

HARVEST OF INTERTIDAL, NONFOOD INVERTEBRATES

1982

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

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 1982, 131 collecting permits were issued. Collecting reports were returned by 55 percent of the permittees. Reports showed a total harvest of 8937 animals taken by 59 collectors (Table 1).

Table 1. Summary of Intertidal, Nonfood Invertebrate Collecting Permits Issued, Collecting Reports Returned, and Harvests Reported, 1982.

	Educational		Commercial	
	No.	%	No.	%
permits issued	131	99	1	1
collecting reports returned	73	55	0	0
collecting reports showing a harvest	59	81	-	-
collecting reports showing no harvest	14	19	-	-
animals harvested	8937		0	

Commercial Harvest

No reports for commercial harvest were returned.

Educational Harvest

A harvest of 8937 animals was taken by 59 collectors. Miscellaneous species made up 54% of the educational harvest due to two large collections of mussels and one large collection of amphipods and copepods. Snails and limpets, and sea urchins were the next highest categories harvested (Table 2).

The peak harvest came from the open areas on the central coast, but 56% of these animals were again due to the two large collections of mussels. Yaquina Head had the largest harvest among the permit areas (Table 2) and was the most frequently used area (Table 3). Sunset Bay-Cape Arago exhibited a drop in percent of harvest over last year (41% in 1981, 7.5% in 1982) but did not show a drop in frequencies of visits (23.5% in 1981, 22.3% in 1982).

Table 3. Educational Collecting Intensity by Area, Oregon Coast, 1982.

<u>Location</u>	<u>Permittees Collecting in Area</u>	<u>Percentage</u>
Boiler Bay	16	21.3
Yaquina Head	22	29.3
Neptune State Park	1	1.3
Sunset Bay-Cape Arago	17	22.7
Harris Beach	1	1.3
North Coast		
(Columbia River - Tillamook Bay)	0	0
Central Coast		
(Tillamook Bay - Coos Bay)	14	18.7
South Coast		
(Coos Bay - California border)	4	5.3
TOTAL	75	

Table 2. Intertidal Nonfood Invertebrates Harvested By Educational Collectors Along The Oregon Coast, By Area And Taxonomic Group, 1982.

Animal Group	Haystack Rock	Boiler Bay	Shell Cove (Depoe Bay)	Yaquina Head	Neptune State Park	Sunset Bay-Cape Arago	Harris Beach	North Coast(1)	Central Coast(2)	South Coast(3)	Total	Percentage
Colelenterata												
Sea anemones	0	95	0	65	0	23	2	0	56	6	247	2.8
Annelida												
Marine worms	0	40	0	80	0	54	0	0	165	29	368	4.1
Arthropoda												
Hermit & porcelain crabs	0	55	0	81	0	70	0	0	32	50	288	3.2
Ghost & mud shrimp	0	0	0	4	0	23	0	0	358	0	385	4.3
Shore, spider & kelp crabs	0	28	0	55	1	61	0	0	342	0	487	5.4
Mollusca												
Chitons	0	40	0	62	0	32	0	0	16	2	152	1.7
Snails, limpets	0	401	0	254	0	167	0	0	92	20	934	10.5
Sea slugs or nudibranchs	0	18	0	58	0	11	3	0	9	3	102	1.1
Echinodermata												
Sea stars or star fish	0	32	0	166	0	59	0	0	10	0	267	3.0
Sea urchins	0	310	0	231	0	115	0	0	1	0	657	7.4
Sand dollars	0	0	0	0	0	0	0	0	0	100	100	1.1
Brittle stars	0	21	0	25	0	2	0	0	0	0	48	.5
Sea cucumbers	0	1	0	32	0	2	0	0	36	3	74	.8
Other groups	0	64	0	146	0	49	0	0	3689	880	4828	54.0
Total	0	1,105	0	1,259	1	668	5	0	4,806	1,093	8,937	
Percentage	0.0	12.4	0.0	14.1	.0	7.5	.1	0.0	53.8	12.2		

(1) Columbia River to Tillamook Bay

(2) Tillamook Bay to Coos Bay

(3) Coos Bay to California border

To get a more accurate indication of collecting trends, a separate analysis of the data was made, eliminating such "annual" species as amphipods and isopods. Most of the chosen index species are of general interest and can be accurately counted. An estimate of the unreported harvest was made by calculating the number of index animals reported per collecting report returned. This value was then applied to the number of permits unreported. This estimated catch is probably high. Past data indicates a larger portion of the permittees that did not return reports also did not collect, as compared to those that filed reports. This estimate was made only for educational collectors (Table 4). Since the only commercial harvester did not file a report, the commercial records are incomplete. Collection of index species was down 28% from 1981 and was the second lowest since the index was first calculated (Figure 1). The lowest was 5,446 index animals in 1977.

Table 4. Selected Groups of Intertidal Nonfood Invertebrates Harvested by Permit Holders Along the Oregon Coast, 1982.

	Educational Catch		Commercial Catch		Total Catch	
	Number	Percentage	Number	Percentage	Number	Percentage
Coelenterata						
Sea anemones	247	7.6	0		247	7.6
Arthropoda						
Hermit & porcelain crabs	288	8.8	0		288	8.8
Shore, spider & kelp crabs	487	15.0	0		487	15.0
Mollusca						
Chitons	152	4.7	0		152	0.0
Snails, limpets	934	28.7	0		934	28.7
Sea slugs	102	3.1	0		102	3.1
Echinodermata						
Sea stars	267	8.2	0		267	0.0
Sea urchins	657	20.2	0		657	20.2
Brittle stars	48	1.5	0		48	1.5
Sea cucumbers	74	2.3	0		74	2.3
Subtotal	3,256		0		3,256	
Estimated unreported catch					2,587	
Grand total	5,843		0		5,843	
Percentage change from previous year		-28.1				

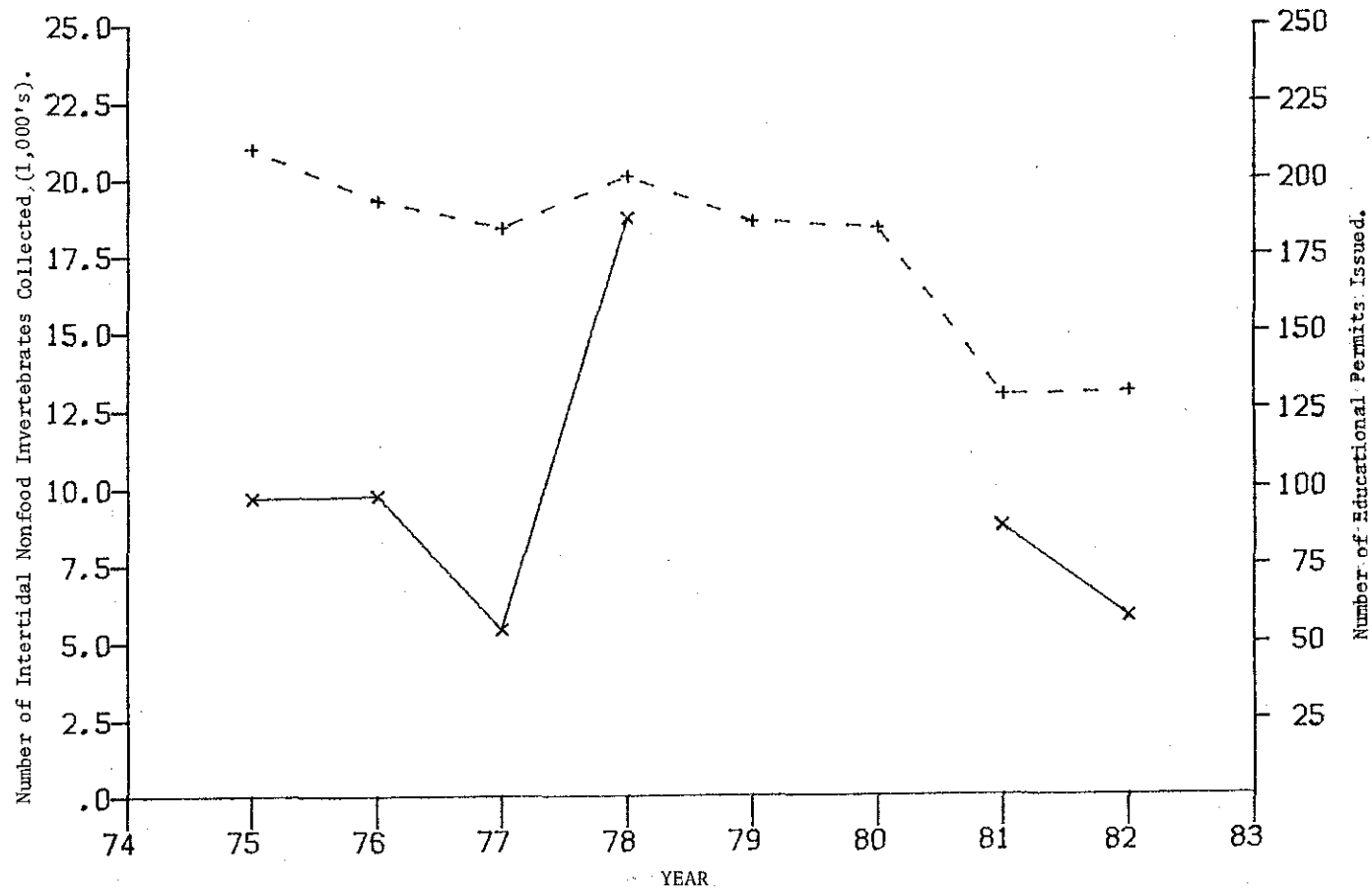


Figure 1. Number of Selected Invertebrates Harvested Along the Oregon Coast by Educational Permit Holders, 1975-1982.