SHELLFISH INVESTIGATION INFORMATION REPORT

1988 RAZOR CLAM FISHERY

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INTRODUCTION

Razor clams from Clatsop Beach (Tillamook Head to Columbia River) were sampled two tides per series from March through September and periodically the rest of the year. Sport and commercial diggers were interviewed to estimate effort, number and age composition of clams dug and harvest area. Beaches south of Tillamook Head were sampled as time permitted. Random wastage and age-length samples were taken and other miscellaneous projects are reported.

SPORT FISHERY

Clatsop Beach

The spring and summer harvest was 959,546 clams taken by 84,306 diggers for an average of 11.4 clams per digger. Area 2 produced 48% of the catch and had 42% of the effort. Another 159,539 clams were wasted. Table 1 shows harvest, effort and catch rates by area. The fall fishery (September 1 to December 31) produced 57,000 clams taken by 4,400 diggers with another 8,000 clams wasted. Total catch and effort are shown in Table 5.

The age composition (Table 2) of clams retained by diggers shows an increase in older clams and a low percentage of 0-age clams. The low percentage of 0-age clams suggests a weak year-class for next year. However, since wasted clams are mostly 0-age clams that would increase 0-age clams to about 19% or a more average year-class.

Table 1. Sport harvest of razor clams and number of diggers by area from Clatsop Beach, March to September 1988.

Area	Miles of beach	# of Diggers	Clams per Digger	# of clams	Wastage	Total
1	3.6	17,067	15.8	269,597	45,353	314,950
2	6.2	35,558	12.9	457,437	75,706	533,143
3	5.0	18,603	6.6	123,119	20,376	143,495
4	1.2	2,053	9.3	19,126	3,165	22,291
5	2.0	11,019	8.2	90,267	14,939	105,206
Total	18.0	84,300	11.4	959,546	159,539	1,119,085

Area 1 - Columbia River South Jetty to Fort Stevens Park Road.
Area 2 - Fort Stevens Park Road to Sunset Beach Road.
Area 3 - Sunset Beach Road to Gearhart Beach Road.
Area 4 - Gearhart Beach Road to Necanicum River.
Area 5 - Necanicum River to Tillamook Head.

Table 2. Age composition in percent of sport dug clams from Clatsop Beach 1983-88.

Year of Harvest	Age					
	0	1	2	3	4	5+
1983	29.5	55.7	13.7	1.1	0.0	0.0
1984	46.8	46.7	6.2	0.3	0.0	0.0
1985	13.0	83.7	3.2	0.1	0.0	0.0
1986	52.3	29.0	18.5	0.2	0.0	0.0
1987	14.2	82.2	3.6	0.0	0.0	0.0
1988	5.5	61.5	31.1	1.9	0.0	0.0
10 year average	28.0	59.8	10.8	1.3	0.1	0.0

Many complaints were received about the number of Washington diggers on Oregon beaches due to season restrictions in Washington. Many Oregon diggers see a need for license to dig clams.

Driving on clam beds was also a problem. A group of residents asked the State Highway Commission for a ban on beach driving from Gearhart to Del Ray Road. No ban was enacted but the need for more enforcement was clear.

Beaches south of Tillamook Head

Digging was slow on most southern beaches. Some clams were taken from Short Sands Beach, Newport beaches, South Slough at Coos Bay and Myers Creek near Gold Beach. Sacchi Beach south of Coos Bay had good digging but little effort was noted.

COMMERCIAL FISHERY

Commercial harvesters landed 33,910 pounds (161,000 clams). Although 229 harvest permits were issued only 178 were used. Area 2 produced 30.2% of the poundage but Area 3 had the highest pounds per hour (5.2). Commercial catch data by area are listed in Table 3.

Table 3. Commercial catch/effort and percent of pounds landed by area.

	Area					Total
	1	2	3	4	5	
Pounds/hour	4.2	4.3	5.2	3.9	4.0	4.2
Percent of pounds landed	10.9	30.2	12.6	20.3	26.0	100.0

There was a slight increase in the percentage of older clams in the fishery (Table 4).

A price of $2.80 per pound in the shell attracted many into the fishery, but some diggers quit in the fall due to small clams. Samples indicated that 64% of the fall population was not of commercial size in Area 5. Also several diggers were cited for no harvesting permit and others are promoting limited entry for the razor clam fishery.

Table 4. Age composition in percent of commercially dug razor clams, Clatsop Beach 1983-88.

Year of Harvest	Age					
	0	1	2	3	4	5+
1983	2.5	65.5	24.0	8.0	0.0	0.0
1984	93.7	5.1	1.2	0.0	0.0	0.0
1985	11.2	85.8	2.7	0.2	0.1	0.0
1986	10.0	30.0	58.0	2.0	0.0	0.0
1987	0.0	98.4	1.6	0.0	0.0	0.0
1988	15.6	60.0	21.6	2.6	0.2	0.0
10-year average	13.6	68.6	15.2	2.1	0.4	0.1

MISCELLANEOUS PROJECTS

Razor clam gills were collected and sent to OSU for NIX analysis. Levels of NIX have been slight and probably are not causing mortalities, although samples for several years have not been analyzed. Moisture content of clam meat, which reflects a clam's general condition, was continued. Results of tests showed a moisture content of 71.3 to 82.1%.

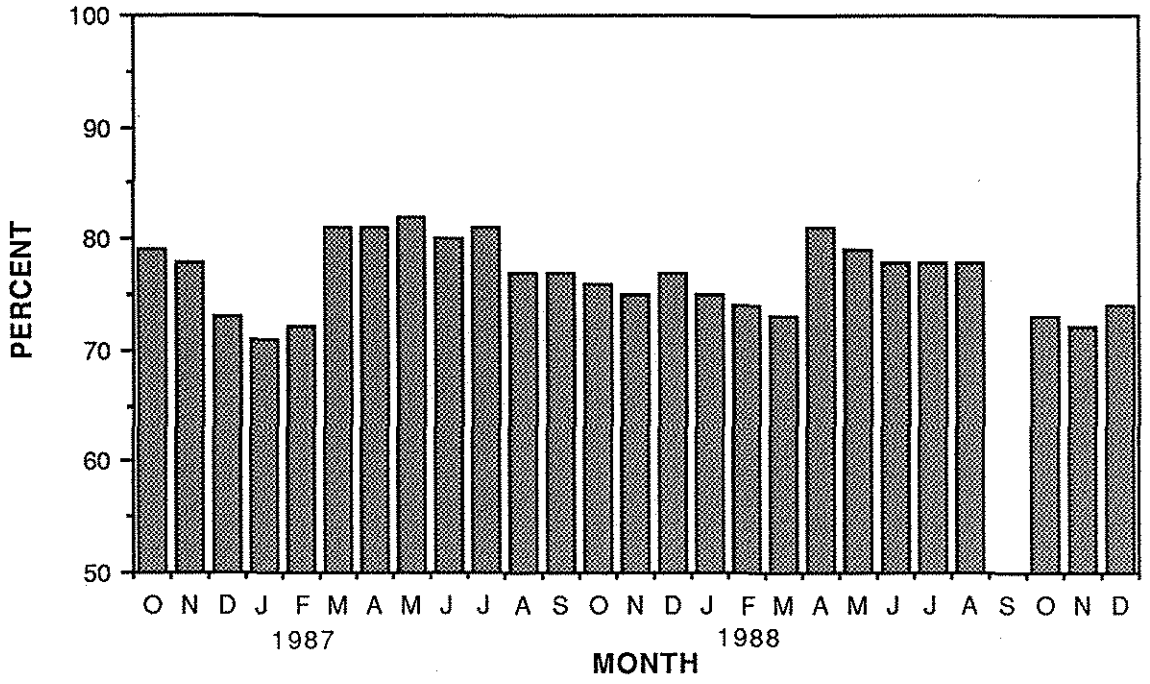

Figure 1. Moisture content, in percent, of razor clams by month, 1986-88.

Table 5. Annual harvest and effort data for the fishery.

Year	Commercial Fishery # of Diggers	Commercial Fishery # of Clams	Sport Fishery # of Diggers	Sport Fishery Clams per Trip	Sport Fishery # of Clams	Wastage	Total
1955	295	904,000	56,000	22	1,212,000	295,000	2,411,000
1956	253	490,000	60,000	18	1,061,000	295,000	1,846,000
1957	193	336,000	77,000	21	1,646,000	416,000	2,398,000
1958#	221	386,000	89,000	19	1,679,000	218,000	2,283,000
1959	118	179,000	54,000	12	646,000	124,000	949,000
1960	93	154,000	48,000	12	596,000	46,000	796,000
1961	58	80,000	51,000	11	583,000	70,000	733,000
1962	79	102,000	56,000	16	892,000	105,000	1,099,000
1963	77	107,000	55,000	13	713,000	70,000	890,000
1964	125	125,000	71,000	16	1,098,000	264,000	1,487,000
1965	213	399,000	76,000	15	1,134,000	186,000	1,719,000
1966	217	282,000	78,000	14	1,052,000	434,000	1,768,000
1967	297	494,000	74,000	20	1,472,000	195,000	2,161,000
1968	340	361,000	64,000	13	831,000	162,000	1,354,000
1969	185	111,000	59,000	14	851,000	155,000	1,117,000
1970	79	61,000	56,000	13	751,000	125,000	901,000
1971	134	123,000	77,000	13	968,000	213,000	1,304,000
1972	76	49,000	69,000	9	636,000	139,000	824,000
1973#	111	89,000	76,000	10	725,000	159,000	973,000
1974	58	32,000	44,000	8	347,000	5,000	384,000
1975	146	171,000	75,000	10	785,000	157,000	1,113,000
1976	391	717,000	119,000	12	1,431,000	63,000	2,211,000
1977#	269	143,000	51,000	10	499,000	33,000	675,000
1978	253	205,000	72,000	12	849,000	137,000	1,191,000
1979	236	180,000	90,000	11	958,000	63,000	1,201,000
1980	145	116,000	70,000	11	747,000	143,000	1,006,000
1981	91	128,000	30,000	6	187,000	49,000	364,000
1982	209	165,000	84,000	9	758,000	123,000	1,046,000
1983#	9	1,000	32,000	3	105,000	12,000	118,000
1984*	34	37,000	23,000	15	341,000	15,000	393,000
1985*	340	303,000	94,000	10	984,000	147,000	1,434,000
1986*	51	18,000	46,000	5	260,000	33,000	311,000
1987*	173	236,000	68,000	15	1,010,000	83,000	1,329,000
1988*	178	161,000	84,000	11	1,016,000	168,000	1,345,000
Ten-year average							855,000

* Fall fishery included
\# Occurrences of El Nino