

SHELLFISH INVESTIGATION
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THE 1976 RAZOR CLAM FISHERY

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Razor clam catches from Clatsop beaches (Tillamook Head-Columbia River) were sampled regularly from March through September and periodically the rest of the year. Diggers were interviewed for number and age composition of clams harvested and the distribution and number of diggers. Data from beaches south of Tillamook Head were collected as time permitted. Data were compiled on clams returned from the 1973 tagging program.

SPORT FISHERY

An estimated 1,494,000 clams including wastage were dug on 119,000 digger trips to Clatsop beaches. This represented a 60% increase in digger trips and an 82% increase in number of clams dug compared to the 1975 season. The two-mile Seaside beach accounted for 69% of the digger trips and 79% of the clams dug. Table 1 lists the harvest, catch rates and number of diggers by statistical area.

Wastage was estimated at 4.2% or 63,000 clams. Clam wastage was minimal due to a poor set in 1975 (0+ age group), combined with the abundant 1974 year class (1+ age group). Age composition of recreationally dug clams reflected the dominant year class (Table 2).

COMMERCIAL FISHERY

In 1976, 391 commercial diggers harvested 118,000 pounds (717,000 clams). This was the largest commercial harvest since 1955. Seaside beach accounted for 72% of the total pounds landed. The age composition of commercially dug clams reflected the dominant 1974 year class by the increase in one year old clams (Table 3).

The increase in the commercial fishery, which took 33.4% of the total clams dug, caused problems with the sport fishery. Of most concern was the large number of inexperienced commercial diggers digging in areas usually frequented only by

sport diggers. A sample of 204 commercial catches leaving the beach showed that 22% (pounds) were not sold legally, amounting to 32,700 pounds or 196,800 clams.

RAZOR CLAM PRODUCTION SOUTH OF TILLAMOOK HEAD

Data were obtained from 11 beaches south of Tillamook Head as time permitted. Table 4 lists the beaches and pertinent catch data. The most productive areas were Short Sands beach, North Beach (Newport) and Port Orford Beach. The 1975 year class was found in substantial numbers on the south coast beaches.

1973 RAZOR CLAM TAGGING

Data for 335 tagged clams has been analyzed and a rough draft of the report completed. Mortality rates are being determined. They will be compared with Hirschorn's work in 1952. The report will be completed in 1977.

HARVEST SUMMARY

The sport and commercial fisheries harvested 2,211,000 clams in 1976. This was the largest catch since 1958. Catch per unit of effort also increased to 12.0 clams per digger. Table 5 lists the annual catch data for the fishery.

Table 1. Personal Use Harvest of Razor Clams and Number of Diggers by Area from Clatsop Beaches, March to September, 1976.

Area	Miles of Beach	Number of Diggers	Clams/Digger Trip	Number of Clams Dug	Number of Clams Wasted	Harvest Total
1	3.6	5,740	5.4	30,828	1,352	32,180
2	6.2	7,201	6.1	43,965	1,927	45,892
3	5.0	8,394	6.8	56,939	2,496	59,435
4	1.2	15,913	10.6	168,044	7,367	175,411
5	2.0	82,176	13.8	1,131,461	49,605	1,181,066
Total	18.0	119,424	12.0	1,431,237	62,747	1,493,984

- 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)

Table 2. Age Composition, in percent, of Personal Use Razor Clams from Clatsop Beaches, 1971-1976.

Year of Harvest	0	1	2	3	4	5
1971	33.0	54.2	8.6	3.3	0.7	0.2
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
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, 1971-1976.

Year of Harvest	0	1	2	3	4	5
1971	5.1	68.3	15.9	5.7	4.1	0.4
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	3.7	37.4	2.6	0.9	0.4	0.0
10 Year Average	2.1	50.8	27.0	13.3	5.6	0.7

Table 4. Razor Clam Catch Data from Beaches South of Tillamook Head, 1976.

Area Sampled	No. of Diggers	No. of Clams	Clams/Digger	Age Composition in Percent					
				0	1	2	3	4	5
Indian Beach	15	8	1.9	50.0	0.0	0.0	0.0	50.0	0.0
Crescent Beach	4	4	1.0	-	-	-	-	-	-
Cannon Beach	5	0	0.0	-	-	-	-	-	-
Cove Beach	9	56	6.2	29.2	0.0	12.5	16.6	29.2	12.5
Short Sands Beach	3	40	13.3	47.6	30.9	2.4	1.2	15.5	2.4
North Beach (Newport)	4	96	24.0	0.0	44.0	11.0	34.9	10.1	0.0
South Beach (Newport)	35	264	7.5	2.9	51.2	23.5	9.6	9.6	3.2
South Slough Spit (Coos Bay)	4	25	6.3	15.4	33.3	25.7	12.8	12.8	0.0
Bastendorff Beach (Coos Bay)	5	39	7.8	37.5	56.3	0.0	6.2	0.0	0.0
Port Orford	11	133	12.1	30.9	56.6	1.5	10.3	0.7	0.0
Meyers Creek (Gold Beach)	14	96	6.9	5.1	56.1	19.4	9.2	7.1	3.1

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

Year	Commercial		Number of Diggers	Sport		Wastage	Total Harvest
	Number of Diggers	Number of Clams Dug		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	213,000	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	1,437,000
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
Mean	171	262,000	67,000	14.3	958,000	177,000	1,397,000