

THE OREGON GROUND FISH FISHERY AND ITS INVESTIGATION IN 1983

By  
Robert L. Demory  
Jerry Butler  
Jack G. Robinson

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## AGENDA ITEM VI. REVIEW OF AGENCY GROUND FISH PROGRAMS - OREGON

### A. Activities

The marine region staff and its function in 1983 were much the same as in 1982. Major emphasis of 1983 activities was on monitoring the groundfish fishery with major emphasis on the trawl fishery. The number of biological and rockfish species composition samples taken was 831, a 13% increase over samples taken in 1982. Most of the increase was due to more emphasis on rockfish species composition sampling, which accounted for 82% of all samples taken (Table 1).

Our data processing system also underwent some modification. Prior to entry into the data system, logbook information is summarized by grouping individual trip-tows into State Statistical Strata. This has substantially reduced the amount of time required for data entry. Apple II computers were also placed at the Astoria and Charleston field stations.

Major analytical tasks accomplished during the past year were preparation of manuscript status of stock reports for canary rockfish and Dover sole. Both documents were prepared as part of Oregon's commitment to provide information to the Groundfish Management Team of the Pacific Fishery Management Council. Also prepared were segments of Stock Status reports for petrale and English sole, other flatfish, and "remaining rockfish" for the PFMC's groundfish management Team's use in late 1983.

In 1984, a major change in rockfish reporting procedure was instituted. Buyers were asked to report rockfish purchases as Pacific ocean perch (S. alutus), widow rockfish, Sebastolobus spp, and other

Table 1. Number of biological samples by PMFC Area in 1983.

Species	1C	2A	2B	2C	3A	3B	Total
Dover sole		4	13		16	2	35
English sole	1	1			16		18
Petrale sole		2	2				4
Rockfish							
<u>S. alutus</u>				3	17	2	22
<u>S. borealis</u>						1	1
<u>S. crameri</u>							
<u>S. entomelas</u>		12	12	6	13	1	44
<u>S. flavidus</u>					3		3
<u>S. paucispinis</u>			1				1
<u>S. pinniger</u>		2	5	2	8		17
Species composition	4	92	123	148	264	52	683
Sablefish			3				3
TOTALS	5	113	159	159	337	58	831

rockfish (Sebastes complex) on fish tickets. This change when fully ing for purposes of monitoring rockfish quotas or harvest guidelines in-season.

B. Reports Completed or in Progress

- \* Barss, W.H. 1984. Results from tagging lingcod on offshore grounds near Stonewall Bank and on inshore grounds near Johnson Rock off Newport, Oregon. (in progress)

Barss, W.H. and R.L. Demory. 1983. Groundfish assessment biannual report, October 1981 to September 1982. Oregon Department of Fish and Wildlife. Processed report, 49 pp.

- \* Barss, W.H. and R.L. Demory. 1984. Utilization of fish by Oregon trawlers in 1982. (in progress)

- \* Butler, J. 198 . Oregon's recreational boat fishery for groundfish. (in progress)

Demory, R.L. and J. Butler. 1983. The Oregon groundfish fishery and its investigation in 1982. PL 88-309 Contract Report. Oregon Department of Fish and Wildlife. Processed report, 44 p.

- \* Demory, R.L., J.T. Golden and E. Pikitch. 1984. Status of Dover sole (Microstomus pacificus) in INPFC Columbia and Vancouver areas in 1983. Oregon Department of Fish and Wildlife. (in progress)

- \* Golden, J.T. and R.L. Demory. 1984. Status of canary rockfish (Sebastes pinniger) in the INPFC Columbia and Vancouver areas in 1982-83. (In progress).

Richmond, N.T. 1983. The Sand Sole. Informational Report No. 83-4. Oregon Department of Fish and Wildlife. Processed report, 4 pp.

Saelens, M.R. 1983. 1982 Oregon shrimp fishery. Fish Division Information Report No. 83-5. Oregon Department of Fish and Wildlife. Processed report, 25 pp.

- \* Wise, D. 1984. Biological characteristics of the charterboat groundfish catch off Garibaldi, Oregon. Oregon Department of Fish and Wildlife. (in progress)

- \* Reports in progress.

Table 3. Oregon trawl landings (mt) of groundfish, total effort (hr) and CPUE (mt/hr), 1973-83.

Species	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1973-82 mean
English sole	1,075	792	982	1,643	1,001	1,041	1,084	718	724	990	914	1,005
Rock sole	Tr	2	13	7	10	12	6	13	9	30	4	10
Petrable sole	994	1,221	1,202	793	822	1,000	1,040	850	880	1,504	1,105	1,031
Dover sole	2,003	2,542	2,168	2,262	1,818	3,374	5,066	4,008	5,228	8,083	8,459	3,655
Rex sole	570	590	464	477	425	642	734	524	606	841	645	587
Starry flounder	154	185	371	773	283	489	284	193	400	218	196	335
Arrowtooth flounder	31	12	45	30	87	170	319	188	588	721	534	219
Other flatfish	267	252	414	536	348	394	569	427	483	642	574	433
Total flatfish	5,094	5,596	5,659	6,521	4,794	7,122	9,102	6,921	8,918	13,029	12,431	7,276
Pacific cod	205	311	265	277	364	398	401	156	44	116	81	254
Lingcod	907	879	694	439	381	445	686	652	904	1,345	1,621	733
Sablefish	380	248	305	442	326	958	1,493	1,026	1,304	2,951	2,771	943
Pacific ocean perch	109	147	186	567	424	486	848	1,128	859	543	1,138	530
Other rockfish	1,748	1,383	1,379	2,528	2,398	4,388	8,450	15,354	22,699	19,587	13,569	7,991
Misc. species	8	13	13	294	153	185	187	92	197	45	98	119
Dogfish	Tr	5	2	6	122	56	40	23	5	1	1	26
Minkfood	270	321	264	56	85	3	0	0	0	0	0	100
Pacific whiting (hake)	25	14	2	218	450	383	129	257	162	1	58	164
Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Total Landings	8,746	8,917	8,769	11,348	9,497	14,424	21,336	25,609	35,092	37,618	31,768	18,136
Total Trawl hrs.	28,243	27,258	28,468	33,259	26,683	38,447	56,444	46,606	68,297	94,997	101,517	44,870
CPUE	0.310	0.327	0.308	0.341	0.356	0.375	0.366*	0.362*	0.303*	0.302*		0.331*

Tr = less than 0.1 mt

\* Excludes pelagic trawl catch of S. entomelas

(2) Trawl landing of principal species

(a) Dover sole. Oregon trawl landings of Dover sole in 1983 totaled 8,459 mt, a record, 132% greater than the 1973-82 mean landing of 3,652 mt (Table 4). Areas of major catch were PMFC areas 2B and 3A. This is the second consecutive year that landings have exceeded 8,000 mt. CPUE showed only moderate fluctuation in major fishing areas (Table 4).

(b) English sole. English sole landings in 1983 were 914 mt, 8% less than the 1982 landing and 10% less than the 1973-82 mean landing. Areas of major production were PMFC areas 1C-2A, 2C and 3A. CPUE remains at a fairly low level in all areas (Table 5).

(c) Petrале sole. Trawl landings of petrale sole in 1983 were 1,105 mt, 13% less than landings in 1982 but 10% greater than the 10-yr mean landing of 1,007 mt. PMFC areas 1C-2A, 2B and 3A were the important areas of catch. CPUE, although quite low, did improve over 1982 (Table 6).

(d) Lingcod. Trawl landings of lingcod in 1983 were 1,621 mt, 20% greater than in 1982 and more than two times greater than the 1973-82 mean landing of 737 mt. Although lingcod are a target species at times for trawl gear the trawl catch of lingcod is still largely incidental to directed fishing for other species.

(e) Sablefish. Trawl landings of sablefish in 1983 were 2,771 mt, 6% less than the 1982 landings but nearly three times greater than the 10-year mean landing. Much of the decrease was probably due to a 5,000 lb trip limit placed on sablefish less than 22-inches total length in 1983 by the Pacific Fishery Management Council.

Table 4. Oregon trawl catch (mt) and CPUE (mt/hr) of Dover sole from major fishing areas<sup>1/</sup>

Year	1C-2A		2B		2C		3A	
	Catch	mt/hr	Catch	mt/hr	Catch	mt/hr	Catch	mt/hr
1973	278	0.124	1,200	0.178	31	0.093	474	0.187
1974	417	0.245	1,461	0.269	68	0.252	585	0.158
1975	212	0.145	1,187	0.170	114	0.071	648	0.143
1976	259	0.116	1,276	0.162	145	0.140	574	0.139
1977	152	0.134	760	0.126	141	0.048	764	0.104
1978	280	0.129	1,580	0.174	288	0.083	1,226	0.135
1979	331	0.120	2,745	0.241	668	0.152	1,324	0.148
1980	540	0.129	1,982	0.163	266	0.115	1,207	0.124
1981	757	0.260	2,488	0.176	540	0.112	1,351	0.162
1982	1,074	0.131	4,114	0.174	1,037	0.088	1,391	0.096
1983	1,786	0.162	3,700	0.138	878	0.089	1,612	0.145
1973-82 Mean		0.148		0.182		0.100		0.131

<sup>1/</sup> CPUE is based on significant trips where 30% or more of the catch was composed of the above species. Catch was estimated using all available logbook and includes trips with less than 30% of the species.

Table 5. Oregon trawl catch (mt) and CPUE (mt/hr) of English sole from major fishing areas<sup>1/</sup>.

Year	2B		2C		3A	
	Catch	mt/hr	Catch	mt/hr	Catch	mt/hr
1973	321	0.088	253	0.112	304	0.118
1974	285	0.147	140	0.087	226	0.144
1975	293	0.108	305	0.083	303	0.110
1976	498	0.128	299	0.134	721	0.176
1977	342	0.109	318	0.102	310	0.122
1978	152	0.068	178	0.074	606	0.169
1979	224	0.081	177	0.067	756	0.106
1980	77	0.032	98	0.058	408	0.086
1981	124	0.039	142	0.028	363	0.068
1982	178.8	0.014	258.2	0.024	302.7	0.026
1983	84	0.032	190	0.037	278	0.042
1973-82 Mean		0.064		0.061		0.093

<sup>1/</sup> CPUE is based on significant trips where 30% or more of the catch was composed of the above species. Catch was estimated using all available logbook data and includes trips with less than 30% of the species.



Table 6. Oregon trawl catch (mt) and CPUE (mt/hr) of petrale sole from major fishing areas<sup>1/</sup>.

Year	2B		2C		3A	
	Catch	mt/hr	Catch	mt/hr	Catch	mt/hr
1973	220	0.133	227	0.204	414	0.150
1974	300	0.230	232	0.147	613	0.171
1975	458	0.109	298	0.074	404	0.116
1976	342	0.122	94	0.085	338	0.091
1977	274	0.042	147	0.040	387	0.052
1978	358	0.041	157	0.033	459	0.041
1979	443	0.089	121	0.076	368	0.066
1980	255	0.083	114	0.111	387	0.082
1981	327	0.057	158	0.057	324	0.093
1982	320	0.021	162	0.013	341	0.026
1983	356	0.064	53	0.026	432	0.068
1973-82 Mean		0.061		0.050		0.068

<sup>1/</sup> CPUE is based on significant trips where 30% or more of the catch was composed of the above species. Catch was estimated using all available logbook data and includes trips with less than 30% of the species.

(f) Rockfish. Trawl landings of rockfish (all species) in 1983 were 14,707 mt. This was 27% less than the landings in 1982 but still nearly twice as large as the 10-year mean landing. Principal species landed were canary, yellowtail and widow rockfish which totaled 3,094 mt, 2,991 mt and 2,855 mt respectively (Table 7). Areas of major catch were PMFC areas 2C, 2B, and 3A. Rockfish catch by midwater trawl was 1,539 mt, almost entirely widow rockfish. The decline in pelagic trawl landings was mostly due to regulatory action designed to reduce landings because the optimum yield-quota was approached in September. However, abundance also was substantially down in some areas, especially in PMFC areas 2C and 3A. As a result of the decreased abundance and regulatory actions in 1983, several pelagic trawlers shifted operations to other areas and/or fisheries.

## 2. Recreational Fisheries

### d. Oregon

Sampling of the 1983 recreational ocean boat fishery began May 23 and June 13 at ports south of, and north of, Cape Blanco, respectively. Sampling continued until September 11 at Astoria, November 6 at Brookings, and until September 18 at all others. The total 1983 catch was estimated to be 405,374 fish (Table 8). This was about a 1 percent decline from the 1982 record catch. However, this small decrease may have been due to slightly different sampling periods between the two years.

Directed bottomfish effort in 1983 was estimated to be 35,434 angling trips, a 29 percent decrease from 1982. This is attributed to the fact that the recreational salmon angling season lasted a month longer in 1983 than in 1982, affording more opportunity for directed

Table 7. Species composition (mt) in 1983 for Oregon landed rockfish in the trawl fishery (includes pelagic and bottom trawls but excludes shrimp trawl).

	1C	2A	2B	2C	3A	3B	Total
<u>Sebastes aleutianus</u>	.0	2.4	4.5	13.0	17.3	4.3	41.5
<u>S. alutus</u>	.3	17.9	143.4	708.0	210.8	57.1	1137.5
<u>S. aurora</u>	.1	4.1	13.0	13.4	1.5	2.2	34.3
<u>S. babcocki</u>	.0	10.3	21.9	6.5	15.3	2.8	56.8
<u>S. brevispinus</u>	.0	1.7	31.9	156.0	29.1	21.7	240.4
<u>S. borealis</u>	.0	.7	.7	.6	12.2	20.1	34.3
<u>S. caurinus</u>	.3	.0	.0	.0	.0	.0	.3
<u>S. chlorostictus</u>	.0	10.1	14.8	.0	.0	.0	24.9
<u>S. crameri</u>	.1	80.8	254.6	84.4	38.7	7.0	465.6
<u>S. diploproa</u>	.2	11.1	64.9	56.3	7.1	3.6	143.2
<u>S. elongatus</u>	.0	20.4	41.1	22.5	11.0	.7	95.7
<u>S. entomelas</u>	2.4	129.3	693.0	1260.7	605.8	163.7	2854.9
<u>S. flavidus</u>	23.7	228.9	626.7	371.0	1615.5	125.4	2991.2
<u>S. goodei</u>	.1	15.3	10.4	.1	.0	.0	25.8
<u>S. helvomaculatus</u>	.0	2.2	6.0	.2	.2	.2	8.8
<u>S. jordani</u>	.0	.0	.0	.2	.1	.0	.3
<u>S. maliger</u>	.1	.0	.0	.0	.0	.0	.1
<u>S. melanops</u>	22.9	.2	.0	2.8	56.2	26.8	108.9
<u>S. melanostomas</u>	.1	3.7	.3	.0	.8	.6	5.5
<u>S. nigrocinctus</u>	.0	.0	.2	.0	.0	.0	.2
<u>S. paucispinus</u>	4.1	141.1	507.6	165.6	47.8	28.3	894.5
<u>S. pinniger</u>	21.0	256.9	1179.5	1306.9	225.8	104.1	3094.2
<u>S. proriger</u>	.0	.4	38.2	270.6	40.4	8.4	358.0
<u>S. reedi</u>	.0	.3	18.6	553.7	4.4	1.5	578.5
<u>S. ruberrimus</u>	.0	3.7	70.1	18.0	9.4	7.3	108.5
<u>S. rufus</u>	.0	.7	7.3	.0	.0	.0	8.0
<u>S. saxicola</u>	.1	1.6	4.7	.2	.0	.0	6.6
<u>S. wilsoni</u>	.0	.2	.1	.2	.0	.0	.5
<u>S. zacentrus</u>	.0	2.4	27.2	83.1	28.9	5.0	146.6
<u>Sebastolobus alascanus</u>	1.2	121.9	293.2	135.9	91.3	32.4	675.9
<u>Sebastolobus altivelis</u>	.0	1.9	141.1	19.0	.0	2.3	164.8
<u>Unidentified Sebastes</u>	3.3	18.4	43.8	218.7	78.4	29.6	392.2
Grand Total	80.0	1089.4	4266.0	5467.6	3148.0	655.6	14706.6

Table 8. Estimated 1983 Oregon recreational catch by port<sup>1/</sup>.

Port	Rockfish	Flatfish	Lingcod	Miscellaneous	Total
Astoria	6,027	189	687	2,099	9,002
Garibaldi	57,576	171	4,246	1,601	63,594
Pacific City	12,692	115	2,185	793	15,785
Depoe Bay	51,402	203	2,161	2,741	56,507
Newport	122,064	831	4,464	4,091	131,450
Florence	54	621	0	240	915
Winchester Bay	16,958	1,574	127	611	19,270
Coos Bay	20,381	96	834	959	22,270
Gold Beach	19,749	67	1,130	711	21,657
Brookings	58,934	263	1,741	3,986	64,924
Total	365,837	4,130	17,575	17,832	405,374

<sup>1/</sup> Catch in numbers of fish

salmon trips. Anglers on directed bottomfish trips landed 264,289 fish, for a catch per trip of 7.5 fish. This was an increase from the 1982 figure of 6.3 fish per trip.

The leading species in the bottomfish catch was again black rockfish, comprising 59% of the total catch (Table 9). Yellowtail rockfish moved up in the total state's landings due to a significant increase in deep-water bottomfish trips out of Garibaldi and Winchester Bay. Yellowtail rockfish accounted for 33 and 70 percent of the catch, respectively, out of these two ports.

PMFC area 2C again dominated the state's catch (Table 10). This area includes Newport, Garibaldi, and Depoe Bay which ranked first, third, and fourth, respectively, in the landings.

Rockfish accounted for 83% of the total catch on a weight basis and 90 percent on a numerical basis. As usual, flatfish were approximately 1% of the landings. Sand sole and Pacific sanddab were the leading flatfish species landed.

The miscellaneous species group catch in 1983 increased by 38% over 1982. However, the leading species were again kelp greenling (Hexagrammus decagrammus) and cabezon (Scorpaenichthys marmoratus).

A few miscellaneous species were seen in unusual numbers that were attributed to the "El Nino" phenomenon. These included Pacific mackerel (Scomber japonicus), Pacific bonito (chiliensis), albacore tuna (Thunnus alalunga) and blue shark (Prionace glauca).

Table 9. Species composition of the 1983 Oregon recreational bottomfish ocean boat fishery.

Species	Percent of catch	Number of fish	Total wt, mt
Black rockfish	58.9	238,765	339.0
Yellowtail rockfish	9.0	36,484	61.3
Canary rockfish	8.7	35,268	40.7
Blue rockfish	5.7	23,106	20.8
Yelloweye rockfish	3.9	15,810	56.9
Other rockfish	4.0	16,404	23.1
Lingcod	4.3	17,575	82.4
Cabazon	1.4	5,675	8.4
Kelp greenling	1.3	5,270	4.8
Otherfish	2.8	11,017	16.5
Total	100.0	405,374	653.9

Table 10. Estimated 1983 Oregon recreational bottomfish catch (mt) from the ocean boat fishery.

Species	PMFC Area				Total
	2A	2B	2C	3A	
Lingcod	13.5	4.5	61.2	3.2	82.4
Rockfish	116.5	55.4	361.0	8.9	541.8
Flatfish	0.5	3.3	1.9	0.3	6.0
Other fish	6.2	2.4	12.3	2.8	23.7
Total	136.7	65.6	436.4	15.2	653.9

D. Canada-U.S. Groundfish Management and Regulations

Extensive changes occurred in Oregon's groundfish regulations in February 1983. In essence, Oregon regulations were revised to reflect Federal regulations in the Fishery Conservation Zone (3-200 mi off-shore) including extensive revision of definitions relating to gear.

Effective in late February to early-March, 1983 a trip limit of 30,000 lb was placed on widow rockfish deliveries (vs 75,000 lb to February 28). A 40,000 lb/trip limit was placed on Sebastes complex, which included all rockfish except Pacific ocean perch, widow, short-belly, and "idiot" rockfish (Sebastes alascanus). A 22 inch minimum size limit was placed on sablefish landings except for a "tolerance" of 333 fish, 1,000 lb, or 10% of weight of all sablefish on board. This tolerance was changed to 5,000 lb effective in late June 1983. These regulations primary purpose was to impede catch rates so the various Optimum Yield or quotas would not be met or exceeded before year's end. In late June, Sebastes trip limits (in areas north of Cape Blanco) were further restricted to one trip per calendar week not to exceed 40,000 lb, except no frequency restriction on trips of 3,000 lb or less of Sebastes complex.

Effective in early September, both widow rockfish and Sebastes complex directed fishing was reduced to allow 1,000 lb per trip (widow rockfish) and 3,000 lb per trip (Sebastes complex). These measures were designed to allow retention and sale of incidental catches without exceeding the quotas of 18,500 mt of Sebastes complex (in the combined INPFC U.S.-Vancouver and Columbia Areas) and 10,500 mt of widow rockfish (coastwide).

In November 1983, retention or sale of Pacific ocean perch (S. alutus) caught in the INPFC Columbia Area was prohibited as the Optimum Yield (quota) there was reached.



AGENDA ITEM VIII. GROUND FISH RESEARCH - OREGON

A. Stock Assessments

1. Rockfish. A status of stock report for canary rockfish in the INPFC Columbia and Vancouver areas was drafted. Cohort analysis was attempted but usable age data was limited to 1980-82. Age determinations prior to 1980 were based on surface readings and were therefore not usable. Results of the analysis suggested that allowable biological catch in 1984 was about 2,450 mt in the INPFC Columbia area and 830 mt in the INPFC U.S.-Vancouver area. Estimates ranged from 940 mt to 2,457 mt in the Columbia area and from 348 mt to 1,777 mt in the Vancouver area. All-nations catch in 1983 was 2,790 and 622 mt, respectively (preliminary data). The canary rockfish report is being revised because some assumptions on which the analysis was based are highly questionable.

In May 1983, ODFW conducted a pilot tagging study of black rockfish out of Garibaldi, Oregon. A total of 1,900 fish were tagged and released in the vicinity of Three-arch Rocks near Tillamook Bay. Vessels and operator time were donated by various members of the Garibaldi charter boat fleet. As of April 1984, 16 tagged fish had been recovered, mostly from the area of tagging. Two fish showed significant movement. One fish was recaptured 17 nm to the south off Cape Kiwanda while the second fish was recaptured 60 nm to the north just north of the Columbia river.

A second tagging study was conducted in cooperation with the Washington Department of Fisheries. About 1,200 black rockfish were tagged off Tillamook Head. The fish were also captured by sport tackle. As of April 1984, 17 of these fish had been recaptured. Nine

were caught at the tagging site and eight were caught at the sunken "wheatship" just north of the Columbia River. The "wheatship" recoveries were taken by trawl.

4. Flatfish. A draft status of stock report on Dover sole in the INPFC Columbia and U.S.-Vancouver areas was completed. The analysis consisted of two parts. Part I was based on data obtained from surveys conducted from 1973-76 and included most of the Columbia-Vancouver area. Part II was based on cohort analysis and was limited to the Columbia area because an age data base for the Vancouver area does not exist.

Estimates of biomass derived from surveys conducted in 1973-76 were about 96,000 and 14,000 mt for the Columbia and Vancouver areas, respectively. Estimates of allowable biological catch ranged from about 7,800 mt to 14,600 for the Columbia area and about 700 mt to 1,500 mt in the Vancouver area. These estimates were based on the forward stock reduction analysis model. Results of the cohort analysis were questionable. The model was very sensitive to age linkages and trial values of fishing mortality. Yield per recruit analysis suggested that at current levels of fishing mortality yield per recruit could be increased slightly by increasing size at entry.

Other flatfish work included the beginnings of status of stock documents for english and petrale sole. Preliminary results suggest that allowable biological catch is about equal to the long term mean catch (1956-83), based on survey estimates of biomass (1973-76) and the forward stock reduction analysis model.

9. Lingcod. Assessment studies on lingcod were limited to preparing a report on the 1978 tagging. The purpose of this study was to determine

if exchange of tagged fish occurred between an off-shore trawl ground and a popular in-shore sport fishing area. Fish were tagged in both areas but not simultaneously. Of the 621 tags recovered no in-shore/offshore exchange was noted between the two tagging areas even though a few fish tagged off-shore did move in a landward direction. The great majority of tagged fish were recovered at their respective tagging sites.

## SUMMARY OF GREGON GROUND FISH TRAWL LANDINGS

GROUND FISH TRAWL (GEAR=910) IN 1983

9Y PMFC AREA IN METRIC TONS

SPECIES	1C	2A	2B	2C	3A	3B	3C	3D	5A	5B	ALL
ENGLISH SOLE.....	24.3	213.5	187.9	186.4	248.7	52.7	.0	.0	.0	.0	913.5
ROCK SOLE.....	.0	.1	2.5	1.4	.1	.0	.0	.0	.0	.0	4.0
PETRALE SOLE.....	4.0	208.5	339.8	107.9	375.5	69.1	.0	.0	.0	.0	1104.8
DOVER SOLE.....	41.3	1500.7	3814.4	967.4	1392.1	742.7	.0	.0	.0	.0	8458.6
PEX SOLE.....	9.3	76.6	96.2	87.4	324.4	51.3	.0	.0	.0	.0	645.2
STARFY FLOUNDER.....	1.3	1.1	10.7	66.1	75.8	40.6	.0	.0	.0	.0	195.7
ARROWTOOTH FLOUNDER.	.8	15.4	28.1	94.6	239.4	155.9	.0	.0	.0	.0	534.1
BUTTER SOLE.....	.4	.2	2.2	.3	1.3	.4	.0	.0	.0	.0	5.4
FLATHEAD SOLE.....	.0	.0	.0	.3	4.3	2.3	.0	.0	.0	.0	6.8
SAND DAB.....	4.0	6.1	113.0	53.5	60.6	3.4	.0	.0	.0	.0	240.6
SAND SOLE.....	4.4	2.7	51.6	64.2	170.3	23.2	.0	.0	.0	.0	316.4
SLENDER SOLE.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
CURLFIN SOLE.....	.1	.1	3.2	.8	.0	.1	.0	.0	.0	.0	4.3
OTHER MISC. FLATS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL OTHER FLATFISH	8.9	9.7	170.0	119.0	236.5	29.3	.0	.0	.0	.0	573.5
PACIFIC COD.....	.0	.0	.1	.9	23.9	56.4	.0	.0	.0	.0	81.4
LING COD.....	21.0	156.1	533.7	427.1	340.6	141.7	.0	.0	.0	.0	1620.3
SABLEFISH.....	21.0	296.1	1024.6	815.4	411.7	202.6	.0	.0	.0	.0	2771.4
PACIFIC OCEAN PERCH.	.3	17.9	143.4	708.0	210.8	57.1	.0	.0	.0	.0	1137.4
OTHER ROCKFISH.....	79.7	983.8	3664.3	4300.7	2538.8	454.9	.0	.0	.0	.0	12022.2
SKATE.....	.1	4.5	52.1	6.4	5.0	.0	.0	.0	.0	.0	63.2
SOUFFIN SHARK.....	.2	.5	.7	.6	2.3	.0	.0	.0	.0	.0	3.0
OTHER SHARK SP.....	.0	.1	.6	.1	.0	.0	.0	.0	.0	.0	1.1
GREEN STURGEON.....	.0	.0	1.3	2.0	1.8	.3	.0	.0	.0	.0	5.5
WHITE STURGEON.....	.0	.0	.1	.1	1.0	.0	.0	.0	.0	.0	1.3
OCTOPUS.....	.2	.7	.7	1.7	.5	.3	.0	.0	.0	.0	4.1
RECTAIL SURFPERCH	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
WOLF EEL.....	.0	.0	.7	1.5	.2	.0	.0	.0	.0	.0	2.4
SQUID.....	.0	.1	.5	.0	.0	.0	.0	.0	.0	.0	.5
ANCHOVY.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
SCRAP.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
OTHER MISC. SP.....	.0	.2	5.9	3.3	.6	.0	.0	.0	.0	.0	10.0
TOTAL MISC. SPECIES.	.5	6.2	62.5	15.8	11.5	1.6	.0	.0	.0	.0	98.1
DOG FISH.....	.0	.0	.0	.2	.3	.0	.0	.0	.0	.0	.5
HAKE.....	.0	2.4	15.0	6.1	17.8	.7	.0	.0	.0	.0	42.0
ANIMAL FOOD.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
REDUCTION.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	212.3	3487.9	10093.2	7904.5	6447.9	2056.8	.0	.0	.0	.0	30202.7
TOTAL TRAWL HOURS	1288.	11365.	38661.	21547.	23527.	4609.	0.	0.	0.	0.	101517.

POP IS NOW TRUE ALCTUS

OREGON  
GROUND FISH LANDINGS BY MONTH IN METRIC TONS  
AREA ALL  
GROUND FISH TRAWL (GEAR 910) IN 1983

SPECIE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH SOLE.....	46.8	20.0	42.3	75.7	110.3	106.1	149.8	129.4	97.7	90.6	11.7	33.1	913.5
ROCK SOLE.....	.1	.0	.0	.0	.0	.5	.9	2.4	.0	.1	.0	.0	4.0
PETRALE SOLE.....	191.1	74.3	83.8	85.1	111.4	87.9	84.5	81.1	68.4	90.4	36.7	110.2	1104.8
DQVEP SOLE.....	243.5	231.0	1503.3	1157.2	756.1	760.3	751.8	744.7	886.8	891.7	176.0	356.4	8458.6
REX. SOLE.....	29.6	29.7	45.5	67.4	66.7	65.1	74.5	64.3	84.6	74.7	8.4	34.6	645.2
STARRY FLOUNDER.....	2.6	2.2	8.6	24.9	59.3	14.3	25.6	21.6	16.4	18.4	.6	1.1	195.7
ARROWTOOTH FLDUNDER.	15.5	10.4	44.2	33.3	107.5	58.8	51.9	80.9	47.8	57.1	10.1	16.7	534.1
BUTTER SOLE.....	.1	.0	.5	.2	.5	.8	1.2	.5	.4	1.1	.0	.2	5.4
FLATHEAD SOLE.....	.0	.4	1.0	.8	.0	.1	.9	.6	2.2	.4	.0	.5	6.8
SAND DAB.....	10.2	8.2	25.1	31.4	36.2	21.3	26.6	21.1	14.6	42.8	1.1	2.1	240.6
SAND SOLE.....	7.6	3.7	11.9	49.3	50.6	40.2	46.2	51.2	28.9	21.6	1.1	3.9	316.4
SLENDER SOLE.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
CUFFIN SOLE.....	.0	.0	.0	.4	.4	1.9	.4	.9	.1	.2	.0	.1	4.3
OTHER MISC. FLATS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL OTHER FLATFISH	17.8	12.3	38.6	82.2	87.7	64.3	75.2	74.3	46.2	66.0	2.3	6.7	573.5
PACIFIC COD.....	.1	.0	.0	14.8	12.6	6.5	15.0	16.7	7.3	7.5	.3	.7	81.4
LING COD.....	26.7	12.5	28.6	132.6	229.2	236.8	277.2	300.6	193.6	125.7	12.8	44.0	1620.3
SABLE FISH.....	130.3	41.6	155.0	183.9	242.6	388.8	506.3	298.8	280.4	310.1	64.7	168.9	2771.4
PACIFIC OCEAN PERCH.	46.0	27.3	44.1	80.2	100.1	119.7	198.4	107.1	174.7	206.5	21.0	12.3	1137.4
OTHER ROCKFISH.....	503.0	483.2	887.8	1514.7	1648.0	1699.1	1778.7	1539.2	892.5	701.0	124.5	250.5	12022.2
SKATE.....	.6	.2	.9	5.5	6.7	10.7	11.4	12.0	11.7	5.5	.9	2.0	68.2
SOUPFIN SHARK.....	.2	.3	.7	.1	.2	.4	.8	1.0	.2	.8	.1	.3	5.0
OTHER SHARK SP.....	.0	.0	.0	.2	.3	.0	.3	.0	.0	.0	.0	.0	1.1
GREEN STURGEON.....	.1	.1	.3	1.6	1.3	.5	.2	.3	.2	.5	.2	.2	5.5
WHITE STURGEON.....	.0	.0	.0	.7	.2	.1	.0	.1	.0	.1	.0	.0	1.3
OCTOPUS.....	.3	.0	.0	.4	.5	.4	1.0	.5	.4	.4	.0	.1	4.1
RECTAIL SURFPERCH	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
WOLF EEL.....	.0	.0	.0	.1	.1	.2	.6	.6	.6	.1	.0	.0	2.4
SCUD.....	.0	.0	.0	.0	.0	.4	.0	.2	.0	.0	.0	.0	.6
AACHOVY.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
SCFAP.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
OTHER MISC. SP.....	.1	.4	.0	.8	1.6	1.5	2.4	1.1	1.3	.5	.1	.1	10.0
TOTAL MISC. SPECIES.	1.3	1.0	2.1	9.4	11.0	14.2	16.6	16.0	14.4	7.9	1.4	2.8	98.1
DOG FISH.....	.0	.0	.0	.0	.0	.0	.0	.0	.4	.1	.0	.0	.5
HAKE.....	.0	.0	.0	.1	.0	8.7	4.9	9.7	4.2	9.8	.0	4.5	42.0
ANIMAL FOOD.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
REDUCTION.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	1254.4	945.4	2884.0	3461.4	3542.5	3631.1	4011.3	3406.7	2815.4	2657.8	470.3	1042.4	30202.7
TOTAL TRAWL HOURS	4299.	2358.	6423.	10218.	11362.	12236.	12713.	12337.	11093.	12176.	1623.	4672.	101517.

OREGON  
GROUND FISH LANDINGS BY MONTH IN METRIC TONS  
AREA 1C  
GROUND FISH TRAWL (GEAR 910) IN 1983

SPECIE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH SOLE.....	.4	.0	.1	.4	1.2	3.6	9.4	4.9	1.0	2.4	.0	.2	24.3
ROCK SOLE.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
PETRALE SOLE.....	.1	.0	.6	.2	.5	.4	.6	.5	.4	.5	.0	.2	4.0
DOVER SOLE.....	.0	.0	.1	13.8	10.3	3.7	4.7	2.9	.5	5.2	.1	.0	41.3
REX SOLE.....	1.9	.0	.1	.3	1.2	.9	1.6	.7	.2	1.5	.1	.3	9.3
STARRY FLOUNDER.....	.0	.0	.0	.1	.1	.1	.3	.4	.0	.2	.0	.0	1.3
ARROWTOOTH FLOUNDER.....	.0	.0	.1	.1	.1	.0	.1	.0	.2	.1	.0	.2	.8
BUTTEF SOLE.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.3	.0	.1	.4
FLATHEAD SOLE.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
SAND DAB.....	.2	.0	.0	.1	.1	.5	1.3	.6	.1	.4	.0	.2	4.0
SAND SOLE.....	.0	.0	.1	.1	.5	.5	.3	.4	.1	2.2	.0	.1	4.4
SLENDER SOLE.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
CURLFIN SOLE.....	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.1
OTHER MISC. FLATS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL OTHER FLATFISH	.3	.0	.1	.2	.6	1.1	2.2	1.0	.2	2.9	.0	.4	8.9
PACIFIC COD.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
LING COD.....	.1	.1	.6	1.7	1.9	4.7	7.6	1.0	1.6	1.3	.1	.3	21.0
SABLEFISH.....	.0	.0	1.2	5.1	4.6	2.8	1.7	.7	.3	4.1	.1	.4	21.0
PACIFIC OCEAN PERCH.....	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	.1	.3
OTHER ROCKFISH.....	2.0	4.8	17.7	9.5	4.0	6.6	9.9	.5	8.2	11.0	.5	5.9	79.7
SKATE.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1
SOUPFIN SHARK.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.2	.0	.0	.2
OTHER SHARK SP.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
GREEN STURGEON.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
WHITE STURGEON.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
OCTOPUS.....	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.2
REDTAIL SURFPERCH.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
WOLF EEL.....	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0	.0	.0	.3
SQUID.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
ANCHOVY.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
SCRAP.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
OTHER MISC. SP.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL MISC. SPECIES.....	.0	.0	.0	.0	.0	.0	.1	.0	.0	.3	.0	.1	.5
DOG FISH.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
HAKE.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
ANIMAL FOOD.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
REDUCTION.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	4.8	5.0	20.8	39.9	25.2	24.0	38.0	12.7	12.6	29.3	.9	9.0	212.3
TOTAL TRAWL HOURS	25.	9.	36.	96.	177.	135.	249.	200.	52.	248.	15.	45.	1288.

OREGON  
GROUND FISH LANDINGS BY MONTH IN METRIC TONS  
AREA 2A  
GROUND FISH TRAWL (GEAR 910) IN 1983

SPECIE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH SOLE.....	2.2	2.6	10.2	18.3	27.7	32.1	28.7	31.8	29.9	15.9	6.0	8.2	213.5
ROCK SOLE.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1
PETRALE SOLE.....	52.8	19.2	14.4	5.6	18.4	17.2	11.3	7.3	5.8	7.2	14.4	34.8	208.5
DOVER SOLE.....	50.4	110.5	314.5	146.3	143.2	106.7	106.0	114.1	105.0	113.6	72.2	118.1	1500.7
REX SOLE.....	4.7	2.3	5.4	7.9	7.6	7.8	6.0	5.2	5.7	12.1	2.8	9.2	76.6
STARRY FLOUNDER.....	.0	.0	.0	.1	.0	.0	.1	.3	.1	.3	.0	.0	1.1
ARROWTOOTH FLOUNDER.....	.5	.4	1.0	1.6	1.7	1.0	1.2	.8	1.9	1.3	1.0	3.1	15.4
BUTTER SOLE.....	.0	.0	.0	.0	.0	.0	.0	.0	.2	.4	.0	.1	.8
FLATHEAD SOLE.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
SAND DAB.....	.1	.1	.4	.2	.6	1.4	.6	1.0	.4	.6	.0	.2	6.1
SAND SOLE.....	.0	.0	.0	.0	.1	.1	.1	.1	.4	1.4	.1	.2	2.7
SLENDER SOLE.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
CURLFIN SOLE.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1
OTHER MISC. FLATS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL OTHER FLATFISH	.1	.1	.4	.3	.7	1.5	.8	1.2	1.6	2.5	.2	.5	9.7
PACIFIC COD.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
LING COD.....	2.6	1.4	1.2	3.9	16.3	15.9	29.0	42.5	20.1	16.6	.8	3.8	156.1
SABLEFISH.....	14.1	7.2	14.0	18.9	18.5	24.5	40.1	22.5	28.0	41.1	18.1	49.0	296.1
PACIFIC OCEAN PERCH.....	5.7	1.2	.6	.4	.3	.4	.3	.2	.2	7.3	.9	.6	17.9
OTHER ROCKFISH.....	53.5	21.9	34.2	117.0	67.3	96.3	103.2	117.0	113.4	145.0	39.8	75.1	983.8
SKATE.....	.0	.0	.0	.2	.3	.9	.4	1.1	.8	.6	.2	.1	4.5
SOUFFIN SHARK.....	.0	.0	.0	.0	.1	.0	.0	.0	.0	.2	.0	.1	.5
OTHER SHARK SP.....	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.1
GREEN STURGEON.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
WHITE STURGEON.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
OCTOPUS.....	.0	.0	.0	.1	.1	.1	.1	.1	.1	.1	.0	.1	.7
REDTAIL SURFPERCH	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
WOLF EEL.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
SQUID.....	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.1
ARCHVY.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
SCRAP.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
OTHER MISC. SP.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.2
TOTAL MISC. SPECIES.....	.0	.0	.0	.3	.5	1.1	.5	1.4	.9	1.0	.3	.2	6.2
DOG FISH.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
HAKE.....	.0	.0	.0	.0	.0	.0	.0	.4	.4	.1	.0	1.5	2.4
ANIMAL FOOD.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
REDUCTION.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	186.5	166.9	396.0	320.5	304.2	304.4	327.2	344.7	313.0	364.0	156.4	304.1	3487.9
TOTAL TRAWL HOURS	503.	275.	543.	786.	1281.	1307.	1165.	1687.	1197.	1401.	485.	1230.	11865.

OREGON  
GROUND FISH LANDINGS BY MONTH IN METRIC TONS  
AREA 28  
GROUND FISH TRAWL (GEAR 910) IN 1983

SPECIE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH SOLE.....	12.3	4.1	9.2	22.9	32.0	24.6	25.0	18.6	12.6	18.4	2.1	6.2	187.9
ROCK SOLE.....	.0	.0	.0	.0	.0	.4	.4	1.5	.0	.0	.0	.0	2.5
PETRALE SOLE.....	105.0	33.3	32.8	37.0	24.3	15.5	16.5	12.7	8.6	15.4	11.5	27.4	339.8
DOVER SOLE.....	108.3	59.8	867.8	481.3	299.6	333.7	307.2	292.0	430.4	456.1	67.2	111.1	3814.4
REX SOLE.....	9.5	3.9	11.9	9.3	12.0	7.1	9.3	5.2	8.5	12.4	1.5	5.5	96.2
STARFY FLOUNDER.....	.1	.3	2.3	1.4	.7	.8	2.0	1.2	1.0	.8	.0	.1	10.7
ARROWTOOTH FLOUNDER.	.1	.3	.4	3.2	2.3	5.1	3.8	5.1	4.9	2.1	.2	.7	28.1
BUTTER SOLE.....	.0	.0	.0	.0	.3	.8	.9	.0	.0	.2	.0	.0	2.2
FLATHEAD SOLE.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
SAND OAB.....	7.8	3.7	20.6	16.8	9.7	5.8	10.1	4.2	1.2	32.1	.0	1.0	113.0
SAND SOLE.....	.1	.1	1.2	4.3	5.0	13.5	9.8	10.0	2.6	4.2	.1	.4	51.6
SLENDER SOLE.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
CUFFL IN SOLE.....	.0	.0	.0	.4	.3	1.2	.2	.0	.0	.0	.0	.0	3.2
OTHER MISC. FLATS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL OTHER FLATFISH	7.9	3.7	21.8	22.0	15.3	21.3	20.9	15.1	3.8	36.6	.1	1.4	170.0
PACIFIC COD.....	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.1
LING COD.....	16.5	3.9	4.9	63.0	101.3	96.9	94.3	75.5	39.8	32.4	1.3	4.0	533.7
SABLE FISH.....	55.4	20.8	23.5	79.3	109.2	113.0	153.6	67.1	124.0	141.4	26.6	50.9	1024.6
PACIFIC OCEAN PERCH.	15.9	13.9	13.5	7.5	28.9	18.4	15.4	1.9	6.5	10.7	.8	.1	143.4
OTHER ROCKFISH.....	144.0	161.2	178.3	289.0	521.5	505.3	643.5	563.6	286.3	245.4	47.5	78.4	3664.3
'SKATE.....	.3	.2	.9	5.1	6.1	9.0	7.6	9.5	9.3	3.3	.1	.7	52.1
SOUPFIN SHARK.....	.0	.0	.0	.0	.0	.0	.0	.2	.0	.1	.0	.0	.7
OTHER SHARK SP.....	.0	.0	.0	.0	.0	.0	.3	.3	.0	.0	.0	.0	.6
GREEN STURGEON.....	.0	.0	.1	.0	.0	.3	.2	.0	.0	.2	.0	.0	1.3
WHITE STURGEON.....	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.1
OCTOPUS.....	.1	.0	.0	.0	.1	.1	.2	.0	.0	.1	.0	.0	.7
RECTAIL SURFPERCH	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
WOLF EEL.....	.0	.0	.0	.0	.0	.1	.3	.2	.0	.0	.0	.0	.7
SQUID.....	.0	.0	.0	.0	.0	.4	.2	.1	.0	.0	.0	.0	.5
ANCHOVY.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
SCFAP.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
OTHER MISC. SP.....	.0	.0	.0	.8	1.5	1.2	1.3	.7	.0	.4	.0	.0	5.9
TOTAL MISC. SPECIES.	.4	.2	1.2	6.0	8.3	11.0	9.9	11.1	9.4	4.1	.1	.8	62.5
DOG FISH.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
HAKE.....	.0	.0	.0	.1	.0	2.4	4.1	2.6	1.4	1.5	.0	3.0	15.0
ANIMAL FOOD.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
REDUCTION.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	475.3	305.3	1227.5	1022.0	1165.8	1155.5	1306.0	1073.3	937.1	977.4	158.7	289.5	10093.2
TOTAL TRAWL HOURS	1867.	874.	2941.	4382.	3969.	4709.	4337.	4071.	4244.	5202.	625.	1459.	38681.



OREGON  
GROUND FISH LANDINGS BY MONTH IN METRIC TONS  
AREA 2C  
GROUND FISH TRAWL(GEAR 910) IN 1983

SPECIE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH SOLE.....	19.6	8.8	6.3	11.4	13.9	12.5	33.7	23.9	16.0	29.3	2.2	8.7	180.4
ROCK SOLE.....	.1	.0	.0	.0	.0	.1	.4	.7	.0	.1	.0	.0	1.4
PETRALE SOLE.....	5.3	4.4	11.4	9.4	8.5	5.8	13.2	15.1	10.5	15.2	.3	8.7	107.9
DOVEF SOLE.....	41.4	36.3	38.0	103.4	76.6	131.1	117.9	109.3	110.9	143.4	15.9	43.2	967.4
REX SOLE.....	7.1	5.6	7.6	8.2	7.7	10.6	12.2	9.7	6.9	8.0	.9	2.9	87.4
STARRY FLOUNDER.....	1.5	1.7	1.1	4.2	15.4	10.3	10.3	7.9	4.3	8.0	.6	.9	66.1
ARROWTOOTH FLOUNDER.....	1.0	1.3	13.2	7.4	7.0	18.0	11.4	7.7	8.1	15.0	1.2	3.4	94.6
BUTTEP SOLE.....	.1	.0	.0	.0	.0	.0	.0	.0	.1	.1	.0	.0	.3
FLATHEAD SOLE.....	.0	.0	.0	.0	.0	.0	.1	.2	.0	.0	.0	.0	.3
SAND DAB.....	1.1	4.1	.5	2.2	11.3	5.3	7.4	9.8	6.4	3.7	1.0	.4	53.5
SAND SOLE.....	4.0	2.8	2.1	6.7	7.2	9.7	12.0	10.0	6.7	1.1	.7	1.1	64.2
SLENDER SOLE.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
CULFIN SOLE.....	.0	.0	.0	.0	.0	.6	.1	.0	.0	.0	.0	.0	.8
OTHER MISC. FLATS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL OTHER FLATFISH	5.2	7.0	2.6	9.0	18.6	15.7	19.5	20.0	13.2	5.0	1.8	1.5	119.0
PACIFIC COD.....	.0	.0	.0	.0	.3	.4	.0	.1	.0	.1	.0	.0	.9
LING COD.....	4.8	4.1	13.8	42.1	40.0	64.4	73.4	95.2	55.4	14.8	1.3	17.8	427.1
SABLEFISH.....	46.7	6.1	19.5	53.0	62.6	133.9	180.8	85.2	77.8	97.2	14.2	39.2	815.4
PACIFIC OCEAN PERCH.....	18.0	10.4	25.0	48.2	19.8	42.7	138.0	87.2	143.1	161.5	14.2	.1	708.0
OTHER ROCKFISH.....	209.7	185.7	381.4	755.2	578.5	581.6	522.2	519.8	317.5	173.1	25.5	51.6	4300.7
SKATE.....	.2	.1	.0	.2	.0	.3	1.6	1.3	1.0	.4	.4	.9	6.4
SOUPFIN SHARK.....	.1	.1	.1	.0	.0	.1	.1	.0	.1	.1	.0	.0	.6
OTHER SHARK SP.....	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	.1
GREEN STURGEON.....	.0	.0	.2	1.0	.1	.1	.0	.1	.1	.0	.2	.2	2.0
WHITE STURGEON.....	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	.1
OCTOPUS.....	.2	.0	.0	.1	.2	.1	.6	.2	.2	.1	.0	.0	1.7
ROFTAIL SURPPERCH.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
WOLF EEL.....	.6	.0	.0	.1	.1	.1	.3	.2	.6	.1	.0	.0	1.5
SQUID.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
ANCHOVY.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
SCRAP.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
OTHER MISC. SP.....	.1	.4	.0	.0	.1	.2	1.1	.4	.7	.1	.1	.1	3.3
TOTAL MISC. SPECIES.....	.5	.6	.3	1.6	.5	.9	3.7	2.2	2.8	.9	.7	1.3	15.8
DOG FISH.....	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0	.2
HAKE.....	.0	.0	.0	.0	.0	3.7	.6	.0	.2	1.6	.0	.0	6.1
ANIMAL FOOD.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
REDUCTION.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	360.9	272.0	520.2	1053.1	849.3	1031.7	1137.3	983.0	766.9	673.2	78.8	178.2	7904.5
TOTAL TRAWL HOURS	1078.0	491.0	963.0	2245.0	2276.0	2673.0	3020.0	2410.0	2352.0	2859.0	276.0	944.0	21547.0

OREGON  
GROUND FISH LANDINGS BY MONTH IN METRIC TONS  
AREA 3A  
GROUND FISH TRAWL (GEAR 910) IN 1983

SPECIE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH SOLE.....	12.3	3.6	16.4	20.1	31.2	30.7	38.9	33.6	29.8	22.9	1.4	7.8	248.7
ROCK SOLE.....	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.1
PETRALE SOLE.....	24.0	17.0	22.8	20.7	55.4	47.9	28.9	33.2	34.5	48.1	9.2	33.9	375.5
DOVEF SOLE.....	7.6	2.6	103.4	184.8	146.2	180.6	187.8	178.3	206.9	160.4	16.0	17.3	1392.1
KEK SOLE.....	5.4	8.8	20.2	40.4	34.6	37.3	40.0	34.5	52.2	36.5	1.9	12.6	324.4
STARRY FLOUNDER.....	1.0	.2	5.2	19.6	6.9	3.0	11.4	9.6	10.9	9.0	.0	.0	75.8
ARROWTOOTH FLOUNDER.	9.1	3.1	26.8	13.4	58.4	28.9	18.2	17.0	19.3	31.2	6.0	3.0	239.4
BUTTER SOLE.....	.0	.0	.5	.2	.1	.1	.2	.1	.1	.0	.0	.0	1.3
FLATHEAD SOLE.....	.0	.4	1.0	.3	.0	.0	.3	.2	1.3	.3	.0	.0	4.3
SAND DAB.....	1.0	.2	3.6	12.1	14.1	7.9	6.7	4.6	4.2	5.9	.0	.3	60.6
SAND SOLE.....	3.4	.8	8.6	37.7	30.7	15.8	19.2	22.3	17.4	12.5	.2	1.8	170.3
SLENDER SOLE.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
CURLY SOLE.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
OTHER MISC. FLATS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL OTHER FLATFISH	4.4	1.4	13.7	50.3	44.9	23.8	26.9	27.2	22.9	18.7	.2	2.1	236.5
PACIFIC COD.....	.1	.0	.0	.0	3.9	5.0	2.4	4.3	1.9	5.9	.0	.4	23.9
LING COD.....	2.3	2.2	7.5	17.0	57.4	52.6	32.9	41.3	55.6	52.6	2.6	16.5	340.6
SABLEFISH.....	4.4	5.8	27.3	16.7	36.5	113.7	86.2	45.7	28.1	25.0	3.9	18.4	411.7
PACIFIC OCEAN PERCH.	.2	.2	4.8	20.3	32.3	50.8	42.0	15.5	19.5	22.2	2.1	.6	210.8
OTHER ROCKFISH.....	67.7	102.1	240.7	279.3	423.9	466.6	375.4	285.6	143.7	118.8	8.0	27.1	2538.8
SKATE.....	.1	.0	.0	.0	.3	.5	1.7	.0	.5	1.1	.3	.3	5.0
SCUP IN SHARK.....	.1	.1	.5	.0	.1	.2	.2	.7	.1	.1	.0	.0	2.3
OTHER SHARK SP.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
GREEN STURGEON.....	.1	.0	.1	.6	.5	.1	.0	.2	.1	.2	.0	.0	1.8
WHITE STURGEON.....	.0	.0	.0	.6	.2	.0	.0	.1	.0	.1	.0	.0	1.0
OCTOPUS.....	.0	.0	.0	.1	.1	.1	.0	.0	.0	.0	.0	.0	.5
REDTAIL SURFPFISH	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
WOLF EEL.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
SQUID.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
ANCHOVY.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
SCRAP.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
OTHER MISC. SP.....	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0	.0	.6
TOTAL MISC. SPECIES.	.3	.2	.6	1.4	1.3	1.0	2.0	1.1	1.3	1.6	.3	.4	11.5
DOG FISH.....	.0	.0	.0	.0	.0	.0	.0	.0	.2	.1	.0	.0	.3
HAKE.....	.0	.0	.0	.0	.0	2.7	.2	6.7	2.0	6.3	.0	.0	17.8
ANIMAL FOOD.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
REDUCTION.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	138.2	152.2	489.3	683.2	932.9	1044.6	893.1	733.7	628.8	559.3	51.6	140.2	6447.9
TOTAL TRAWL HOURS	726.	605.	1764.	2260.	2931.	3155.	3159.	2961.	2719.	2281.	215.	750.	23527.

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OREGON  
GROUND FISH LANDINGS BY MONTH IN METRIC TONS  
AREA 3B  
GROUND FISH TRAWL (GEAR 910) IN 1983

SPECIE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ENGLISH SOLE.....	.0	.9	.0	2.6	3.7	2.5	14.1	16.6	8.5	1.7	.0	2.0	52.0
ROCK SOLE.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
PETRALE SOLE.....	3.8	.4	1.8	12.3	4.2	1.1	14.0	12.3	8.6	4.0	1.3	5.2	69.1
DOVER SOLE.....	35.7	21.7	179.6	227.7	80.3	4.5	28.2	48.0	33.1	12.9	4.5	66.6	742.7
REX SOLE.....	.9	9.0	.3	.8	3.6	1.4	5.5	8.9	11.1	4.3	1.3	4.2	51.3
STARRY FLOUNDER.....	.0	.0	.0	.5	36.2	.2	1.7	2.1	.0	.1	.0	.1	40.8
ARROWTOOTH FLOUNDER.....	5.0	.4	2.7	7.5	38.0	5.8	17.3	50.3	13.4	7.4	1.7	6.4	155.9
BUTTER SOLE.....	.0	.0	.0	.0	.0	.0	.0	.4	.0	.0	.0	.0	.4
FLATHEAD SOLE.....	.0	.0	.0	.5	.0	.0	.0	.2	.9	.1	.0	.0	2.3
SAND DAB.....	.0	.0	.0	.0	.4	.2	.1	.8	1.9	.0	.0	.0	3.4
SAND SOLE.....	.0	.0	.0	.0	7.1	.6	4.8	8.4	1.8	.1	.0	.3	23.2
SLENDER SOLE.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
CURL FIN SOLE.....	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0	.1
OTHER MISC. FLATS	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL OTHER FLATFISH	.0	.0	.0	.5	7.7	.9	4.9	9.8	4.5	.3	.0	.8	29.3
PACIFIC COD.....	.0	.0	.0	14.7	8.4	1.1	12.5	12.3	5.4	1.5	.2	.2	56.4
LING COD.....	.5	.6	.6	4.9	10.3	2.3	40.0	45.1	21.0	7.9	6.7	1.7	141.7
SABLEFISH.....	9.7	1.7	9.6	10.8	11.1	1.0	43.9	77.5	22.1	1.4	1.8	12.1	202.6
PACIFIC OCEAN PERCH.....	6.3	1.6	.1	3.8	8.8	7.4	2.7	2.3	5.4	4.8	3.1	10.8	57.1
OTHER ROCKFISH.....	26.1	7.4	35.5	65.7	52.4	42.7	124.5	53.8	23.4	7.8	3.2	12.4	454.9
SKATE.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
SOUFFLE SHARK.....	.0	.1	.0	.0	.0	.0	.5	.0	.0	.0	.0	.0	.6
OTHER SHARK SP.....	.0	.0	.0	.0	.3	.0	.0	.0	.0	.0	.0	.0	.3
GREEN STURGEON.....	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0	.2
WHITE STURGEON.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
OCTOPUS.....	.0	.0	.0	.0	.0	.0	.0	.2	.0	.1	.0	.0	.3
REDTAIL SURFPERCH.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
WOLF EEL.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
SQUID.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
ANCHOVY.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
SCRAP.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
OTHER MISC. SP.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL MISC. SPECIES.....	.0	.1	.0	.0	.5	.1	.6	.2	.1	.1	.0	.0	1.6
DOG FISH.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
HAKE.....	.0	.0	.0	.0	.0	.0	.0	.0	.3	.4	.0	.0	.7
ANIMAL FOOD.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
REDUCTION.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
TOTAL	83.1	43.9	230.3	351.0	265.1	70.7	309.7	339.2	157.0	54.5	23.9	122.5	2756.8
TOTAL TRAWL HOURS	95.	104.	176.	449.	728.	257.	788.	1008.	529.	185.	47.	244.	4609.

Midwater Trawl Landings by International Statistical Area in 1983

(Landings in metric tons)

Species	1C	2A	2B	2C	3A	3B	Total
English Sole							
Rock Sole							
Petrals Sole							
Dover Sole							
Rex Sole							
Starry Flounder							
Arrowtooth Flounder							
Other Flatfish							
Pacific True Cod							
Lingcod		0.1	0.1		0.1		0.3
Sablefish							
Pacific Ocean Perch							
Other Rockfish		86.9	451.0	458.8	398.4	143.6	1538.7
Misc. Species			16.1				16.1
Dogfish							
Animal Food							
Reduction Use							
Total Landings		87.0	467.2	458.8	398.5	143.6	1555.1
Total Hours							

Shrimp Incidental Landings by International Statistical Area in 1983

(Landings in metric tons)

Species	1C	2A	2B	2C	3A	3B	Total
English Sole	0	0	Tr	Tr	0.4	0.2	0.6
Rock Sole	0	0	0	0	0	0	0
Petrale Sole	0	0	0.5	Tr	0.3	0.2	1.0
Dover Sole	0	0.1	10.7	3.4	6.1	13.9	34.2
Rex Sole	0	0	1.0	Tr	1.1	1.4	3.5
Starry Flounder	0	0	0	0	0	0	0
Arrowtooth Flounder	0	0	0	0	0.7	6.0	6.7
Other Flatfish	0	0	0.8	Tr	0.5	0.4	1.7
Pacific True Cod	0	0	Tr	Tr	0.6	7.2	7.8
Lingcod	0	0.1	2.1	0.6	13.4	20.8	37.0
Sablefish	0	0	2.7	1.6	6.1	14.4	24.8
Pacific Ocean Perch	0	0	1.1	Tr	1.6	4.1	6.8
Other Rockfish	0	5.8	118.4	7.3	141.0	176.5	4449.0
Misc. Species	0	0.4	4.1	0.1	3.5	0.5	8.6
Dogfish	0	0	0	0	0	0	0
Animal Food	0	0	0	0	0	0	0
Reduction Use	0	0	0	0	0	0	0
Total Landings	0	6.4	141.4	13.0	175.3	245.6	581.7
Total Hours							

Fish Pot Landings By International Statistical Area in 1983

(Landings in metric tons)

Species	1C	2A	2B	2C	3A	3B	Total
English Sole							
Rock Sole							
Petrals Sole							
Dover Sole		Tr		0.1	Tr		0.1
Rex Sole							
Starry Flounder							
Arrowtooth Flounder							
Other Flatfish					0.4		0.4
Pacific True Cod							
Lingcod		0.5	1.0	1.1			2.6
Sablefish		204.5	590.0	519.1	16.5		1330.1
Pacific Ocean Perch							
Unsp. Other Rockfish		0.5	2.0	1.0	Tr		3.5
Misc. Species <sup>1/</sup>				Tr	0.4		0.4
Dogfish							
Animal Food							
Reduction Use							
Total Landings		205.5	593.0	521.3	17.3		1337.1
Total Hours							

<sup>1/</sup> Includes Pacific halibut (fish illegal gear)

Jig Landings By International Statistical Area in 1983

(Landings in metric tons)

Species	1C	2A	2B	2C	3A	3B	Total
English Sole				Tr			Tr
Rock Sole				Tr			Tr
Petrable Sole				Tr			Tr
Dover Sole							
Rex Sole							
Starry Flounder			Tr	Tr			Tr
Arrowtooth Flounder							
Other Flatfish <sup>1/</sup>				Tr			Tr
Pacific True Cod							
Lingcod		3.1	22.7	22.5	0.6		48.9
Sablefish				0.1			0.1
Pacific Ocean Perch							
Unsp. Other Rockfish		57.2	108.0	271.6	3.9		440.7
Misc. Species		Tr	0.2	0.1	Tr		0.3
Dogfish							
Animal Food							
Reduction Use							
Total Landings		60.3	130.9	294.3	4.5		490.0
Total Hours							

<sup>1/</sup> Other flatfish includes Pacific Halibut

Longline Landings By International Statistical Area In 1983

(Landings in metric tons)

Species	1C	2A	2B	2C	3A	3B	Total
English Sole							
Rock Sole							
Petrale Sole			0.1	0.1	Tr		0.2
Dover Sole					Tr		Tr
Rex Sole							
Starry Flounder							
Arrowtooth Flounder				Tr			Tr.
Other Flatfish <sup>1/</sup>		1.8	12.2	56.0	191.6		261.6
Pacific True Cod					Tr		Tr
Lingcod		0.1	2.6	3.2	1.3		7.2
Sablefish		0.1	366.3	59.6	96.1		522.1
Pacific Ocean Perch							
Unsp. Other Rockfish		1.1	42.0	19.6	28.1		90.8
Misc. Species		0.6	1.3	0.8	2.5		5.2
Dogfish							
Animal Food							
Reduction Use							
Total Landings		3.7	424.5	139.3	319.6		887.1
Total Hours							

<sup>1/</sup> Includes Pacific Halibut



Troll Landings By International Statistical Area In 1983

(Landings in metric tons)

Species	1C	2A	2B	2C	3A	3B	Total
English Sole							
Rock Sole							
Petrale Sole			Tr	0.1			0.1
Dover Sole							
Rex Sole							
Starry Flounder				Tr			Tr
Arrowtooth Flounder							
Other Flatfish				Tr			Tr
Pacific True Cod				Tr			Tr
Lingcod		1.0	10.3	6.1	2.0		19.4
Sablefish			Tr	0.2	Tr		0.2
Pacific Ocean Perch							
Other Rockfish		6.0	37.7	45.7	5.3		94.7
Misc. Species		0.2	0.1	0.1	0.1		0.5
Dogfish							
Animal Food							
Reduction Use							
Total Landings		7.2	48.1	52.2	7.4		114.9
Total Hours							

Scallop Dredge Landings By International Statistical Area In 1983

(Landings in metric tons)

Species	1C	2A	2B	2C	3A	3B	Total
English Sole	0.1		0.1		Tr		0.1
Rock Sole	Tr						Tr
Petrale Sole	0.4		0.1	0.2	0.1		0.4
Dover Sole	1.8		0.9	0.3	0.6		1.8
Rex Sole	0.1				0.1		0.1
Starry Flounder	Tr						Tr
Arrowtooth Flounder	Tr						Tr
Other Flatfish	0.1						0.1
Pacific True Cod	Tr				Tr		Tr
Lingcod	1.4		0.2	0.6	0.1		0.9
Sablefish							
Pacific Ocean Perch							
Other Rockfish	2.4		Tr	0.1	Tr		0.1
Misc. Species	0.8			Tr	0.1		0.1
Dogfish							
Animal Food							
Reduction Use							
Total Landings	7.1		1.3	1.2	1.0		3.5
Total Hours							

Gill Net Landings By International Statistical Area In 1983

(Landings in metric tons)

Species	1C	2A	2B	2C	3A	3B	Total
English Sole							
Rock Sole							
Petrale Sole							
Dover Sole							
Rex Sole							
Starry Flounder							
Arrowtooth Flounder							
Other Flatfish							
Pacific True Cod							
Lingcod							
Sablefish							
Pacific Ocean Perch							
Other Rockfish							
Misc. Species				0.5			0.5
Dogfish							
Animal Food							
Reduction Use							
Total Landings				0.5			0.5
Total Hours							

Other Nets Landings By International Statistical Area In 1983

(Landings in metric tons)

Species	1C	2A	2B	2C	3A	3B	Total
English Sole			Tr				Tr
Rock Sole							
Petrale Sole							
Dover Sole							
Rex Sole							
Starry Flounder			Tr	Tr			Tr
Arrowtooth Flounder							
Other Flatfish			0.1				0.1
Pacific True Cod							
Lingcod			0.1				0.1
Sablefish							
Pacific Ocean Perch							
Unsp. Other Rockfish			0.3	1.2			1.5
Misc. Species			Tr				Tr
Dogfish							
Animal Food							
Reduction Use							
Total Landings			0.5	1.2			1.7
Total Hours							

Crabpot Landings By International Statistical Area In 1983

(Landings in metric tons)

Species	1C	2A	2B	2C	3A	3B	Total
English Sole				Tr			Tr
Rock Sole				Tr			Tr
Petrale Sole							
Dover Sole							
Rex Sole							
Starry Flounder				Tr			Tr
Arrowtooth Flounder				Tr			Tr
Other Flatfish				Tr			Tr
Pacific True Cod							
Lingcod			Tr	0.3	0.1		0.4
Sablefish							
Pacific Ocean Perch							
Unsp. Other Rockfish			0.1	0.5	0.2		0.8
Misc. Species			Tr	0.2	Tr		0.2
Dogfish							
Animal Food							
Reduction Use							
Total Landings			0.1	1.0	0.3		1.4
Total Hours							

Tagged Fish Recoveries

Species           Lingcod  
Date Tagged       July 1978  
Number            3,818 - Floy anchor  
Depth             40-83 fms  
Area               2B-2C  
Agency           Oregon Dept. Fish & Wildlife

Area	Recoveries by Year					
	1978	1979	1980	1981	1982	1983
3B	0	0	1	4	0	0
3A	0	0	2	3	1	0
2B-2C	188	180	109	49	37	14
Unk	17	2	1	9	1	3
Total	205	182	113	65	39	17

Tagged Fish Recoveries

Species           English sole  
Date Tagged       December 1977, March 1978  
Number            4,190 - Floy anchor  
Depth             28-63 fms  
Area               2B-2C  
Agency           Oregon Dept. Fish & Wildlife

Area	Recoveries by Year					
	1978	1979	1980	1981	1982	1983
5A	1	1	1	0	0	0
4B	3	0	0	0	0	0
3C	3	2	0	0	0	0
3B	13	6	1	1	0	0
3A	46	13	2	0	0	0
2B-2C	82	22	1	1	1	0
2A	2	0	0	0	0	0
1C	12	2	0	0	0	0
Unk	15	4	3	1	0	0
Total	177	50	8	3	1	1

Common and scientific names of species reported in the Oregon commercial catch.

Common Name	Scientific Name	Common Name	Scientific Name
<b>FISHES</b>		<b>FISHES</b>	
Anchovy, northern.....	<i>Engraulis mordax</i>	Steelhead.....	<i>Salmo gairdneri</i>
Bass, striped.....	<i>Morone saxatilis</i>	Sturgeon	
Cabezon.....	<i>Scompaenichthys marmoratus</i>	Green.....	<i>Acipenser medirostris</i>
Carp.....	<i>Cyprinus carpio</i>	White.....	<i>Acipenser transmontanus</i>
Cod, Pacific.....	<i>Gadus macrocephalus</i>	Surfperch.....	Members of the family <i>Embiotocidae</i>
Flounder		Tuna	
Arrowtooth.....	<i>Atheresthes stomus</i>	Albacore.....	<i>Thunnus alalunga</i>
Starry.....	<i>Platichthys stellatus</i>	Bluefin.....	<i>Thunnus thynnus</i>
Hake, Pacific (Whiting).....	<i>Merluccius productus</i>	Skipjack.....	<i>Euthynnus pelamis</i>
Halibut, Pacific.....	<i>Hippoglossus stenolepis</i>	Yellowfin.....	<i>Thunnus albacurus</i>
Herring, Pacific.....	<i>Clupea harengus pallasi</i>	Walleye.....	<i>Stizostedion vitreum vitreum</i>
Lamprey, Pacific.....	<i>Entosphenus tridentatus</i>	Wolf-eel.....	<i>Anarrhichthys ocellatus</i>
Langcod.....	<i>Ophiodon elongatus</i>		
Mackerel.....	Members of the family <i>Scombridae and Scombridae</i>	<b>CRUSTACEANS</b>	
Rockfish		Crab	
Miscellaneous rockfish.....	<i>Sebastes</i> spp.	Box.....	<i>Lopholithodes foraminatus</i>
Pacific Ocean Perch.....	<i>Sebastes alutus</i>	Bungeness.....	<i>Cancer magister</i>
Widow.....	<i>Sebastes entomelas</i>	Rock.....	<i>Cancer productus</i>
Subfish.....	<i>Anoplopoma fimbria</i>	Tanner.....	<i>Chionoecetes</i> spp.
Salmon		Crayfish.....	<i>Puorifastacus</i> spp.
Chinook.....	<i>Oncorhynchus tshawytscha</i>	Shrimp	
Chum.....	<i>Oncorhynchus keta</i>	Brine.....	<i>Artemia salina</i>
Coho.....	<i>Oncorhynchus kisutch</i>	Ghost (Sand).....	<i>Callinectes californiensis</i>
Pink.....	<i>Oncorhynchus gorbuscha</i>	Pink.....	<i>Pandalus jordani</i>
Sockeye.....	<i>Oncorhynchus nerka</i>		
Sanddab, Pacific.....	<i>Citharichthys bordinus</i>		
Shad, American.....	<i>Alosa sapidissima</i>	<b>MOLLUSKS</b>	
Shark		Clam	
Soupfin.....	<i>Galeorhinus zyopterus</i>	Butter.....	<i>Saxidomus giganteus</i>
Spiny dogfish.....	<i>Squalus acanthias</i>	Cockle.....	<i>Clinocardium nuttallii</i>
Skates and Rays.....	Members of the family <i>Rajidae, Rhinobatidae</i> and <i>Myliobatidae</i>	Gaper.....	<i>Tresus capax</i>
Smelt.....	Members of the family <i>Osmeridae</i>	Littleneck.....	<i>Venerupis</i> spp.
Soie		Razor.....	<i>Siliqua patula</i>
Butter.....	<i>Isopsetta isolapis</i>	Softshell.....	<i>Mya arenaria</i>
Carlin.....	<i>Platyonichthys decurrens</i>	Mussel.....	<i>Mytilus</i> spp.
Dover.....	<i>Microstomus pacificus</i>	Octopus.....	<i>Polypus</i> spp.
English.....	<i>Parophrys vetulus</i>	Oyster	
Flathead.....	<i>Hippoglossoides stassleodon</i>	Kumamoto.....	<i>Crassostrea gigas</i> var.
Petrale.....	<i>Opsetta jordani</i>	Native.....	<i>Ostrea lurida</i>
Rex.....	<i>Glyptocephalus sachirus</i>	Pacific.....	<i>Crassostrea gigas</i>
Rock.....	<i>Lepidopsetta bilineata</i>	Scallop, weathervane.....	<i>Patinopecten caurinus</i>
Sand.....	<i>Psettichthys melanostictus</i>	Squid.....	<i>Loligo opalescens</i>
Slender.....	<i>Lipsetta exilis</i>		