

SHELLFISH INVESTIGATION INFORMATION REPORT  
1990 RAZOR CLAM FISHERY

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## INTRODUCTION

Razor clams from Clatsop Beach (Tillamook Head to Columbia River) were sampled two tides per tide 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 collected and other miscellaneous projects are reported.

## SPORT FISHERY

The total sport harvest for Clatsop beaches was 639,400 clams which included 60,700 wasted clams. The harvest was 10% below the ten-year average. Diggers averaged 11.6 clams on 55,000 digger-trips. Clam wastage averaged 9.5%.

The spring and summer harvest was 605,000 clams which included 50,000 wasted clams. The average number of clams per digger was 9.9 for 49,000 digger-trips. Area 5 contributed 51% of the clams and 40% of the effort. Table 1 shows catch and effort by area.

Table 1. Sport harvest of razor clams and number of diggers by area, Clatsop Beach, March to September 1990.

Area	Miles of beach	# of Diggers	Clams per Digger	# of clams	Wastage	Total
1	3.6	8,792	10.0	87,864	9,223	97,087
2	6.2	11,742	9.6	112,390	11,798	124,188
3	5.0	6,999	4.2	29,402	3,086	32,488
4	1.2	1,499	2.5	3,634	381	4,015
5	2.0	19,662	12.5	246,353	25,860	272,213
Total	18.0	48,644	9.9	479,643	50,348	529,991

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.

The fall fishery produced 109,400 clams of which 10,400 were wasted. Diggers averaged 16.7 clams on 5,900 trips. The fall harvest is included in Table 5.

Random samples indicated a low abundance for the 1989 year-class. The 1990 year-class set late as indicated by shell lengths of 8-10 mm in December. Age composition of sport-dug clams (Table 2) showed an increase in clams two years

and older over the ten-year average. The presence of all age classes indicates a healthy population and that the affects of the 1982 El Nino period have passed.

Table 2. Age composition in percent of sport-dug clams from Clastop Beach, 1985-90.

Year of Harvest	Age					
	0	1	2	3	4	5+
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
1989	28.1	55.3	12.1	3.4	1.0	0.0
1990	14.3	52.1	25.5	5.9	2.1	0.1
10 year average	26.5	59.8	11.8	1.5	0.4	0.0

#### Beaches South of Tillamook Head

Digging occurred on most southern beaches, but effort was minimal due to low numbers of clams.

Oregon diggers continue to request a clam license because of the increase in the number of out-of-state diggers due to Washington digging restrictions. Driving on clam beds also continues to be a problem.

#### COMMERCIAL FISHERY

Nearly 75,000 clams (13,474 pounds) were taken by commercial diggers. A record price of \$3.00 a pound in the shell enticed 255 people to get harvest permits, but only 151 made landings. Area 5 produced 70% of the poundage. Catch data by area are listed in Table 3.

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

	Area					Total
	1	2	3	4	5	
Pounds/hour	3.3	3.9	3.2	2.1	3.4	3.3
Percent of pounds landed	13	10	3	4	70	100.0

The age composition of commercial clams (Table 4) shows a lack of the 1989 year class. Also, random samples in September indicated that 54% of the population was not of commercial size, and resulted in considerable wastage.

#### MISCELLANEOUS PROJECTS

Razor clam gills were collected and sent to OSU for NIX analysis. The incidence in Washington was high. There are no recent data for Oregon, but levels were low about a year ago. The study to correlate NIX with moisture content in razor clams continues. Results to date are shown in Figure 1.

A survey to estimate the dollar value of the sport razor clam fishery was begun. Expenditure data are being obtained for transportation, food from restaurants and stores, lodging and miscellaneous (gear rentals, clam cleaning or purchases).

Table 4. Age composition in percent of commercially dug razor clams, Clatsop Beach 1985-90.

Year of Harvest	Age					
	0	1	2	3	4	5+
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
1989	6.5	87.1	2.2	3.7	0.3	0.2
1990	0.0	52.3	42.9	3.7	0.8	0.3
10-year average	14.1	67.3	16.3	2.1	0.1	0.1

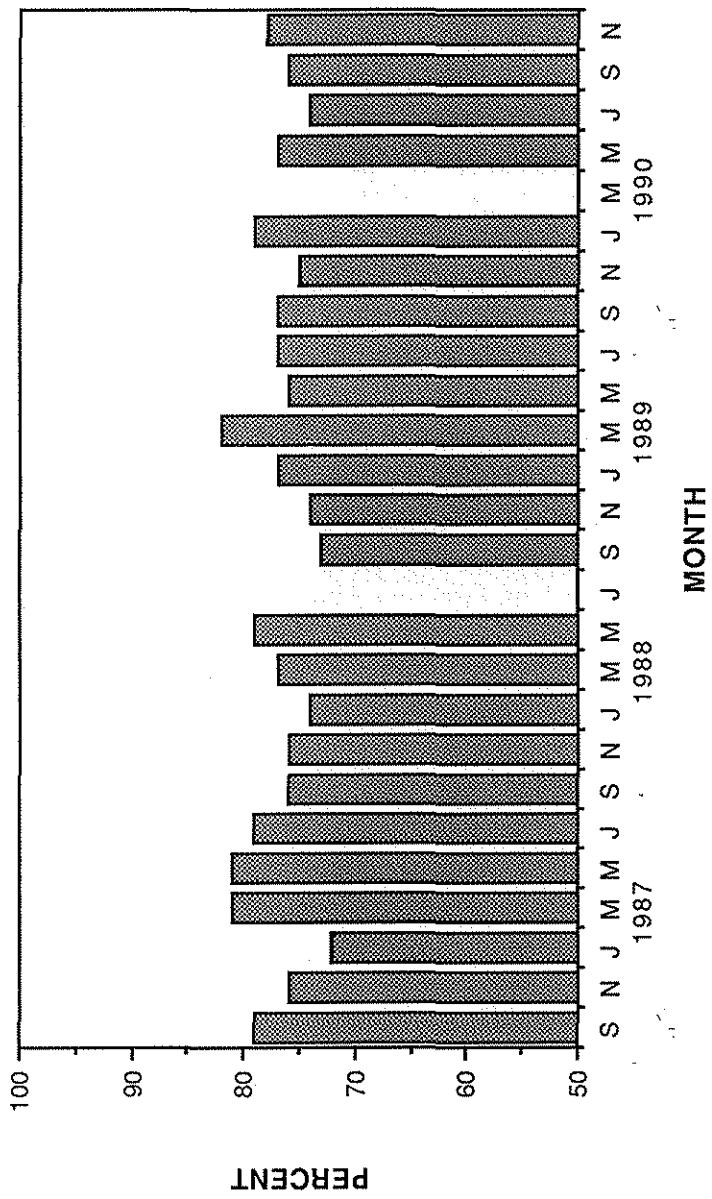


Table 5. Annual harvest and effort data for the fishery.

Year	Commercial Fishery		Sport Fishery			Wastage	Total
	# of Diggers	# of Clams	# of Diggers	Clams per Trip	# of Clams		
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	7,098,000	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		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
1989*	228	195,000	97,000	11	1,082,000	136,000	1,413,000
1990*	151	75,000	55,000	12	579,000	61,000	715,000
Ten-year average					632,000	83,000	

\* Fall fishery included  
 # Occurrences of El Nino