars	124	0.8	-15.1	0	0.0	0.0	124	0.2	-15.1
Sea cucumbers	128	0.8	-50.8	0	0.0	0.0	128	0.3	-51.5
Total	15,987	100.0	-8.2	34,350	100.0	-15.6	50,337	100.0	-13.4