

HARVEST OF INTERTIDAL, NONFOOD INVERTEBRATES  
1978

A collecting permit from the Oregon Department of Fish and Wildlife is required to take intertidal non-food invertebrates from permit areas or in excess of personal bag limits (10 animals). Upon expiration of a permit, harvesters are required to report kinds and numbers of animals taken by area.

Collecting reports are analyzed to determine commercial and educational harvest and number of animals taken by taxonomic groups by area. Collecting trends are determined by analyzing index species, harvest and number of collectors.

Results and Discussion

In 1978, 204 permits were issued. Collecting reports were returned by 48 percent of the permittees. Reports showed a total harvest of 65,604 animals taken by 82 collectors (Table 1).

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Table 1. Summary of Intertidal, Non-food Invertebrate Collecting Permits Issued, Collecting Reports Returned and Harvests Reported, 1978.

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Educational permits issued	201	98.5%
Commercial permits issued	3	1.5
Collecting reports returned	98	48.0
Collecting reports showing no harvest	16	16.3
Collecting reports showing harvest	82	83.7
Educational harvest	10,054	15.3
Commercial harvest	<u>55,550</u>	84.7
Total harvest	65,604	

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Table 2. Intertidal nonfood invertebrates harvested by educational collectors along the Oregon coast by area and taxonomic groups in 1978.

Animal Group	Haystack Rock	Boiler Bay	Shell Cove (Depoe Bay)	Yaquina Head	Neptune State Park	Sunset Bay - Cape Arago	Harris Beach Permit Area	North Coast <sup>1/</sup>	Central Coast <sup>2/</sup>	South Coast <sup>3/</sup>	Total	Percentage
Coelenterata												
Sea anemones	0	21	0	54	140	92	4	0	62	3	376	3.7
Annelida												
Marine worms	0	163	0	46	0	487	0	0	33	59	788	7.8
Arthropoda												
Hermit & porcelain crabs	0	77	0	123	0	181	24	1,221	19	13	1,658	16.5
Ghost and mud shrimp	0	6	0	13	0	39	0	0	18	10	86	.9
Shore, spider and kelp crabs	0	29	0	84	0	121	18	0	8	12	272	2.7
Mollusca												
Chitons	0	72	0	73	4	111	37	0	13	5	315	3.1
Snails & limpets	0	866	0	207	4	2,130	59	0	23	3	3,292	32.8
Sea slugs or nudibranchs	0	72	0	65	0	75	10	0	18	3	243	2.4
Echinodermata												
Sea stars	0	62	0	92	0	69	16	0	14	6	259	2.6
Sea urchins	0	1,122	0	918	0	82	10	0	6	6	2,144	21.3
Sand dollars	0	0	0	0	0	10	0	0	0	0	10	.1
Brittle stars	0	1	0	4	0	28	1	0	0	5	39	.4
Sea cucumbers	0	9	0	18	0	200	2	0	18	1	248	2.5
Other groups	0	38	0	58	2	158	2	0	3	54	315	3.0
Total	0	2,538	0	1,755	150	3,783	183	1,221	235	180	10,045	100.0
Percentage	0	25.3	0	17.5	1.5	37.7	1.8	12.1	2.3	1.8	100.0	

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

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

<sup>3/</sup> Coos Bay to California border

### Commercial Harvest

Commercial collectors harvested 55,550 animals from the central Oregon coast open area. Collectors took 20,750 snail and limpets, 16,000 shore, spider and kelp crab, 11,000 sea stars, 5,000 hermit and porcelain crabs, 2,750 sea urchins and 50 chitons. The commercial catch was 84.7 percent of the total harvest.

### Educational Harvest

Collectors concentrated on taking snails and limpets, sea urchins and hermit and porcelain crabs which accounted for 70.6 percent of the 10,054 harvested animals. Collectors took 37.6 percent of the catch from Sunset Bay - Cape Arago permit area and 12.2 percent from the north coast open area. Table 2 lists numbers of animals by taxonomic groups and harvest areas. Yaquina Head and Sunet Bay - Cape Arago were the most used permit areas and the central coast was the most often visited open coastal area, Table 3.

Table 3. Educational Collecting Intensity by Area, Oregon Coast, 1978.

<u>Location</u>	<u>Permitees Collecting in Area</u>	<u>Percentage</u>
Boiler Bay	24	23.5
Yaquina Head	37	36.3
Neptune State Park	2	2.0
Sunset Bay - Cape Arago	24	23.5
Harris Beach	3	2.9
North Coast	1	1.0
(Columbia River - Tillamook Bay)		
Central Coast	9	8.8
(Tillamook Bay - Coos Bay)		
South Coast	2	2.0
(Coos Bay - California border)		
Total	102	100.0

Table 3. Intertidal Nonfood Invertebrates Harvested by Commercial Collectors  
 Along the Oregon Coast, by Area and Taxonomic Group, 1978.

Animal Group	AREA			Total	Percentage
	North Coast	Central Coast	South Coast		
Coelenterata					
Sea anemone	0	0	0		
Annelida					
Marine worms	0	0	0		
Arthropoda					
Hermit & porcelain crabs	0	5,000	0	5,000	9.0
Shore, spider and kelp crabs	0	16,000	0	16,000	28.8
Mollusca					
Chitons	0	50	0	50	.01
Snails and limpets	0	20,750	0	20,750	37.4
Sea slugs	0	0	0		
Echinodermata					
Sea stars	0	11,000	0	11,000	19.8
Sea urchins	0	2,750	0	2,750	5.0
Sand dollars	0	0	0		
Brittle stars	0	0	0		
Sea cucumbers	0	0	0		
Other groups	0	0	0		
Total	0	55,550	0	55,550	
Percentage	<del>0.0</del>	<del>100.0</del>	<del>0</del>	<del>100.0</del>	

Table 5. Selected groups of invertebrate Nonfood Invertebrates harvested by  
 Permit Holders Along the Oregon Coast 1978

Animal Group	Educational Catch		Commercial Catch		Total Catch	
	Number	Percentage	Number	Percentage	Number	Percentage
Coelenterata Sea anemones	376	5.3	0	0	376	0.5
Arthropoda Hermit & Porcelain Crabs	1658	18.7	5000	9.0	6658	10.3
Shore, spider and kelp Crabs	272	3.1	16000	28.8	16272	25.3
Mollusca Chitons	315	3.6	50	.1	365	0.6
Snails, limpets	3292	37.2	20150	37.4	24042	37.3
Sea slugs	243	2.7	0	0	243	0.4
Echinodermata Sea stars	259	2.9	11000	19.8	11259	17.5
Sea urchins	2144	24.2	2750	4.9	4894	7.6
Brittle stars	39	0.4	0	0	39	0.1
Sea Cucumbers	248	2.8	0	0	248	0.4
Subtotal	8846	100.0	55550		64396	100.0
Estimated unreported catch	9870				9870	
Grand total	18,716		55,550		74,266	
Percent change from 1977	+244%		-7%		+14%	

1978