

#152

DATA REPORT

HARVEST OF INTERTIDAL, NONFOOD INVERTEBRATES, 1974

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## INTRODUCTION

Persons desiring to harvest intertidal nonfood invertebrates in permit areas or in excess of personal use bag limits must obtain a collecting permit from the Oregon State Department of Fish and Wildlife and report the number of animals taken, by area.

This report summarizes the 1974 collecting reports. A general analysis of the data is followed by a separate analysis of index species such as sea anemones, shore crabs, sea stars and others to determine collecting trends.

## RESULTS AND DISCUSSION

The Department of Fish and Wildlife issued 260 intertidal nonfood invertebrate collecting permits in 1974 (Table 1), down 13% from 1973. Collecting reports were returned by 75% of the permittees and showed a harvest of 62,774 animals (Table 1), down 19% from 1973.

Table 1. Summary of Intertidal, Nonfood Invertebrate Collecting Permits Issued, Reports Returned and Harvest Reported from the Oregon Coast, 1974.

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	<u>Number</u>	<u>Percentage</u>
Educational permits	254	98
Commercial permits	6	2
Total	<u>260</u>	<u>100</u>
Number of collecting reports returned	188	75
Number of permits used	136	72
Number of permits unused	52	28
Educational harvest	20,264	32
Commercial harvest	<u>42,510</u>	<u>68</u>
Total	<u>62,774</u>	<u>100</u>

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Miscellaneous species such as amphipods, isopods and barnacles made up 32% of the educational harvest. Marine worms, snails and sea urchins were also taken in larger numbers (Table 2). Commercial collectors concentrated on shore crabs and sea stars which accounted for 71% of the commercial harvest (Table 3).

The peak educational catch came from open areas on the Central Coast but 51% of the animals were miscellaneous species such as barnacles, amphipods and isopods. Sunset Bay-Cape Arago had the largest harvest among the permit areas (Table 2). As in the past, over 90% of the commercial take came from the Central Oregon Coast (Table 3).

Yaquina Head and the Central Coast were the most frequently visited areas (Table 4).

Index species collecting was up 12% among educational collectors, down 26% among commercial collectors for an overall decrease of 21% (Table 5). Educational collecting was 35% below the 11-year average and the commercial harvest was 5% above the 11-year average commercial take (Figures 1 and 2).

Table 2. Intertidal Nonfood Invertebrates Harvested by Educational Collectors Along the Oregon Coast, by Area and Taxonomic Group, 1974.

Animal Group	Neptune						Harris Beach			Total	Percentage	
	Haystack Rock	Boiler Bay	Shell Cove (Depoe Bay)	Yaquina Head	State Park	Sunset Bay-Cape Arago	Permit Area	North Coast <sup>1/</sup>	Central Coast <sup>2/</sup>			South Coast <sup>3/</sup>
<b>Coelenterata</b>												
Sea anemones	0	138	0	129	21	534	0	1	344	7	1,174	5.8
<b>Annelida</b>												
Marine worms	0	108	0	165	55	568	0	3	2,047	219	3,165	15.6
<b>Arthropoda</b>												
Hermit & Porcelain crabs	0	125	0	422	18	210	0	2	309	8	1,094	5.4
Ghost & mud shrimp	0	2	0	8	0	28	0	0	259	7	304	1.5
Shore, spider & kelp crabs	0	61	0	209	12	330	2	2	302	16	934	4.6
<b>Mollusca</b>												
Chitons	0	76	0	156	11	132	0	2	73	16	466	2.3
Snails, limpets	0	309	0	564	42	876	0	8	677	21	2,497	12.3
Sea slugs	0	16	0	34	16	135	0	0	57	1	259	1.3
<b>Echinodermata</b>												
Sea stars	0	72	0	118	7	168	3	1	362	8	739	3.6
Sea urchins	0	1,035	0	375	3	595	7	0	96	183	2,294	11.3
Sand dollars	0	3	0	0	0	250	0	0	5	200	458	2.3
Brittle stars	0	11	5	21	0	39	0	0	14	1	91	.5
Sea cucumbers	0	9	0	10	12	65	0	0	151	41	288	1.4
Other groups	0	242	0	675	60	507	1	0	4,999	17	6,501	32.1
<b>Total</b>	<b>0</b>	<b>2,207</b>	<b>5</b>	<b>2,886</b>	<b>257</b>	<b>4,437</b>	<b>13</b>	<b>19</b>	<b>9,695</b>	<b>745</b>	<b>20,264</b>	<b>100.0</b>
<b>Percentage</b>	<b>0.0</b>	<b>10.9</b>	<b>&lt;0.1</b>	<b>14.2</b>	<b>1.3</b>	<b>21.9</b>	<b>.1</b>	<b>.1</b>	<b>47.8</b>	<b>3.7</b>	<b>100.0</b>	

<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 3. Intertidal Nonfood Invertebrates Harvested by Commercial Collectors Along the Oregon Coast, by Area and Taxonomic Group, 1974.**

Animal Group	Area			Total	Percentage
	North Coast	Central Coast	South Coast		
<b>Coelenterata</b>					
Sea anemones	0	0	0	0	0.0
<b>Annelida</b>					
Marine worms	0	0	0	0	0.0
<b>Arthropoda</b>					
Hermit & porcelain crabs	0	3,000	0	3,000	7.1
Shore, spider and kelp crabs	0	21,400	0	21,400	50.3
<b>Mollusca</b>					
Chitons	0	50	1,050	1,100	2.5
Snails, limpets	0	3,000	0	3,000	7.1
Sea slugs	0	0	0	0	0.0
<b>Echinodermata</b>					
Sea stars	0	9,000	90	9,090	21.0
Sea urchins	0	2,000	1,400	3,400	8.0
Sand dollars	0	0	0	0	0.0
Brittle stars	0	0	0	0	0.0
Sea cucumbers	0	0	20	20	<0.1
<b>Other groups</b>	0	1,500	0	1,500	4.0
<b>Total</b>	<b>0</b>	<b>39,950</b>	<b>2,560</b>	<b>42,510</b>	<b>100.0</b>
<b>Percentage</b>	<b>0.0</b>	<b>94.0</b>	<b>6.0</b>	<b>100.00</b>	

Table 4. Summary of Collecting Intensity by Area, Oregon Coast, 1974.

Location	Permittees collecting in area	Percentage
Yaquina Head	53	32.8
Sunset Bay - Cape Arago	29	18.0
Boiler Bay	26	16.2
Neptune State Park	5	3.1
Harris Beach Permit area	2	1.2
Haystack Rock	0	0.0
Central Coast <sup>1/</sup>	41	25.4
South Coast <sup>2/</sup>	5	3.2
North Coast <sup>3/</sup>	<u>1</u>	<u>&lt;0.1</u>
Total	162	100.0

- <sup>1/</sup> Central Coast: Tillamook Bay to Coos Bay  
<sup>2/</sup> South Coast: Coos Bay to California border  
<sup>3/</sup> North Coast: Columbia River to Tillamook Bay

Table 5. Selected Groups of Intertidal Nonfood Invertebrates Harvested by Permit Holders Along the Oregon Coast, 1974.

Animal Group	Educational Catch		Commercial Catch		Total Catch	
	Number	Percentage	Number	Percentage	Number	Percentage
Coelenterata						
Sea anemones	1,174	11.9	0	0	1,174	2.3
Arthropoda						
Hermit & porcelain crabs	1,094	11.1	3,000	7.3	4,094	8.1
Shore, spider & kelp crabs	934	9.5	21,400	52.2	22,334	43.9
Mollusca						
Chitons	466	4.7	1,100	2.7	1,566	3.1
Snails, limpets	2,497	25.4	3,000	7.3	5,497	10.8
Sea slugs	259	2.7	0	0	259	.5
Echinodermata						
Sea stars	739	7.5	9,090	22.2	9,829	19.3
Sea urchins	2,294	23.4	3,400	8.3	5,694	11.2
Brittle stars	91	0.9	0	0	91	.2
Sea cucumbers	288	2.9	20	<0.1	308	.6
Total	9,836	100.0	41,010	100.0	50,846	100.0
Percent change from 1973	+12%		-26%		-21%	

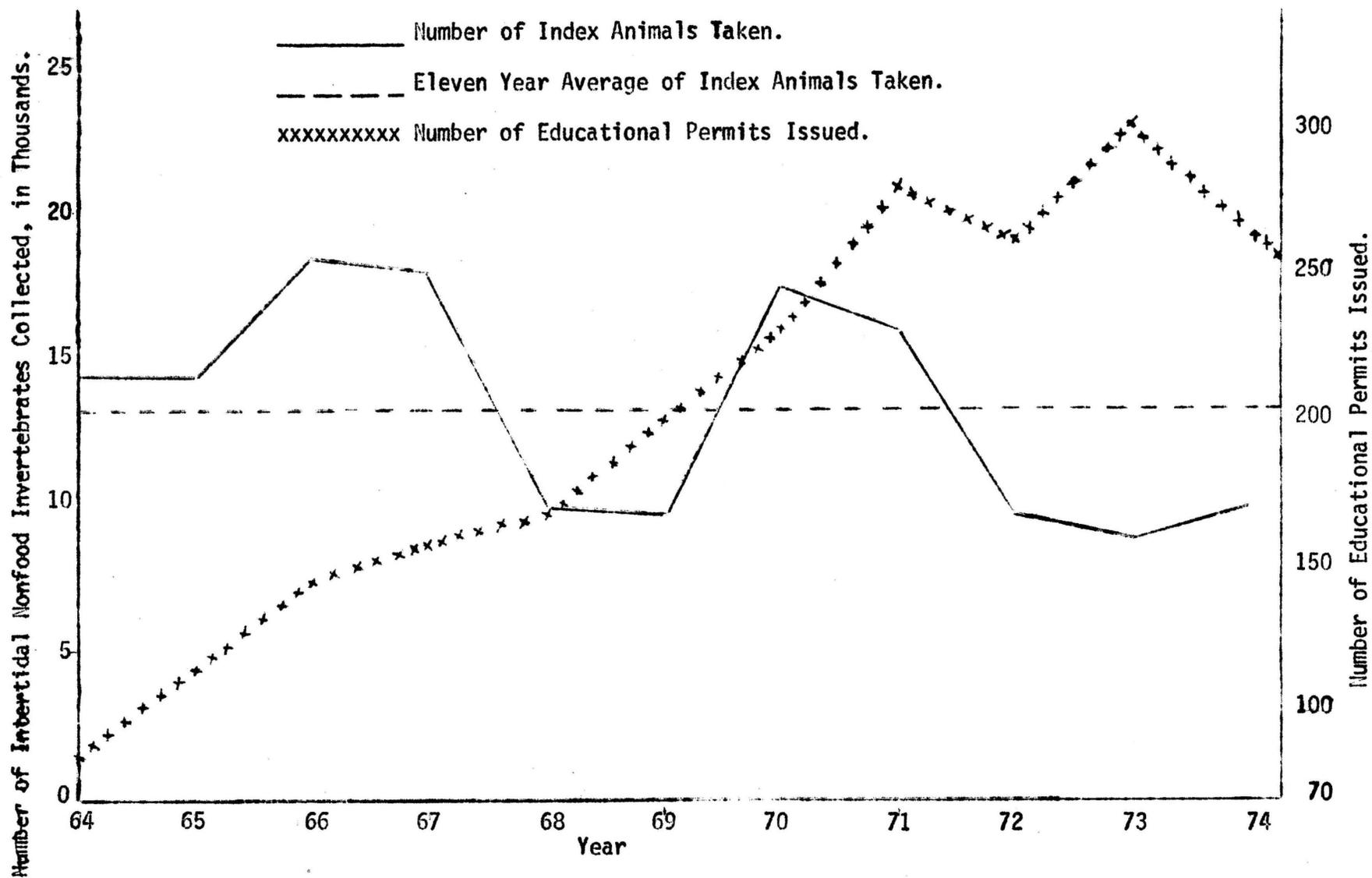


Figure 1. Number of Selected Invertebrates Harvested Along the Oregon Coast by Educational Permit Holders, 1964-1974.

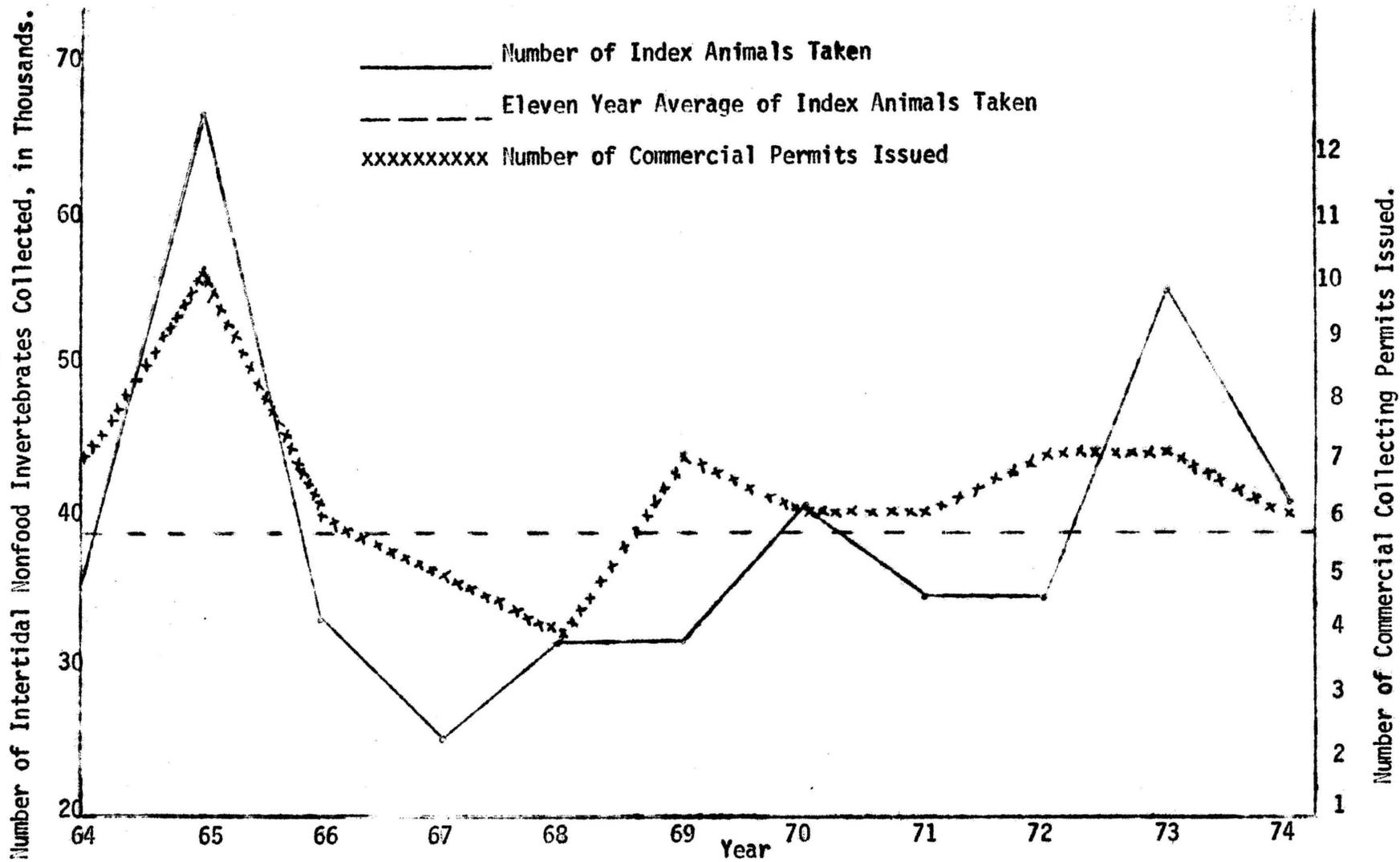


Figure 2. Number of Selected Invertebrates Harvested Along the Oregon Coast by Commercial Collectors, 1964-1974.