

HARVEST OF NONFOOD, MARINE INVERTEBRATES

1984

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 1984, 139 marine invertebrate collecting permits were issued. Collecting reports were returned by 57 percent of the permittees. (Table 1).

Table 1. Summary of Nonfood, Marine Invertebrate Collecting Permits Issued, Collecting Reports Returned, and Harvests Reported, 1984.

	Educational		Commercial	
	No.	%	No.	%
permits issued	127		12	
collecting reports returned	69	54	10	83
collecting reports showing a harvest	46	67	4	33
collecting reports showing no harvest	23	33	6	66
animals harvested	10,791		1450.5 lbs	

Commercial Harvest

Twelve permits were issued in 1984. Only four were actively used to harvest 1450.5 pounds of animals, all of which came from central coast areas (Table 2). Tubeworms of the EUDISTYLA genus, used for fishing bait, made up 99.9% of the

total harvest. Beginning in 1984, commercial harvesters were required to report their landings on fish tickets. These landings are reported as pounds rather than numbers of animals. Since past data has been reported in numbers, conversion factors would need to be generated in order to compare the data.

Table 2. Pounds of Nonfood, Marine Invertebrates Harvested by Commercial Collectors along the Oregon Coast, by Area and Taxonomic Group, 1984.

Animal Group	North Coast	Central Coast	South Coast	Total	Percentage
Annelida Marine worms	0	1450.5	0	1450.5	100.0
Total	0	1450.5	0	1450.5	100.0
Percentage		100.0			

Educational Harvest

A harvest of 10,791 animals was taken by 69 collectors. Similar to last year, the miscellaneous species category made up a large part of the harvest (62.0%) due to a couple of large collections of mysid shrimp and amphipods. Shore crabs and ghost shrimp were the next highest categories harvested (Table 2).

The areas of harvest were very similar to last year, with most of the harvest (81.5%) coming from the open areas of the central coast. The number of animals collected from within all the permit areas except Sunset Bay-Cape Arago was down from past years. Although Sunset Bay-Cape Arago had the largest harvest of the permit areas (Table 3), the harvest was similar to past years for that area. Yaquina Head was still the most frequently used area (Table 4).

Table 3. Nonfood Marine Invertebrates Harvested By Educational Collectors Along The Oregon Coast, By Area And Taxonomic Group, 1984.

Animal Group	Haystack Rock	Boller 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	Percent
Colelenterata												
Sea anemones		6		31		36		20	34		127	1.18
Annelida												
Marine worms		32		10		55			373	31	501	4.64
Arthropoda												
Hermit & porcelain crabs		17		67		99		10	44		237	2.20
Ghost & mud shrimp		3		4		4		24	886	6	927	8.59
Shore, spider & kelp crabs		10		20		99		32	842	5	1008	9.34
Mollusca												
Chitons		18		13		41	25	9	4		110	1.02
Snails, limpets		89		152		128		10	106	25	510	4.73
Sea slugs or nudibranchs		5		9		13		8	67		102	.95
Echinodermata												
Sea stars or star fish		10		17		23			20		70	.65
Sea urchins		52		198		77		14		36	377	3.49
Sand dollars						17				100	117	1.08
Brittle stars						2					2	.02
Sea cucumbers		3		8		1				2	14	.13
Other groups		140		13		110			6424	2	6689	61.99
Total	0	385	0	542	0	705	25	127	8,800	207	10,791	
Percentage	0.0	3.6	0.0	5.0	0.0	6.5	.2	1.2	81.5	1.9		

(1) Columbia River to Tillamook Bay

(2) Tillamook Bay to Coos Bay

(3) Coos Bay to California border

Table 4. Educational Collecting Intensity by Area. Oregon Coast, 1984.

Location	Permitees Collecting In Area	Percentage
Boiler Bay	6	11.1
Yaquina Head	18	33.3
Neptune State Park	0	0.0
Sunset Bay-Cape Arago	11	20.4
Harris Beach	1	1.9
North Coast		
(Columbia River - Tillamook Bay)	2	3.7
Central Coast		
(Tillamook Bay - Coos Bay)	12	22.2
South Coast		
(Coos Bay - California border)	4	7.4
TOTAL	54	

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. The harvest of index species by educational collectors was down (26.8%) from last year (Table 5) but was still the third lowest harvest since the records have been kept (Figure 1).

Table 5. Selected Groups of Nonfood Marine Invertebrates Harvested By Permit Holders Along the Oregon Coast, 1984.

	Educational Catch		Commercial Catch		Total Catch	
	Number	Percentage	Number	Percentage	Number	Percentage
Coelenterata						
Sea anemones	127	5.0	0	0.0	127	5.0
Arthropoda						
Hermit & porcelain crabs	237	9.3	0	0.0	237	9.3
Shore, spider & kelp crabs	1008	39.4	0	0.0	1008	39.4
Mollusca						
Chitons	110	4.3	0	0.0	110	0.0
Snails, limpets	510	19.9	0	0.0	510	19.9
Sea slugs	102	4.0	0	0.0	102	4.0
Echinodermata						
Sea stars	70	2.7	0	0.0	70	0.0
Sea urchins	377	14.7	0	0.0	377	14.7
Brittle stars	2	.1	0	0.0	2	.1
Sea cucumbers	14	.5	0	0.0	14	.5
Subtotal	2,557		0		2,557	
Estimated unreported catch					2,152	
Grand total	4,709		0		4,709	
Percentage change from previous year	-26.8					

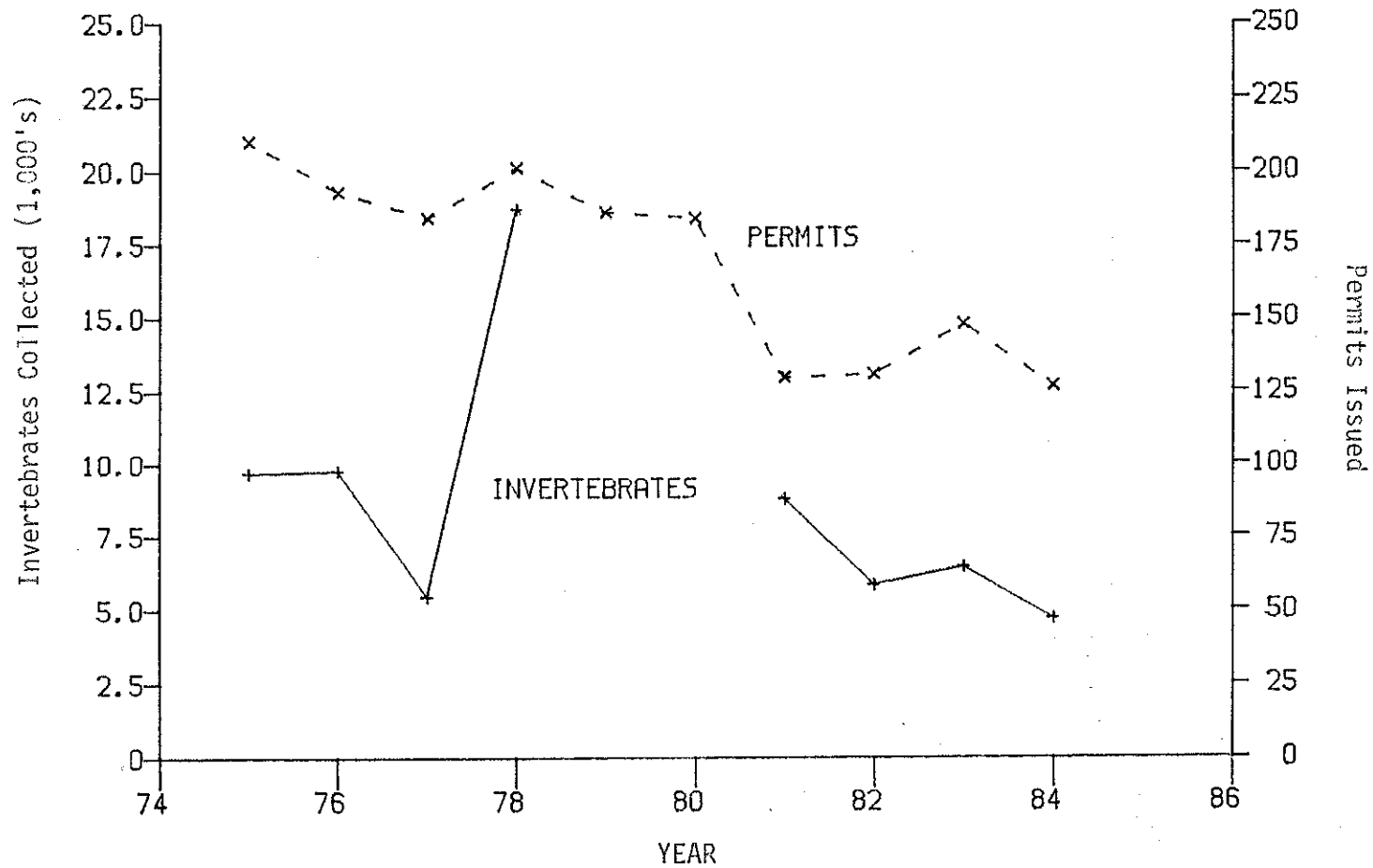


Figure 1. Number of Selected Invertebrates Harvested Along the Oregon Coast by Educational Permit Holders, 1975-1984.