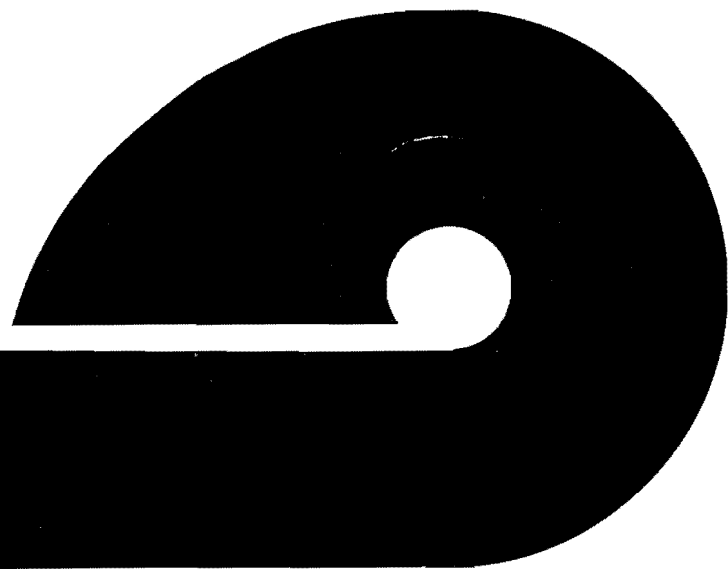


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# SIUSLAW RIVER ESTUARY

A STUDY IN RESOURCE USE  
DIVISION OF MANAGEMENT AND RESEARCH



# 1971 SIUSLAW RIVER ESTUARY RESOURCE USE STUDY

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Division of Management and Research

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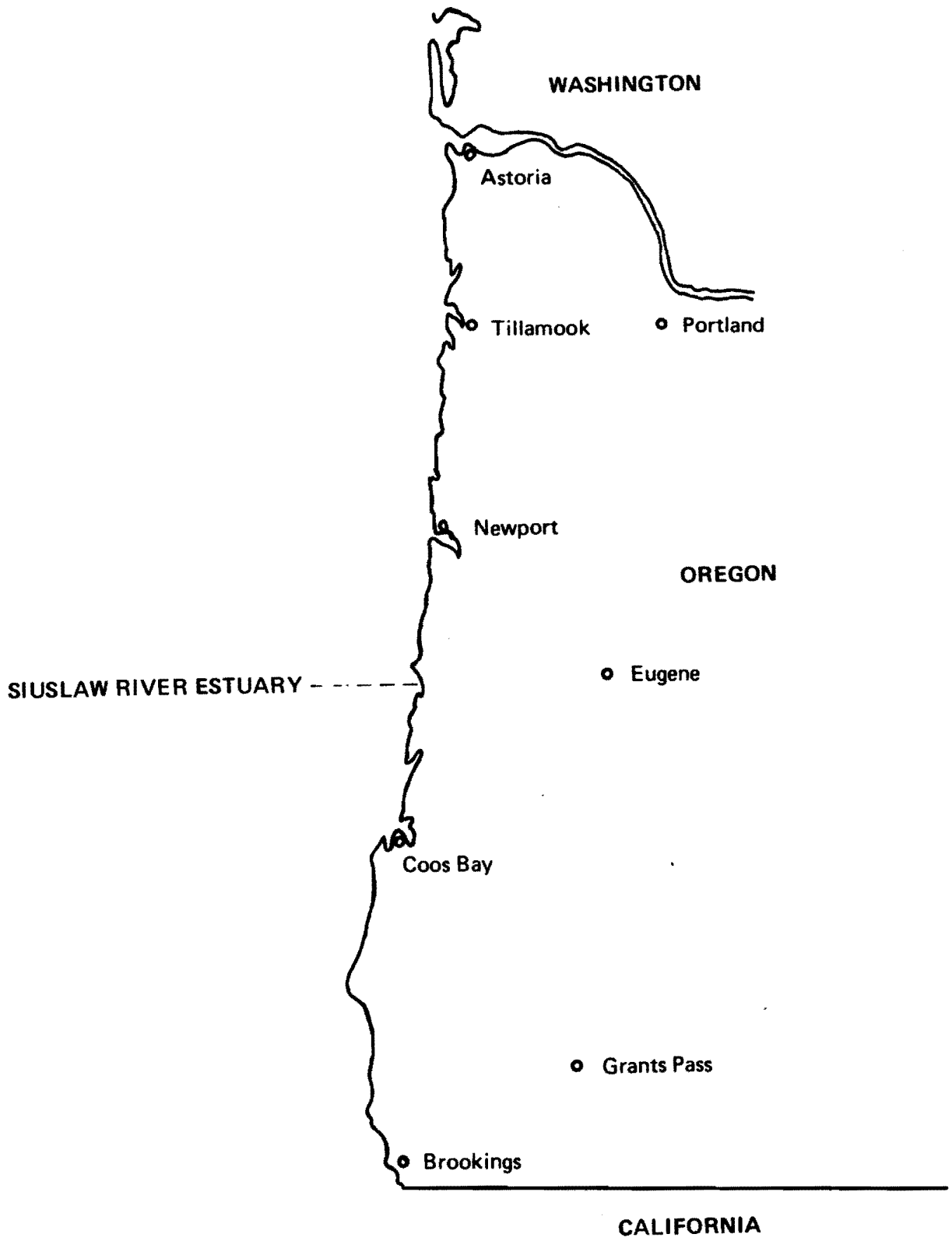


Figure 1. Location of Siuslaw River Estuary

# **1971 SIUSLAW RIVER RESOURCE USE STUDY**

## **INTRODUCTION**

In 1971 the Fish Commission of Oregon conducted a comprehensive study of the recreational use of marine food fish, shellfish, and other miscellaneous invertebrates in 16 Oregon estuaries. Anadromous sport fisheries in the upper portions of most estuaries were not included in the study due to lack of manpower to adequately sample those areas. The study was supported by state general funds and by the National Marine Fisheries Service under the Commercial Fisheries Research and Development Act. The U.S. Army Corps of Engineers funded portions of the data processing, preparation of a series of marine resource maps, and a special report for each estuary. This report summarizes the results of the Siuslaw River Estuary study.

## **PROCEDURE**

The Siuslaw River Estuary is located 202 miles south of the Columbia River (Figure 1). The 2,245-acre bay contains 756 acres of tidelands.

From March 1 through October 31, 1971, boat and shore anglers, tideflat users, and scuba divers were interviewed for catch, effort, and origin data in a program designed for statistical analysis. Resource users were categorized as (1) county: people that reside west of the coast range summit within the county where the sampled estuary is found, (2) state: residents of Oregon not classified as county, and (3) nonstate: nonresidents of Oregon.

The study area extended from the seaward ends of the two jetties upstream 7 miles to and including the confluence of the North Fork with the main river. Survey areas and their station numbers are outlined in Table 1 and are shown in Figure 2.

The 1971 Siuslaw River Estuary commercial landings of fish and shellfish and their value, taken from Fish Commission catch statistic reports, are included as supplemental information.

The following maps were prepared using information collected in previous Fish Commission studies and the 1971 resource use survey.

1. Principal boat fishing areas.
2. Clam beds.
3. Eel grass beds.
4. Food production areas, fish feeding areas, fish migration routes, and known herring spawning area.

## **RESULTS**

During the study 5,031 boat, shore, tideflat, and scuba resource user interviews were obtained to estimate catch and effort values and angler origin. Values presented in the tables are estimates and have been rounded off when used in the text.

### **Boat Fishery**

Figure 3 shows the principal boat fishing areas of the Siuslaw River Estuary. Both sport and commercial boat fishing areas are combined on the map. Principal species of fish and shellfish caught and peak periods of fishing activity are outlined.

An estimated 4,200 boat angler trips were expended on the estuary below 101 bridge (Table 2). No boat anglers were observed fishing between the 101 bridge and Cox Island (B-2). Boat anglers spent 13,100 hours fishing (Table 3). Peak month of activity was August.

Ten species of fish and one species of crab were identified in the boat anglers' catch (Table 4). Dungeness crab was the principal species taken and accounted for 66% of the total number of animals caught. Peak catch occurred in July and fishing success (catch per hour) was highest during October (Table 5).

### **Shore Fishery**

Interview data revealed that 22,500 shore angler trips were expended on the estuary (Table 6). The jetties and the South Jetty Pier were the principal fishing areas; 75% of the anglers fished there. Shore anglers spent 61,700 hours fishing (Table 7). Peak months of activity were July and August.

Twenty-one species of fish and one species of crab were identified in the shore anglers' catch (Table 8). Redtail surfperch, pile perch, and Pacific staghorn sculpin were the principal species taken, accounting for 53% of the total catch. Peak catch occurred during July while fishing success was highest in June (Table 9).

### **Tideflat Fishery**

Figure 4 shows the distribution of the three species of bay clams found in the estuary. Piddock and littleneck clams are taken near the north bank of the lower estuary, and softshells are found scattered throughout the Florence-Cox Island area. Principal areas of digging are outlined on the map.

Table 10 shows that 5,900 tideflat user trips were expended to harvest clams and other invertebrates from the Siuslaw River Estuary. Tideflat users spent 8,700 hours collecting these animals (Table 11). Peak month of activity was July. Major digging effort (88%) was at Cox Island and on both sides of the North Fork Bridge area where 5,200 user trips, representing 7,600 hours, were expended.

Three species of clams, Dungeness crab, and four other miscellaneous species were harvested by tideflat users (Table 12). Softshell clams accounted for 89% of the animals dug. Cox Island was the principal area of catch, providing 55,100 clams or 38% of the total harvest. Peak catch was in July while digging success was highest in March (Table 13).

### **Scuba Fishery**

The small number of scuba divers interviewed on Siuslaw River Estuary precluded making an estimate of catch and effort for this fishery.



### Angler Origin

Approximately 70% of the anglers interviewed were residents of Oregon living outside of western Lane County, 21% were from western Lane County, and 9% were out-of-state residents.

	Angler Origin		
	County	State	Non-State
Boat	957	3,125	92
Shore	3,212	16,737	2,544
Tideflat	2,511	2,960	419
Total	6,680	22,822	3,055
Percentage	20.5	70.1	9.4

### Combined Recreational Fisheries

A total of 32,600 resource user trips (4,200 boat, 22,500 shore, and 5,900 tideflat) were expended on the Siuslaw River Estuary during the study (Table 14). The 32,600 user trips represented 83,400 hours of effort (13,100 boat, 61,600 shore, and 8,700 tideflat). Peak activity occurred in August for the boat fishery and July for the shore and tideflat fisheries. Table 15 shows that peak activity occurred in July for all fisheries. Areas receiving principal use for boat, shore, and tideflat fisheries were below Highway 101 bridge (100%), South Jetty Pier (30%), and Cox Island (34%), respectively.

Anglers of the three fisheries harvested 184,400 animals (143,100 clams, 33,600 fish, 7,000 crabs, and 700 miscellaneous invertebrates). Dungeness crab comprised 66% of the boat anglers' total catch. Fish made up 92% of the shore anglers' catch with redbait surfperch the main species caught. Softshell clams comprised 89% of the tideflat users' total take. Comparing the catch for all three fisheries revealed tideflat users harvested 143,800 or 78% of the total animals taken. Boat and shore anglers caught 6,400 and 34,300 animals, respectively. Peak catch was in July for all three fisheries.

### Commercial Fisheries

Commercial landings of marine food fish and shellfish caught in the estuary in 1971 totaled 13,372 pounds valued at \$2,160 (fisherman's level) according to Fish Commission landing statistics. Shad was the principal species landed, followed by Dungeness crab.

Species	Pounds	Value
Shad	8,290	\$1,000
Dungeness crab	3,800	950
Striped bass	1,242	199
Smelt	40	11
Total	13,372	2,160

### **Eel Grass Beds**

Principal eel grass beds are found scattered throughout the Florence-Cox Island area (Figure 5). These beds are usually found in areas of shallow water and high salinities. Clams and other important marine fauna are usually an integral part of the eel grass beds.

### **Food Production Areas, Fish Feeding Areas, Fish Migration Routes, and Known Herring Spawning Area**

Figure 6 shows food production areas, fish feeding areas, and fish migration routes in the estuary. Also outlined on the map is the only known herring spawning area.

Estuaries are some of the most productive lands on earth. Productivity of estuarial areas is directly related to length of shore line, depth of water, and geographical location. Within each estuary tidelands are generally more productive than deep water channel areas.

Production of food organisms occurs throughout the entire estuary. These food organisms include the microscopic phytoplankton and other algae, zooplankton, small crustaceans, mollusks, annelids, and fish which are all important to the estuarine food chain.

The fish feeding areas of the estuary (for finfish and shellfish) include all areas under tidal influence. Tidelands as well as deep water channels and rocky areas provide a variety of rearing habitat. Species of fish, numbers, and distribution within each area are generally related to type of food organisms, bottom type, water depth, and water quality.

Fish and shellfish typically found associated with the estuary tidelands include flounder, sole, perch, salmon, trout, crabs, shrimp, and clams. In addition to those species found on tidelands, shad, striped bass, herring, anchovy, and smelt reside in the estuary channels; period of residency is dependent on species, season, and location. A taxonomic list of the species of marine animals observed in this study is contained in Table 16.

Rocky areas in the estuary are preferred feeding and rearing areas of perch, greenling, and cabezon. These fish reside near jetties and rock groins of the lower bay.

Fish migration routes are those areas traveled by fish to and from spawning, feeding, or rearing areas. Fish migration routes through the estuary are as varied as the fish that use them. Species and age class of fish, season, water depth, and water quality all play an important role in fish migration patterns.

The use of channel areas throughout the estuary by salmon, trout, perch, shad, striped bass, and baitfish is well known. In addition, during high tide, these same fish frequently swim across tidelands to reach their destination.

During the months of January through March, herring eggs can be found adhered to pilings, rocks, or eel grass in the area outlined in Figure 6. More complete observations in the future will no doubt reveal other areas used by these fish.

**Table 1. LOCATION OF SAMPLING STATIONS  
Siuslaw River Estuary, 1971**

<b>Fishing Activity</b>	<b>Station Number</b>	<b>Location</b>
Boat	B-1	Below 101 bridge (westward end of jetties to Highway 101 bridge)
	B-2	Above 101 bridge (Highway 101 bridge upstream to east end of Cox Island)
Shore	S-1	North Jetty
	S-2	Siuslaw Pacific Moorage
	S-3	Siuslaw Pacific Moorage Bank (river bank upstream from Siuslaw Pacific Moorage)
	S-4	City docks (Bay Bridge Marina, public dock, Peterson Dock, public boat ramp and dock)
	S-5	North Fork (river bank upstream of North Fork Bridge)
	S-6	South Jetty Pier
	S-7	South Jetty
Tideflat	T-1	Piddock beds (near North Jetty)
	T-2	South Jetty Pier
	T-3	Bay Bridge Marina
	T-4	Glenada
	T-5	West side, North Fork Bridge (west side of North Fork Bridge)
	T-6	East side, North Fork Bridge (east side of North Fork Bridge)
	T-7	Cox Island

**Table 2. NUMBER OF BOAT ANGLER TRIPS  
By Month and Area, Siuslaw River Estuary  
March 1 through October 31, 1971**

<b>Month</b>	<b>Boat Fishing Area and Station Number</b>		<b>Total</b>	<b>Percentage</b>
	<b>Below 101 Bridge B-1</b>	<b>Above 101 Bridge B-2</b>		
March	46	0	46	1.1
April	164	0	164	3.9
May	598	0	598	14.3
June	585	0	585	14.0
July	637	0	637	15.3
August	1,114	0	1,114	26.7
September	838	0	838	20.1
October	192	0	192	4.6
<b>Total</b>	<b>4,174</b>	<b>0</b>	<b>4,174</b>	<b>100.0</b>
<b>Percentage</b>	<b>100.0</b>	<b>0.0</b>	<b>100.0</b>	

**Table 3. HOURS OF BOAT ANGLER USE  
By Month and Area, Siuslaw River Estuary  
March 1 through October 31, 1971**

Month	Boat Fishing Area and Station Number		Total	Percentage
	Below 101 Bridge	Above 101 Bridge		
	B-1	B-2		
March	106	0	106	0.8
April	374	0	374	2.9
May	1,364	0	1,364	10.4
June	1,333	0	1,333	10.2
July	2,042	0	2,042	15.6
August	3,786	0	3,786	28.9
September	3,424	0	3,424	26.1
October	691	0	691	5.3
Total	13,120	0	13,120	100.2
Percentage	100.0	0.0	100.0	

**Table 4. MARINE ANIMALS CAUGHT BY BOAT ANGLERS  
Siuslaw River Estuary, by Species and Area  
March 1 through October 31, 1971**

Species	Boat Fishing Area and Station Number		Total	Percentage
	Below 101 Bridge	Above 101 Bridge		
	B-1	B-2		
Dungeness crab	4,216	0	4,216	66.1
Pacific staghorn sculpin	1,209	0	1,209	18.9
Starry flounder	336	0	336	5.3
Redtail surfperch	313	0	313	4.9
Shiner perch	180	0	180	2.8
Coho salmon (adult)	35	0	35	0.5
Pacific herring	31	0	31	0.5
Chinook salmon (adult)	17	0	17	0.3
Walleye surfperch	15	0	15	0.2
Pile perch	15	0	15	0.2
Pacific tomcod	15	0	15	0.2
Total	6,382	0	6,382	99.9
Percentage	100.0	0.0	100.0	

**Table 5. SPORT BOAT FISHING DATA**  
**Siuslaw River Estuary, All Areas**  
**1971**

	March	April	May	June	July	August	Sept.	Oct.	Total	Percentage
Angler trips (number)	46	164	598	585	637	1,114	838	192	4,174	—
Fishing effort (hours)	106	374	1,364	1,333	2,042	3,786	3,424	691	13,120	—
Fishing success (catch/hr.)	0.72	0.72	0.72	0.72	0.71	0.17	0.24	1.69	0.49	—
Catch (number)										
Dungeness crab	16	57	207	203	1,224	572	769	1,168	4,216	66.1
Pacific staghorn sculpin	40	142	519	508	0	0	0	0	1,209	18.9
Starry flounder	10	35	129	127	0	18	17	0	336	5.3
Redtail surfperch	4	14	51	50	159	18	17	0	313	4.9
Shiner perch	6	21	77	76	0	0	0	0	180	2.8
Coho salmon (adult)	0	0	0	0	0	18	17	0	35	0.5
Pacific herring	0	0	0	0	31	0	0	0	31	0.5
Chinook salmon (adult)	0	0	0	0	0	0	17	0	17	0.3
Walleye surfperch	0	0	0	0	15	0	0	0	15	0.2
Pile perch	0	0	0	0	15	0	0	0	15	0.2
Pacific tomcod	0	0	0	0	15	0	0	0	15	0.2
<b>Total</b>	<b>76</b>	<b>269</b>	<b>983</b>	<b>964</b>	<b>1,459</b>	<b>626</b>	<b>837</b>	<b>1,168</b>	<b>6,382</b>	<b>99.9</b>
Percentage	1.2	4.2	15.4	15.1	22.8	9.8	13.1	18.3	99.9	

**Table 6. NUMBER OF SHORE ANGLER TRIPS  
By Month and Area, Siuslaw River Estuary  
March 1 through October 31, 1971**

Month	Shore Fishing Area and Station Number							Total	Percentage
	North Jetty S-1	Siuslaw Pacific Moorage S-2	S.P.M. Bank S-3	City Docks S-4	North Fork S-5	South Jetty Pier S-6	South Jetty S-7		
March	20	0	0	23	0	157	20	220	1.0
April	123	24	0	80	0	910	451	1,588	7.1
May	852	151	165	181	0	607	422	2,378	10.6
June	313	45	12	413	0	744	1,096	2,623	11.7
July	1,407	171	78	1,138	0	1,495	1,752	6,041	26.9
August	1,662	335	94	679	0	1,649	1,250	5,669	25.2
September	313	56	2	819	0	797	213	2,200	9.8
October	15	372	0	895	0	448	44	1,774	7.9
<b>Total</b>	<b>4,705</b>	<b>1,154</b>	<b>351</b>	<b>4,228</b>	<b>0</b>	<b>6,807</b>	<b>5,248</b>	<b>22,493</b>	<b>100.2</b>
<b>Percentage</b>	<b>20.9</b>	<b>5.1</b>	<b>1.6</b>	<b>18.8</b>	<b>0</b>	<b>30.3</b>	<b>23.3</b>	<b>100.0</b>	

**Table 7. HOURS OF SHORE ANGLER USE  
By Month and Area, Siuslaw River Estuary  
March 1 through October 31, 1971**

Month	Shore Fishing Area and Station Number							Total	Percentage
	North Jetty S-1	Siuslaw Pacific Moorage S-2	S.P.M. Bank S-3	City Docks S-4	North Fork S-5	South Jetty Pier S-6	South Jetty S-7		
March	56	0	0	63	0	430	56	605	1.0
April	338	67	0	220	0	2,494	1,237	4,356	7.1
May	2,336	416	454	495	0	1,663	1,157	6,521	10.6
June	858	123	33	1,132	0	2,039	3,002	7,187	11.6
July	3,854	468	214	3,118	0	4,097	4,800	16,551	26.8
August	4,553	920	258	1,860	0	4,517	3,425	15,533	25.2
September	858	155	8	2,245	0	2,183	586	6,035	9.8
October	41	1,021	1	2,451	0	1,227	122	4,863	7.9
<b>Total</b>	<b>12,894</b>	<b>3,170</b>	<b>968</b>	<b>11,584</b>	<b>0</b>	<b>18,650</b>	<b>14,385</b>	<b>61,651</b>	<b>100.0</b>
<b>Percentage</b>	<b>20.9</b>	<b>5.1</b>	<b>1.6</b>	<b>18.8</b>	<b>0.0</b>	<b>30.3</b>	<b>23.3</b>	<b>100.0</b>	

**Table 8. MARINE ANIMALS CAUGHT BY SHORE ANGLERS**  
**Siuslaw River Estuary, by Species and Area**  
**March 1 through October 31, 1971**

Species	Shore Fishing Area and Station Number							Total	Percentage
	North Jetty S-1	Siuslaw Pacific Moorage S-2	S.P.M. Bank S-3	City Docks S-4	North Fork S-5	South Jetty Pier S-6	South Jetty S-7		
Dungeness crab	104	776	0	926	0	924	72	2,802	8.2
Redtail surfperch	2,317	11	300	75	0	1,021	5,365	9,089	26.5
Pile perch	2,377	18	0	2,460	0	11	333	5,199	15.2
Pacific staghorn sculpin	35	175	312	1,814	0	1,313	362	4,011	11.7
Shiner perch	172	431	152	1,018	0	1,442	72	3,287	9.6
Pacific herring	0	0	11	2,489	0	69	126	2,695	7.9
Striped seaperch	1,332	12	24	433	0	29	211	2,041	6.0
Starry flounder	245	66	69	94	0	385	551	1,410	4.1
Buffalo sculpin	174	268	11	173	0	369	207	1,202	3.5
Walleye surfperch	12	5	11	737	0	0	47	812	2.4
Kelp greenling	266	0	0	0	0	17	151	434	1.3
White seaperch	12	0	0	90	0	0	165	267	0.8
Pacific tomcod	24	0	12	124	0	11	48	219	0.6
Rock greenling	70	0	0	0	0	0	26	96	0.3
Sand sole	0	0	0	0	0	0	76	76	0.2
Whitespotted greenling	30	0	0	0	0	0	19	49	0.1
Cabazon	0	0	0	0	0	0	39	39	0.1
Chinook salmon (adult)	12	0	0	0	0	0	12	24	0.1
Coho salmon (adult)	24	0	0	0	0	0	0	24	0.1
Topsmelt	0	0	0	13	0	0	0	13	< 0.1
Yellow perch	0	0	0	13	0	0	0	13	< 0.1
Black rockfish	11	0	0	0	0	0	0	11	< 0.1
Coho salmon (juvenile)	0	0	0	11	0	0	0	11	< 0.1
Chinook salmon (juvenile)	0	0	0	5	0	0	0	5	< 0.1
Unidentified fish	131	0	0	245	0	0	45	421	1.2
<b>Total</b>	<b>7,348</b>	<b>1,762</b>	<b>902</b>	<b>10,720</b>	<b>0</b>	<b>5,591</b>	<b>7,927</b>	<b>34,250</b>	<b>99.9</b>
<b>Percentage</b>	<b>21.5</b>	<b>5.1</b>	<b>2.6</b>	<b>31.3</b>	<b>0.0</b>	<b>16.3</b>	<b>23.1</b>	<b>99.9</b>	

**Table 9. SHORE FISHING DATA**  
**Siuslaw River Estuary, All Areas**  
**1971**

	March	April	May	June	July	August	Sept.	Oct.	Total	Percentage
Angler trips (number)	220	1,588	2,378	2,623	6,041	5,669	2,200	1,774	22,493	—
Fishing effort (hours)	605	4,356	6,521	7,187	16,551	15,533	6,035	4,863	61,651	—
Fishing success (catch/hr.)	0.12	0.34	0.56	0.72	0.65	0.48	0.48	0.55	0.56	—
Catch (number)										
Dungeness crab	0	13	91	69	251	293	316	1,769	2,802	8.2
Redtail surfperch	48	1,011	1,969	2,478	1,503	1,953	99	28	9,089	26.5
Pile perch	0	0	22	129	2,702	576	1,582	188	5,199	15.2
Pacific staghorn sculpin	0	19	160	555	1,035	1,437	451	354	4,011	11.7
Shiner perch	0	0	240	663	1,077	1,153	0	154	3,287	9.6
Pacific herring	0	0	195	22	1,704	774	0	0	2,695	7.9
Striped seaperch	3	59	228	211	904	477	126	33	2,041	6.0
Starry flounder	7	210	275	426	398	85	9	0	1,410	4.1
Buffalo sculpin	7	85	263	283	304	24	117	119	1,202	3.5
Walleye surfperch	0	0	80	188	199	269	54	22	812	2.4
Kelp greenling	0	6	22	23	132	233	18	0	434	1.3
White seaperch	0	0	11	0	92	110	54	0	267	0.8
Pacific tomcod	0	0	0	34	132	48	0	5	219	0.6
Rock greenling	0	6	11	0	79	0	0	0	96	0.3
Sand sole	0	0	0	11	53	12	0	0	76	0.2
Whitespotted greenling	0	38	11	0	0	0	0	0	49	0.1
Cabezon	0	0	0	0	39	0	0	0	39	0.1
Chinook salmon (adult)	0	0	0	0	0	24	0	0	24	0.1
Coho salmon (adult)	0	0	0	0	0	24	0	0	24	0.1
Topsmelt	0	0	0	0	13	0	0	0	13	< 0.1
Yellow perch	0	0	0	0	13	0	0	0	13	< 0.1
Black rockfish	0	0	0	11	0	0	0	0	11	< 0.1
Coho salmon (juvenile)	0	0	0	0	0	0	0	11	11	< 0.1
Chinook salmon (juvenile)	0	0	0	0	0	0	0	5	5	< 0.1
Unidentified fish	7	26	80	59	130	24	90	5	421	1.2
Total	72	1,473	3,658	5,162	10,760	7,516	2,916	2,693	34,250	99.9
Percentage	0.2	4.3	10.7	15.1	31.4	21.9	8.5	7.9	100.0	



**Table 10. NUMBER OF TIDEFLAT USER TRIPS  
By Month and Area, Siuslaw River Estuary  
March 1 through October 31, 1971**

Month	Tideflat and Station Number							Total	Percentage
	Piddock Beds T-1	South Jetty Pier T-2	Bay Bridge Marina T-3	Glenada T-4	West Side N.F.B. T-5	East Side N.F.B. T-6	Cox Island T-7		
March	0	0	0	0	0	0	144	144	2.4
April	67	0	22	2	72	404	348	915	15.5
May	104	0	0	0	236	371	313	1,024	17.4
June	56	0	0	10	216	400	385	1,067	18.1
July	253	0	0	0	440	366	297	1,356	23.0
August	95	0	0	0	307	207	258	867	14.7
September	75	0	0	0	153	31	258	517	8.8
October	0	0	0	0	0	0	0	0	0.0
Total	650	0	22	12	1,424	1,779	2,003	5,890	99.9
Percentage	11.0	0.0	0.4	0.2	24.2	30.2	34.0	100.0	

**Table 11. HOURS OF TIDEFLAT USE  
By Month and Area, Siuslaw River Estuary  
March 1 through October 31, 1971**

Month	Tideflat and Station Number							Total	Percentage
	Piddock Beds T-1	South Jetty Pier T-2	Bay Bridge Marina T-3	Glenada T-4	West Side N.F.B. T-5	East Side N.F.B. T-6	Cox Island T-7		
March	0	0	0	0	0	0	156	156	1.8
April	96	0	50	4	103	577	496	1,326	15.3
May	138	0	0	0	313	497	414	1,362	15.7
June	80	0	0	14	311	588	550	1,543	17.8
July	409	0	0	0	778	624	480	2,291	26.4
August	143	0	0	0	504	326	389	1,362	15.7
September	91	0	0	0	185	38	311	625	7.2
October	0	0	0	0	0	0	0	0	0.0
Total	957	0	50	18	2,194	2,650	2,796	8,665	99.9
Percentage	11.0	0.0	0.6	0.2	25.3	30.6	32.3	100.0	

**Table 12. MARINE ANIMALS CAUGHT BY TIDEFLAT USERS  
Siuslaw River Estuary, by Species and Area  
March 1 through October 31, 1971**

Species	Tideflat and Station Number							Total	Percentage
	Piddock Beds T-1	South Jetty Pier T-2	Bay Bridge Marina T-3	Glenada T-4	West Side N.F.B. T-5	East Side N.F.B. T-6	Cox Island T-7		
Softshell clam	519	0	0	0	36,911	35,845	55,051	128,326	89.2
Piddock clam	14,740	0	0	0	0	0	0	14,740	10.3
Sea mussel	220	0	0	0	0	0	0	220	0.1
Ghost shrimp	0	0	0	0	93	0	0	93	0.1
Mud shrimp	0	0	0	0	42	0	0	42	< 0.1
Native littleneck clam	7	0	0	0	0	0	0	7	< 0.1
Dungeness crab	6	0	0	0	0	0	0	6	< 0.1
Algae	0	0	0	0	0	3	0	3	< 0.1
Unidentified shrimp	0	0	295	58	14	0	0	367	0.3
<b>Total</b>	<b>15,492</b>	<b>0</b>	<b>295</b>	<b>58</b>	<b>37,060</b>	<b>35,848</b>	<b>55,051</b>	<b>143,804</b>	<b>100.0</b>
<b>Percentage</b>	<b>10.8</b>	<b>0.0</b>	<b>0.2</b>	<b>&lt; 0.1</b>	<b>25.8</b>	<b>24.9</b>	<b>38.3</b>	<b>100.0</b>	

**Table 13. TIDEFLAT FISHING DATA**  
**Siuslaw River Estuary, All Areas**  
**1971**

	March	April	May	June	July	August	Sept.	Oct.	Total	Percentage
Angler trips (number)	144	915	1,024	1,067	1,356	867	517	0	5,890	—
Fishing effort (hours)	156	1,326	1,362	1,543	2,291	1,362	625	0	8,665	—
Fishing success (catch/hr.)	27.6	15.3	16.6	18.1	15.6	16.1	18.0	0.0	16.6	—
Catch (number)										
Softshell clam	4,253	18,099	20,759	25,872	28,917	19,468	10,958	0	128,326	89.2
Piddock clam	0	1,798	1,732	1,777	6,752	2,416	265	0	14,740	10.3
Sea mussel	0	0	0	220	0	0	0	0	220	0.1
Ghost shrimp	0	0	93	0	0	0	0	0	93	0.1
Mud shrimp	0	0	0	42	0	0	0	0	42	< 0.1
Native littleneck clam	0	0	7	0	0	0	0	0	7	< 0.1
Dungeness crab	0	0	3	0	0	3	0	0	6	< 0.1
Algae	0	0	0	3	0	0	0	0	3	< 0.1
Unidentified shrimp	0	353	11	3	0	0	0	0	367	0.3
Total	4,253	20,250	22,605	27,917	35,669	21,887	11,223	0	143,804	100.0
Percentage	3.0	14.1	15.7	19.4	24.8	15.2	7.8	0.0	100.0	

**Table 14. SUMMARY**  
**Number of Angler Trips, Hours of Effort, and Animals Caught**  
**Siuslaw River Estuary, by Station**  
**March 1 through October 31, 1971**

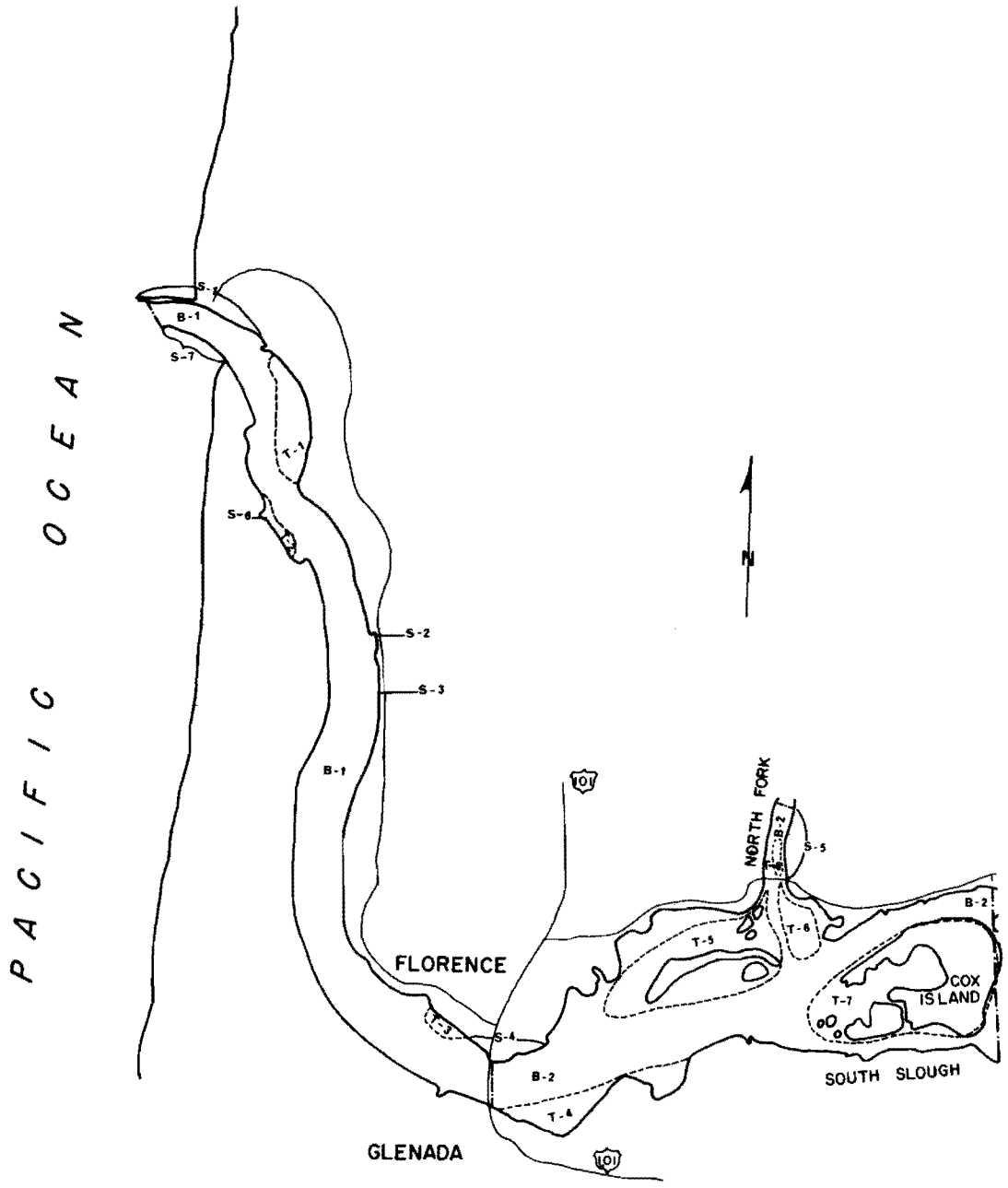
Station Number	No. Angler Trips	Angler Hours	Catch				Total
			Fish	Crabs	Clams	Misc. Invert.	
B-1	4,174	13,120	2,166	4,216	0	0	6,382
B-2	0	0	0	0	0	0	0
Total	4,174	13,120	2,166	4,216	0	0	6,382
S-1	4,705	12,894	7,244	104	0	0	7,348
S-2	1,154	3,170	986	776	0	0	1,762
S-3	351	968	902	0	0	0	902
S-4	4,228	11,584	9,794	926	0	0	10,720
S-5	0	0	0	0	0	0	0
S-6	6,807	18,650	4,667	924	0	0	5,591
S-7	5,248	14,385	7,855	72	0	0	7,927
Total	22,493	61,651	31,448	2,802	0	0	34,250
T-1	650	957	0	6	15,266	220	15,492
T-2	0	0	0	0	0	0	0
T-3	22	50	0	0	0	295	295
T-4	12	18	0	0	0	58	58
T-5	1,424	2,194	0	0	36,911	149	37,060
T-6	1,779	2,650	0	0	35,845	3	35,848
T-7	2,003	2,796	0	0	55,051	0	55,051
Total	5,890	8,665	0	6	143,073	725	143,804
Grand Total	32,557	83,436	33,614	7,024	143,073	725	184,436

**Table 15. SUMMARY**  
**Number of Angler Trips, Hours of Effort, and Animals Caught**  
**Siuslaw River Estuary, by Month**  
**March 1 through October 31, 1971**

Fishery	Month	No. Angler Trips	Angler Hours	Catch				Total
				Fish	Crabs	Clams	Misc. Invert.	
Boat	March	46	106	60	16	0	0	76
	April	164	374	212	57	0	0	269
	May	598	1,364	776	207	0	0	983
	June	585	1,333	761	203	0	0	964
	July	637	2,042	235	1,224	0	0	1,459
	August	1,114	3,786	54	572	0	0	626
	September	838	3,424	68	769	0	0	837
	October	192	691	0	1,168	0	0	1,168
	Total	4,174	13,120	2,166	4,216	0	0	6,382
	Shore	March	220	605	72	0	0	0
April		1,588	4,356	1,460	13	0	0	1,473
May		2,378	6,521	3,567	91	0	0	3,658
June		2,623	7,187	5,093	69	0	0	5,162
July		6,041	16,551	10,509	251	0	0	10,760
August		5,669	15,533	7,223	293	0	0	7,516
September		2,200	6,035	2,600	316	0	0	2,916
October		1,774	4,863	924	1,769	0	0	2,693
Total		22,493	61,651	31,448	2,802	0	0	34,250
Tideflat		March	144	156	0	0	4,253	0
	April	915	1,326	0	0	19,897	353	20,250
	May	1,024	1,362	0	3	22,498	104	22,605
	June	1,067	1,543	0	0	27,649	268	27,917
	July	1,356	2,291	0	0	35,669	0	35,669
	August	867	1,362	0	3	21,884	0	21,887
	September	517	625	0	0	11,223	0	11,223
	October	0	0	0	0	0	0	0
	Total	5,890	8,665	0	6	143,073	725	143,804
	Combined	March	410	867	132	16	4,253	0
April		2,667	6,056	1,672	70	19,897	353	21,992
May		4,000	9,247	4,343	301	22,498	104	27,246
June		4,275	10,063	5,854	272	27,649	268	34,043
July		8,034	20,884	10,744	1,475	35,669	0	47,888
August		7,650	20,681	7,277	868	21,884	0	30,029
September		3,555	10,084	2,668	1,085	11,223	0	14,976
October		1,966	5,554	924	2,937	0	0	3,861
Grand Total	32,557	83,436	33,614	7,024	143,073	725	184,436	

**Table 16. TAXONOMIC LIST OF SPECIES HARVESTED  
By Estuarine Resource Users, Siuslaw River Estuary  
March 1 through October 31, 1971**

<b>Common Name</b>	<b>Local Names</b>	<b>Scientific Name</b>
<b>Fish</b>		
Black rockfish	Black sea bass, black snapper	<i>Sebastes melanops</i>
Buffalo sculpin	Bullhead	<i>Enophrys bison</i>
Cabezon	Bullhead, rock cod	<i>Scorpaenichthys marmoratus</i>
Chinook salmon	King salmon, salmon	<i>Oncorhynchus tshawytscha</i>
Coho salmon	Silver salmon	<i>Oncorhynchus kisutch</i>
Kelp greenling	Seatrout	<i>Hexagrammos decagrammus</i>
Pacific herring		<i>Clupea harengus pallasi</i>
Pacific staghorn sculpin	Bullhead	<i>Leptocottus armatus</i>
Pacific tomcod		<i>Microgadus proximus</i>
Pile perch		<i>Rhacochilus vacca</i>
Redtail surfperch		<i>Amphistichus rhodoterus</i>
Rock greenling	Seatrout	<i>Hexagrammos lagocephalus</i>
Sand sole		<i>Psettichthys melanostictus</i>
Shiner perch	Shiner	<i>Cymatogaster aggregata</i>
Starry flounder		<i>Platichthys stellatus</i>
Striped seaperch	Rainbow perch	<i>Embiotoca lateralis</i>
Topsmelt		<i>Atherinops affinis</i>
Walleye surfperch		<i>Hyperprosopon argenteum</i>
White seaperch		<i>Phanerodon furcatus</i>
Whitespotted greenling	Seatrout	<i>Hexagrammos stelleri</i>
Yellow perch		<i>Perca flavescens</i>
<b>Crabs</b>		
Dungeness crab	Market crab	<i>Cancer magister</i>
<b>Clams</b>		
Native littleneck clam	Butter clam, steamer clam	<i>Venerupis staminea</i>
Piddock clam	Rock oyster	<i>Zirfaea pilsbryi</i> and <i>Penitella penita</i>
Softshell clam	Bay clam, mud clam	<i>Mya arenaria</i>
<b>Miscellaneous Invertebrates</b>		
Ghost shrimp	Sand shrimp	<i>Callinassa californiensis</i>
Mud shrimp	Sand shrimp	<i>Upogebia pugettensis</i>
Sea mussel		<i>Mytilus californianus</i>



**FIGURE 2.**  
**1971 FCO RESOURCE SURVEY**  
**SAMPLING AREAS**

- S - Shore Fishing Area
- B - Boat Fishing Area
- T - Tideflat Use Area

**SIUSLAW RIVER, OREGON**

SCALE IN FEET  
 2,000 0 2,000 4,000

LEGEND

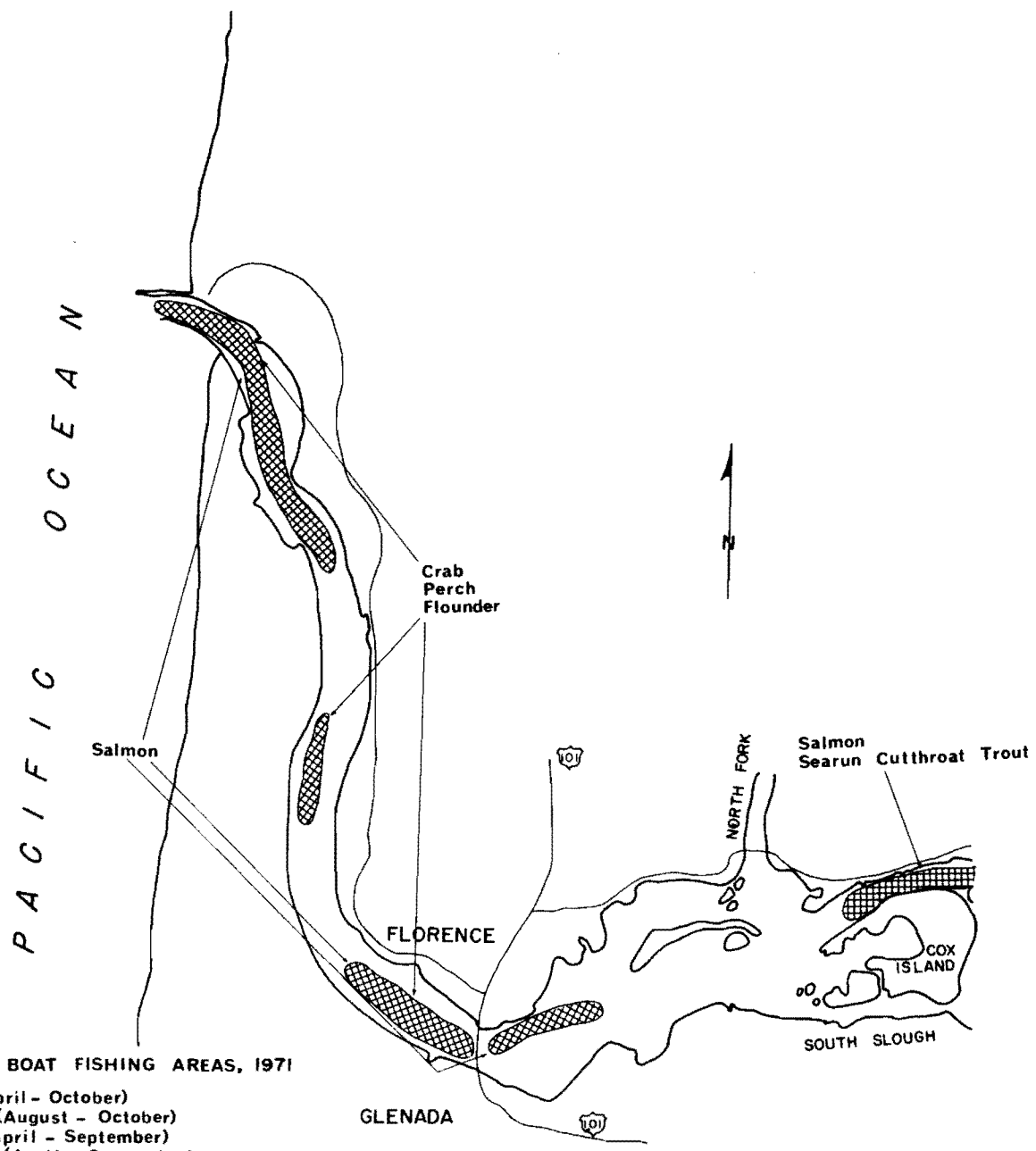


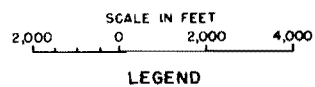
FIGURE 3.



**PRINCIPAL BOAT FISHING AREAS, 1971**

- Crab (April - October)
- Salmon (August - October)
- Perch (April - September)
- Flounder (April - September)
- Searun Cutthroat Trout (August - September)

**SIUSLAW RIVER, OREGON**





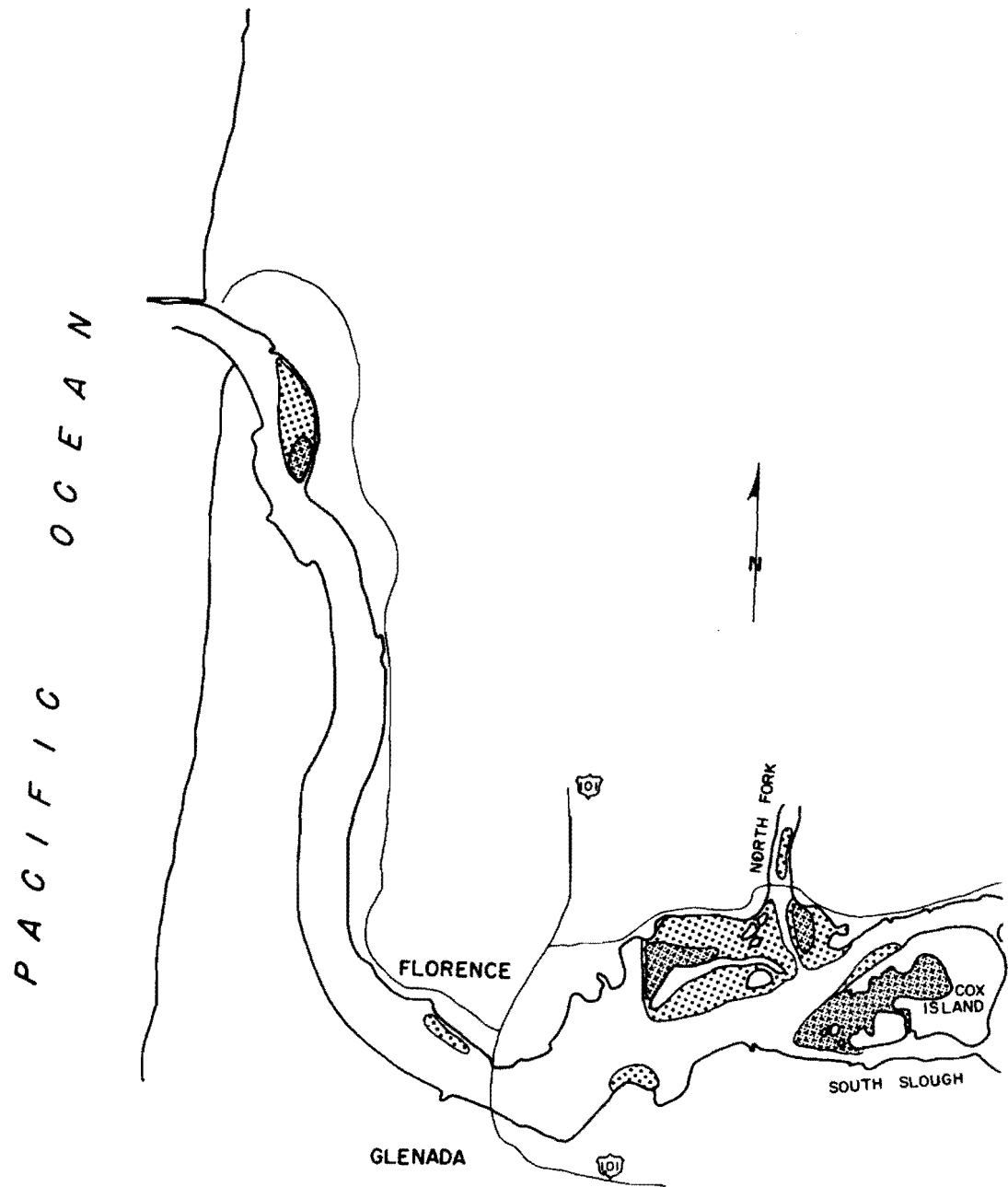




FIGURE 4.  CLAM BEDS, 1971  
 PRINCIPAL DIGGING AREAS

SIUSLAW RIVER, OREGON  
 SCALE IN FEET  
 2,000 0 2,000 4,000  
 LEGEND

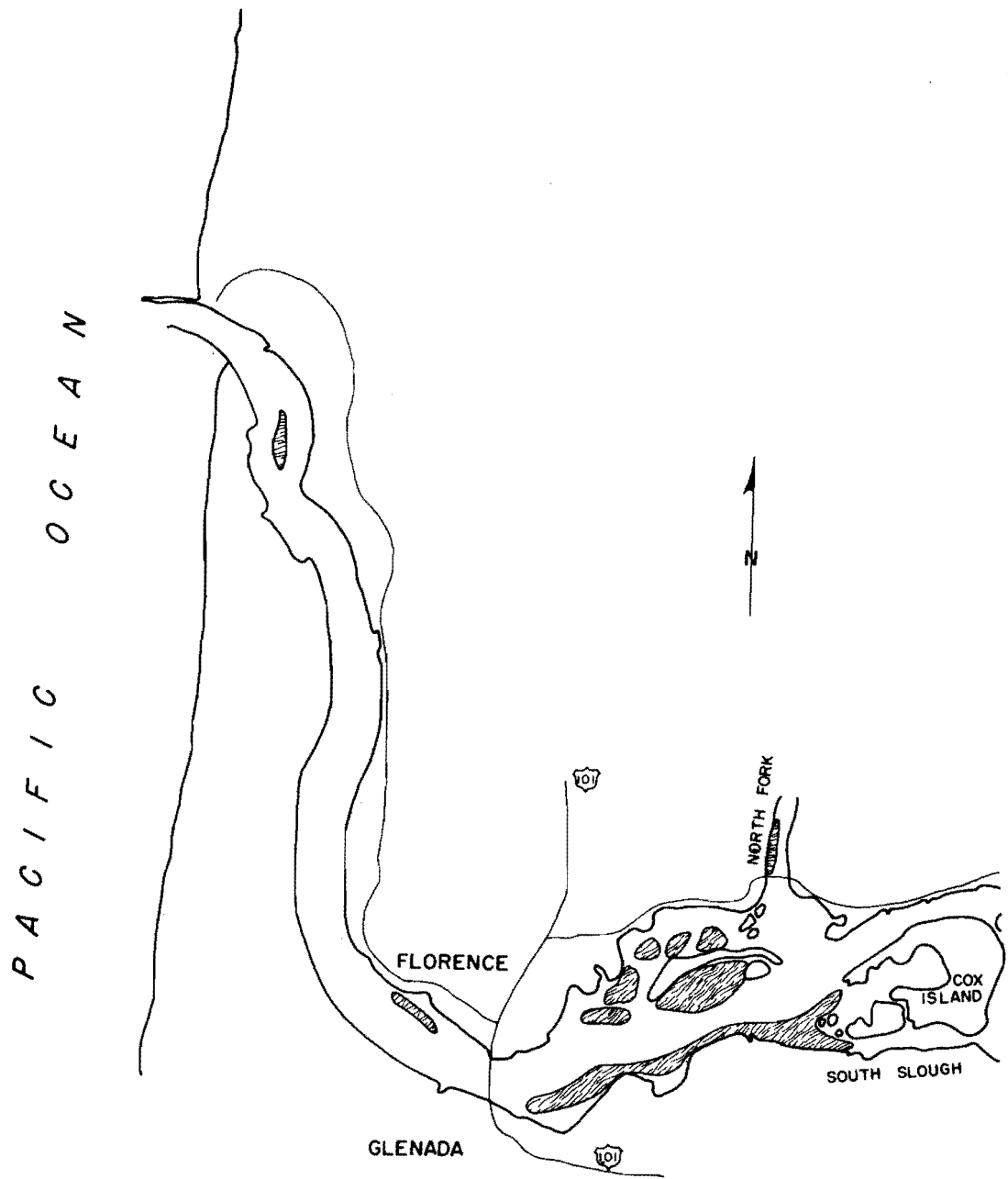
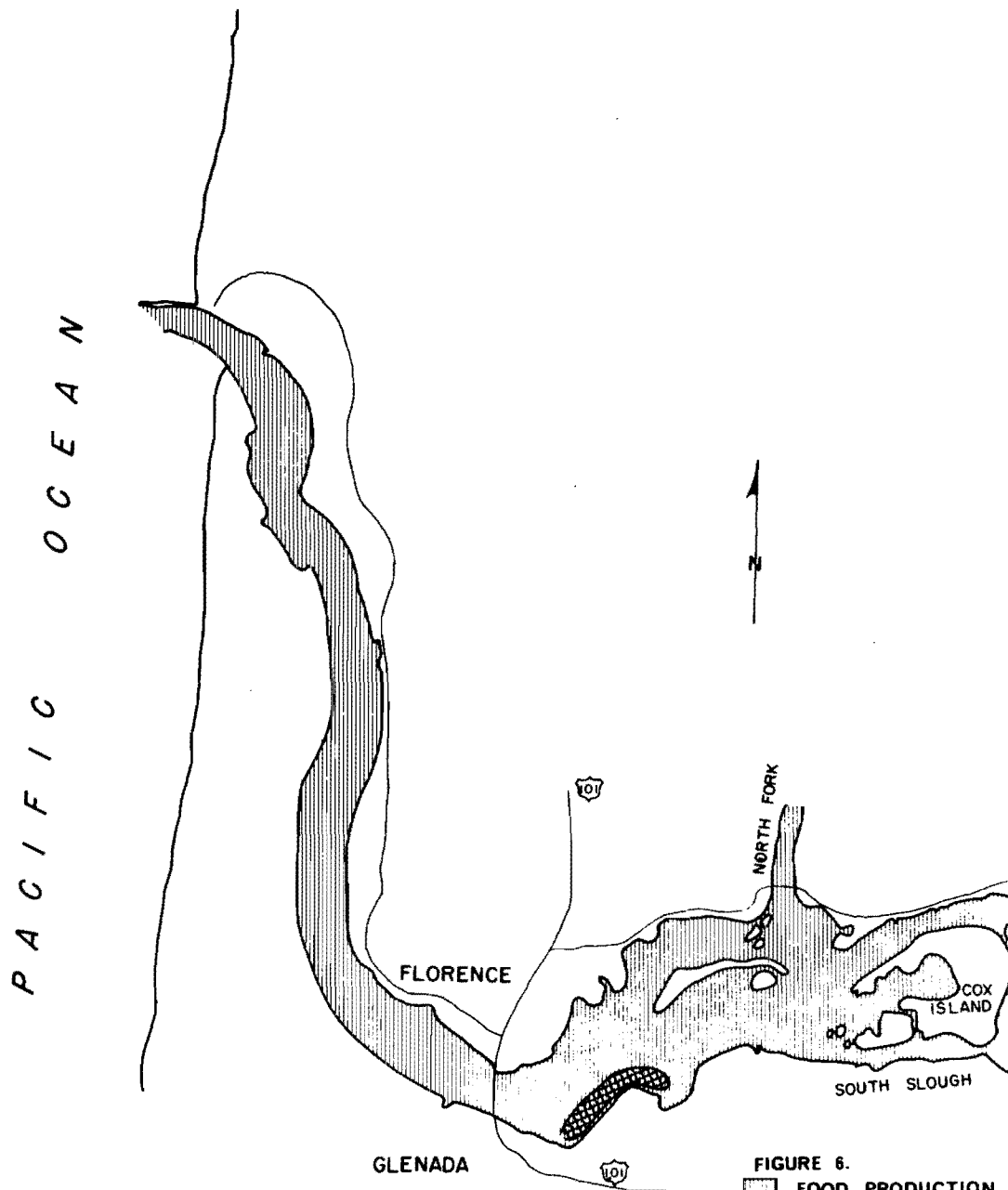


FIGURE 5.  EEL GRASS BEDS, 1971

SIUSLAW RIVER, OREGON

SCALE IN FEET  
2,000 0 2,000 4,000

LEGEND



**FIGURE 6.**  
 □ FOOD PRODUCTION AREAS,  
 FISH FEEDING AREAS AND  
 FISH MIGRATION ROUTES  
 ■ KNOWN HERRING SPAWNING  
 AREA, 1971

#### **ACKNOWLEDGMENTS**

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