

SHELLFISH INVESTIGATION
INFORMATION REPORT

1981 Razor Clam Fishery

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The 1981 Razor Clam Fishery

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

SPORT FISHERY

The sport fishery on Clatsop Beach harvested 236,000 clams (includes wastage). A calculated 187,000 clams were dug on 30,000 digger trips, which is the lowest harvest since records were kept in 1955. This represents a 76% decrease in the number of clams and a 60% decrease in digger trips from the ten year average. The Seaside Beach accounted for 45.6% of the clams dug and 31.2% of the digger trips. Table 1 lists 1981 harvest, catch rates and number of diggers by statistical area. Table 2 lists annual harvest and effort data.

Table 1. Sport Harvest of Razor Clams and Number of Diggers by Area From Clatsop Beach, March to September, 1981.

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	3167	2.2	6797	1774	8571
2	6.2	4202	2.2	9177	2395	11,572
3	5.0	6453	3.8	24,396	6367	30,763
4	1.2	7074	8.7	61,455	16,040	77,495
5	2.0	9467	9.0	85,395	22,288	107,683
Total	18.0	30,363	6.2*	187,220	48,864	236,084

Area 1 = Columbia River to Ft. Stevens Park Rd.

* weighted mean

2 = Ft. Stevens Park Rd. to Sunset Beach Rd.

3 = Sunset Beach Rd. to Gearhart Beach Rd.

4 = Gearhart Beach Rd. to Necanicum River

5 = Necanicum River to Tillamook Head, Seaside

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

Year	Commercial		Sports			Wastage	Total Harvest
	Number of Diggers	Number of Clams Dug	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	384,000

Clam wastage was estimated at 26.1, but losses of small clams were low due to minimum digging effort. The lack of clams in catches combined with news releases on poor digging success discouraged many diggers from digging. Age composition of catch is listed in Table 3 which shows a lack of older clams.

Diggers enjoyed excellent fall weather and harvested 16 clams per trip which averaged about 95 mm in shell length. The fall harvest, was estimated at 150,000 clams and is not included in harvest data.

Table 3. Age Composition, in Percent, of Sport Dug Razor Clams from Clatsop Beach, 1976-1981.

Year of Harvest	Age					
	0	1	2	3	4	5+
1976	14.6	78.9	2.8	2.0	1.3	0.4
1977	37.5	15.7	33.5	6.6	3.8	2.9
1978	28.7	61.8	4.0	3.5	1.3	0.7
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
10 Year Average	26.1	52.3	14.5	5.1	1.5	0.5

COMMERCIAL FISHERY

A harvest of 22,414 pounds (128,000 clams) were dug by 91 diggers. Statistical area four accounted for 54% of the total pounds landed. The fall fishery produced 17,654 pounds, which made up 79% of the annual harvest. The fall fishery which was predominately first year clams is not included in the age composition Table 4. The commercial fishery took 36% of the total harvest of clams from Clatsop Beach.

Table 4. Age Composition in Percent of Commercially Dug Clams from Clatsop Beach, 1976-1981.

Year of Harvest	Age					
	0	1	2	3	4	5
1976	8.7	87.4	2.6	0.9	0.4	0.0
1977	1.6	8.7	60.0	12.0	10.6	7.1
1978	0.8	70.8	10.7	12.6	3.4	1.7
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
10 Year Average	2.0	55.7	26.4	10.0	4.7	1.2

Razor Clam Production South of Tillamook Head

Data were obtained from five beaches south of Tillamook Head as time permitted. Table 5 lists the beaches and pertinent catch data. The Newport beaches were some of the best producing areas. Due to poor digging success on Clatsop Beach, diggers were advised to try other razor clam beaches along the coast.

Table 5. Razor Clam Data from Beaches South of Tillamook Head

Area Sampled	No. of Diggers	No. of Clams	Clams per Digger	Age Composition					
				0	1	2	3	4	5
Indian Beach	5	0	0	**13.6	59.1	18.2	9.1		
Silver Point	3	3	1.0				100.0		
Falcon Cove	7	14	2.0	18.2	60.6	12.1	9.1		
Short Sands*	2	15	7.5	45.2	50.0	4.8	0.0		
Agate Beach (Newport)	54	647	12.0	0.6	13.6	29.1	20.3	33.9	2.5

*one trip

**collected by biologist

HARVEST DISCUSSION

The 1979 year class that dominated the 1980 fall fishery suffered high winter losses during January and February, 1981. Large numbers of fresh shells were found wind-rowsed on the beach for several months. Spring sampling verified that older clams were missing from Clatsop Beach but large numbers of the 1980 year class were present. The redistribution of small razor clams from subtidal areas to intertidal areas may be more important than we anticipate in contributing to clam availability on the beach.