

REPORT OF THE TECHNICAL SUB-COMMITTEE  
OF THE  
INTERNATIONAL GROUND FISH COMMITTEE  
Appointed By  
The Second Conference on Coordination  
Of Fisheries Regulations Between  
CANADA  
and the  
UNITED STATES

Thirteenth Annual Meeting  
June 28-30, 1972  
Newport, Oregon

off the lower west coast of Vancouver Island (Area 3C) where catch in 1971 was 50% greater than the mean for 1961-70. Catch in other Areas (4A, 5A, and 5B) remained relatively close to the 1961-70 mean.

b. Oregon. Pacific cod landings increased to 483,000 pounds from 78,000 pounds in 1970. Oregon is a fringe area for cod distribution and landings generally fluctuate with the passage of strong and weak year classes in more northern areas.

D. Pacific ocean perch

Pacific ocean perch landings in Canada and the United States at 12.8 million pounds in 1971 declined 34% from the 19.5 million pounds landed in 1970.

1. Canada

Total Canadian landings of Pacific ocean perch declined 37% in 1971 from 1970 (3.0 million pounds from 4.6 million pounds in 1971 and 1970, respectively). The 1971 catch was still 30% greater than the 10-year average, however. The decline in Canadian landings was attributed to depressed 1971 market conditions with resultant decline in effort (40% drop between 1969 and 1971). Most Canadian landings came from PMFC Areas 5A-5B (INPFC Queen Charlotte Sound sub-area), 2.4 million pounds; the rest (505,000 pounds) from Areas 3B-3D (Vancouver area).

2. United States

a. Washington. Total landings of Pacific ocean perch in 1971 declined 39% in Washington from 1970 (8.1 million pounds from 13.2 million pounds in 1971 and 1970, respectively). The 1971 catch was 37% below the 10-year average. This decline was attributed to lessened effort due to lower availability of stocks and a shift in effort to other rockfishes and Pacific cod, for which a ready market existed. Washington perch landings came from PMFC Areas 5A-5B (Queen Charlotte Sound sub-area), Areas 3B-3D (Vancouver area)

with 6.4 million and 1.6 million pounds in the first two areas, respectively. Only 41,000 pounds were taken in the Columbia sub-area.

b. Oregon. Oregon landings of Pacific ocean perch in 1971 were nearly identical to the 1970 total (1.6 million pounds), but 68% less than the 10-year average. Oregon catches remained low because of the low availability of perch in areas generally fished by Oregon vessels. No market problems existed in Oregon in 1971. Oregon catches came from all three INPFC areas - 308,000; 459,000; and, 852,000 pounds, respectively, in the Queen Charlotte Sound sub-area and the Vancouver and Columbia areas.

c. California. California Pacific ocean perch landings increased nearly 100% in 1971 over 1970--from 57,000 to 112,000 pounds, and represented an increase of 300% over the 10-year average.

E. Other rockfish

Total Pacific coast landings of rockfishes other than Pacific ocean perch decreased 7% from 1970. The catch in 1971 was 24.5 million pounds; in 1970 it was 26.3 million pounds. Most important species in this group which includes many species of *Sebastes* were *S. flavidus*, *S. pinniger*, *S. brevispinis*, *S. paucispinis*, *S. goodei*, and *Sebastolobus alascanus*.

1. Canada

Catches of other rockfishes in Canada increased 11% in 1971 over 1970 (1.7 million and 1.5 million pounds, respectively), continuing an upward trend in catches of this group since 1967 when only .5 million pounds were landed. This trend was caused by increased market acceptance. *S. flavidus* is the most important species and was taken in Queen Charlotte Sound.

During 1971, 49% of other rockfish landings came from PMFC Areas 5A-5B, 26% from Areas 5C-5D, and 21% from Areas 3B-3D. Four per cent of landings came from Area 4A.

2. United States

a. Washington. Washington landings of other rockfish in 1971 declined 13% from 1970 (10.5 from 12.2 million pounds), but were up 15% from the 10-year mean. Recent increases from the 10-year mean have been due, at least in part, to declining Pacific ocean perch catches with resultant shift in effort.

The estimated 1966-70 other rockfish catch species composition was 46% *Sebastes flavidus*, 32% *S. pinniger*, 15% *S. brevispinis*, 5% *S. paucispinis*, and 2% miscellaneous species. Species composition varied between grounds and with depth within grounds.

During 1966-70, 56% of the catch came from PMFC Areas 5A-5B and 43% from Areas 3B-3D. During 1971, these percentages were 59% and 37%, respectively.

b. Oregon. Landings of other rockfish totaled 3.4 million pounds, down 3% from 1970 catch of 3.5 million pounds and 27% below the 10-year mean. This was the lowest landing since 1957. The drastic reduction in landings, which started in 1970, may be due to the impact of the Soviet fleet on other species of rockfish.

*Sebastes flavidus* and *S. pinniger* were most important in landings.

During 1971, 72% of the rockfish landings came from PMFC Areas 2B-3A, 12% from 3B-3D, 8% from 5A-5B, and 8% from 1C-2A.

c. California. California landings of other rockfish decreased 2% in 1971 from 1970 (8.9 million from 9.1 million pounds), but were 8% greater than the 10-year mean. Leading species in 1962 and 1963 were *Sebastes paucispinis*, *S. goodei*, *S. pinniger*, and *Sebastes alascanus*. No recent sampling for species composition has been made but these are probably still the predominant species. *S. alascanus* has become increasingly important in landings, comprising about 15% of the total rockfish catch in 1970 and 1971.

During 1971, most (46%) of the landings came from PMFC Area 1B, 38% from Areas 1C-2A, and 16% from Area 1A.

F. English sole

Canadian and United States landings of English sole in 1971 totaled 7.5 million pounds. This total was 21% below the 1970 catch of 9.5 million pounds and 35% below the 11.6 million pound average for 1961-70. PMFC statistical Areas 1B, 5D, 1C, and 4A were the leading English sole catch areas where respective catches of 1.6 million pounds, 1.1 million pounds, 1.0 million pounds, and 984,000 pounds were made.

1. Canada

Landings of English sole in 1971 were 1.4 million pounds. This was a drop of almost 50% from 1970 and 15% less than the mean for the preceding 10 years. The bulk of the landings (74%) was taken as usual from grounds in northern Hecate Strait. CPUE in this fishery is based on performance of vessels which had 20% or more of English sole in their landing for a trip during February-June. Based on these criteria, the CPUE for 1971 was 466 lb/hr, i.e., 35% lower than the mean for the preceding six years. The English sole fishery in northern Hecate Strait is strongly dependent on newly recruited fish, primarily 4 and 5-year-olds. Production of good English sole year classes appears to require relatively low water temperature (or some factor associated with low water temperature) and there is a decline in strengths with water temperatures above 6°C. (This, despite the potential of the egg for better survival at higher temperatures. High water temperatures are apparently associated with transport of eggs or larvae to unfavorable rearing areas; Ketchen, 1956, Alderdice and Forrester, 1968.) The principal year classes expected in 1971 were 1967 and 1966. However, the sea surface temperature in February in northern Hecate Strait (the index for temperature) in both those years was above average and some

WASHINGTON TRAWL LANDINGS  
1950 through 1954 (1,000 Pounds)

SPECIES	1950	1951	1952	1953	1954	Mean 1950-54
English sole	4,097	4,680	4,534	2,510	4,850	4,134
Rock sole	119	490	1,420	388	520	587
Petrable sole	4,309 (1)	3,339	3,259	2,414	3,590	3,382
Dover sole	NA (1)	870	1,424	1,264	1,889	1,362 <sup>3/</sup>
Rex sole	NA	3	18	6	8	9 <sup>3/</sup>
Starry flounder	1,352	1,274	1,157	793	815	1,078
Other flatfish	283	81	532	267	429	318
Total flatfish	10,160	10,737	12,344	7,642	12,101	10,597
Pacific cod	6,616	8,368	9,873	8,157	15,327	9,668
Lingcod	2,330	1,810	1,386	928	1,494	1,590
Sablefish	491 (2)	1,259 (2)	618	221	330	584 <sup>4/</sup>
Pacific O. perch	NA	NA	1,383	2,939	6,662	3,661
Other rockfish	11,948	9,652	8,896	3,713	6,010	8,044
Misc. species	26	33	34	51	73	43
Total food fish	31,571	31,859	34,534	23,651	41,997	32,722
Dogfish	117	380	514	827	793	526
Animal food	12	37	18	495	1,064	325
Reduction	1,096	1,677	2,846	3,230	3,132	2,396
Total catch	32,796	33,953	37,912	28,203	46,986	35,970
Total hours	NA	NA	NA	NA	NA	NA

(1) Included in other flatfish, (2) Included in other rockfish, <sup>3/</sup>4-yr. aver.  
<sup>4/</sup> 3-yr. aver.

WASHINGTON TRAWL LANDINGS  
1955 through 1959 (1,000 Pounds)

SPECIES	1955	1956	1957	1958	1959	Mean 1955-59
English sole	4,085	3,805	3,253	4,478	5,387	4,202
Rock sole	964	716	313	483	534	602
Petrale sole	2,992	2,896	4,701	2,154	3,066	3,162
Dover sole	3,322	3,722	1,522	2,031	2,365	2,592
Rex sole	27	38	7	30	19	24
Starry flounder	1,530	1,631	1,290	918	876	1,249
Other flatfish	92	175	112	70	22	94
Total flatfish	13,012	12,983	11,198	10,164	12,269	11,925
Pacific cod	12,608	9,561	11,280	12,243	12,930	11,724
Lingcod	3,428	2,809	2,560	2,877	4,500	3,235
Sablefish	443	3,269	564	370	940	1,117
Pacific O. perch	3,499	4,980	4,515	2,736	5,840	4,314
Other rockfish	5,583	5,695	4,254	5,499	6,201	5,446
Misc. species	67	59	38	65	66	59
Total food fish	38,640	39,356	34,409	33,954	42,746	37,821
Dogfish	726	407	368	1,338	1,399	848
Animal food	879	3,813	2,588	2,501	1,388	2,234
Reduction	2,720	4,243	4,757	5,054	5,055	4,366
Total catch	42,965	47,819	42,122	42,847	50,588	45,268
Total hours	NA	NA	NA	NA	NA	NA

Washington Trawl Landings, 1960 through 1970  
(Thousands of Pounds)

Appendix B-5

Species	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	Mean	
											1960-69	1970
English sole	5,039	3,582	3,075	3,607	3,739	3,779	3,693	2,915	3,169	2,989	3,559	1,718
Rock sole	863	584	789	793	830	1,013	1,377	1,879	826	1,148	1,010	452
Petrale sole	2,472	3,507	2,964	2,944	2,162	2,737	2,547	1,830	1,575	1,608	2,435	797
Dover sole	3,466	2,655	3,083	2,785	1,714	1,373	1,072	998	1,526	1,850	2,052	2,235
Rex sole	14	22	32	41	66	105	89	129	19	12	529	26
Starry flounder	1,105	1,174	982	1,020	802	704	483	1,271	1,957	657	1,016	397
Other flatfish	57	97	70	44	66	86	216	166	48	77	93	114
Total flatfish	13,016	11,621	10,995	11,234	9,379	9,797	9,477	9,188	9,120	8,341	10,694	5,739
Pacific cod	5,134	2,955	3,154	6,298	6,211	9,942	9,466	8,365	5,526	3,767	6,082	2,660
Lingcod	4,702	4,732	3,418	2,468	2,953	4,569	5,737	5,778	5,940	3,465	4,376	2,540
Sablefish	962	523	2,361	545	271	182	245	182	155	138	556	183
Pacific ocean perch	6,064	7,871	11,447	15,616	11,244	14,388	17,416	13,579	11,715	12,269	12,161	13,249
Other rockfish	5,449	6,706	9,518	7,464	5,509	6,515	9,315	6,863	10,255	17,141	8,474	12,157
Miscellaneous species	24	25	100	76	76	81	155	86	80	91	79	55
Total food fish	35,351	34,433	40,933	43,701	35,643	45,747	51,791	44,041	42,791	45,212	42,422	36,583
Animal food	3,390	5,184	3,966	2,419	3,135	3,844	7,212	6,829	6,310	3,226	4,552	2,598
Reduction	3,025	2,213	2,330	2,286	3,628	4,247	9,867	26,819	6,865	9,672	7,095	10,132
Total landings	41,766	41,830	47,289	48,406	42,406	53,565	68,870	77,689	55,966	58,110	54,069	49,313
Total hours	57,900	50,700	54,600	52,900	53,800	49,600	51,800	49,700	46,100	51,800	51,900	45,036

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b. Oregon. Pacific cod landings increased to 1.1 million pounds from the 0.5 million pounds of 1971, and reflected the greater abundance in this fringe area of the cod's distribution.

D. Pacific ocean perch

1972 Pacific ocean perch landings in Canada and the United States were 14.5 million pounds; an increase of 14% over 1971 landings and a 29% increase from the 1962-71 mean.

1. Canada

Total Canadian landings were 5.1 million pounds in 1972 which represents a 75% increase from the 2.9 million pounds landed in 1971 and a 104% increase from the 10-year mean. Ninety-four percent of the total landings came from area 5A and 5B (INPFC Charlotte sub-area). The remainder, 258,000 pounds, was from Areas 3B-3D (INPFC Vancouver area). In Queen Charlotte Sound, Canadian CPUE values were up substantially (66% in terms of catch/hr) from 1971 values. Some of the increase in catches and CPUE may be attributed to changes in seasonal and areal fishing patterns. There was considerably more effort spent during August-November, 1972, than in the same period of previous years and there appeared to be relatively greater effort on grounds toward the seaward side of Queen Charlotte Sound than in 1969-71. However, substantial increases in CPUE were observed in all areas fished in Queen Charlotte Sound in 1972, possibly reflecting a recovery of the stocks from the intensive 1966-67 fisheries.

2. United States

a. Washington. Total landings were up 8% from 8.1 million pounds in 1971 to 8.7 million pounds in 1972, but were 33% below the 10-year mean. While the 1.1 million pound landing from off the northern Washington coast and the

west coast of Vancouver Island is less than the 1971 landing, the 7.4 million pound landing from Queen Charlotte Sound represents a one million pound increase from 1971.

b. Oregon. Landings were down 63% from 1971 and 88% from the 10-year mean. Ninety-eight percent of the landings were from Areas 2B-3A (Columbia Area) where the CPUE was down from 328 lbs/hr, in 1971 to 290 lbs/hr, in 1972.

c. California. California fishermen landed 94,000 pounds of Pacific ocean perch in 1972 which was a 16% decrease from the 112,000 pounds landed in 1971, but about twice the magnitude of the 10-year mean. Eighty-four percent of the landings (79,000 pounds) was from Area 1C.

E. Other rockfish

Canadian and U. S. landings of other rockfish were 31.3 million pounds in 1972, a 28% increase over 1971 landings and 35% above the past 10-year mean landing.

1. Canada

Landings of other rockfish in 1972 continued to increase. The 3.4 million pounds landed in 1972 was 100% greater than the 1971 landings of 1.7 million pounds and 298% greater than the 10-year mean. Most of the other rockfish landed was from Queen Charlotte Sound and consisted mainly of Sebastes flavidus.

2. United States

a. Washington. Washington's 1972 landings of 10.7 million pounds represents a 1% increase from the 1971 landings and a 12% increase from the 10-year mean. The bulk of the landings (83%) was from the northwest coast of Vancouver Island and Queen Charlotte Sound. Principal species were Sebastes flavidus, S. pinniger, and S. brevispinis.

b. Oregon. Landings of other rockfish totaled 4.1 million pounds in 1972, up 19.2% from the 3.4 million pounds landed in 1971 and 10.8% below the

10-year mean. Most of the other rockfish landed (82%) came from Areas 2B and 3A.

c. California. Other rockfish landings in 1972 were 13.2 million pounds as compared to 8.8 million pounds in 1971, a 49% increase. The 1972 landings were 61% greater than the 10-year mean. Landings were greatest from Areas 1B and 1C (51% and 27% of the total landing respectively). Predominant species in California landings are Sebastolobus alascanus, Sebastes paucispinus, S. goodei and S. pinniger.

F. English sole

Canadian and United States landings of English sole in 1972 were 8.1 million pounds. This total was 8% greater than the 1971 catch of 7.5 million pounds but it was 28% below the past 10-year average of 11.1 million pounds. Areas 1B, 1C, and 4A, were leading catch areas where catches exceeded a million pounds in 1972.

1. Canada

Landings of English sole in 1972 were 1.1 million pounds, a decline of 25% from that of 1971 and 28% below the 1962-71 mean. The bulk of the landings (72%) was taken in northern Hecate Strait (Area 5D). CPUE in this fishery was 528 lbs/hr, slightly greater than that of 1971, but 23% below the 10-year mean.

2. United States

a. Washington. Washington trawl landings of English sole for foodfish use were 1.8 million pounds in 1972. This catch is up 39% from 1971, a reverse of the downward landing trend which began in 1970. An additional 216,000 pounds of English sole was landed for animal food in 1972.

The northern Washington coast (Area 3B) is the main area fished for English sole by Washington trawlers; in 1972, 520,000 pounds caught in Area 3B. CPUE was 107 lbs/hr, an improvement over that of 1971. Both catch and CPUE remain below 10-year averages but they are the first signs of improvement since 1968.

Table 1. Otter trawl landings (1,000's of pounds) from the Northeastern Pacific by Canadian and United States Vessels in 1971, 1972 and mean for 1962-71.

Species	1971					1972					Mean 1962-71
	B.C.	Wash.	Ore.	Cal.	Total	B.C.	Wash.	Ore.	Cal.	Total	
English sole	1,438	1,316	1,799	2,964	7,517	1,084	1,826	2,196	3,002	8,108	11,053
Rock sole	4,309	568	122	--	4,999	2,110	555	2	5	2,672	5,643
Petrale sole	1,115	1,095	2,284	3,704	8,198	1,275	1,726	2,185	3,574	8,760	8,038
Dover sole	2,987	1,376	5,538	14,241	24,142	2,424	1,192	5,942	22,080	31,638	18,131
Rex sole	424	59	839	1,469	2,791	359	101	1,314	1,662	3,436	2,937
Starry flounder	293	496	485	248	1,522	457	780	439	599	2,275	1,934
Other flatfish	458	132	521	1,197	2,308	562	291	600	1,576	3,029	2,099
Pacific cod	10,996	5,615	483	1,651	17,094	19,013	9,304	1,069	0	29,386	20,161
Langcod	3,427	1,984	1,281	2,971	8,343	2,288	1,482	1,349	2,618	7,737	9,332
Sablefish	418	123	240	2,971	3,752	1,517	85	403	5,067	7,072	2,920
Pacific ocean perch	2,947	8,074	1,649	112	12,782	5,130	8,685	602	94	14,511	20,367
Other rockfish	1,716	10,525	3,404	8,858	24,503	3,393	10,678	4,057	13,160	31,288	23,107
Misc. species	204	82	28	142	456	610	216	36	292	1,154	646
Dogfish	259	--	4	--	263	181	--	tr	2	183	255
Animal food	943	3,789	1,786	988	7,506	1,131	1,076	730	370	3,307	14,861
Reduction <u>L</u>	157	7,985	0	--	9,142	157	4,072	0	0	4,229	8,819
Total	32,089	43,219	20,463	38,545	134,318	41,691	42,069	20,924	54,101	158,785	150,303

% of total catch	23.9	32.2	15.2	28.7	100	26.2	26.5	13.2	34.1	100	
Total hours	28,235	41,400	28,644	53,837	152,116	27,958	39,600	29,206	69,988	166,752	159,077
Catch/Effort (16/hr)	1,028	1,044	714	716	882	1,491	1,062	716	773	952	945

L Reduction pounds include dogfish in Washington statistics.

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Fifteenth Annual Meeting  
June 19-21, 1974  
Millbrae, California, U.S.A.

b. Oregon

Landings of sablefish by trawlers in 1973 of 838,000 lb were 108% greater than those of 1972 and 430% above the 10-year mean. Sablefish landed from other gear catches were 482,000 lb in 1973.

c. California

A record trawl landing of 7.1 million lb was made in 1973. This catch exceeds the previous record of 5.1 million lb in 1972 by 39% and exceeds the 10-year mean by more than 300%. Increases in catch occurred in all areas. Increased landings may be attributed to a continued high demand and increased effort.

G. PACIFIC OCEAN PERCH

Canadian and United States landings of Pacific ocean perch in 1973 were 9.5 million lb, a decline of 35% from 1972 landings of 14.5 million lb and also 52% down from the 10-year mean.

1. Canada

Landings by British Columbia trawlers in 1973 were 3.1 million lb, 40% less than in 1972. Ninety-seven percent of the catch was from Queen Charlotte Sound (Areas 5A and 5B). CPUE in 1973 was 2,767 lb/hr, an increase of 33% from 1972.

2. United States

a. Washington

The 1973 Pacific ocean perch catch was only 5.8 million lb, a decline of 53% from the 10-year mean and 34% from the 1972 catch. Declines in production and in CPUE from Areas 3B-3D occurred despite the hope that conservation measures and recruitment of a strong 1961 year-class might reduce the declining trend of previous years. Catch in this area was 32% below the 1972 catch and 77% below the 10-year mean.

The catch from Queen Charlotte Sound declined 33% from 1972 while CPUE increased 14%. Included in the reported catch of Pacific ocean perch from Queen Charlotte Sound were landings of "slope" rockfish of 667,000 lb which consisted of S. reedi, S. diploproa, S. aleutianus, and S. rubrivinctus.

b. Oregon

Landings of Pacific ocean perch were 540,000 lb, the lowest annual landing since 1948. The landings were 10% below the 1972 level and 98% below the 10-year mean. CPUE for Areas 2B-3A was 359 lb/hr in 1973 compared to 290 lb/hr in 1972.

c. California

In 1973 Pacific ocean perch landings increased to 125,000 lb. This catch was well above average but Pacific ocean perch is a minor species in California landings.

H. OTHER ROCKFISH

Canadian and United States landings of other rockfish were 36 million lb in 1973, up 15% from the 31.3 million lb of 1972 and 52% over the 10-year mean of 23.7 million lb.

1. Canada

Landings of other rockfish by Canadian trawlers decreased 20% to 2.7 million lb but were still 3 times the mean 1963-72 level. The bulk of the other rockfish catch was taken in Queen Charlotte Sound and consisted mainly of S. flavidus.

2. United States

a. Washington

Washington trawlers landed 11.6 million lb of other rockfish in 1973, up 8% over 1972 and 20% over the mean of 1963-72. The major areas of production were Queen Charlotte Sound and Cape Scott.

b. Oregon

Landings of other rockfish totalled 3.6 million lb, down 12% from 1972 and 16% below the 1963-72 mean. The southern Washington - northern Oregon coast (Area 3A) was the principal rockfish producing area for Oregon trawl fishermen.

c. California

Record high rockfish landings of 17.5 million lb occurred in 1973. This amount is 33% above 1972 and 100% above the 1963-72 mean. Bocaccio (S. paucispinis) and chilipepper (S. goodei) rockfish were the major species contributing to the catch with canary rockfish (S. pinniger) a distant third.

V. REVIEW OF THE FISHERY

The 1973 trawl landings from the northeastern Pacific by Canadian and United States vessels were 159.5 million lb (Table 1). This catch was an increase of 0.7 million lb (0.4%) over the 158.8 million lb landed in 1972 and 4% above the 10-year (1963-72) average of 152 million lb. Total effort was 166,113 hr; down 0.4% from 1972 and 4% greater than the mean effort for the previous 10 years. Overall CPUE in 1973 at 960 lb/hr was close to the mean for preceding years.

In addition to trawl landings of groundfish, Canada and United States total landings of groundfish by gear other than trawl were 20 million lb.

The leading species in the 1973 trawl fishery was dover sole. Contributing chiefly to total dover sole landings of 30.0 million lb was the continued high volume landed in California. The other rockfish species groups contributed landings of 36.0 million lb, up 15% from 1972 and 52% above the 1963-72 mean level of landings. Landings of Pacific ocean perch at 9.5 million lb were down sharply from the 1972 level of 14.5 million lb and the 1963-72 mean level of 20.0 million lb. Landings of Pacific ocean perch reported by all agencies

Table 1. Otter trawl landings (1000's of lb) from the northeastern Pacific by Canadian and United States vessels in 1972, 1973, and mean for 1963-72.

Species	1972					1973					Mean 1963-72
	B.C.	Wash.	Ore.	Calif.	Total	B.C.	Wash.	Ore.	Calif.	Total	
English sole	1,084	1,826	2,196	3,002	8,108	1,630	2,683	2,371	3,209	9,893	10,894 7.1
Rock sole	2,110	555	2	5	2,672	1,789	844	tr	8	2,641	5,504 3.6
Petrale sole	1,275	1,726	2,185	3,574	8,760	1,044	2,222	2,191	2,876	8,333	7,942 5.2
Dover sole	2,424	1,192	5,942	22,080	31,638	1,830	1,254	4,416	22,485	29,985	19,708 2.4
Rex sole	359	101	1,314	1,662	3,436	317	168	1,256	1,583	3,324	3,002 2.0
Starry flounder	457	780	439	599	2,275	136	836	339	638	1,949	1,942 1.3
Other flatfish	562	291	600	1,576	3,029	1,221	527	657	1,498	3,903	2,247 1.5
Pacific cod	19,013	9,304	1,069	2,618	29,386	16,453	7,740	453	3,111	24,646	22,189 14.5
Lingcod	2,288	1,482	1,349	5,067	7,737	2,655	1,736	1,999	7,058	9,501	9,398 4.2
Sablefish	1,517	85	403	5,067	7,072	183	94	838	7,058	8,173	3,181 2.1
Pacific ocean perch	5,130	8,685	602	94	14,511	3,082	5,756	540	125	9,503	19,977 15.1
Other rockfish	3,393	10,678	4,057	13,160	31,288	2,681	12,246	3,558	17,544	36,029	23,723 15.5
Misc. species	610	216	36	292	1,154	421	184	63	604	1,272	689 0.5
Dogfish	181		tr	2	183	4,332		tr	2	4,334	205 0.1
Animal food	1,131	1,076	730	370	3,307	655	1,061	603	323	2,642	12,546 6.2
Reduction	157	4,072			4,229	153	3,215			3,368	8,992 5.9
<b>Total</b>	<b>41,691</b>	<b>42,069</b>	<b>20,924</b>	<b>54,101</b>	<b>158,785</b>	<b>38,582</b>	<b>40,566</b>	<b>19,284</b>	<b>61,064</b>	<b>159,496</b>	<b>152,796</b>
Percent of total	26.2	26.5	13.2	34.1	100.0	24.2	25.4	12.1	38.3	100.0	
Total hours	27,958	39,600	29,206	69,988	166,752	23,699	37,431	28,243	76,740	166,113	159,076
Catch/effort (lb/hr)	1,491	1,062	716	773	952	1,445	1,084	683	796	960	961

23.6%

27.1%

REPORT OF THE  
TECHNICAL SUB-COMMITTEE  
OF THE  
INTERNATIONAL GROUND FISH COMMITTEE

Appointed by  
The Second Conference On Coordination  
Of Fisheries Regulations Between  
CANADA  
and the  
UNITED STATES

Seventeenth Annual Meeting

June 23-25, 1976

Newport, Oregon

Table 1. Trawl landings (1000 lb) from the northeastern Pacific by Canadian and United States vessels in 1974, 1975 and mean for 1965-74.

Species	1974				Total	1975				Total	Mean 1965-74
	B.C.	Wash.	Ore.	Calif.		B.C.	Wash.	Ore.	Calif.		
English sole	1,461	2,414	1,747	3,802	9,424	2,415	2,441	2,166	4,310	11,332	10,582
Rock sole	2,083	832	4	18	2,937	3,844	542	29	21	4,436	5,339
Petrale sole	1,508	3,012	2,692	3,426	10,638	972	3,355	2,649	3,252	10,228	8,094
Dover sole	1,813	1,314	5,604	19,081	27,812	2,270	1,230	4,780	22,683	30,963	21,892
Rex sole	301	364	1,300	1,381	3,346	215	300	1,024	1,639	3,178	3,174
Starry flounder	135	1,425	408	438	2,406	199	575	817	596	2,187	1,996
Other flatfish	817	507	581	1,524	3,429	2,104	312	1,013	1,373	4,802	2,633
Pacific cod	19,417	8,872	685	-	28,974	22,602	11,134	585	-	34,321	23,828
Lingcod	3,322	2,529	1,937	3,249	11,037	4,139	3,518	1,529	2,609	11,795	10,206
Sablefish	268	165	547	5,486	6,466	623	380	672	6,263	7,938	4,157
Pacific ocean perch	3,370	5,314	831	123	9,638	4,497	2,944	960	147	8,548	17,233
Other rockfish	2,016	8,444	2,545	15,937	28,942	2,157	6,885	2,469	17,775	29,286	26,156
Misc. species	301	486	59	334	1,180	629	93	32	391	1,145	708
Dogfish	705	-	12	-	717	1,057	414	4	-	1,475	739
Animal food	383	2,554	708	65	3,710	80	1,908	581	5	2,574	11,059
Reduction	603	5,369	-	-	5,972	465	2,970	-	-	3,435	9,271
Total	38,503	43,601	19,660	54,864	156,628	48,268	39,001	19,310	61,064	167,643	157,067
Percent of total	24.6	27.8	12.6	35.0	100.0	28.8	23.3	11.5	36.4	100.0	-
Total hours	23,808	44,978	27,258	75,278	171,322	34,058	46,816	28,468	85,271	194,613	159,489
Catch/effort (lb/hr (excludes dogfish))	1,588	969	721	729	914	1,386	833	678	716	861	985

California increased 20% from 1974 to 147 thousand pounds.

#### 9. Other Rockfish

Total 1975 Canadian and United States trawl landings of other rockfish were 29.3 million pounds, nearly identical to the 1974 landings and 11% over the 1965-74 mean.

##### a. Canada

The 1975 trawl catch of other rockfish was 2.2 million pounds, up 7% from 1974 and 46% greater than the 1965-74 mean. Queen Charlotte Sound (Areas 5A and 5B) was the major production area. In landings sampled for species composition, *Sebastes flavidus* was the dominant species (97%).

##### b. United States

###### (1) Alaska

Alaska's total rockfish catch (not separated by species) in 1975 was 217 thousand pounds.

###### (2) Washington

Washington trawlers landed 6.9 million pounds of shelf rockfish during 1975, 37% less than the mean landings for the previous 10 years, and 18% less than the 1974 catch. Queen Charlotte Sound (Areas 5A and 5B) continued to be the major area of production. The most important species components of Washington's shelf rockfish catch continue to be *S. flavidus*, *S. pinniger*, *S. brevispinis* and *S. paucispinis*.

###### (3) Oregon

Landings of other rockfish totaled 2.5 million pounds, equal to that of 1974 but 40% below the 1965-74 mean. The majority of the landings came from Areas 3A and 2B. Principal species

were *S. flavidus*, *S. pinniger*, and *S. melanops*.

(4) California

A record catch of 17.8 million pounds was taken in 1975 by California trawlers. This exceeded the 1974 catch by 12% and the 1965-74 mean by 71%. The major area of production was Area 1B. Major species caught were *Sebastes paucispinis*, *S. goodei* and *Sebastolobus alascanus*. Rockfish catches by other gears (line and gillnet) were 5.7 million pounds in 1975.

10. Rock Sole

Coastwide trawl landings of rock sole in 1975 totaled 4.4 million pounds, an increase of 34% from 1974, but 17% less than the 1965-74 mean.

a. Canada

Canadian landings accounted for 3.8 million pounds (86%) with Areas 5C & 5D as the main areas of production.

b. United States

Total landings of rock sole were 593 thousand pounds. Washington landings were 542 thousand pounds while landings from Oregon and California were 29 thousand and 21 thousand pounds respectively.

B. INTERNATIONAL FISHERIES OFF CANADA AND UNITED STATES

1. Soviet Fisheries

a. Gulf of Alaska (Jan.-Sept. 1975)

Soviet fishing in the Gulf of Alaska was primarily by stern trawlers operating off Albatross and Portlock Banks. Effort was rather constant with 5-10 trawlers fishing, except during February and September when the number of vessels increased to 20. Principal species in the catch were rockfish, pollock and Atka mackerel. An

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Sixteenth Annual Meeting

June 25-27, 1975

Vancouver, B. C., Canada

#### H. OTHER ROCKFISH

Canadian and United States trawl landings of other rockfish were 28.9 million lb in 1974, down 20% from the 36.0 million lb of 1973, but up 15% over the 10-year mean of 25.1 million lb. Leading areas of production were 1B, 5A, and 5B.

##### 1. Canada

Landings of other rockfish by Canadian trawlers decreased 25% to 2.0 million lb but remained approximately 50% above the mean for the 1964-73 period. The bulk of the catch was taken in Queen Charlotte Sound, and consisted mainly of S. flavidus and S. reedi.

##### 2. United States

a. Washington trawlers landed 8.4 million lb of other rockfish in 1974, down 31% from 1973, and 15% from the 1964-73 mean. The major areas of production were Queen Charlotte Sound and the northern coast of Vancouver Island. Landings of S. flavidus were 3.1 million lb, down 55% from 1973. The "other rockfish" catch also included significant quantities of S. pinniger, S. brevispinis, and S. paucispinis.

##### b. Oregon

Landings of other rockfish totalled 2.5 million lb, down 29% from the 3.6 million lb landed in 1973 and 38% below the 1964-73 mean. The 1974 CPUE of 298 lb/hr was 29% below the 1973 estimate of 417 lb/hr.

##### c. California

California trawlers landed 15.9 million lb of other rockfish in 1974, down 9% from 1973, but 68% greater than the 1964-73 mean. Catches in Area 1B declined, but this area remained the leading area of production. S. paucispinis and S. goodei remained the leading species in Areas 1A and 1B, and Sebastolobus alascanus was the leading species in catches from Area 1C.

Rockfish catches in 1974 by line and gillnet gear, fished mainly in shallow water, were approximately 6 million lb.

#### VI. REVIEW OF THE NORTH AMERICAN FISHERY

The 1974 Canadian and United States trawl landings from the Northeast Pacific Ocean were 156.6 million lb, down slightly (2%) from 1973 (Table 1). Total fishing effort in 1974 was 171,300 hr, an increase of 3% over the 1973 level.

Canadian trawl landings of 38.5 million lb were virtually the same magnitude as reported for 1973. Groundfish landings (excluding halibut) in British Columbia by gear other than trawl totalled an additional 5.3 million lb.

The United States trawl catch was 118.2 million lb in 1974 compared to 120.9 million lb landed in 1973. Information on United States groundfish landings by gear other than trawls was incomplete at the time of reporting.

Pacific cod, "other rockfish" and Dover sole were the major species contributing to the Canadian and United States trawl landings in 1974, together accounting for 55% of the total landings. Pacific cod landings were 29.0 million lb (up 18% from 1973), "other rockfish" landings were 28.9 million lb (down 20% from 1973) and Dover sole landings were 27.8 million lb (down 7% from 1973).

#### Canada

The most important aspects of the 1974 fisheries were: (1) the dominance of Pacific cod which at 19.4 million lb constituted 50% of the total landings; (2) the increased catch of petrale sole which at 1.5 million lb was almost 50% greater than 1973; and (3) a marked decrease in dogfish landings, down 84% for all gears combined.

Table 1. Otter trawl landings (1000 lb) from the northeastern Pacific by Canadian and United States vessels in 1973, 1974, and mean for 1964-73.

Species	1973					1974					Mean 1964-73
	B.C.	Wash.	Ore.	Calif.	Total	B.C.	Wash.	Ore.	Calif.	Total	
English sole	1,630	2,683	2,371	3,209	9,893	1,461	2,414	1,747	3,802	9,424	10,772
Rock sole	1,789	844	tr	8	2,641	2,083	832	4	18	2,937	5,391
Petrale sole	1,044	2,222	2,191	2,876	8,333	1,508	3,012	2,692	3,426	10,638	7,826
Dover sole	1,830	1,254	4,416	22,485	29,985	1,813	1,314	5,604	19,081	27,812	20,876
Rex sole	317	168	1,256	1,583	3,324	301	364	1,300	1,381	3,346	3,070
Starry flounder	136	836	339	638	1,949	135	1,425	408	438	2,406	1,986
Other flatfish	1,221	527	657	1,498	3,903	817	507	581	1,524	3,429	2,429
Pacific cod	16,453	7,740	453	-	24,646	19,417	8,872	685	-	28,974	23,122
Lingcod	2,655	1,736	1,999	3,111	9,501	3,322	2,529	1,937	3,249	11,037	9,823
Sablefish	183	94	838	7,058	8,173	268	165	547	5,486	6,466	3,744
Pacific ocean perch	3,082	5,756	540	125	9,503	3,370	5,314	831	123	9,638	18,461
Other rockfish	2,681	12,246	3,558	17,544	36,029	2,016	8,444	2,545	15,937	28,942	25,100
Misc. species	421	184	63	604	1,272	301	486	59	334	1,180	526
Dogfish	4,332	-	tr	2	4,334	705	-	12	-	717	580
Animal food	655	1,061	603	323	2,642	383	2,554	708	65	3,710	11,515
Reduction	153	3,215	-	-	3,368	603	5,369	-	-	5,972	9,329
Total	38,582	40,566	19,284	61,064	159,496	38,503	43,601	19,660	54,864	156,628	154,550
Percent of total	24.2	25.4	12.1	38.3	100.0	24.6	27.8	12.6	35.0	100.0	-
Total hours	23,699	37,431	28,243	76,740	166,113	23,808	44,978	27,258	75,278	171,322	158,251
Catch/effort (lb/hr) (excludes dogfish)	1,445	1,084	683	796	934	1,588	969	721	729	914	973