

SHELLFISH INVESTIGATION  
INFORMATION REPORT

1987 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 BEACHES SOUTH OF TILLAMOOK HEAD WERE COLLECTED AS TIME PERMITTED. RANDOM WASTAGE AND AGE-LENGTH SAMPLES WERE TAKEN AND OTHER MISCELLANEOUS PROJECTS WERE REPORTED.

## SPORT FISHERY

### CLATSOP BEACH

THE SPRING AND SUMMER HARVEST WAS 991,788 CLAMS WHICH INCLUDED 75,376 WASTED CLAMS. THE AVERAGE NUMBER OF CLAMS PER DIGGER TRIP WAS 15.3 FOR 59,771 DIGGER TRIPS. CLAM ABUNDANCE WAS EVENLY FOUND ON MOST AREAS. AREA 3 CONTRIBUTED 36% OF THE CLAMS AND 39% OF THE EFFORT. TABLE 1 LIST 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 1987.

AREA	MILES OF BEACH	NO. OF DIGGER TRIPS	CLAMS DUG/ DIGGER TRIPS	NO. OF CLAMS DUG	NO. OF CLAMS WASTED	HARVEST TOTAL
1	3.6	5,032	15.5	78,803	6,399	84,202
2	6.2	11,914	17.0	202,475	16,654	219,129
3	5.0	23,506	14.3	335,674	27,610	363,284
4	1.2	10,583	16.0	169,182	13,915	183,097
5	2.0	8,736	15.0	131,278	10,798	142,076
TOTAL		59,771	15.3	916,412	75,376	991,788

AREA 1 COLUMBIA RIVER SOUTH JETTY TO FORT STEVENS PARK RD.

AREA 2 FORT STEVENS PARK RD. TO SUNSET BEACH RD.

AREA 3 SUNSET BEACH RD. TO GEARHART BEACH RD.

AREA 4 GEARHART BEACH RD. TO MECANICUM RIVER

AREA 5 MECANICUM RIVER TO TILLAMOOK HEAD

CLAM WASTAGE AVERAGE 7.6% IN THE SPRING AND BECAME A PROBLEM IN AREAS 4 AND 5. SUMMER AND FALL RANDOM SAMPLES FOUND THE 1986 YEAR CLASS TO BE IN AVERAGE NUMBERS AND HIGH ON THE BEACH IN MOST AREAS. THE HEAVIEST SET OCCURED IN AREA 1. THE AGE COMPOSITION OF SPORT DUG CLAMS IN TABLE 3 SHOWS THE DOMINATE 1985 YEAR CLASS AND THE LACK OF OLDER CLAMS.

EXCELLENT FALL GROWTH MADE THE FALL FISHERY MORE ATTRACTIVE

TABLE 2 ANNUAL HARVEST AND EFFORT DATA FOR THE FISHERY.

YEAR	COMMERCIAL FISHERY			SPORT FISHERY		CLAM WASTAGE	TOTAL HARVEST
	NO. OF DIGGERS	NO. OF CLAMS	NO. OF DIGGERS	CLAMS PER DIG. TRIP	NO. OF CLAMS		
1955	295	904000	56000	21.6	1212000	295000	2411000
1956	253	490000	60000	17.7	1061000	295000	1846000
1957	193	336000	77000	21.4	1646000	416000	2398000
1958#	221	386000	89000	18.9	1679000	218000	2283000
1959	118	179000	54000	12.0	646000	124000	949000
1960	93	154000	48000	12.4	596000	46000	796000
1961	58	80000	51000	11.4	583000	70000	733000
1962	79	102000	56000	15.9	892000	105000	1099000
1963	77	107000	55000	13.0	713000	70000	890000
1964	125	125000	71000	15.5	1098000	264000	1487000
1965	213	399000	76000	14.9	1134000	186000	1719000
1966	217	282000	78000	13.6	1052000	434000	1768000
1967	297	494000	74000	19.9	1472000	195000	2161000
1968	340	361000	64000	13.0	831000	162000	1354000
1969	185	111000	59000	14.4	851000	155000	1117000
1970	79	61000	56000	12.8	751000	125000	901000
1971	134	123000	77000	12.6	968000	213000	1304000
1972	76	49000	69000	9.2	636000	139000	824000
1973#	111	89000	76000	9.5	725000	159000	973000
1974	58	32000	44000	7.9	347000	5000	384000
1975	146	171000	75000	10.5	785000	157000	1113000
1976	391	717000	119000	12.0	1431000	63000	2211000
1977#	269	143000	51000	9.6	499000	33000	675000
1978	253	205000	72000	11.8	849000	137000	1191000
1979	236	180000	90000	10.7	958000	63000	1201000
1980	145	116000	70000	10.6	747000	143000	1006000
1981	91	128000	30000	6.2	187000	49000	364000
1982	209	165000	84000	9.1	758000	123000	1046000
1983#	9	1000	32000	3.3	105000	12000	118000
1984*	34	37000	23000	14.8	341000	15000	393000
1985*	340	303000	94000	10.4	984000	147000	1434000
1986*	51	18000	46000	5.3	260000	33000	311000
1987*	173	236000	68000	14.9	1010000	83000	1329000

TEN YEAR AVERAGE

839000

\* FALL FISHERY INCLUDED

# OCCURRENCES OF EL NINO

AND CONTRIBUTED A CALCULATED 101,400 CLAMS (OF WHICH 7700 WERE WASTED) TAKEN ON 8,100 DIGGER TRIPS FOR AN AVERAGE OF 11.6 CLAMS PER TRIP. THE FALL HARVEST IS INCLUDED IN ANNUAL HARVEST, TABLE 2.

THE TOTAL SPORT HARVEST WAS 1,093,000 CLAMS WHICH INCLUDES 83,000 WASTED CLAMS. THE TOTAL HARVEST WAS 56% OVER THE 10 YEAR AVERAGE.

TABLE 3. AGE COMPOSITION IN PERCENT OF SPORT DUG CLAMS, FROM CLATSOP BEACH, 1982-1987.

YEAR OF HARVEST	AGE					
	0	1	2	3	4	5+
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	0.3	0.0	0.0
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
10-YEAR AVERAGE	30.4	59.8	8.1	1.4	0.2	0.1

MANY COMPLAINTS WERE RECEIVED ABOUT THE NUMBER OF WASHINGTON DIGGERS ON THE OREGON BEACHES DUE TO WASHINGTON RAZOR CLAM SEASONS BEING CLOSED. DIGGERS VOICED THE CONCERN FOR NEEDING A LICENSE TO DIG RAZOR CLAMS. THERE IS SUBSTANTIAL SUPPORT FROM DIGGERS FOR HAVING A LICENSE REQUIRED FOR HARVESTING SHELLFISH AND MOST FEEL A OUT-OF-STATE LICENSE FEE BE REQUIRED EQUAL TO WASHINGTONS. DRIVING ON CLAM BEDS IS BECOMING MORE OF A PROBLEM AND STATE POLICE AND OUR DEPARTMENT HAS HAD MANY CALLS ON THE NEED FOR ENFORCEMENT.

#### BEACHES SOUTH OF TILLAMOOK HEAD

DIGGING WAS POOR IN MOST AREAS IN THE NEWPORT AREA BUT CLAMS WERE TAKEN FROM SOUTH SLOUGH SPIT IN COOS BAY AND SHORT SANDS BEACH AT CANNON BEACH. DIGGERS NUMBERING UP TO 50 PER DAY WERE COUNTED ON BETTER TIDES IN APRIL AND MAY ON SHORT SANDS BUT DIGGING WAS THROUGH BY JUNE. CATCH DATA IS LISTED IN TABLE 4.

TABLE 4. AREA CATCH DATA FOR BEACHES SOUTH OF TILLAMOOK HEAD.

BEACHES	NO. DIG.	NO. CLAMS	AV. CLAMS	AGE COMP. IN PERCENT			
				0	1	2	3+
INDIAN	2	0	0.0				
ARCH CAPE	3	0	0.0				
SHORT SANDS	17	213	12.5	40.6	50.3	9.1	
AGATE BEACH (NEWPORT)	4	4	1.0				
SOUTH SLOUGH (COOS BAY)	4	72	18.0				

## COMMERCIAL FISHERY

COMMERCIAL HARVESTERS LANDED 29,197 POUNDS ON 2344 TRIPS. A PRICE OF \$2.25 A POUND ATTRACTED 276 DIGGERS INTO GETTING PERMITS BUT ONLY 173 LANDED. SOME DIGGERS QUIT DUE TO SMALL CLAMS. THE 1985 YEAR CLASS DOMINATED SPRING CATCHES. AGE COMPOSITIONS OF THE CATCH IS LISTED IN TABLE 5. RANDOM FALL SAMPLES INDICATED THAT 70% OF THE POPULATION WAS NOT OF COMMERCIAL SIZE AT THAT TIME. SOME WASTAGE WAS OBSERVED ON AREA 3. MANY DIGGERS FAILED TO TURN IN THEIR LOGS DURING THE YEAR BUT TURNED THEM IN ON APPLYING FOR THEIR 1988 PERMIT.

TABLE 5. AGE COMPOSITION IN PERCENT OF COMMERCIAL DUG CLAMS FROM CLATSOP BEACH, 1982-1987.

YEAR OF HARVEST	AGE					
	0	1	2	3	4	5+
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
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
10-YEAR AVERAGE	12.0	69.7	14.1	3.1	0.8	0.3

## MISCELLANEOUS PROJECTS

SAMPLES OF RAZOR CLAMS HAVE BEEN SENT TO O.S.U. FOR EXAMINATION OF INFESTATIONS OF NIX. AT THIS TIME LEVELS OF NIX HAS NOT BEEN HIGH ENOUGH TO CAUSE LOSSES OF CLAMS. MEAT CONDITION AND STAMINA OF OLDER CLAMS (THIRD YEAR CLAMS AND UP) WAS NOTED TO BE VERY POOR IN 1986. SAMPLING OF MOISTURE CONTENT IN CLAMS WAS STARTED TO SEE IF THERE MAY BE A CONNECTION TO NIX.

MOISTURE WAS RECOMMENDED AS A EASY TEST TO PERFORM WHICH REFLECTS THE GENERAL CONDITION OF THE MEAT. PROCEDURES FOR SAMPLING (1). USE CLAMS OF THE SAME SIZE, (2). CLEAN CLAM AND REMOVE DIGGER, (3). BLOT MEAT FREE OF EXCESS MOISTURE, (4). WEIGH CLAMS AND CONTINUE TO WEIGH AT 1/2 HOUR INTERVALS, (5). BAKE AT 350 DEGREES. RESULTS OF TESTING SHOWED A 71.3 TO 82.1% RANGE IN MOISTURE LOSS. TABLE 6 SHOWS WEIGHT LOSS BY PERCENT OF BODY WEIGHT. THE LOWER THE PERCENTAGE OF MOISTURE LOST THE BETTER THE MEAT CONDITION.

TABLE 6. PERCENTAGE OF WEIGHT LOST BY MONTH

PERCENT WEIGHT LOST	1986			1987											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
82.0						+		+							
81.0							+		+	+	+				
80.0															
79.0	+														
78.0		+													+
77.0											+	+			
76.0													+		
75.0														+	
74.0															
73.0			+		+										
72.0															
71.0				+											
70.0															

A BANN ON SHELLFISH HARVESTING WAS IN EFFECT JULY 1 THROUGH JULY 9 ON THE NORTH COAST. A SAMPLE OF RAZOR CLAMS WAS SENT IN FOR P.S.P TESTING DURING THE CLOSURE FOR SHELLFISH OF WHICH A RATE OF 98ug WAS FOUND. A SECOND SAMPLE WAS CHECKED IN SEPTEMBER WITH A RATE OF 45ug.