

SHELLFISH INVESTIGATION
INFORMATION REPORT

1984 RAZOR CLAM FISHERY

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INTRODUCTION

Razor clams from Clatsop Beach (Tillamook Head to Columbia River) were sampled regularly from March through September and periodically the rest of the year. Sport and commercial diggers were interviewed to obtain data on number, age composition of clams dug and harvest area. Data from other beaches south of Tillamook Head were collected as time permitted. Random wastage and age-length samples were collected and other miscellaneous projects are reported.

SPORT FISHERY

Clatsop Beach

The spring and summer fishery produced a harvest of 169,000 clams which included 15,000 wasted clams, taken on a record low 12,365 digger trips. The average number of clams per digger trip was 12.5. Areas 3 and 5 were the most productive, accounting for 73% of clams dug and 69% of the digger trips.

Table 1 lists harvest, catch rates and number of diggers by statistical area.

Table 1. Sport harvest of razor clams and number of diggers by area from Clatsop Beach, March to September, 1984.

Area	Miles of Beach	No. of Digger Trips	Clams Dug/ Digger-trip	No. of Clams Dug	No. of Clams Wasted	Harvest Total
1	3.6	1,325	7.1	9,455	901	10,356
2	6.2	1,769	12.4	21,856	2,083	23,939
3	5.0	4,623	12.6	58,282	5,554	63,836
4	1.2	785	12.8	10,056	958	11,014
5	2.0	3,863	14.1	54,528	5,196	59,724
Total	18.0	12,365	12.5	154,177	14,692	168,869

Area 1 Columbia River to Fort Stevens Park Road
Area 2 Fort Stevens 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, Seaside

The fall fishery (October-December) which usually is small and contributes little to the yearly harvest produced an estimated 187,000 clams taken on 11,000 digger trips. Diggers averaged 17.0 clams per trip. The fall harvest is included in landing data in Table 2.

Clam wastage was calculated at 8.7% in the spring and 0% in the fall. Wastage was minimal due to lack of effort during the spring. Age composition of the sport catch indicates a large 1983 year class is entering the fishery. Random digging in the fall also found 94% of the population to be of the 1983 year class and all areas have better than average numbers of clams.

Table 3. Age composition in percent of sport dug clams, from Clatsop Beach, 1979-1984.

Year of Harvest	0	1	2	3	4	5+
1979	12.3	75.3	11.1	0.9	0.3	0.1
1980	44.6	32.0	16.7	6.1	0.5	0.1
1981	44.1	51.4	3.1	1.3	0.1	0.0
1982	18.1	80.7	0.6	0.5	0.1	0.0
1983	29.5	55.7	13.7	1.1	0.0	0.0
1984	46.8	46.7	6.2	.3	0.0	0.0
10-year average	30.0	54.4	10.9	3.2	1.0	0.5

Beaches South of Tillamook Head

Beaches in southern Oregon did not develop as they have in past years and digging was very poor. The best digging was found in the Newport area. Beaches north of Newport showed no sign of clams except Short Sand Beach near Cannon Beach which had a large 1983 year class present.

COMMERCIAL FISHERY

The commercial harvest was 5,803 pounds landed on 323 trips. The spring harvest was 3 pounds, the lowest on record. The fall harvest was 5,800 pounds which was made up almost entirely of the 1983 year class. The age composition of the commercial catch is shown in Table 4. Random digging during the fall months found that 46% of the population was not of commercial size (3 3/4 inches) and wastage was observed from commercial diggers. Many commercial diggers were reported selling their catch to unlicensed buyers. A letter was sent to all commercial fishermen that all clams must be recorded and that they must sell to a legal buyer or have a bait dealer's license.

Table 4. Age composition in percent of commercially dug clams from Clatsop Beach, 1979-1984.

Year of Harvest	0	1	AGE 2	3	4	5+
1979	0.0	61.9	26.1	7.1	4.0	0.9
1980	0.7	90.9	7.5	0.7	0.0	0.2
1981	1.4	89.8	8.8	0.0	0.0	0.0
1982	0.4	98.7	0.7	0.2	0.0	0.0
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
10-year average	11.0	63.0	15.6	6.2	3.0	1.2

NIX (NUCLEAR INCLUSION UNKNOWN)

The parasite called NIX found in razor clams from Clatsop Beach was found also in clams from the Newport area. Monthly samples of gill tissues from 60 Clatsop Beach clams were sent to Oregon State University for examination to determine the presence of NIX. Some samples were also obtained from the Newport area. At this time only a few of the samples have been checked

from which it was determined that NIX was present in the same slight infestation rate as found in 1983 by Battel Laboratories. OSU hopes to analyze all samples in the future.

PARALYTIC SHELLFISH POISON ALERT

On June 28 a PSP alert went into effect from Yaquina Bay north to the Columbia River. Razor clams were sent to the Oregon State Health Department for testing and were found to contain 415 micrograms of toxin per 100 grams of meat. Samples of dressed razor clams were tested and found to have only 36 micrograms of toxin. The alert was lifted on July 13 when toxin levels dropped to 59 micrograms. The ban on shellfish harvesting affected most of the days in two tide series. Four cats were reported to have died due to being fed clam parts during the alert. Long Beach, Washington, razor clams tested at 1350 micrograms.

Table 2. Annual Harvest and Effort Data for the Sport and Commercial Fishery.

Year	Commercial		Sport			Wastage	Total Harvest
	Number of Diggers	Number of Clams Landed	Number of Diggers	Clams per Digger Trip	Number of Clams Dug		
1955	295	904,000	56,000	21.6	1,212,000	295,000	2,411,000
1956	253	490,000	60,000	17.7	1,061,000	295,000	1,846,000
1957	193	336,000	77,000	21.4	1,646,000	416,000	2,398,000
1958*	221	386,000	89,000	18.9	1,679,000	218,000	2,283,000
1959	118	179,000	54,000	12.0	646,000	124,000	949,000
1960	93	154,000	48,000	12.4	596,000	46,000	796,000
1961	58	80,000	51,000	11.4	583,000	70,000	733,000
1962	79	102,000	56,000	15.9	892,000	105,000	1,099,000
1963	77	107,000	55,000	13.0	713,000	70,000	890,000
1964	125	125,000	71,000	15.5	1,098,000	264,000	1,487,000
1965	213	399,000	76,000	14.9	1,134,000	186,000	1,719,000
1966	217	282,000	78,000	13.6	1,052,000	434,000	1,768,000
1967	297	494,000	74,000	19.9	1,472,000	195,000	2,161,000
1968	340	361,000	64,000	13.0	831,000	162,000	1,354,000
1969	185	111,000	59,000	14.4	851,000	155,000	1,117,000
1970	79	61,000	56,000	12.8	751,000	125,000	901,000
1971	134	123,000	77,000	12.6	968,000	213,000	1,304,000
1972	76	49,000	69,000	9.2	636,000	139,000	824,000
1973*	111	89,000	76,000	9.5	725,000	159,000	973,000
1974	58	32,000	44,000	7.9	347,000	5,000	384,000
1975	146	171,000	75,000	10.5	785,000	157,000	1,113,000
1976	391	717,000	119,000	12.0	1,431,000	63,000	2,211,000
1977*	269	143,000	51,000	9.6	499,000	33,000	675,000
1978	253	205,000	72,000	11.8	849,000	137,000	1,191,000
1979	236	180,000	90,000	10.7	958,000	63,000	1,201,000
1980	145	116,000	70,000	10.6	747,000	143,000	1,006,000
1981	91	128,000	30,000	6.2	187,000	49,000	364,000
1982	209	165,000	84,000	9.1	758,000	123,000	1,046,000
1983*	9	1,000	32,000	3.3	105,000	12,000	118,000
1984 [↓]	35	37,000	23,000	14.8	341,000	15,000	393,000

* Occurrences of El Nino
[↓] Fall Sport Fishery included