

SHELLFISH INVESTIGATION
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THE 1977 RAZOR CLAM FISHERY

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Razor clams from Clatsop beaches (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 and number and age composition of clams dug. Random age-length samples and wastage samples were collected. Data from other beaches south of Tillamook Head were collected as time permitted.

SPORT FISHERY

A calculated 532,000 clams including wastage were harvested on 51,000 digger trips to Clatsop beaches. This represented a 57% decrease in digger trips and a 65% decrease in number of clams dug compared to the 1976 season. The two-mile Seaside beach accounted for 56% of the digger trips and 60% of the clams dug. Table 1 lists the harvest, catch rates and number of diggers by statistical area.

Wastage was estimated at 6.2% or 33,000 clams. Clam wastage was minimal due to reduced digging effort in July. Age composition of recreationally dug clams reflected the dominant 1974 year class (age 2) and the poor 1975 year class (Table 2).

COMMERCIAL FISHERY

In 1977, 269 diggers harvested 41,055 pounds (143,000 clams). Seaside beach accounted for 59% of the total pounds landed. The age composition of commercially dug clams reflected the dominant 1974 year class by the increase in two year old clams (Table 3).

The commercial fishery took 22% of the total clams dug. A sample of 161 commercial catches leaving the beach indicated that 14.4% (pounds) were not sold amounting to a total of 6,800 ~~pounds~~ or 23,600 clams.

RAZOR CLAM PRODUCTION SOUTH OF TILLAMOOK HEAD

Data were obtained from 13 beaches south of Tillamook Head as time permitted. Table 4 lists the beaches and pertinent catch data. The most productive areas were Cannon Beach, Arch Cape, Cove Beach, South Beach (Newport), and Myers Creek (Gold Beach). The 1976 year class was found in good numbers on most beaches.

HARVEST SUMMARY

The sport and commercial fisheries harvested 675,000 clams on Clatsop Beach in 1977. A drop in recreational effort was noted in all phases of the tourist industry on the north coast during spring months; this may have accounted for the drop in effort for the sport fishery. Random samples in late 1976 and 1977 indicated a good set of the 1976 year class on the north end of Clatsop Beach and in the Cannon Beach area. This should disperse digging effort in 1978. Table 5 lists annual catch data for the fishery.

Table 1. Sport Harvest of Razor Clams and Number of Diggers by Area from Clatsop Beaches, March to September, 1977.

Area	Miles of Beach	Number of Digging Trips	Clams Dug/ Digger Trip	Number of Clams Dug	Number of Clams Wasted	Harvest Total
1	3.6	4,274	10.9	49,151	3,249	52,400
2	6.2	5,884	10.2	61,456	4,062	65,518
3	5.0	6,781	5.2	35,303	2,333	37,636
4	1.2	5,450	9.5	51,552	3,407	54,959
5	2.0	29,059	10.4	301,323	19,917	321,240
Total	18.0	51,448	9.6 ^{1/}	498,785	32,968	531,753

- 1 - Columbia River to Fort Stevens Park Road
- 2 - Fort Stevens Park Road to Sunset Beach Road
- 3 - Sunset Beach Road to Gearhart Beach Road
- 4 - Gearhart Beach Road to Necanicum River
- 5 - Necanicum River to Tillamook Head (Seaside)

^{1/} Weighted mean

Table 2. Age Composition, in percent, of Sport Dug Razor Clams from Clatsop Beaches, 1972-1977.

Year of Harvest	0	1	2	3	4	5+
1972	24.2	53.8	18.2	3.4	0.3	0.1
1973	32.4	49.9	8.1	8.5	1.0	0.1
1974	10.0	55.3	24.3	6.9	3.3	0.2
1975	24.0	46.0	17.6	9.8	2.3	0.3
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
10 year average	21.7	58.5	13.9	4.6	1.1	0.2

Table 3. Age Composition, in percent, of Commercially Dug Razor Clams from Clatsop Beaches, 1972-1977.

Year of Harvest	0	1	2	3	4	5
1972	0.0	9.9	78.0	11.4	0.7	0.0
1973	2.0	67.4	13.3	15.8	1.3	0.2
1974	0.7	40.0	35.9	13.0	10.2	0.2
1975	0.4	50.8	14.7	20.6	11.9	1.6
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
10 year average	2.1	50.8	27.0	13.8	5.6	0.7

Table 4. Razor Clam Catch Data from Beaches South of Tillamook Head, 1977.

Area Sampled	No. of Diggers	No. of Clams	Clams/Digger	Age Composition in Percent ^{1/}					
				0	1	2	3	4	5
Indian Beach	2	0	0	-	-	-	-	-	-
Crescent Beach	0	0	0	-	-	-	-	-	-
Cannon Beach	4	62	15.5	99.0	1.0	0	0	0	0
Arch Cape	1	14	14.0	99.2	0	0	0	0	.8
Cove Beach	11	207	18.8	96.5	1.5	.6	.4	.1	.9
Short Sands	5	38	7.6	13.0	82.6	4.4	0	0	0
Agate Beach	-	-	-	42.9	42.9	5.7	0	5.7	2.8
South Beach (Newport)	-	-	-	55.4	12.9	22.8	5.9	1.0	2.0
Bastendorff	2	15	7.5	70.0	20.0	10.0	0	0	0
So. Slough Spit (Coos Bay)	4	26	6.5	14.2	42.9	42.9	0	0	0
Sixes	0	0	-	-	-	-	-	-	-
Baily Beach	0	0	-	-	-	-	-	-	-
Myers Creek	6	48	12.0	69.1	17.6	10.3	1.5	1.5	0

^{1/} Includes biologists' sample

Table 5. Annual Harvest and Effort Data for the Sport and Commercial Fishery.

Year	Commercial		Sport			Wastage	Total Harvest
	Number of Diggers	Number of Clams Dug	Number of Diggers	Clams/ 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	715,000	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
Mean	175	256,000	67,000	14.0	938,000	171,000	1,365,000