

# **Catch and Effort Statistics of the Canadian Groundfish Fishery on the Pacific Coast in 1993**

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GROUNDFISH FISHERY ON THE PACIFIC COAST IN 1993

by

K. L. Rutherford

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## ABSTRACT

Rutherford, K. L. 1996. Catch and effort statistics of the Canadian groundfish fishery on the Pacific coast in 1993. Can. Tech. Rep. Fish. Aquat. Sci. 2097: 97 p.

Catch and effort statistics for the Canadian groundfish fishery (excluding halibut) on the Pacific coast in 1993 are presented. Statistics are shown by major areas, minor areas, and North Pacific Anadromous Fisheries Commission (formerly International North Pacific Fisheries Commission) areas in metric tonnes (t). Total domestic landings in 1993 were 83,109 t, 10% below the total for 1992. Most of the catch was taken by trawl gear. The main species landed were Pacific hake, Pacific cod, pollock, lingcod, sablefish, yellowtail rockfish, and Pacific ocean perch.

Joint venture fisheries along Canada's west coast caught 46,373 t of Pacific hake in 1993.

Key words: groundfish, Pacific coast, catch statistics, effort statistics

## RÉSUMÉ

Rutherford, K. L. 1996. Catch and effort statistics of the Canadian groundfish fishery on the Pacific coast in 1993. Can. Tech. Rep. Fish. Aquat. Sci. 2097: 97 p.

Le rapport présente des statistiques sur les prises et l'effort dans la pêche canadienne du poisson de fond (flétan excepté) sur la côte pacifique en 1993. Les chiffres sont donnés par grandes zones, zones secondaires et zones de la Commission internationale des pêcheries du Pacifique nord, en tonnes métriques (t). Les débarquements canadiens de 1993 totalisaient 83 109 t, soit 10 % de moins que le total de 1992. La plus grande partie des prises avait été faite au chalut. Les principales espèces débarquées étaient le merlu de Pacifique, la morue du Pacifique, la morue du Pacifique occidental, la morue-lingue, la morue charbonnière, le sébaste à queue jaune et le sébaste à longue mâchoire.

Sur la côte ouest du Canada, les coentreprises ont capturé en 1993 46 373 t.

Mots clés : poisson de fond, côte pacifique, statistiques sur les prises, statistiques sur l'effort.

## INTRODUCTION

The Canadian fishery for groundfish along Canada's west coast involves many species of demersal fishes, the majority of which are caught by bottom and midwater trawls. The remaining catch is taken by trap, longline, handline, and troll. Excluding halibut, these domestic groundfish landings contributed an average of 62,354 metric tonnes (t) to the annual fish production of Canada during 1983-92. The total landings of major groundfish species, caught by all types of gear from all areas on the Pacific coast during 1983-93 are shown in Table 1. Figure 1 illustrates total groundfish landings from 1983-93.

The Biological Sciences Branch, Pacific Biological Station, Nanaimo, B.C., maintained port liaison officers at Vancouver, Steveston, and Prince Rupert during 1993. These persons conducted interviews with captains of trawl and trap vessels to collect information on effort expended for groundfish catches, by species, area and depth as well as other pertinent data. The landings not covered by these interviews were obtained from the sales slips collected by the Statistics Division of the Fisheries Branch in Vancouver. All available 1993 data are included in this report. While changes are rare, individuals using these data for analyses should refer to the author for confirmation.

Total 1993 domestic landings of 83,109 t were 33% above the 1983-92 mean and 10% below the 1992 level. Pacific ocean perch and other rockfish species were the dominant species group landed, accounting for 30% of the total catch. The single largest contributor to the total landings was Pacific hake (15,959 t) which accounted for 19% of the total catch. This was, however, a drop of 43% from the amount of hake landed in 1992. There were increases in landings of pollock (7,974 t, +133%), lingcod (5,236 t, +20%), Pacific ocean perch (4,565 t, +12%), turbot (4,020 t, +13%), dover sole (3,957 t, +43%) and English sole (1,770 t, +34%). In addition to the decrease in hake landings there were decreases in the landings of other rockfish (20,403 t, -8%), Pacific cod (8,096 t, -22%) and dogfish (722 t, -69%).

In 1993, joint-venture fisheries were conducted along the British Columbia coast by Poland and China. These fisheries caught 46,373 t of Pacific hake, 33% less than the amount taken in 1992.

This portion of the document is the traditional report of landings (t) by species, by discrete domestic (minor) fishing areas and by larger United States-Canadian (major) areas, commonly called Pacific Marine Fisheries Commission (PMFC) areas.



Table 1. Total Canadian landings<sup>a</sup> (t) of groundfish by species, taken from all areas of the Pacific Coast, 1983-1993.

Species	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1983-92	1993
English sole	532	812	692	452	755	879	1,041	1,266	1,171	1,319	892	1,770
Rock sole	668	525	430	454	887	1,960	2,066	2,264	3,414	3,094	1,576	3,014
Petrale sole	439	417	336	416	445	790	952	1,066	793	603	626	579
Dover sole	871	1,148	963	1,167	633	1,281	2,149	2,382	2,217	2,763	1,557	3,957
Rex sole	49	219	205	87	83	145	140	134	59	93	121	240
Starry flounder	66	170	66	54	65	110	123	143	146	145	109	105
Turbot	323	369	764	895	1,193	375	609	2,635	2,286	3,573	1,302	4,020
Other flatfish	199	141	161	215	232	147	50	51	87	225	151	252
Pacific cod	4,505	3,465	2,342	3,650	13,917	11,015	9,149	6,463	11,914	10,321	7,674	8,096
Lingcod	3,755	3,688	5,668	3,827	3,591	3,462	3,980	5,219	5,385	4,370	4,295	5,236
Sablefish <sup>b</sup>	4,414	3,855	4,275	4,668	4,719	5,563	5,493	5,038	5,531	5,008	4,856	5,108
Pollock	1070	800	1,895	577	1,270	1,111	443	939	2,597	3,426	1,413	7,974
Hake	3,122	4,600	6,055	6,802	13,275	6,054	8,682	10,609	23,175	27,956	11,033	15,959
Ocean perch	5,655	6,698	6,069	5,914	6,335	6,929	6,004	5,761	4,331	4,056	5,775	4,565
Other rockfish	7,024	8,512	11,709	19,040	18,177	20,399	18,437	22,885	19,428	22,248	16,786	20,403
Misc. species	156	175	192	245	344	353	172	122	143	203	211	190
Hagfish	-	-	-	-	-	66	829	213	23	60	119	-
Dogfish	3,274	2,510	2,815	3,289	3,801	5,483	2,780	4,194	3,126	2,335	3,361	722
Animal food	94	161	309	255	188	130	127	17	tr.	tr.	128	149
Reduction	321	244	214	175	210	581	353	210	380	1,003	369	770
<b>Total</b>	<b>36,537</b>	<b>38,509</b>	<b>45,160</b>	<b>52,182</b>	<b>70,120</b>	<b>66,833</b>	<b>63,579</b>	<b>71,611</b>	<b>86,206</b>	<b>92,801</b>	<b>62,354</b>	<b>83,109</b>

<sup>a</sup> Does not include catches from joint-venture fisheries, see Table 56.

<sup>b</sup> Sablefish catches from 1992 - 1994 do not include catches for special permit fisheries to offshore seamounts. This amounted to an additional 325 t in 1992, and 52 t in 1993. Previous years may include trips to offshore seamounts.

**Total domestic Canadian groundfish landings, 1983-1993**

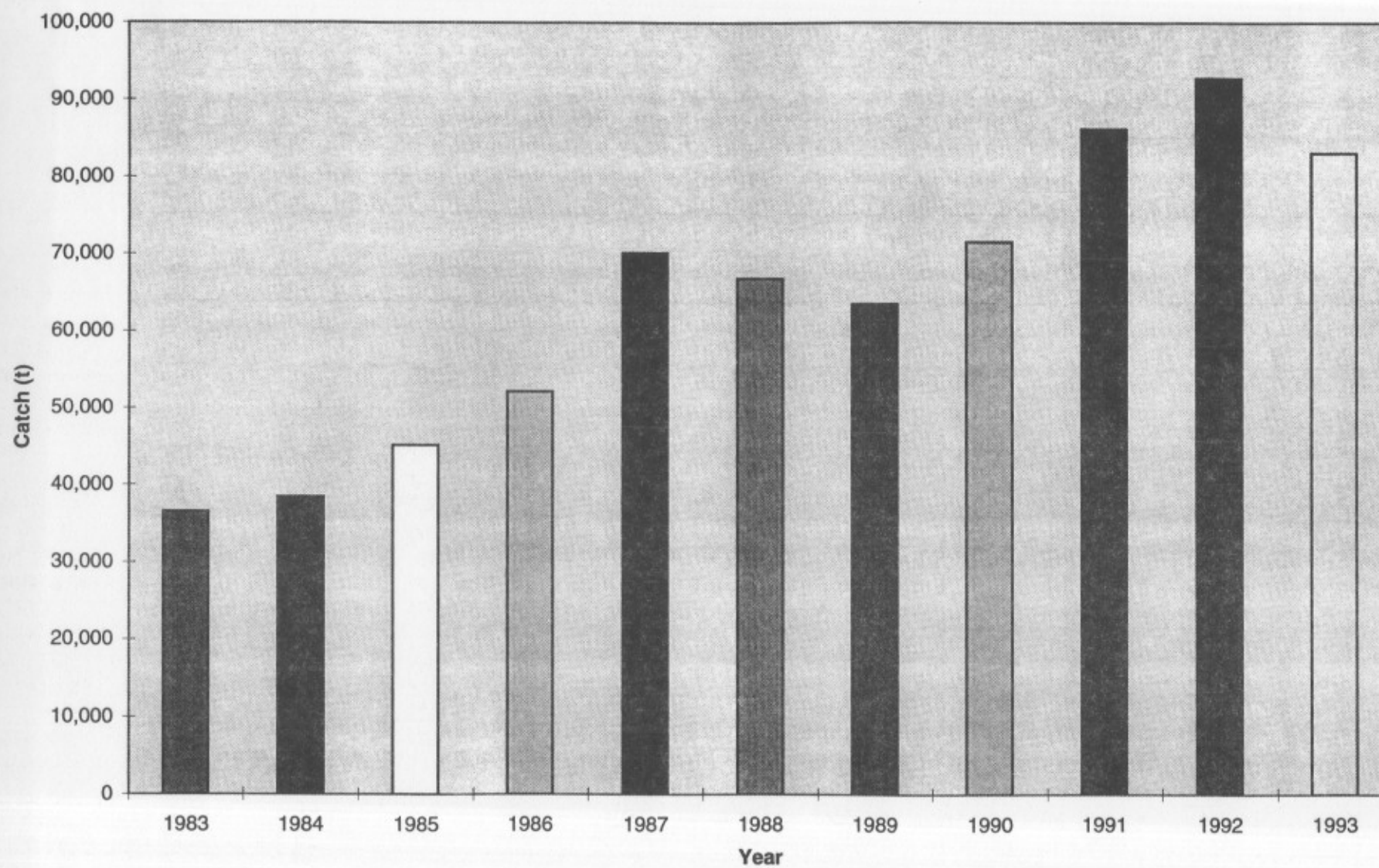


Figure 1.





MAJOR STATISTICAL AREA DIVISIONS

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per Lia  
+ Statistical Areas

Standardization between Canada and the United States in reporting of groundfish catches on the Pacific coast has resulted in assignment of catches to certain major statistical areas. In the United States these international areas are used by the Pacific Marine Fisheries Commission in their annual summaries of catch statistics. Figure 2 illustrates the major statistical areas off the British Columbia coast and gives their numerical designation. The following is a complete description of the boundaries of these areas.

AREA 3B--NORTHWEST WASHINGTON COAST

From latitude  $47^{\circ}20'N$  to a line bearing  $220^{\circ}$  True from the mid-point of the Bonilla-Tatoosh line and crossing said parallel of latitude. This area includes the Quillayute and Umatilla Reef grounds and the shallow waters off Cape Flattery.

AREA 3C--SOUTHWEST COAST VANCOUVER ISLAND

From the northern boundary of Area 3B to a line bearing  $200^{\circ}$  True from Estevan Point southward to the  $49^{\circ}$  parallel of latitude, thence westward along said parallel. This area includes the Cape Flattery Spit, the Swiftsure Bank, La Pérouse Bank (Big Bank or 40 mile Bank), the Cabbage Patch, the Firing Range, the Lennard Island and Sydney Inlet grounds, and the inshore waters of Barkley Sound.

AREA 3D--NORTHWEST COAST VANCOUVER ISLAND

From the northern boundary of Area 3C to latitude  $50^{\circ}30'N$ . This area includes the Nootka, Esperanza, and Kyuquot grounds as well as the Estevan deep ground.

AREA 4A--PUGET SOUND

The United States territorial waters inside the Bonilla-Tatoosh line including the Juan de Fuca Strait and Puget Sound. There is no Canadian catch from this area.



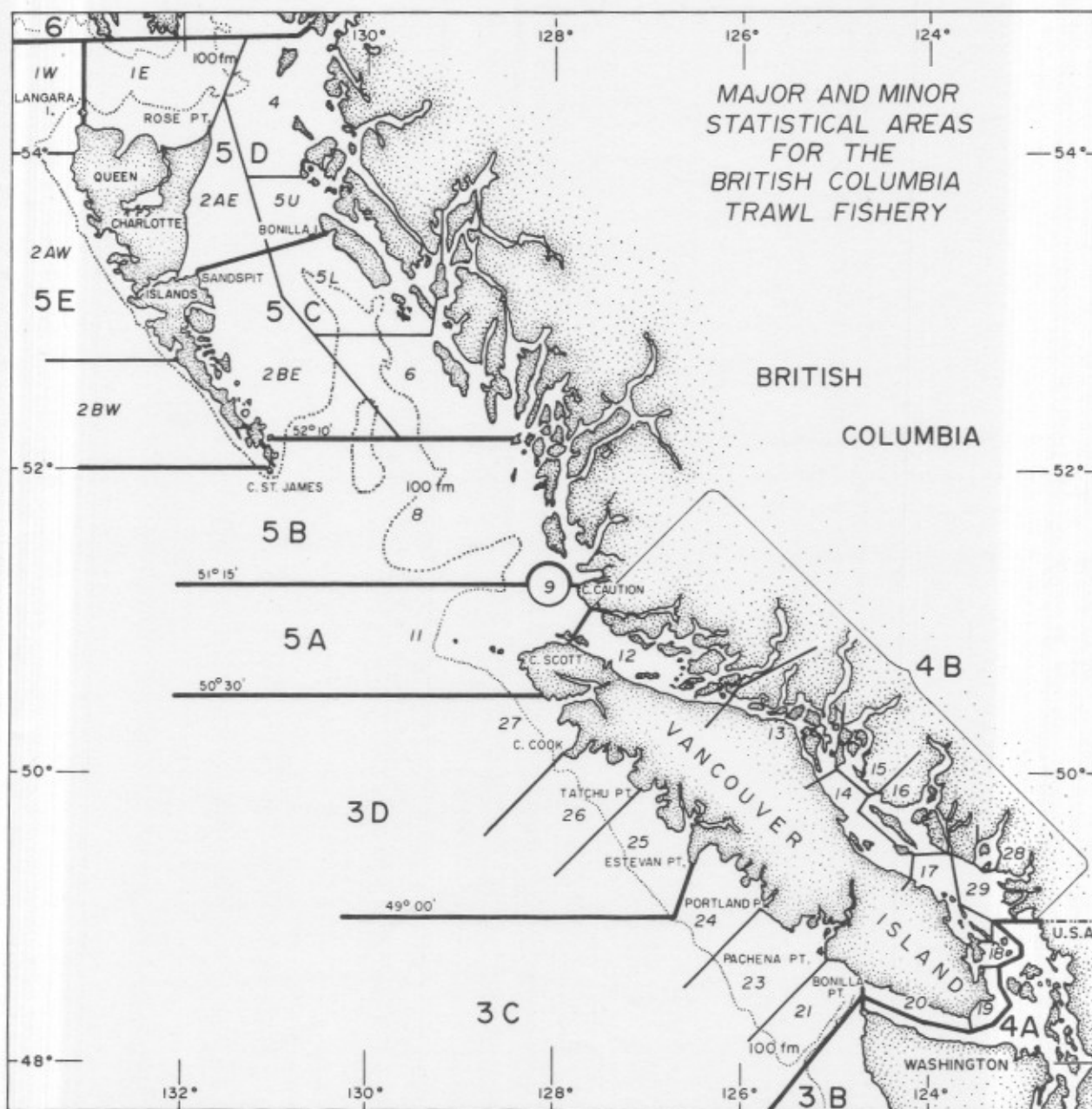


Figure 2.





#### AREA 4B--STRAIT OF GEORGIA

The Canadian waters from the Bonilla-Tatoosh line inside to a line drawn north and south (Mag.) through Pine Island at the upper end of Queen Charlotte Strait. This area, defined simply as the Strait of Georgia, includes all Canadian inshore grounds of Juan de Fuca Strait, Johnstone and Queen Charlotte Straits, and the Strait of Georgia.

#### AREA 5A--SOUTH QUEEN CHARLOTTE SOUND

From the northern boundaries of Areas 4B and 3D to latitude  $51^{\circ}15'N$ . This area includes all grounds incorporated in the Cape Scott Bank and a portion of the grounds in the gully between the Cape Scott Bank and the Goose Island Bank. It also includes catches from the Virgin Rocks ground.

#### AREA 5B--NORTH QUEEN CHARLOTTE SOUND

From latitude  $51^{\circ}15'N$  to latitude  $52^{\circ}00'N$  on the westward side to Cape St. James and from latitude  $51^{\circ}15'N$  to latitude  $52^{\circ}10'N$  on the eastward side of Cape St. James. This area includes all grounds associated with the Goose Island Bank and the remaining portion of the grounds in the gully between the Goose Island Bank and the Cape Scott Bank.

#### AREA 5C--SOUTH HECATE STRAIT

From latitude  $52^{\circ}10'N$  to a line drawn from Spit Point (Sandspit) on Moresby Island to the southern tip of Bonilla Island. This area includes the grounds known as the Horseshoe and Ole Spot in the central region of the Strait.

#### AREA 5D--NORTH HECATE STRAIT

From the northern boundary of Area 5C to latitude  $54^{\circ}40'N$ , limited to the westward by longitude  $133^{\circ}W$  across Dixon Entrance. This area includes the Two Peaks ground (northeast of Rose Spit), the Butterworth-Warrior edge, the Fingers (southwest of Archibald Island), the Oval Hill ground, the White Rock ground (northwest of Bonilla Island), the Skidegate Inlet ground, the Fife Point ground, the southwest Seal Rocks ground, and grounds in Dixon Entrance.

#### AREA 5E--WEST COAST QUEEN CHARLOTTE ISLANDS

From latitude  $52^{\circ}00'N$  to  $54^{\circ}40'N$ , limited to the eastward by longitude  $133^{\circ}W$  across Dixon Entrance.

## AREA 6--ALASKA

Encompasses waters bounded on the south by latitude  $54^{\circ}40'N$  and on the west by longitude  $147^{\circ}W$ .

### MINOR STATISTICAL AREA DIVISIONS

Minor areas are used to give more detailed information on region of capture of groundfish. They are areas within major areas and are basically the former Fisheries Management statistical areas with some modifications. Figure 3 illustrates the areas, and the modifications are catalogued below:

1. Minor area 101 has been divided into two minor areas, 1E and 1W. This boundary lies along longitude  $133^{\circ}W$ .
2. Minor area 142 has been divided into two minor areas, 2AW and 2BW. This boundary lies along  $52^{\circ}40'N$  latitude.
3. The boundary between Area 102 and Area 104 has been shifted northwestward to Rose Spit. Area 4 was expanded to bring the whole of the Two Peaks and Dundas grounds within Area 4. This has meant the elimination of Areas 103 and 3xy.
4. Minor area 105 has been divided into sub-areas, designated 5U and 5L. This boundary lies along the Sandspit-Bonilla Island line, which is the internationally agreed line of division between north and south Hecate Strait (Areas 5D and 5C).
5. The boundary between Areas 5D and 5C has been continued through Area 102 to divide it into two minor areas, 2AE and 2BE.
6. The southern boundary of Areas 102 and 106 has been shifted to lie along  $52^{\circ}10'N$  latitude to conform with the boundary between Areas 5C and 5D.
7. Area 8 has been expanded to include the whole of the Goose Island Bank. This had involved (a) shifting the northern boundary to  $52^{\circ}10'N$  latitude and eliminating Area 107, (b) shifting the southern boundary to  $51^{\circ}15'W$  latitude and elimination of Areas 109, and 110, and (c) the elimination of Area 130, previously used for offshore catches in Queen Charlotte Sound. There is, in this report, no westward limit to Area 8.
8. Area 9 has been changed and is now a circle 12 miles in diameter surrounding the Sea Otter group and the Virgin Rocks ground. It is considered to be part of Area 5A.
9. Area 11 has been expanded to include all of the Cape Scott Bank. This has meant the elimination of Area 111 and the addition of part of Area 127 lying northward of  $50^{\circ}30'N$  latitude. This is to conform with the boundary between Areas 5A and 3D.



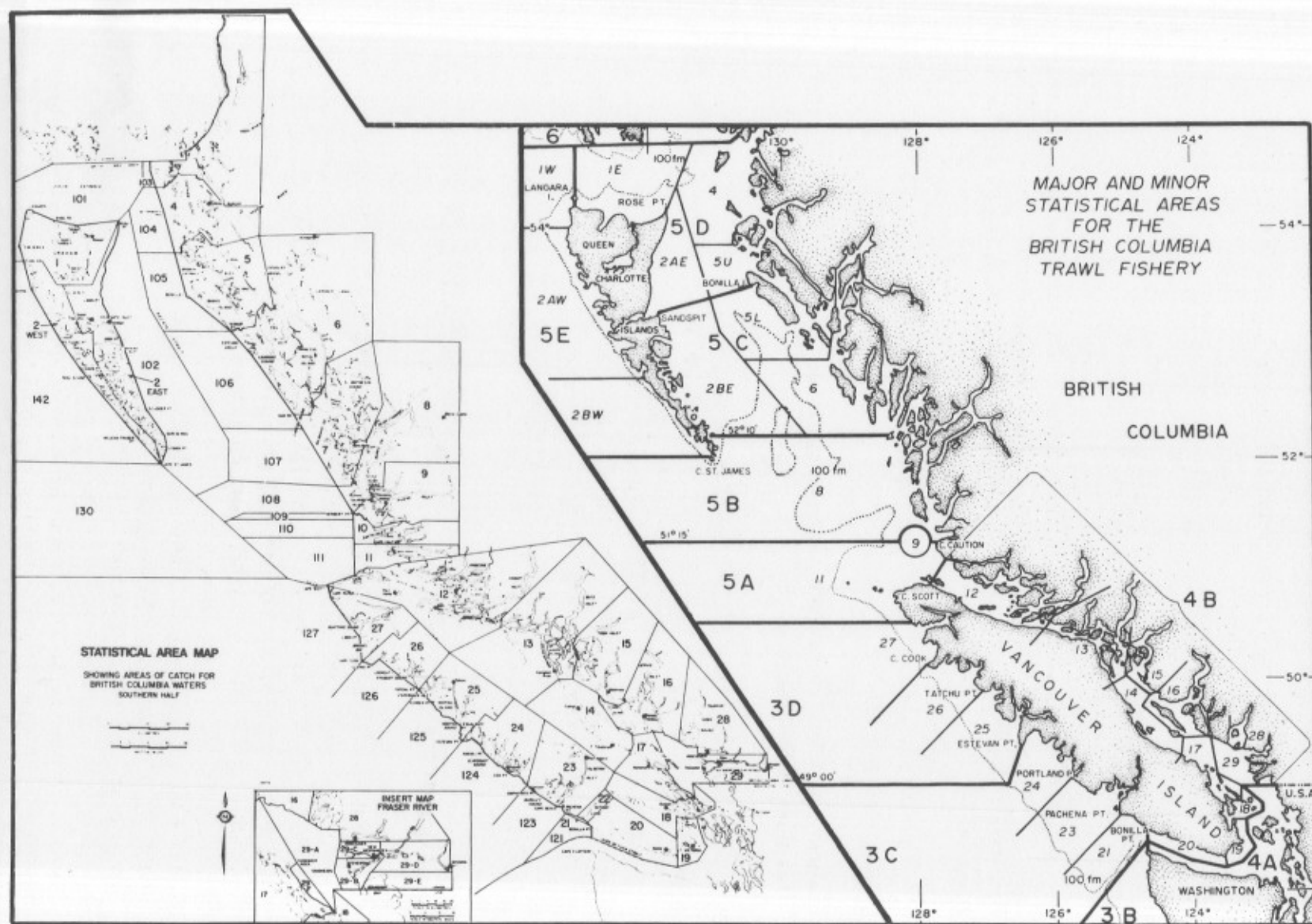


Figure 3.

from;  
Ratherford K.L., 1946. Catch & Effort Stats. - Can. Groundfish Fishery  
on the Pacific Coast in 1943, Can. Fish. & Aquat. Sci. 2097.  
4711



10. The western limit of Area 12 is now Bates Passage.
11. Areas 21, 23, 24, 25, 26, and 27 have been expanded to include Areas 121, 123, 124, 125, 126, and 127, respectively.
12. The boundary between Areas 24 and 25 has been shifted to lie along the boundary between Areas 3C and 3D.
13. The boundary between Areas 23 and 24 has been shifted northwards to Portland Point and it lies on a bearing 225° True. This is to bring the whole of the ground known as Firing Range (which formerly lay on the boundary between these two areas) entirely within Area 23.

All other minor areas remain the same as those defined by the Fisheries Management Statistical Chart.

The following shows the relationship between the major and minor areas:

Major areas

Minor areas

6 Alaska	Southeastern, Yakutat <sup>1</sup>
5E West Coast Queen Charlotte Islands	1W, 2AW, 2BW
5D North Hecate Strait	1E, 2AE, 4, 5U
5C South Hecate Strait	2BE, 5L, 6
5B North Queen Charlotte Sound	8
5A South Queen Charlotte Sound	9, 11
3D Northwest Coast Vancouver Island	27, 26, 25
3C Southwest Coast Vancouver Island	24, 23, 21
3B Northwest Washington Coast	"C"
4B Strait of Georgia <sup>2</sup>	12, 13, 14, 15, 16, 17, 18, 19, 20, 28, 29

<sup>1</sup> Southeastern - from 54°40'N to 137° W. Yakutat from 137° W to 147° W.

<sup>2</sup> Including Johnstone and Queen Charlotte straits and the Canadian portion of Juan de Fuca Strait.

## DOMESTIC TRAWL FISHERY

In 1993, catch and effort data were collected by port liaison officers (Biological Sciences Branch) and by Offshore Division (Fisheries Branch) for 97%, by weight, of the total trawl landings. Through the cooperation of the Statistics Division, Fisheries Branch, the remaining 3% of the landings were recorded from sales slips, from which no effort (hours fished) is available. Catch-per-unit-effort (CPUE) statistics obtained from the interview data were used to estimate the effort expended for the catch reported on these sales slips.

From total landed catch and total estimated effort data, an average CPUE (t/h) was calculated for each major fishing area. Also calculated was the percentage of total catch and effort expended in each of these areas. These last two statistics show relative importance of each area and are used in the calculation of the "success ratio". This parameter is defined as the percent of the total catch divided by the percent of total effort.

Total landings in 1993 (excluding dumped<sup>3</sup> and discarded<sup>4</sup> fish) by the British Columbia domestic trawl fleet were 74,366 t, 11% below the total for 1992. Effort expended increased 10% to 82,910 hours, resulting in an overall CPUE of 0.897 t/h, 19% below the 1992 rate. Midwater trawl gear accounted for 34% (24,980 t) of the total trawl catch and 8% (6,872 h) of the total trawl effort, for an overall CPUE of 3.635 t/h, 23% below the 1992 rate.

Pacific hake was the strongest contributor to the trawl fishery with landings of 15,959 t, entirely caught by midwater trawl gear. Pacific hake accounted for 21% of the total trawl landings. This was, however, a 43% decrease from the amount of hake landed in 1992. Rockfish landings were 22,980 t, and accounted for 31% of the total trawl landings.

There were increases in landings of pollock (7,974 t, +133%), Pacific ocean perch (4,562 t, +13%), turbot (4,020 t, +13%), dover sole (3,957 t, +43%), lingcod (3,758 t, +16%), roughey rockfish (1,876 t, +14%), English sole (1,770 t, +34%), Bocaccio (1,122 t, +19%), sablefish (541 t, +21%), shortspine thornyheads (498 t, +139%), sharpchin rockfish (391 t, +229%), shortraker rockfish (345 t, +43%) and rex sole (240 t, +159%).

As well as the noted decrease in landings of Pacific hake there were decreases in landings of Pacific cod (8,092 t, -21%), widow rockfish (1,908 t, -49%), redstripe rockfish (1,901 t, -37%), canary rockfish (1,133 t, -20%), yellowmouth rockfish (1,115 t, -24%), redbanded rockfish (914 t, -11%), starry flounder (105 t, -28%) and dogfish (56t, -89%).

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<sup>3</sup> Fish caught and retained but eventually rejected at the plant as being unsuitable for any utilization.

<sup>4</sup> Fish caught and discarded at sea by fishermen.



Annual trawl catch and effort data are shown in Tables 2-7. Landings by major area, month and species are presented in Tables 8-16. Landings by minor area, month and species are given in Tables 17-45. Due to rounding some table totals do not match exactly. Figure 4 illustrates total trawl catch (t) and total trawl effort (h) by major area.

#### AREA 4B--STRAIT OF GEORGIA

There was a 27% decrease in the amount of effort expended (5,024 h) and a 10% decrease in landings (11,680 t), resulting in an increased CPUE of 2.325 t/h. Midwater trawl gear accounted for 97% of the catch (11,336 t) from this area with Pacific hake (8,006 t), accounting for 71% of all landings, being the most abundant species. Pollock (3,221 t) was the other main species caught in this area and accounted for 28% of the landings.

#### AREA 3C--SOUTHWEST COAST OF VANCOUVER ISLAND

This area contributed 23% to the total British Columbia trawl production. There was a 9% increase in the amount of effort expended (17,861 h) and a 36% decrease in landings (17,101 t). This resulted in a decreased CPUE of 0.957 t/h. Pacific hake (7,953 t) accounted for 47% of the catch from this area, entirely caught with midwater trawl gear. This amount of hake was 54% less than in 1992. All rockfish species (2,881 t) made up 17% of the landings from this area, with yellowtail rockfish (823 t) and Pacific ocean perch (647 t) being the most abundant. Pacific cod (1,691 t), dover sole (1,516 t) and lingcod (1,476 t) were the other dominant species.

#### AREA 3D--NORTHWEST COAST OF VANCOUVER ISLAND

The landings (9,983 t) for this area increased 23%, the amount of effort expended (11,566 h) increased 20% and CPUE increased to 0.863 t/h. Rockfish landings of 5,891 t, of which yellowtail rockfish (1,596 t), Pacific ocean perch (979 t) and widow rockfish (747 t) were the dominant species, accounted for 59% of the total catch. Turbot landings (1,787 t) accounted for 18% of the landings from this area.

#### AREA 5A--SOUTH QUEEN CHARLOTTE SOUND

Total landings (6,802 t) decreased 29% and total effort expended (10,675 h) increased 6%, resulting in a decreased CPUE of 0.637 t/h. Rockfish landings (4,030 t) accounted for 59% of the landings. Yellowtail rockfish (1,042 t), widow rockfish (601 t) and redstripe rockfish (547 t) were the major rockfish species caught in this area. Pacific cod (806 t) and lingcod (622 t) were the other dominant species.

#### AREA 5B--NORTH QUEEN CHARLOTTE SOUND

Total landings (8,101 t) decreased 19% and total effort expended (9,231 h) decreased 8%. This resulted in a 12% decrease in CPUE (0.878 t/h) from 1992 levels. Rockfish accounted for 59% of the landings. Pacific ocean perch (1,553 t) and yellowtail rockfish (832 t) were the dominant species. The other main species landed were turbot (1,038 t), lingcod (747 t), and Pacific cod (635 t).

#### AREA 5C--SOUTH HECATE STRAIT

The amount of effort expended (6,364 h) in this area was only 1% higher and landings (3,967 t) were 2% lower than those seen in 1992. This resulted in a 3% decrease in CPUE (0.623 t/h). Pacific cod (1,396 t) was the dominant species landed, accounting for 35% of the catch. Rock sole (605 t) and Pacific ocean perch (472 t) were the other main species landed.

#### AREA 5D--NORTH HECATE STRAIT

Total landings (12,680 t) increased 39% and total effort expended (17,892 h) increased 34%. This resulted in an increased CPUE (0.709 t/h). Pollock (4,407 t) was the dominant species landed, accounting for 35% of the catch. Pacific cod (2,567 t), rock sole (1,476 t), English sole (1,288 t) and dover sole (649 t) were the other main species caught.

#### AREA 5E--WEST COAST OF QUEEN CHARLOTTE ISLANDS

There was a 42% increase in the total landings (4,052 t) and a 46% increase in the amount of effort expended (4,297 h). This resulted in a decreased CPUE (0.943 t/h). Total rockfish landings of 3,118 t accounted for 77% of the total catch. Rougheye rockfish (1,180 t) and Pacific ocean perch (496 t) were the dominant species.

The following species were observed in trawl landings in British Columbia in 1993.

Family and common name

Scientific name<sup>5</sup>

FISHES

Acipenseridae

Green sturgeon

Acipenser medirostris Ayres

Anarhichadidae

Wolf-eel

Anarrhichthys ocellatus Ayres

Anoplopomatidae

Sablefish

Anoplopoma fimbria (Pallas)

Carangidae

Jack mackerel

Trachurus symmetricus (Ayres)

Chimaeridae

Spotted ratfish

Hydrolagus coliei (Lay & Bennett)

Clupeidae

American shad

Alosa sapidissima (Wilson)

Pacific herring

Clupea pallasii Valenciennes

Pacific sardine

Sardinops sagax (Jenyns)

Cottidae

Sculpins

various species

Cabezons

Scorpaenichthys marmoratus (Ayres)

Embiotocidae

Pile perch

Rhacochilus vacca (Girard)

Gadidae

Pacific cod, true cod or gray cod

Gadus macrocephalus Tilesius

Pacific hake

Merluccius productus (Ayres)

Walleye pollock

Theragra chalcogramma (Pallas)

Hexagrammidae

Lingcod

Ophiodon elongatus Girard

<sup>5</sup> Gillespie, G.E. 1993. An updated list of the fishes of British Columbia, and those of interest in adjacent waters, with numeric code designations. Can. Tech. Rep. Fish. Aquat. Sci. 1918: 116 p.

Family and common name

Scientific name

Hexanchidae

Sixgill shark

Hexanchus griseus (Bonnaterre)

Osmeridae

Smelts

unknown species

Pleuronectidae

Arrowtooth flounder or turbot

Petrale sole

Rex sole

Flathead sole

Butter sole

Rock sole

Dover sole

English sole

Starry flounder

Sand sole

Atheresthes stomias (Jordan & Gilbert)

Eopsetta jordani (Lockington)

Errex zachirus (Lockington)

Hippoglossoides elassodon Jordan & Gilbert

Pleuronectes isolepis (Lockington)

Pleuronectes bilineatus (Ayres)

Microstomus pacificus (Lockington)

Pleuronectes vetulus (Girard)

Platichthys stellatus (Pallas)

Psettichthys melanostictus Girard

Rajidae

Big skate

Longnose skate

Raja binoculara Girard

Raja rhina (Jordan & Gilbert)

Salmonidae

Salmon

Oncorhynchus sp.

Scombridae

Skipjack tuna

Chub mackerel

Katsuwonus pelamis (Linnaeus)

Scomber japonicus Houttuyn

Scorpaenidae

Rougheye rockfish

Pacific ocean perch

Redbanded rockfish

Shortraker rockfish

Silvergray rockfish

Copper rockfish

Darkblotched rockfish

Splitnose rockfish

Greenstriped rockfish

Widow rockfish

Sebastes aleutianus (Jordan & Evermann)

Sebastes alutus (Gilbert)

Sebastes babcocki (Thompson)

Sebastes borealis Barsukov

Sebastes brevispinis (Bean)

Sebastes caurinus Richardson

Sebastes crameri (Jordan)

Sebastes diploproa (Gilbert)

Sebastes elongatus Ayres

Sebastes entomelas (Jordan & Gilbert)



Yellowtail rockfish

Sebastes flavidus (Ayres)

Family and common name

Scientific name

Scorpaenidae cont'd

Quillback rockfish

Black rockfish

China rockfish

Tiger rockfish

Bocaccio

Canary rockfish

Redstipe rockfish

Yellowmouth rockfish

Yelloweye rockfish

Sharpchin rockfish

Shortspine thornyhead

Sebastes maliger (Jordan & Gilbert)

Sebastes melanops Girard

Sebastes nebulosus Ayres

Sebastes nigrocinctus Ayres

Sebastes paucispinis Ayres

Sebastes pinniger (Gill)

Sebastes proriger (Jordan & Gilbert)

Sebastes reedi (Westrheim & Tsuyuki)

Sebastes ruberrimus (Cramer)

Sebastes zacentrus (Gilbert)

Sebastolobus alascanus Bean

Squalidae

Spiny dogfish

Squalus acanthias Linnaeus

Torpedinidae

Pacific electric ray

Torpedo californica Ayres

INVERTEBRATES

Octopoda

Octopus or devilfish

Octopus sp.

Teuthoidea

Squid

Loligo opalescens Berry

Table 2. Total catch (t) and related effort<sup>a</sup> (h) for the British Columbia trawl fleet in 1993 (excludes dumped and discarded fish).

Major Area	4B		3C		3D		5A		5B	
Month	Catch	Effort	Catch	Effort	Catch	Effort	Catch	Effort	Catch	Effort
January	283.6	377	555.8	873	819.5	931	946.7	751	306.3	190
February	2,325.7	1,633	1,679.1	4,045	853.1	1,319	588.7	666	494.7	194
March	2,728.1	926	730.3	1,559	435.0	679	150.0	176	200.7	166
April	840.3	418	1,000.1	1,317	899.0	922	497.9	722	381.4	467
May	226.2	214	1,416.9	2,273	1,433.7	1,423	1032.0	1,842	1,150.6	1,367
June	326.5	97	1,433.3	1,273	1,070.1	1,650	959.7	2,015	2,016.3	2,039
July	142.3	23	2,215.2	1,559	706.5	819	626.2	1,177	1,023.3	1,616
August	960.9	133	1,642.5	823	514.3	626	397.2	677	553.7	850
September	1,323.4	286	2,996.1	1,427	605.2	663	487.7	861	564.5	885
October	1,199.1	258	2,072.1	1,974	2,322.4	2,078	790.2	1,221	1,090.4	1,088
November	1,060.6	351	1,259.5	661	318.7	459	284.6	470	242.0	334
December	263.7	308	39.2	51	12.5	9	95.0	111	77.0	35
Total	11,680.4	5,024	17,040.1	17,835	9,990.0	11,578	6,855.9	10,689	8,100.9	9,231
CPUE (t/h)		2.325		0.955		0.863		0.641		0.878
% catch		15.71		22.91		13.43		9.22		10.89
% effort		6.06		21.51		13.96		12.89		11.13
Success ratio		2.59		1.07		0.96		0.72		0.98

<sup>a</sup> This effort was prorated using the known CPUE obtained from interviews which accounted for 97% of the total catch.

Table 2 (cont'd)

Major area	5C		5D		5E		Total	
Month	Catch	Effort	Catch	Effort	Catch	Effort	Catch	Effort
January	87.1	147	252.9	628	302.1	283	3554.0	4,180
February	313.5	483	319.6	853	336.6	350	6911.0	9,543
March	637.7	653	673.0	1,127	286.8	327	5,841.6	5,613
April	725.4	1,425	1,083.4	2,181	781.3	838	6,208.8	8,290
May	269.3	655	1,221.1	2,522	522.9	661	7,272.7	10,957
June	775.7	1,219	1,032.6	2,102	295.7	442	7,909.9	10,837
July	301.3	489	907.0	1,158	201.8	176	6,123.6	7,017
August	125.9	193	673.3	879	146.1	135	5,013.9	4,316
September	193.1	309	1,026.2	1,364	161.7	147	7,357.9	5,942
October	291.6	373	1,264.2	1,712	517.1	547	9,547.1	9,251
November	213.1	375	3,082.4	2,349	273.5	267	6,734.4	5,266
December	32.9	43	1,144.5	1,017	226.1	124	1,890.9	1,698
Total	3,966.6	6,364	12,680.2	17,892	4,051.7	4,297	74,365.8	82,910
CPUE (t/h)		0.623		0.709		0.943		0.897
% catch		5.33		17.05		5.45		
% effort		7.68		21.58		5.18		
Success ratio		0.69		0.79		1.05		





Trawl catch (t) by major area in 1993

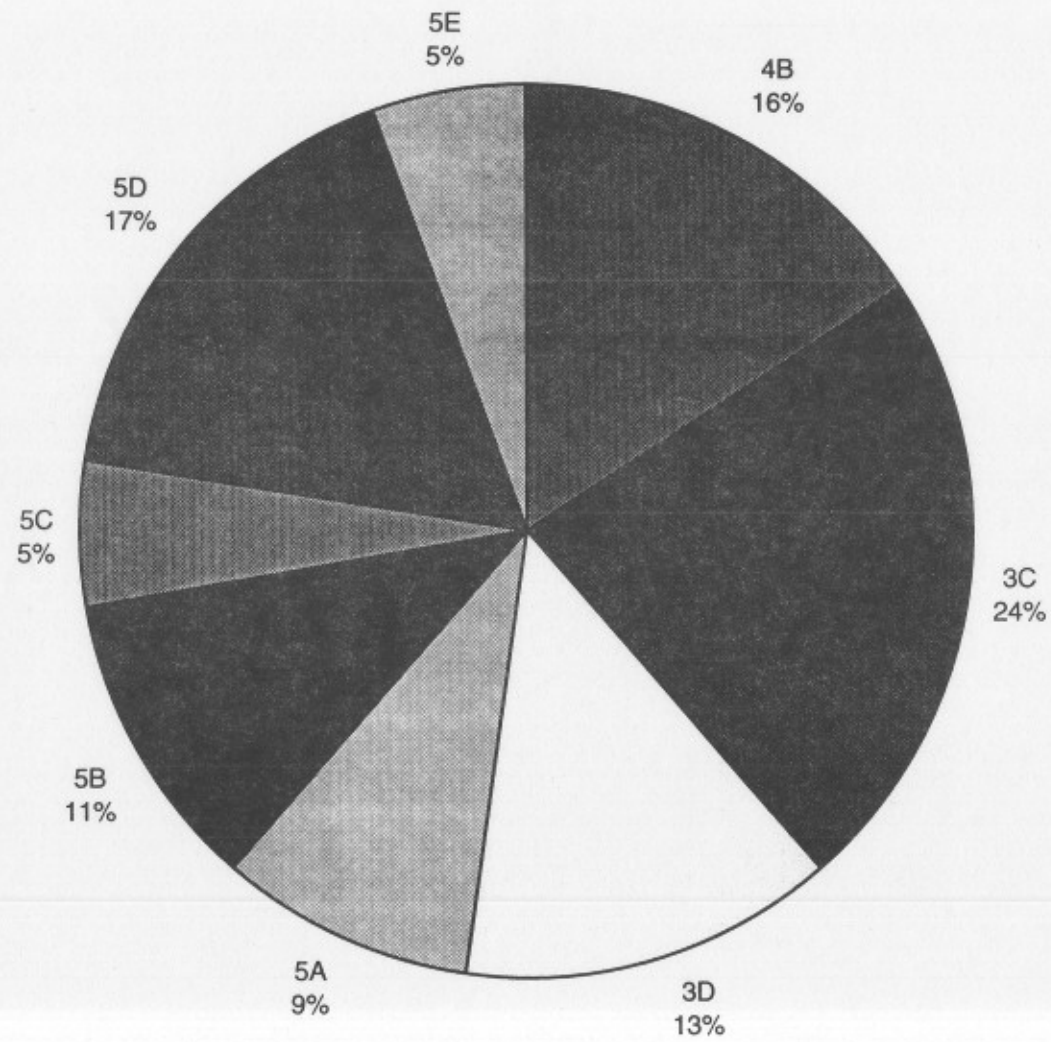


Figure 4 (a).



Trawl effort (hr) by major area in 1993

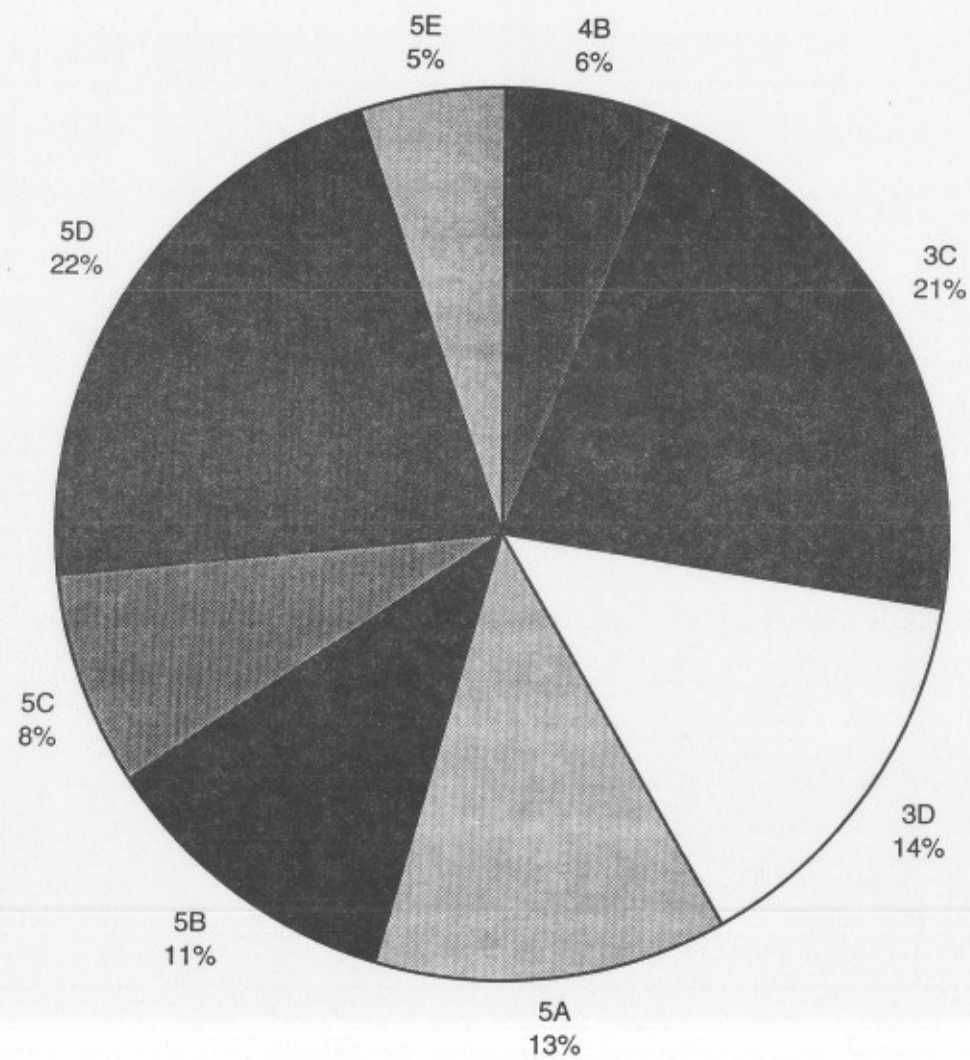


Figure 4 (b).





Table 3. Total British Columbia trawl landings (t) by main species and major area in 1993 (excluding dumped and discarded fish).

Species	Major area								Total
	4B	3C	3D	5A	5B	5C	5D	5E	
English sole	65.0	105.2	39.7	51.9	75.0	144.6	1,288.2	0.2	1,769.8
Rock sole	19.9	79.7	34.7	456.7	342.6	604.7	1,475.7	0.2	3,014.2
Petrale sole	6.4	246.0	105.7	25.2	80.8	50.4	14.7	49.5	578.7
Dover sole	12.1	1,516.4	584.5	56.2	279.4	207.4	649.2	652.2	3,957.4
Rex sole	0.1	46.2	5.4	1.3	1.4	21.9	113.4	50.5	240.2
Starry flounder	8.6	15.1	0.4	0.3	1.1	6.4	72.8	-	104.7
Turbot	2.6	404.2	1,787.2	387.8	1,037.9	15.7	337.5	47.0	4,019.9
Other flatfish <sup>a</sup>	3.2	14.4	0.5	1.2	2.0	61.6	159.7	-	242.6
Pacific cod	157.9	1,690.3	833.2	806.0	635.4	1,395.7	2,567.0	6.9	8,092.4
Lingcod	0.9	1,426.0	447.1	671.9	747.2	206.8	248.4	10.0	3,758.3
Sablefish	0.7	212.7	138.2	10.2	37.7	23.3	25.7	92.7	541.2
Pollock	3,221.1	1.6	1.1	300.6	21.5	18.3	4,407.3	2.0	7,973.5
Hake	8,005.9	7,952.6	-	-	0.6	-	-	-	15,959.1
Pacific ocean perch	4.3	646.1	980.7	327.5	1,552.7	471.6	82.9	495.8	4,561.6
Other rockfish <sup>a</sup>	11.5	2,225.3	4,916.1	3,706.5	3,214.9	702.3	1,020.6	2,621.7	18,418.9
Misc. species <sup>a</sup>	7.3	28.5	2.4	11.9	18.8	14.5	74.6	0.4	158.4
Dogfish	6.1	15.1	34.8	-	-	-	-	-	56.0
Animal food <sup>a</sup>	11.6	-	0.4	1.7	2.2	9.7	112.7	10.4	148.7
Reduction <sup>a</sup>	135.2	414.7	77.9	39.0	49.7	11.7	29.8	12.2	770.2
<b>Total</b>	<b>11,680.4</b>	<b>17,040.1</b>	<b>9,990.0</b>	<b>6,855.9</b>	<b>8,100.9</b>	<b>3,966.6</b>	<b>12,680.2</b>	<b>4,051.7</b>	<b>74,365.8</b>
<b>Effort</b>	<b>5,024</b>	<b>17,835</b>	<b>11,578</b>	<b>10,689</b>	<b>9,231</b>	<b>6,364</b>	<b>17,892</b>	<b>4,297</b>	<b>82,910</b>

<sup>a</sup> Refer to Table 6 for breakdown by species.

Table 4. Total midwater<sup>a</sup> catch (t) and related effort<sup>b</sup> (h) for the British Columbia trawl fleet in 1993 (excludes dumped and discarded fish).

Major area	4B		3C		3D		5A		5B	
Month	Catch	Effort	Catch	Effort	Catch	Effort	Catch	Effort	Catch	Effort
January	252.1	182	0.4	2	134.2	140	346.6	239	0.5	3
February	2,168.5	1060	1.0	7	48.0	47	141.3	76	-	-
March	2,709.7	737	-	-	4.2	1	0.9	3	-	-
April	824.7	192	4.4	10	43.0	48	92.6	86	10.7	23
May	210.1	46	363.2	28	15.8	38	107.1	110	34.4	45
June	320.7	35	935.8	65	0.6	1	47.2	70	33.1	36
July	141.2	16	1,288.1	115	77.5	25	-	-	40.8	27
August	948.3	88	1,405.6	180	28.7	20	8.8	8	19.8	4
September	1,280.8	111	2,381.7	343	54.5	24	52.2	42	86.8	33
October	1,184.3	110	1,203.2	189	1,122.7	618	326.6	164	183.6	91
November	1,044.4	148	894.4	127	19.1	19	36.3	23	5.7	2
December	250.8	146	-	-	-	-	37.3	37	-	-
Total	11,335.6	2871	8,477.8	1066	1,548.3	981	1,196.9	858	415.4	264
CPUE (t/h)		3.948		7.953		1.578		1.395		1.57348
% catch		45.38		33.94		6.20		4.79		1.66
% effort		41.78		15.51		14.28		12.49		3.84
Success ratio		1.09		2.19		0.43		0.38		0.43

<sup>a</sup> Midwater trawl catch and effort are included in all the trawl tables in this report.

<sup>b</sup> This effort was prorated using the known CPUE obtained from fishing logbooks which accounted for 98% of the midwater trawl catch.

Table 4 (cont'd)

Major area	5C		5D		5E		Total	
Month	Catch	Effort	Catch	Effort	Catch	Effort	Catch	Effort
January	-	-	-	-	-	-	733.8	566
February	-	-	-	-	-	-	2,358.8	1,190
March	-	-	1.7	2	-	-	2,716.5	743
April	-	-	-	-	-	-	975.4	359
May	-	-	18.9	18	-	-	749.5	285
June	-	-	-	-	-	-	1,337.4	207
July	-	-	-	6	-	-	1,547.6	189
August	-	1	-	-	-	-	2,411.2	301
September	-	-	11.3	23	0.3	1	3,867.6	577
October	-	-	242.7	107	6.5	2	4,269.6	1,281
November	-	-	1,570.8	547	-	4	3,570.7	870
December	-	-	134.7	117	19.3	4	442.1	304
Total	-	1	1,980.1	820	26.1	11	24,980.2	6,872
CPUE (t/h)		0		2.415		2.373		3.635
% catch		0		7.93		0.10		
% effort		0.01		11.93		0.16		
Success ratio		0		0.66		0.65		

Table 5. British Columbia midwater trawl landings<sup>a</sup> (t) by species and major area in 1993 (excluding dumped and discarded fish).

Species	Major area								Total
	4B	3C	3D	5A	5B	5C	5D	5E	
English sole	-	-	-	0.1	-	-	-	-	0.1
Petrale sole	-	-	0.4	-	-	-	-	-	0.4
Dover sole	-	-	-	0.1	-	-	-	-	0.1
Rex sole	-	-	-	-	-	-	0.2	-	0.2
Other flatfish	-	0.3	-	-	0.1	-	-	-	0.4
Pacific cod	0.5	0.4	-	0.8	0.2	-	0.1	-	2.0
Lingcod	-	0.6	1.4	-	-	-	-	1.0	3.0
Sablefish	-	-	0.2	0.1	0.2	-	-	-	0.5
Pollock	3,182.5	-	-	246.9	0.9	-	1,824.0	-	5,254.3
Hake	8,005.9	7,952.6	-	-	0.6	-	-	-	15,959.1
Pacific ocean perch	-	1.2	60.4	16.2	3.2	-	0.1	-	81.1
Other rockfish	0.7	189.0	1,483.6	927.5	409.3	-	132.9	25.0	3,168.0
Misc. species	-	15.7	-	-	-	-	-	-	15.7
Animal food	11.6	-	0.3	0.1	-	-	16.9	-	28.9
Reduction	134.4	318.0	2.0	5.1	0.9	-	5.9	0.1	466.4
Total	11,335.6	8,477.8	1,548.3	1,196.9	415.4	0.0	1,980.1	26.1	24,980.2
Effort	2,871	1,066	981	858	264	1	820	11	6,872

<sup>a</sup> These midwater trawl catches are included in all the trawl tables in this report.



Table 6. Species landed (t) as "other flatfish", "other rockfish", "miscellaneous species", animal food", and "reduction" by major area in 1993 (excludes dumped and discarded fish).

	Major area								
Species	4B	3C	3D	5A	5B	5C	5D	5E	Total
<u>Other flatfish</u>									
Butter sole	-	-	-	-	-	1.9	15.9	-	17.8
C-O sole	0.1	-	-	tr.	0.1	2.1	-	-	2.3
Curlfin sole	-	-	-	tr.	tr.	1.1	2.8	-	3.9
Flathead sole	-	5.9	0.3	-	-	0.2	1.4	-	7.8
Sand sole	0.2	7.4	-	-	1.3	57.4	138.4	-	204.7
Pacific sanddab	0.3	0.8	-	-	-	-	-	-	1.1
Unspecified sole	2.8	0.4	0.2	1.2	0.7	1.1	1.4	-	7.8
Total	3.4	14.5	0.5	1.2	2.1	63.8	159.9	0	245.4
<u>Other rockfish</u>									
Black rockfish	0.1	-	1.3	5.8	16.3	1.0	1.9	-	26.4
Bocaccio	0.7	128.8	322.1	250.0	239.5	49.3	89.5	42.3	1,122.2
Canary rockfish	tr.	248.6	585.0	85.0	109.4	53.6	22.2	28.8	1,132.6
China rockfish	-	tr.	-	tr.	-	tr.	1.9	-	1.9
Copper rockfish	-	2.2	1.3	1.3	-	5.1	39.3	-	49.2
Darkblotched rockfish	-	18.6	37.2	15.8	14.7	2.9	1.2	1.9	92.3
Greenstriped rockfish	-	4.6	1.3	1.2	1.6	0.7	0.1	-	9.5
Quillback rockfish	-	0.6	0.5	15.0	2.7	4.7	22.2	-	45.7
Redbanded rockfish	-	59.3	96.9	76.8	499.4	113.8	40.2	27.6	914.0
Redstripe rockfish	-	221.8	321.3	547.3	394.7	62.4	11.6	341.8	1,900.9
Rosethorn rockfish	-	-	-	tr.	tr.	tr.	0.4	0.1	0.5
Rougheye rockfish	3.0	226.0	273.2	87.1	95.8	5.8	4.9	1,180.2	1,876.0
Sharpchin rockfish	-	23.2	52.6	260.4	37.0	4.9	3.9	8.8	390.8
Shortraker rockfish	-	14.8	28.6	5.0	11.4	1.5	1.8	281.4	344.5
Shortspine rockfish	0.2	154.2	64.3	13.1	47.6	17.6	31.9	169.3	498.2

Table 6 (cont'd)

	Major area								
Species	4B	3C	3D	5A	5B	5C	5D	5E	Total
<u>Other rockfish (cont'd)</u>									
Silvergray rockfish	0.2	80.0	394.7	313.4	271.1	267.6	147.6	284.7	1,759.3
Splitnose rockfish	-	26.6	60.8	10.8	18.8	0.7	2.0	11.5	131.2
Tiger rockfish	-	-	0.1	-	-	-	-	-	0.1
Vermilion rockfish	-	0.5	-	-	-	tr.	1.4	-	1.9
Widow rockfish	-	119.1	747.3	601.2	354.8	2.9	40.6	41.8	1,907.7
Yelloweye rockfish	tr.	16.9	7.2	7.0	6.6	1.3	6.4	-	45.4
Yellowmouth rockfish	-	47.9	300.8	353.9	243.4	18.6	2.2	147.8	1,114.6
Yellowtail rockfish	7.0	818.5	1,597.6	1,045.0	831.8	82.9	543.9	35.4	4,962.1
Unspecified rockfish	0.4	13.5	21.8	11.2	18.2	5.2	5.1	18.4	93.8
Total	11.6	2,225.7	4,915.9	3,706.3	3,214.8	702.5	1,022.2	2,621.8	18,420.8
<u>Misc. species</u>									
Chub mackerel	-	4.2	-	-	-	-	-	-	4.2
Jack mackerel	-	4.3	-	-	-	-	-	-	4.3
Greenlings	-	-	-	tr.	-	-	-	-	tr.
Octopus	0.7	2.2	0.3	2.4	0.8	4.0	24.3	-	34.7
Pile perch	tr.	-	-	-	-	-	-	-	tr.
Sculpins	0.1	-	-	-	-	-	-	-	0.1
Shark	-	tr.	tr.	-	-	-	-	-	tr.
Skate wings	6.5	10.4	1.9	9.3	18.0	10.6	49.8	-	106.5
Skipjack tuna	-	7.1	-	-	-	-	-	-	7.1
Squid	tr.	0.1	-	-	-	-	0.1	-	0.2
Sturgeon	-	0.3	-	0.1	-	-	tr.	-	0.4
Wolf eel	-	tr.	-	tr.	0.1	tr.	-	-	0.1
Unspecified	tr.	-	0.3	-	-	-	0.5	0.4	1.2
Total	7.3	28.6	2.5	11.8	18.9	14.6	74.7	0.4	158.8

Table 6 (cont'd)

	Major area								
Species	4B	3C	3D	5A	5B	5C	5D	5E	Total
<u>Animal food</u>									
Pollock	11.7	-	-	-	-	-	-	-	11.7
Unspecified	-	-	0.4	1.8	2.1	9.6	112.7	10.3	136.9
Total	11.7	0	0.4	1.8	2.1	9.6	112.7	10.3	148.6
<u>Reduction</u>									
Chub mackerel	-	0.6	-	-	-	-	-	-	0.6
Dogfish	13.1	18.7	-	-	-	-	-	-	31.8
Dover sole	0.4	54.7	11.4	0.2	5.7	1.9	0.3	0.6	75.2
English sole	0.2	1.0	0.2	0.8	1.3	-	2.3	-	5.8
Herring	-	0.9	-	-	-	-	-	-	0.9
Lingcod	-	1.8	1.2	1.2	1.5	0.4	0.4	0.1	6.6
Jack mackerel	-	0.6	-	-	-	-	-	-	0.6
Misc. sole	-	0.1	-	-	-	-	-	-	0.1
Ocean perch	-	3.5	6.6	0.6	9.6	5.0	-	0.3	25.6
Other rockfish	tr.	22.6	14.4	11.6	11.6	0.3	0.2	9.5	70.2
Pacific cod	0.1	2.2	0.7	4.7	2.6	1.9	0.4	-	12.6
Pacific hake	-	239.0	-	-	-	-	-	-	239.0
Petrale sole	tr.	1.7	1.2	0.1	0.1	tr.	-	tr.	3.1
Pollock	120.7	47.7	-	3.0	-	-	1.8	-	173.2
Rex sole	-	1.9	0.1	0.1	-	-	-	-	2.1
Rock sole	-	0.1	0.2	6.8	2.4	1.7	0.1	-	11.3
Sablefish	-	1.4	0.2	tr.	0.3	0.1	-	-	2.0
Salmon	-	0.4	-	-	-	-	-	-	0.4
Shad	-	0.4	-	-	-	-	-	-	0.4
Skate wings	0.1	0.1	0.3	tr.	-	-	-	-	0.5
Skipjack tuna	-	2.1	-	-	-	-	-	-	2.1
Squid	0.4	-	-	-	-	-	-	-	0.4

Table 6 (cont'd)

Species	Major area								Total
	4B	3C	3D	5A	5B	5C	5D	5E	
<b>Reduction (cont'd)</b>									
Turbot	-	6.0	41.2	8.3	11.9	-	-	-	67.4
Unspecified	0.3	7.1	0.5	1.5	2.9	0.4	24.4	1.6	38.7
<b>Total</b>	<b>135.3</b>	<b>414.6</b>	<b>78.2</b>	<b>38.9</b>	<b>49.9</b>	<b>11.7</b>	<b>29.9</b>	<b>12.1</b>	<b>770.6</b>
Other species	-	55.8	14.4	11.8	11.8	0.3	0.3	0.3	103.8
Green hake	-	3.2	0.8	0.8	0.8	2.0	-	0.3	5.9
Wig sole	-	0.1	-	-	-	-	-	-	0.1
Rock sole	-	0.8	-	-	-	-	-	-	0.8
Flatfish	-	1.8	1.5	1.5	1.2	0.4	0.4	0.1	6.9
Herring	-	0.8	-	-	-	-	-	-	0.8
English sole	0.5	1.0	0.5	0.8	1.3	-	5.3	-	9.8
Rock sole	0.4	24.3	11.4	0.3	2.3	1.8	0.3	0.8	42.5
Rockfish	13.1	18.1	-	-	-	-	-	-	31.8
Other species	-	0.8	-	-	-	-	-	-	0.8
<b>Total</b>	<b>11.1</b>	<b>0</b>	<b>0.4</b>	<b>1.8</b>	<b>5.1</b>	<b>8.8</b>	<b>11.5</b>	<b>10.3</b>	<b>48.8</b>
Unspecified	-	-	0.4	1.8	5.1	8.8	11.5	10.3	43.9
Rockfish	11.1	-	-	-	-	-	-	-	11.1
<b>Species</b>	<b>4B</b>	<b>3C</b>	<b>3D</b>	<b>5A</b>	<b>5B</b>	<b>5C</b>	<b>5D</b>	<b>5E</b>	<b>Total</b>



Table 7. British Columbia trawl landings (t) by species and minor area in 1993.

Species	Minor Area						
	12	14	16	17	18	19	
English sole	-	0.3	-	34.8	8.8	0.5	
Rock sole	-	5.7	-	5.2	8.4	-	
Petrale sole	-	-	-	-	-	-	
Dover sole	-	-	-	-	-	-	
Rex sole	-	-	-	-	-	-	
Butter sole	-	-	-	-	-	-	
Flathead sole	-	-	-	-	-	-	
Sand sole	-	-	-	-	-	-	
Turbot	-	-	-	-	-	-	
Starry flounder	-	1.7	-	5.2	1.7	-	
Other flatfish	-	0.3	-	2.5	-	-	
Pacific cod	0.5	2.8	-	2.5	14.8	41.9	
Lingcod	-	-	-	-	-	-	
Sablefish	-	-	-	-	-	-	
Pollock	3,220.4	-	-	-	0.4	-	
Pacific ocean perch	-	-	-	-	-	-	
Bocaccio	0.3	-	-	-	-	-	
Canary rockfish	-	-	-	-	-	-	
Redstripe rockfish	-	-	-	-	-	-	
Rougheye rockfish	-	-	-	-	-	-	
Silvergray rockfish	0.1	-	-	-	-	-	
Yellowmouth rockfish	-	-	-	-	-	-	
Yellowtail rockfish	1.3	0.2	-	-	-	-	
Widow rockfish	-	-	-	-	-	-	
Other rockfish	0.1	0.2	-	-	-	-	
Hake	-	1,372.8	295.6	649.1	-	43.0	
Octopus	-	-	-	-	0.3	0.1	
Skate wings	-	-	-	1.3	1.7	1.5	
Squid	-	-	-	-	-	-	
Sturgeon	-	-	-	-	-	-	
Misc. species	-	-	-	-	-	-	
Dogfish	-	-	-	-	-	2.6	
Reduction	120.9	8.3	-	0.1	-	-	
Animal food	11.6	-	-	-	-	-	
Total	3,355.2	1,392.3	295.6	700.7	36.1	89.6	
Dumped fish	-	-	-	0.4	-	-	
Discarded fish	150.0	0.6	-	28.0	7.6	-	

Table 7 (cont'd)

Species	Minor area					
	20	29	21	23	24	25
English sole	20.2	0.4	13.3	45.6	46.5	26.1
Rock sole	0.8	-	13.0	58.0	8.6	4.1
Petrale sole	6.4	-	7.0	116.9	122.2	68.0
Dover sole	12.1	-	8.1	1,063.6	444.6	488.9
Rex sole	0.1	-	0.1	31.8	14.4	4.6
Butter sole	-	-	-	-	-	-
Flathead sole	-	-	0.1	0.9	4.9	0.3
Sand sole	0.2	-	0.4	4.3	2.5	-
Turbot	2.6	-	0.3	278.9	125.1	1,506.4
Starry flounder	-	-	-	1.3	13.8	0.3
Other flatfish	0.2	-	-	1.2	-	-
Pacific cod	95.5	-	193.0	1,295.5	202.0	411.4
Lingcod	0.9	-	14.9	518.8	892.3	312.7
Sablefish	0.7	-	4.3	124.2	84.3	100.8
Pollock	0.1	0.2	-	1.6	-	-
Pacific ocean perch	4.3	-	3.9	333.0	309.1	318.8
Bocaccio	0.4	-	4.7	46.3	77.7	181.5
Canary rockfish	-	-	10.6	116.4	121.6	249.2
Redstripe rockfish	-	-	3.6	101.2	117.2	124.9
Rougheye rockfish	3.0	-	-	122.3	103.8	175.3
Silvergray rockfish	0.1	-	2.0	41.6	36.5	106.2
Yellowmouth rockfish	-	-	0.1	23.9	23.8	25.1
Yellowtail rockfish	5.5	-	17.6	215.9	585.2	1,229.6
Widow rockfish	-	-	2.7	25.5	90.7	594.9
Other rockfish	0.3	-	3.2	126.6	204.4	183.8
Hake	3,595.4	2,050.0	774.6	6,845.0	333.1	-
Octopus	-	-	-	1.3	0.9	0.3
Skate wings	1.6	0.1	1.4	3.7	5.2	1.0
Squid	-	-	-	0.1	-	-
Sturgeon	-	-	-	-	0.1	-
Misc. species	-	-	0.5	13.8	1.3	-
Dogfish	3.4	-	6.4	3.7	5.0	0.5
Reduction	0.7	5.1	29.7	332.0	53.1	60.0
Animal food	-	-	-	-	-	-
Total	3,754.5	2,055.8	1,115.5	11,894.9	4,029.9	6,174.7
Dumped fish	-	-	-	0.2	0.1	-
Discarded fish	19.8	6.3	163.8	507.5	257.5	432.8

Table 7 (cont'd)

Species	Minor area						2BE
	26	27	9	11	8		
English sole	4.1	9.9	0.9	51.1	75.0	43.5	
Rock sole	3.7	26.9	1.6	455.2	342.6	562.6	
Petrale sole	6.3	31.5	-	25.2	80.8	15.8	
Dover sole	25.0	70.4	-	56.2	279.4	25.0	
Rex sole	0.9	0.1	-	1.3	1.4	5.0	
Butter sole	-	-	-	-	-	1.5	
Flathead sole	-	-	-	-	-	-	
Sand sole	-	-	-	-	1.3	56.4	
Turbot	111.4	169.2	-	387.8	1,037.9	0.1	
Starry flounder	-	0.1	-	0.3	1.1	5.9	
Other flatfish	-	0.2	-	1.2	0.7	1.1	
Pacific cod	76.0	346.0	22.6	783.4	635.4	631.9	
Lingcod	24.0	110.6	2.1	669.7	747.2	91.8	
Sablefish	8.5	29.0	-	10.2	37.7	9.9	
Pollock	0.6	0.5	0.8	299.8	21.5	2.5	
Pacific ocean perch	103.0	558.6	-	327.5	1,552.7	386.2	
Bocaccio	30.7	109.8	16.1	234.0	239.4	14.1	
Canary rockfish	84.1	251.5	3.6	81.5	109.3	31.0	
Redstripe rockfish	34.0	162.6	13.7	533.7	394.6	29.5	
Rougheye rockfish	12.7	85.1	-	87.1	95.8	5.5	
Silvergray rockfish	52.5	235.7	8.2	305.4	271.0	141.7	
Yellowmouth rockfish	20.2	255.6	-	353.8	243.3	17.8	
Yellowtail rockfish	180.6	187.2	1.9	1,043.2	831.8	27.9	
Widow rockfish	114.7	37.7	-	601.3	354.8	1.6	
Other rockfish	16.1	173.8	12.9	410.5	674.1	48.8	
Hake	-	-	-	-	0.6	-	
Octopus	-	-	-	2.3	0.8	3.1	
Skate wings	0.4	0.6	-	9.2	18.0	4.9	
Squid	-	-	-	-	-	-	
Sturgeon	-	-	-	-	-	-	
Misc. species	-	0.3	-	-	0.1	-	
Dogfish	9.5	24.8	-	-	-	-	
Reduction	9.1	8.9	-	39.0	49.7	9.6	
Animal food	0.2	0.1	-	1.7	2.2	5.7	
Total	928.3	2,886.7	84.4	6,771.6	8,100.2	2,180.4	
Dumped fish	-	-	-	5.6	1.6	0.2	
Discarded fish	182.1	55.7	-	450.6	434.4	212.1	

Table 7 (cont'd)

Species	Minor area						
	5L	6	2AE	1E	4	5U	
English sole	100.2	0.8	35.1	130.9	998.7	123.5	
Rock sole	39.4	2.7	202.2	88.8	404.1	780.5	
Petrale sole	33.8	0.9	0.7	4.0	4.3	5.5	
Dover sole	128.2	54.2	5.7	102.8	444.4	96.4	
Rex sole	12.6	4.0	3.9	18.0	82.2	9.1	
Butter sole	0.2	0.2	2.3	0.1	12.2	1.3	
Flathead sole	0.2	-	0.4	0.3	0.6	-	
Sand sole	0.6	0.3	15.5	10.5	92.0	20.4	
Turbot	14.4	1.2	9.9	33.0	293.5	1.2	
Starry flounder	0.4	-	1.7	7.3	55.0	9.0	
Other flatfish	0.9	0.1	0.8	0.8	0.9	1.7	
Pacific cod	760.6	3.1	65.4	340.9	1,042.5	1,117.7	
Lingcod	104.9	10.1	15.4	96.4	107.6	29.2	
Sablefish	9.2	4.1	-	6.7	3.4	15.5	
Pollock	12.4	3.3	33.6	3,024.8	1,204.5	144.2	
Pacific ocean perch	46.6	38.9	0.2	77.5	2.4	2.9	
Bocaccio	30.3	4.6	4.5	54.4	18.8	11.7	
Canary rockfish	13.8	8.8	0.1	9.1	4.5	8.5	
Redstripe rockfish	15.0	17.7	2.6	3.2	0.4	5.3	
Rougheye rockfish	0.1	0.2	-	4.7	0.2	-	
Silvergray rockfish	81.7	44.3	3.7	116.0	9.7	18.5	
Yellowmouth rockfish	-	0.7	-	1.0	1.1	-	
Yellowtail rockfish	48.8	6.4	4.3	408.3	75.8	55.6	
Widow rockfish	0.6	0.6	0.3	26.5	6.2	7.9	
Other rockfish	74.3	36.4	20.8	51.5	28.1	58.0	
Hake	-	-	-	-	-	-	
Octopus	0.7	-	1.6	2.3	6.2	14.2	
Skate wings	5.3	0.2	3.2	3.1	30.4	13.2	
Squid	-	-	-	-	-	-	
Sturgeon	-	-	-	-	-	-	
Misc. species	-	-	-	0.5	-	-	
Dogfish	-	-	-	-	-	-	
Reduction	1.6	0.5	1.0	15.7	4.4	8.9	
Animal food	3.4	0.6	2.5	46.3	48.7	15.0	
Total	1,540.2	244.9	437.4	4,685.4	4,982.8	2,574.9	
Dumped fish	-	-	-	-	2.8	-	
Discarded fish	119.5	4.2	22.1	152.6	583.3	194.3	



Table 7 (cont'd)

Species	Minor area			Total
	1W	2AW	2BW	
English sole	-	0.2	-	1,770.4
Rock sole	0.2	-	-	3,014.3
Petrale sole	29.5	19.3	0.4	578.5
Dover sole	271.7	380.2	0.4	3,957.3
Rex sole	38.5	11.3	0.7	240.0
Butter sole	-	-	-	17.8
Flathead sole	-	-	-	7.7
Sand sole	-	-	-	204.4
Turbot	20.6	14.4	12.1	4,020.0
Starry flounder	-	-	-	104.8
Other flatfish	-	-	-	12.6
Pacific cod	3.6	3.2	-	8,092.2
Lingcod	3.6	6.3	-	3,758.5
Sablefish	18.4	73.9	0.1	540.9
Pollock	1.9	-	-	7,973.1
Pacific ocean perch	18.7	469.9	7.3	4,561.5
Bocaccio	1.5	40.8	-	1,121.6
Canary rockfish	3.7	25.0	-	1,132.3
Redstripe rockfish	12.0	329.0	0.6	1,900.8
Rougheye rockfish	54.1	1,126.1	-	1,876.0
Silvergray rockfish	33.8	250.7	-	1,759.4
Yellowmouth rockfish	4.2	143.6	-	1,114.2
Yellowtail rockfish	8.6	26.8	-	4,962.5
Widow rockfish	2.8	38.9	-	1,907.7
Other rockfish	141.5	375.5	2.1	2,643.0
Hake	-	-	-	15,959.2
Octopus	-	-	-	34.1
Skate wings	-	-	-	106.0
Squid	-	-	-	0.1
Sturgeon	-	-	-	0.1
Misc. species	-	0.4	-	16.9
Dogfish	-	-	-	55.9
Reduction	0.5	11.7	-	770.5
Animal food	0.9	9.4	-	148.3
Total	670.3	3,356.6	23.7	74,362.6
Dumped fish	-	-	-	10.9
Discarded fish	128.0	167.4	-	4,280.2

Tables of monthly catch (t) by major area

Table 8. 1993 British Columbia trawl landings (t) of groundfish - International area 4B, Strait of Georgia.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
English s.	4.2	18.2	6.4	7.9	5.1	3.3		0.7	1.3	7.0	7.0	3.9	65.0
Rock s.	3.9	3.1	1.5	3.2	1.6	0.9			0.2	1.3	1.0	3.2	19.9
Petrale s.	4.0	1.5	0.1	0.1	0.5	0.2							6.4
Dover s.	1.7	2.1			2.2		1.1	3.0	0.5	1.5			12.1
Rex sole		0.1											0.1
Starry fldr	1.2	3.3	1.0	1.0	0.3	0.1				0.1	0.6	1.0	8.6
Turbot	1.0							1.6					2.6
Other flat.		2.5	0.5									0.2	3.2
Pacific cod	7.6	81.0	8.2	2.8	3.4	0.6		3.3	39.1	4.1	4.9	2.9	157.9
Lingcod								0.3		0.1	0.5		0.9
Sablefish	0.2	0.5											0.7
Pollock	251.7	1,558.3	1,037.7	126.3							1.8	245.3	3,221.1
Hake		569.7	1,632.4	678.5	207.4	320.7	141.2	948.3	1,280.8	1,184.3	1,042.6		8,005.9
Ocean perch	4.3												4.3
Other rockf.	3.2	5.2		0.1	2.6						0.4		11.5
Misc. sp.	0.6	1.6	0.3	0.5	0.5	0.6		0.3	1.4	0.7	0.4	0.4	7.3
Dogfish						0.1		3.4			1.3	1.3	6.1
Animal food		11.6											11.6
Reduction		67.0	40.0	19.9	2.6				0.1		0.1	5.5	135.2
<b>TOTAL</b>	<b>283.6</b>	<b>2,325.7</b>	<b>2,728.1</b>	<b>840.3</b>	<b>226.2</b>	<b>326.5</b>	<b>142.3</b>	<b>960.9</b>	<b>1,323.4</b>	<b>1,199.1</b>	<b>1,060.6</b>	<b>263.7</b>	<b>11,680.4</b>

Table 9. 1993 British Columbia trawl landings (t) - International area 3C, southwest coast Vancouver Island.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
English s.	0.4	3.8	3.2	4.2	25.5	7.9	12.9	10.6	14.7	15.2	6.8		105.2
Rock s.	3.9	18.7	12.6	2.5	14.1	5.0	13.7	3.9	3.4	1.6	0.3		79.7
Petrale s.	63.0	76.2	15.2	5.4	4.8	3.2	19.0	4.5	18.1	17.9	18.3	0.4	246.0
Dover s.	109.9	208.1	335.3	582.3	107.5	33.0	23.8	24.4	17.8	40.7	25.4	8.2	1,516.4
Rex sole	0.4	8.8	7.7	14.5	0.2	1.3	1.1	3.9	2.1	3.5	2.7		46.2
Starry flr	6.9	6.3	0.4		0.1					1.4			15.1
Turbot	12.7	11.5	93.8	122.8	55.9	27.3	40.9	1.1	22.4	12.3	2.4	1.1	404.2
Other flat.	1.6	3.7	1.6		0.3		0.2	2.2	0.7	0.8	3.3		14.4
Pacific cod	123.4	901.8	125.3	13.0	224.3	76.9	72.5	21.2	69.3	44.5	17.5	0.6	1,690.3
Lingcod	0.1	1.0		0.4	171.1	98.2	435.2	15.0	278.7	235.1	191.2		1,426.0
Sablefish	7.9	40.9	17.7	15.1	14.6	12.2	27.7	7.9	17.8	45.8	3.8	1.3	212.7
Pollock		1.6											1.6
Hake					354.9	911.8	1,231.6	1,274.7	2,212.0	1,095.8	871.8		7,952.6
Ocean perch	0.6	23.9	22.8	69.0	120.2	36.0	69.7	28.5	16.3	241.4	12.1	5.6	646.1
Other rockf.	213.1	331.4	79.6	147.7	311.4	210.4	236.6	127.6	180.3	287.5	81.4	18.3	2,225.3
Misc. sp.	0.8	2.0	1.2	0.8	2.2	0.8	2.3	2.5	14.1	1.2	0.6		28.5
Dogfish		2.0			6.0	0.7			6.4				15.1
Animal food													
Reduction	11.1	37.4	13.9	22.4	3.8	8.6	28.0	114.5	122.0	27.4	21.9	3.7	414.7
<b>TOTAL</b>	<b>555.8</b>	<b>1,679.1</b>	<b>730.3</b>	<b>1,000.1</b>	<b>1,416.9</b>	<b>1,433.3</b>	<b>2,215.2</b>	<b>1,642.5</b>	<b>2,996.1</b>	<b>2,072.1</b>	<b>1,259.5</b>	<b>39.2</b>	<b>17,040.1</b>



Table 10. 1993 British Columbia trawl landings (t) of groundfish - International area 3D, northwest coast Vancouver Island.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
English s.	1.1	2.3	1.5	2.2	6.3	10.2	3.8	4.3	3.4	3.8	0.8		39.7
Rock s.	0.1	3.0	0.8	1.7	7.9	8.8	6.7	2.4	0.6	2.1	0.6		34.7
Petrale s.	10.0	18.4	14.7	8.6	5.3	15.8	8.3	6.8	6.5	8.2	2.5	0.6	105.7
Dover s.	41.1	210.5	76.7	58.4	48.1	40.4	24.4	14.0	21.8	39.1	10.0		584.5
Rex sole	0.6	0.5	0.7	0.4	1.2	1.2		0.3		0.5			5.4
Starry flr					0.1					0.3			0.4
Turbot	5.0	30.7	27.7	314.5	643.5	220.4	81.6	93.2	231.8	135.2	3.6		1,787.2
Other flat.								0.1		0.3	0.1		0.5
Pacific cod	19.6	38.2	86.3	89.4	157.2	255.6	47.2	65.9	30.0	37.6	6.1	0.1	833.2
Lingcod	0.6	0.8		4.7	63.9	117.8	49.5	55.3	30.9	104.5	19.1		447.1
Sablefish	5.5	28.0	4.7	6.8	11.6	12.3	19.0	9.9	8.2	26.0	5.8	0.4	138.2
Pollock							0.6			0.5			1.1
Hake													
Ocean perch	142.2	82.5	26.5	79.8	136.5	67.2	69.1	31.1	36.7	266.1	40.9	2.1	980.7
Other rockf.	591.1	429.4	180.0	301.1	322.6	307.1	387.9	227.3	235.1	1,697.1	228.3	9.1	4,916.1
Misc. sp.		0.1		0.1	0.3	1.1	0.5			0.3			2.4
Dogfish			13.8	20.5		0.5							34.8
Animal food				0.1						0.3			0.4
Reduction	2.6	8.7	1.6	10.7	29.2	11.7	7.9	3.7	0.2	0.5	0.9	0.2	77.9
<b>TOTAL</b>	<b>819.5</b>	<b>853.1</b>	<b>435.0</b>	<b>899.0</b>	<b>1,433.7</b>	<b>1,070.1</b>	<b>706.5</b>	<b>514.3</b>	<b>605.2</b>	<b>2,322.4</b>	<b>318.7</b>	<b>12.5</b>	<b>9,990.0</b>

Table 11. 1993 British Columbia trawl landings (t) of groundfish - International area 5A, south Queen Charlotte Sound.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
English s.	2.8	3.0	2.1	5.1	8.8	10.0	4.7	3.5	4.7	3.5	3.5	0.2	51.9
Rock s.	1.8	8.8	6.4	24.3	105.2	157.9	63.7	40.6	18.1	26.4	3.3	0.2	456.7
Petrals s.	1.1	0.6	4.6	0.7	2.8	1.9	3.5	1.8	3.7	2.7	1.5	0.3	25.2
Dover s.	0.1	0.3	0.2	0.2	4.0	11.6	12.0	6.0	8.1	6.3	3.7	3.7	56.2
Rex sole			0.7			0.1					0.5		1.3
Starry flr									0.3				0.3
Turbot	0.8	1.2		0.5	8.6	146.4	85.5	53.9	80.2	9.3	1.4		387.8
Other flat.			0.5	0.6						0.1			1.2
Pacific cod	27.4	41.2	16.3	95.7	258.3	121.6	76.9	68.3	26.2	43.9	27.1	3.1	806.0
Lingcod	22.4	69.2	58.1	27.6	90.9	86.2	86.1	61.8	63.7	50.4	20.6	34.9	671.9
Sablefish	0.2			0.1	0.6	3.0	3.0	0.8	1.1	0.9	0.5		10.2
Pollock	96.8	77.0	2.6	17.7	19.7	13.4	4.1	20.6	4.5	4.4	2.5	37.3	300.6
Hake													
Ocean perch	45.6	13.6	2.0	15.5	48.1	42.1	46.2	8.8	21.1	69.0	15.4	0.1	327.5
Other rockf.	740.6	371.4	54.6	303.8	479.4	354.2	236.3	122.3	253.5	572.2	203.7	14.5	3,706.5
Misc. sp.	0.1	0.1	1.6	4.7	1.1	1.6	0.3	0.4	1.2	0.5	0.2	0.1	11.9
Dogfish		0.1		0.1	0.3	1.1	0.2						
Animal food				0.1	0.4	0.1	0.2		0.9	0.1			1.7
Reduction	7.0	2.3	0.3	1.3	4.1	9.7	3.7	8.4	0.4	0.5	0.7	0.6	39.0
<b>TOTAL</b>	<b>946.7</b>	<b>588.7</b>	<b>150.0</b>	<b>497.9</b>	<b>1,032.0</b>	<b>959.7</b>	<b>626.2</b>	<b>397.2</b>	<b>487.7</b>	<b>790.2</b>	<b>284.6</b>	<b>95.0</b>	<b>6,855.9</b>

Table 12. 1993 British Columbia trawl landings (t) - International area 5B, north Queen Charlotte Sound.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
English s.		0.3	1.0	4.4	8.4	10.7	17.9	8.9	10.3	11.7	1.4		75.0
Rock s.	1.0	0.3	2.0	6.0	12.2	78.0	111.8	37.7	54.0	37.1	2.5		342.6
Petrale s.	10.3	3.3	5.0	22.3	2.6	9.9	7.8	7.2	5.9	4.7	1.7	0.1	80.8
Dover s.	8.7	1.7	11.4	16.6	16.1	86.2	19.2	30.0	19.4	39.3	27.3	3.5	279.4
Rex sole	0.1			0.1		0.5				0.5	0.2		1.4
Starry flr									1.1				1.1
Turbot	88.1	225.0	77.6	0.1	306.8	57.7	91.6	31.9	46.3	77.2	8.8	26.8	1,037.9
Other flat.					0.7				1.3				2.0
Pacific cod	26.9	1.1	10.9	20.2	199.4	208.9	84.1	19.0	27.8	27.5	4.5	5.1	635.4
Lingcod	1.2	51.9	30.0	75.7	58.7	102.6	143.9	179.6	55.4	44.2	3.6	0.4	747.2
Sablefish	0.6	1.2	1.6	0.4	0.9	11.5	6.6	4.6	2.4	6.0	1.4	0.5	37.7
Pollock					1.2		1.2		2.2	4.5	0.5	11.9	21.5
Hake						0.6							0.6
Ocean perch	71.7	29.2	1.5	43.8	95.4	907.9	99.1	33.7	41.4	187.0	41.0	1.0	1,552.7
Other rockf.	96.5	179.8	59.0	187.1	434.5	515.7	422.3	200.2	296.0	648.1	148.0	27.7	3,214.9
Misc. sp.		0.4		1.1	3.3	12.4	0.9	0.1	0.1	0.3	0.2		18.8
Dogfish													
Animal food			0.2	0.2	0.3	0.5			0.9	0.1			2.2
Reduction	1.2	0.5	0.5	3.4	10.1	13.2	16.9	0.8		2.2	0.9		49.7
<b>TOTAL</b>	<b>306.3</b>	<b>494.7</b>	<b>200.7</b>	<b>381.4</b>	<b>1,150.6</b>	<b>2,016.3</b>	<b>1,023.3</b>	<b>553.7</b>	<b>564.5</b>	<b>1,090.4</b>	<b>242.0</b>	<b>77.0</b>	<b>8,100.9</b>

Table 13. 1993 British Columbia trawl landings (t) of groundfish - International area 5C, south Hecate Strait.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
English s.	1.6	9.4	15.2	11.4	7.5	14.1	6.0	14.5	39.0	12.8	10.5	2.6	144.6
Rock s.	3.7	17.1	62.7	189.7	110.4	114.5	33.2	22.3	30.3	9.9	10.9		604.7
Petrale s.	0.1	0.2	0.6	1.1	2.6	17.5	7.8	4.6	5.5	4.5	5.5	0.4	50.4
Dover s.	0.2		1.6	2.9	6.9	43.9	41.1	9.0	10.1	31.0	59.7	1.0	207.4
Rex sole	1.8	0.4	0.4	0.9	1.2	3.7	1.5	0.3	1.0	4.7	5.2	0.8	21.9
Starry flr			0.1	0.3	4.4	0.4		0.4	0.7	0.1			6.4
Turbot						2.1	13.5			0.1			15.7
Other flat.		4.8	10.6	22.8	9.8	11.2			1.3	0.3	0.6	0.2	61.6
Pacific cod	34.5	225.8	519.4	318.1	22.0	142.9	40.7	21.5	40.8	20.3	7.6	2.1	1,395.7
Lingcod	1.6	9.4	11.1	13.5	9.2	50.2	43.6	25.5	6.9	8.4	26.6	0.8	206.8
Sablefish	0.2			0.3	0.7	3.3	4.3	0.4	1.4	10.2	2.4	0.1	23.3
Pollock		0.6		3.2	2.7	1.3		0.7	3.5	2.8	3.3	0.2	18.3
Hake													
Ocean perch	1.9	3.0	3.6	43.8	32.3	228.2	38.5	5.8	8.0	88.7	15.6	2.2	471.6
Other rockf.	41.2	39.2	11.4	109.3	57.6	132.4	66.6	19.1	42.0	97.0	64.0	22.5	702.3
Misc. sp.	0.3	3.1	0.6	3.6	1.9	0.9	1.5	0.2	1.2	0.4	0.8		14.5
Dogfish													
Animal food		0.1	0.4	0.5	0.1	1.8	3.0	1.6	1.4	0.4	0.4		9.7
Reduction		0.4		4.0		7.3							11.7
<b>TOTAL</b>	<b>87.1</b>	<b>313.5</b>	<b>637.7</b>	<b>725.4</b>	<b>269.3</b>	<b>775.7</b>	<b>301.3</b>	<b>125.9</b>	<b>193.1</b>	<b>291.6</b>	<b>213.1</b>	<b>32.9</b>	<b>3,966.6</b>



Table 14. 1993 British Columbia trawl landings (t) of groundfish - International area 5D, north Hecate Strait.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
English s.	43.9	92.2	121.2	164.7	207.6	142.6	114.9	76.1	79.2	70.7	127.5	47.6	1,288.2
Rock s.	41.8	54.4	88.4	169.3	222.4	261.0	137.4	75.0	122.1	165.0	94.9	44.0	1,475.7
Petrale s.	0.2	0.2	0.1	0.2	1.6	0.5	0.9	1.6	2.3	3.3	2.9	0.9	14.7
Dover s.			0.1	0.5	7.8	64.8	131.9	109.0	161.6	115.5	55.9	2.1	649.2
Rex sole	0.8	1.7	1.7	1.6	5.8	4.1	10.1	9.8	19.2	20.0	31.1	7.5	113.4
Starry flr	0.2	0.4	0.3	9.8	19.0	5.6	8.7	7.2	11.1	2.7	2.0	5.8	72.8
Turbot		5.6		6.4	19.9	83.8	63.7		29.2	26.5	94.7	7.7	337.5
Other flat.	2.9	4.1	4.2	9.0	18.4	35.0	14.6	5.4	34.1	13.0	15.7	3.3	159.7
Pacific cod	75.7	94.1	343.1	632.3	460.1	276.8	164.3	141.6	140.2	86.7	113.5	38.6	2,567.0
Lingcod	22.6	18.4	20.6	25.2	29.2	26.3	11.8	6.3	24.2	23.3	28.1	12.4	248.4
Sablefish				0.1	4.0	0.5	2.3	1.8	5.8	9.2	1.8	0.2	25.7
Pollock	4.2	7.1	62.2	14.0	55.7	37.6	176.1	199.5	278.9	449.7	2,251.6	870.7	4,407.3
Hake													
Ocean perch		0.8	1.3		3.5	9.5	16.7	0.9	4.1	18.0	16.6	11.5	82.9
Other rockf.	58.9	30.0	20.9	33.0	151.0	61.6	43.8	17.9	95.9	233.8	191.9	81.9	1,020.6
Misc. sp.	1.3	10.1	8.1	12.8	6.9	4.2	1.9	2.0	5.4	9.1	10.9	1.9	74.6
Dogfish													
Animal food		0.1	0.8	4.5	8.2	9.1	7.6	19.2	12.9	15.3	31.1	3.9	112.7
Reduction	0.4	0.4				9.6	0.3			2.4	12.2	4.5	29.8
<b>TOTAL</b>	<b>252.9</b>	<b>319.6</b>	<b>673.0</b>	<b>1,083.4</b>	<b>1,221.1</b>	<b>1,032.6</b>	<b>907.0</b>	<b>673.3</b>	<b>1,026.2</b>	<b>1,264.2</b>	<b>3,082.4</b>	<b>1,144.5</b>	<b>12,680.2</b>

Table 15. 1993 British Columbia trawl landings (t) of groundfish - International area 5E, west coast Queen Charlotte Islands.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
English s.					0.2								0.2
Rock s.					0.2								0.2
Petrale s.	1.1	3.6	3.2	28.3	11.1	0.7			0.1	0.6	0.6	0.2	49.5
Dover s.	3.9	111.0	84.6	280.7	141.4	8.6	6.3	0.1	1.8	6.9	3.5	3.4	652.2
Rex sole	0.5	8.1	1.4	12.4	9.3	10.4	3.4	0.5	0.2	0.8	1.7	1.8	50.5
Starry flr													
Turbot	12.1	28.6	2.5	3.3	0.5								47.0
Other flat.													
Pacific cod	1.3		0.5	0.4	4.0			0.4	0.1	0.2			6.9
Lingcod	0.8		0.4	0.7	2.1	1.5	0.1	0.7	0.7	0.9	0.2	1.9	10.0
Sablefish	2.4	16.9	7.6	12.9	9.5	5.4	8.5	3.1	2.6	12.7	8.3	2.8	92.7
Pollock		0.1									1.3	0.6	2.0
Hake													
Ocean perch	77.5	41.2	19.4	70.2	45.0	24.7	31.5	19.1	16.2	105.6	21.1	24.3	495.8
Other rockf.	202.4	127.1	167.2	370.8	289.3	242.3	150.6	121.7	138.9	385.4	235.1	190.9	2,621.7
Misc. sp.					0.4								0.4
Dogfish													
Animal food				1.6	0.6	1.0	1.4	0.5	1.1	3.6	0.6		10.4
Reduction	0.1				9.3	1.1				0.4	1.1	0.2	12.2
<b>TOTAL</b>	<b>302.1</b>	<b>336.6</b>	<b>286.8</b>	<b>781.3</b>	<b>522.9</b>	<b>295.7</b>	<b>201.8</b>	<b>146.1</b>	<b>161.7</b>	<b>517.1</b>	<b>273.5</b>	<b>226.1</b>	<b>4,051.7</b>

Table 16. 1993 British Columbia trawl landings (t) of groundfish - coastwide total.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
English s.	54.0	129.2	150.6	199.9	269.4	198.8	160.2	118.6	152.6	124.7	157.5	54.3	1,769.8
Rock s.	56.2	105.4	174.4	396.7	474.0	626.1	366.5	181.9	228.7	243.4	113.5	47.4	3,014.2
Petrale s.	89.8	104.0	43.5	66.7	31.3	49.7	47.3	26.5	42.1	41.9	33.0	2.9	578.7
Dover s.	165.6	533.7	509.9	941.6	334.0	288.5	259.8	195.5	241.1	280.3	185.5	21.9	3,957.4
Rex sole	4.2	19.6	12.6	29.9	17.7	21.3	16.1	14.8	22.5	30.0	41.4	10.1	240.2
Starry flr	8.3	10.0	1.8	11.1	23.9	6.1	8.7	7.6	13.2	4.6	2.6	6.8	104.7
Turbot	119.7	302.6	201.6	447.6	1,035.2	537.7	376.8	181.7	409.9	260.6	110.9	35.6	4,019.9
Other flat.	4.5	15.1	17.4	32.4	29.2	46.2	14.8	7.7	37.4	14.5	19.7	3.7	242.6
Pacific cod	316.4	1,383.2	1,110.0	1,171.9	1,328.7	1,083.3	485.7	341.2	373.5	264.8	181.2	52.5	8,092.4
Lingcod	49.3	150.7	120.2	147.8	425.1	482.8	770.2	344.5	460.5	466.9	289.9	50.4	3,758.3
Sablefish	17.0	87.5	31.6	35.7	41.9	48.2	71.4	28.5	39.3	110.8	24.0	5.3	541.2
Pollock	352.7	1,644.7	1,102.5	161.2	79.3	52.3	182.0	220.8	289.1	461.9	2,261.0	1,166.0	7,973.5
Hake		569.7	1,632.4	678.5	562.3	1,233.1	1,372.8	2,223.0	3,492.8	2,280.1	1,914.4		15,959.1
Ocean perch	343.8	194.2	77.1	322.1	481.0	1,315.6	370.8	127.9	143.8	975.8	162.7	46.8	4,561.6
Other rockf.	1,947.0	1,513.5	572.7	1,452.9	2,048.4	1,823.7	1,544.1	836.1	1,241.7	3,921.1	1,152.8	364.9	18,418.9
Misc. sp.	3.1	17.4	11.8	23.6	16.6	21.6	7.4	5.5	23.4	12.5	13.1	2.4	158.4
Dogfish		2.0	13.8	20.5	6.0	1.3		3.4	6.4		1.3	1.3	56.0
Animal food		11.8	1.4	7.0	9.6	12.4	12.2	21.3	17.2	19.8	32.1	3.9	148.7
Reduction	22.4	116.7	56.3	61.7	59.1	61.2	56.8	127.4	122.7	33.4	37.8	14.7	770.2
<b>TOTAL</b>	<b>3,554.0</b>	<b>6,911.0</b>	<b>5,841.6</b>	<b>6,208.8</b>	<b>7,272.7</b>	<b>7,909.9</b>	<b>6,123.6</b>	<b>5,013.9</b>	<b>7,357.9</b>	<b>9,547.1</b>	<b>6,734.4</b>	<b>1,890.9</b>	<b>74,365.8</b>

Tables of monthly catch (t) by minor area



Table 17. 1993 British Columbia trawl landings (t) of groundfish from statistical area 12.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
English s.													
Rock sole													
Petrale s.													
Dover sole													
Rex sole													
Butter sole													
Flathead s.													
Sand sole													
Turbot													
Starry flwr													
Other flat.													
Pacific cod	0.3	0.2											0.5
Lingcod													
Sablefish													
Pollock	251.7	1,558.2	1,037.1	126.3							1.8	245.3	3,220.4
Ocean perch													
Bocaccio	0.1	0.1		0.1									0.3
Canary rf													
Redstripe r													
Rougheye rf													
Silvergray		0.1											0.1
Yel'mouth r													
Yellowtail		1.3											1.3
Widow rf													
Other rf		0.1											0.1
Hake													
Octopus													
Perch													
Skate													
Squid													
Sturgeon													
Misc. sp.													
Dogfish													
Reduction		59.5	38.0	17.9								5.5	120.9
Animal food		11.6											11.6
<b>Total</b>	<b>252.1</b>	<b>1,631.1</b>	<b>1,075.1</b>	<b>144.3</b>							<b>1.8</b>	<b>250.8</b>	<b>3,355.2</b>
Dumped fish													
Discards	4.5	104.5	38.3		1.8					0.9			150.0

Table 18. 1993 British Columbia trawl landings (t) of groundfish from statistical area 14.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
English s.			0.3										0.3
Rock sole	2.8	1.0	0.1								0.3	1.5	5.7
Petrale s.													
Dover sole													
Rex sole													
Butter sole													
Flathead s.													
Sand sole													
Turbot													
Starry flr	0.8	0.3									0.2	0.4	1.7
Other flat.			0.3										0.3
Pacific cod												2.8	2.8
Lingcod													
Sablefish													
Pollock													
Ocean perch													
Bocaccio													
Canary rf													
Redstripe r													
Rougheye rf													
Silvergray													
Yel'mouth r													
Yellowtail						0.2							0.2
Widow rf													
Other rf					0.2								0.2
Hake		316.3			207.4	176.2				60.3	612.6		1,372.8
Octopus													
Perch													
Skate													
Squid													
Sturgeon													
Misc. sp.													
Dogfish													
Reduction		6.0			2.3								8.3
Animal food													
<b>Total</b>	<b>3.6</b>	<b>323.6</b>	<b>0.7</b>		<b>210.1</b>	<b>176.2</b>				<b>60.3</b>	<b>613.1</b>	<b>4.7</b>	<b>1,392.3</b>
Dumped fish													
Discards			0.2		0.1					0.3			0.6

Table 19. 1993 British Columbia trawl landings (t) of groundfish from statistical area 16.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
English s.													
Rock sole													
Petrale s.													
Dover sole													
Rex sole													
Butter sole													
Flathead s.													
Sand sole													
Turbot													
Starry flr													
Other flat.													
Pacific cod													
Lingcod													
Sablefish													
Pollock													
Ocean perch													
Bocaccio													
Canary rf													
Redstripe r													
Rougheye rf													
Silvergray													
Yellowmouth r													
Yellowtail													
Widow rf													
Other rf													
Hake											295.6		295.6
Octopus													
Perch													
Skate													
Squid													
Sturgeon													
Misc. sp.													
Dogfish													
Reduction													
Animal food													
Total											295.6		295.6
Dumped fish													
Discards													

Table 20. 1993 British Columbia trawl landings (t) of groundfish from statistical area 17.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
English s.	2.9	8.8	5.0	6.1	3.4	0.2				1.5	3.5	3.4	34.8
Rock sole	0.2	1.1	0.3	0.7	1.0	0.2				0.5	0.7	0.5	5.2
Petrale s.													
Dover sole													
Rex sole													
Butter sole													
Flathead s.													
Sand sole													
Turbot													
Starry fldr	0.3	2.8	0.6	0.4	0.1					0.1	0.4	0.5	5.2
Other flat.		2.3										0.2	2.5
Pacific cod	0.4	1.4	0.2	0.2	0.1						0.2		2.5
Lingcod													
Sablefish													
Pollock													
Ocean perch													
Bocaccio													
Canary rf													
Redstripe r													
Rougheye rf													
Silvergray													
Yel'mouth r													
Yellowtail													
Widow rf													
Other rf													
Hake			183.3	343.3						0.4	122.1		649.1
Octopus													
Perch													
Skate	0.1	0.4	0.1	0.1	0.1					0.2	0.1	0.2	1.3
Squid													
Sturgeon													
Misc. sp.													
Dogfish													
Reduction		0.1											0.1
Animal food													
<b>Total</b>	<b>3.9</b>	<b>16.9</b>	<b>189.5</b>	<b>350.8</b>	<b>4.7</b>	<b>0.4</b>				<b>2.7</b>	<b>127.0</b>	<b>4.8</b>	<b>700.7</b>
Dumped fish		0.4											0.4
Discards	0.6	3.3	1.4	3.3	3.5	8.9				1.4	5.4	0.2	28.0



Table 21. 1993 British Columbia trawl landings (t) of groundfish from statistical area 18.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
English s.	0.7	0.8	0.9	1.1	1.2	2.4			0.1	1.1		0.5	8.8
Rock sole	1.0	0.3	1.2	2.5	0.6	0.7			0.2	0.8		1.1	8.4
Petrale s.													
Dover sole													
Rex sole													
Butter sole													
Flathead s.													
Sand sole													
Turbot													
Starry flidr	0.1	0.2	0.4	0.6	0.2	0.1						0.1	1.7
Other flat.													
Pacific cod	1.8	0.6	4.5	0.6	0.1	0.4			6.4	0.3		0.1	14.8
Lingcod													
Sablefish													
Pollock			0.4										0.4
Ocean perch													
Bocaccio													
Canary rf													
Redstripe r													
Rougheye rf													
Silvergray													
Yel'mouth r													
Yellowtail													
Widow rf													
Other rf													
Hake													
Octopus	0.1				0.1					0.1			0.3
Perch													
Skate	0.4		0.1	0.2	0.2	0.2			0.2	0.3		0.1	1.7
Squid													
Sturgeon													
Misc. sp.													
Dogfish													
Reduction													
Animal food													
Total	4.1	1.9	7.5	5.0	2.4	3.8			6.9	2.6		1.9	36.1
Dumped fish													
Discards		1.3		0.6	1.1					4.6			7.6

Table 22. 1993 British Columbia trawl landings (t) of groundfish from statistical area 19.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
English s.									0.5				0.5
Rock sole													
Petrale s.													
Dover sole													
Rex sole													
Butter sole													
Flathead s.													
Sand sole													
Turbot													
Starry fldr													
Other flat.													
Pacific cod								3.1	32.0	3.1	3.7		41.9
Lingcod													
Sablefish													
Pollock													
Ocean perch													
Bocaccio													
Canary rf													
Redstripe r													
Rougheye rf													
Silvergray													
Yellowtail													
Widow rf													
Other rf													
Hake										43.0			43.0
Octopus											0.1		0.1
Perch													
Skate								0.2	1.2		0.1		1.5
Squid													
Sturgeon													
Misc. sp.													
Dogfish											1.3	1.3	2.6
Reduction													
Animal food													
Total								3.3	33.7	46.1	5.2	1.3	89.6
Dumped fish													
Discards													

Table 23. 1993 British Columbia trawl landings (t) of groundfish from statistical area 20.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
English s.	0.6	8.6	0.3	0.7	0.6	0.2		0.7	0.7	4.4	3.4		20.2
Rock sole		0.8											0.8
Petrale s.	4.0	1.5	0.1	0.1	0.5	0.2							6.4
Dover sole	1.7	2.1			2.2		1.1	3.0	0.5	1.5			12.1
Rex sole		0.1											0.1
Butter sole													
Flathead s.													
Sand sole		0.2											0.2
Turbot	1.0							1.6					2.6
Starry fldr													
Other flat.			0.2										0.2
Pacific cod	5.2	78.8	3.6	2.0	3.2	0.1		0.2	0.7	0.7	1.0		95.5
Lingcod								0.3		0.1	0.5		0.9
Sablefish	0.2	0.5											0.7
Pollock		0.1											0.1
Ocean perch	4.3												4.3
Bocaccio		0.2			0.2								0.4
Canary rf													
Redstripe r													
Rougheye rf	3.0												3.0
Silvergray					0.1								0.1
Yellowtail		3.2			1.9						0.4		5.5
Widow rf													
Other rf	0.1	0.1									0.1		0.3
Hake						144.5	141.2	948.3	1,280.8	1,080.6			3,595.4
Octopus													
Perch													
Skate		1.1		0.1	0.1	0.2		0.1					1.6
Squid													
Sturgeon													
Misc. sp.													
Dogfish								3.4					3.4
Reduction		0.2			0.3				0.1		0.1		0.7
Animal food													
Total	20.1	97.5	4.2	2.9	9.1	145.2	142.3	957.6	1,282.8	1,087.3	5.5		3,754.5
Dumped fish													
Discards	1.4	5.7								6.8	5.9		19.8

Table 24. 1993 British Columbia trawl landings (t) of groundfish from statistical area 29.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
English s.	0.4					0.4							0.4
Rock sole													
Petrale s.													
Dover sole		0.3			0.3				0.1		0.1		0.5
Rex sole								3.4					3.4
Butler sole													
Flathead s.													
Sand sole													
Turbot													
Starry fldr		1.1		0.1	0.1	0.5		0.1					1.8
Other flat.													
Pacific cod						144.2	141.5	348.3	435.9	1080.9			3150.8
Lingcod													
Sablefish	0.1	0.1									0.1		0.3
Pollock			0.2										0.2
Ocean perch		3.5			1.3						0.1		4.9
Bocaccio					0.1								0.1
Canary rf													
Redstripe r	3.0												3.0
Rougheye rf													
Silvergray		0.5			0.5								1.0
Yel'mouth r	4.3												4.3
Yellowtail													
Widow rf		0.1											0.1
Other rf	0.3	0.3											0.6
Hake	0.3	253.4	1,449.2	335.2	3.5	0.1		0.3	0.1	0.1	12.2		2,050.0
Octopus													
Perch			0.5										0.5
Skate						0.1							0.1
Squid								1.8					1.8
Sturgeon	1.0												1.0
Misc. sp.		0.3											0.3
Dogfish													
Reduction		1.2	2.0	1.9	5.5		1.4	3.0	0.2	1.2			13.4
Animal food	1.1	1.2	0.1	0.1	0.2	0.5							3.1
Total	5.1	254.6	1,451.4	337.1	9.2	0.5		5.1	0.3	1.2	12.2		2,055.8
Dumped fish													
Discards				1.8		2.7					1.8		6.3



Table 25. 1993 British Columbia trawl landings (t) of groundfish from statistical area 21.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
English s.		0.3	0.1	1.4	8.5	1.7	0.5			0.6	0.2		13.3
Rock sole		0.4		0.3	7.6	1.8	0.2	1.6	0.4	0.7			13.0
Petrale s.		0.1		0.1	2.4	1.0	3.0	0.2		0.2			7.0
Dover sole					0.9	3.2	0.7	0.2		1.7	1.4		8.1
Rex sole							0.1						0.1
Butter sole													
Flathead s.							0.1						0.1
Sand sole		0.1			0.3								0.4
Turbot				0.3									0.3
Starry fldr													
Other flat.													
Pacific cod	1.8	14.0	0.6	1.8	116.5	19.2	35.2	0.8	0.8	0.9	1.4		193.0
Lingcod					9.7	0.8	3.0	0.8	0.3	0.3			14.9
Sablefish						0.1	0.7	0.3	1.3	1.9			4.3
Pollock													
Ocean perch							1.2	2.7					3.9
Bocaccio		3.2		0.2		0.1	0.6		0.6				4.7
Canary rf		4.4		1.7	0.6	1.0	2.5	0.4					10.6
Redstripe r		0.7					2.2		0.1	0.6			3.6
Rougheye rf													
Silvergray		1.8					0.1		0.1				2.0
Yel'mouth r										0.1			0.1
Yellowtail		0.1			6.9	2.6	4.2	1.2	2.1	0.5			17.6
Widow rf							2.7						2.7
Other rf	0.2	0.5			0.6	0.3	0.3	0.9	0.3	0.1			3.2
Hake						175.4	299.0	158.1	105.8	36.3			774.6
Octopus													
Perch													
Skate		0.4		0.1	0.5	0.4							1.4
Squid													
Sturgeon													
Misc. sp.							0.3	0.1	0.1				0.5
Dogfish									6.4				6.4
Reduction	0.7			0.2		0.8	5.3	17.8	2.3	2.6			29.7
Animal food													
Total	2.7	26.0	0.7	6.1	154.5	208.4	361.9	185.1	120.6	46.5	3.0		1,115.5
Dumped fish													
Discards		0.7		3.6	34.0	49.9	40.4	7.3	27.2	0.7			163.8

Table 26. 1993 British Columbia trawl landings (t) of groundfish from statistical area 23.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
English s.	0.4	3.2	3.1	0.9	11.6	3.1	3.7	3.0	7.8	5.5	3.3		45.6
Rock sole	3.8	17.4	11.6	0.9	4.9	2.5	11.8	2.0	2.6	0.5			58.0
Petrale s.	34.3	23.3	6.9	4.5	0.9	0.6	8.0	1.9	14.9	12.8	8.6	0.2	116.9
Dover sole	93.9	154.9	225.8	466.2	53.0	9.9	8.5	3.7	9.0	19.7	13.2	5.8	1,063.6
Rex sole	0.4	7.1	7.7	14.5			0.5	0.3	0.8	0.5			31.8
Butter sole													
Flathead s.								0.2	0.2	0.2	0.3		0.9
Sand sole		2.7	0.5					1.1					4.3
Turbot	4.7	5.9	64.1	94.8	42.2	20.5	33.6		6.6	6.0	0.2	0.3	278.9
Starry flwr	0.2	1.1											1.3
Other flat.		0.2	1.0										1.2
Pacific cod	117.8	868.9	122.1	2.1	66.0	44.6	17.8	3.7	33.9	14.7	3.9		1,295.5
Lingcod		0.3			136.9	24.1	42.9	4.6	70.1	91.7	148.2		518.8
Sablefish	5.5	14.6	11.6	11.2	8.0	5.8	14.6	4.6	11.7	32.4	3.3	0.9	124.2
Pollock		1.6											1.6
Ocean perch	0.4	5.9	17.2	48.5	58.2	19.3	25.4	9.8	3.9	134.5	7.3	2.6	333.0
Bocaccio	0.4	1.6	0.1	0.7	14.7	6.8	9.7	1.9	4.2	4.7	1.5		46.3
Canary rf	11.7	1.7	2.2	16.9	26.6	16.8	11.3	7.6	11.3	9.4	0.9		116.4
Redstripe r	11.2	2.5	0.5	4.6	13.5	5.4	12.2	5.9	16.6	25.8	1.0	2.0	101.2
Rougheye rf	23.1	24.1	15.4	23.1	10.8	0.9	2.7			9.7	8.2	4.3	122.3
Silvergray	1.0	2.3	0.1	3.4	11.5	1.8	5.9	1.8	11.3	2.5			41.6
Yel'mouth r	5.8	0.9	1.5		5.9	1.7	1.9		0.1	5.5	0.6		23.9
Yellowtail	0.1	17.5	5.4	3.0	46.6	42.0	26.2	26.6	30.7	17.6	0.2		215.9
Widow rf		2.3			1.6	2.8	2.6		6.8	9.4			25.5
Other rf	7.4	18.6	23.7	26.7	11.7	3.7	10.8	3.2	4.8	13.7	2.2	0.1	126.6
Hake					354.9	550.4	897.5	1,115.2	1,995.7	1,059.5	871.8		6845.0
Octopus	0.1	0.5	0.1		0.3			0.1	0.1	0.1			1.3
Perch													
Skate	0.1	0.7	1.0		0.1		1.4		0.3		0.1		3.7
Squid			0.1										0.1
Sturgeon													
Misc. sp.							0.2	1.4	12.2				13.8
Dogfish		2.0			1.0	0.7							3.7
Reduction	8.8	34.4	12.4	19.6	3.1	7.8	20.8	86.2	90.3	24.8	21.4	2.4	332.0
Animal food													
Total	331.1	1,216.2	534.1	741.6	884.0	771.2	1,170.0	1,284.8	2,345.9	1,501.2	1,096.2	18.6	11,894.9
Dumped fish										0.2			0.2
Discards	1.9	11.7	7.5	30.2	91.4	65.9	86.9	98.5	60.6	50.5	2.4		507.5

Table 27. 1993 British Columbia trawl landings (t) of groundfish from statistical area 24.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
English s.	0.1	0.3		1.9	5.4	3.1	8.7	7.6	7.0	9.1	3.3		46.5
Rock sole		0.9	1.0	1.3	1.6	0.7	1.8	0.2	0.4	0.4	0.3		8.6
Petrale s.	28.7	52.8	8.4	0.8	1.5	1.6	8.0	2.4	3.2	4.9	9.7	0.2	122.2
Dover sole	16.0	53.2	109.4	116.1	53.6	19.9	14.5	20.6	8.8	19.3	10.8	2.4	444.6
Rex sole		1.7	0.1		0.2	1.2	0.5	3.7	1.3	3.0	2.7		14.4
Butter sole													
Flathead s.							0.1	0.9	0.3	0.6	3.0		4.9
Sand sole	1.6	0.7	0.1					0.1					2.5
Turbot	8.0	5.6	29.7	27.7	13.7	6.9	7.3	1.1	15.9	6.3	2.1	0.8	125.1
Starry flr	6.7	5.2	0.4		0.1					1.4			13.8
Other flat.													
Pacific cod	3.9	18.9	2.6	9.2	41.7	13.2	19.5	16.7	34.6	28.9	12.2	0.6	202.0
Lingcod	0.1	0.7		0.4	24.4	73.3	389.2	9.7	208.4	143.1	43.0		892.3
Sablefish	2.5	26.2	6.1	3.9	6.7	6.2	12.5	3.0	4.8	11.5	0.4	0.5	84.3
Pollock													
Ocean perch	0.2	18.0	5.5	20.6	62.0	16.7	43.1	16.0	12.3	106.9	4.8	3.0	309.1
Bocaccio	1.0	13.1		1.5	11.5	12.5	7.3	8.4	7.0	11.0	2.7	1.7	77.7
Canary rf	1.9	6.4	0.9	1.1	19.9	26.7	23.7	12.9	11.4	11.8	4.2	0.7	121.6
Redstripe r	1.0	4.4	0.1	6.8	16.8	8.0	16.2	2.1	0.5	28.1	27.4	5.8	117.2
Rougheye rf	9.2	35.8	13.2	11.5	2.4	1.6	3.1	1.3	3.9	13.1	7.8	0.9	103.8
Silvergray	2.0	7.4	1.4	0.7	5.2	2.7	2.5	5.2	1.8	6.2	1.0	0.4	36.5
Yel'mouth r	0.1	0.3		2.2	4.6	2.2	4.9	1.1	2.1	4.9	0.3	1.1	23.8
Yellowtail	119.6	155.4	1.1	21.1	58.8	39.3	38.1	41.9	44.3	50.5	15.1		585.2
Widow rf	14.1	3.3		3.6	2.8	2.2	14.2	3.2	7.4	38.3	0.5	1.1	90.7
Other rf	3.1	23.3	14.0	18.8	38.4	29.4	30.7	2.1	12.9	24.0	7.7		204.4
Hake						186.0	35.1	1.5	110.5				333.1
Octopus		0.2		0.1		0.1	0.1		0.1	0.2	0.1		0.9
Perch													
Skate	0.7	0.2		0.6	1.2		0.2	0.8	0.1	0.9	0.5		5.2
Squid													
Sturgeon					0.1								0.1
Misc. sp.						0.2			1.1				1.3
Dogfish					5.0								5.0
Reduction	1.6	3.0	1.5	2.6	0.7		2.0	10.5	29.4		0.5	1.3	53.1
Animal food													
Total	222.1	437.0	195.5	252.5	378.3	453.7	683.3	172.9	529.6	524.4	160.1	20.5	4,029.9
Dumped fish							0.1						0.1
Discards	0.6	18.1	14.5	28.1	134.6	18.7	17.9	0.8	18.4	2.8	3.0		257.5

Table 28. 1993 British Columbia trawl landings (t) of groundfish from statistical area 25.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
English s.	0.2	1.9	0.7	1.3	2.2	7.4	2.2	4.1	2.4	3.0	0.7		26.1
Rock sole		0.1		0.1	0.1	1.9	0.9	0.3		0.7			4.1
Petrale s.	5.9	10.1	2.9	2.6	2.8	14.1	7.2	6.7	6.5	7.2	1.4	0.6	68.0
Dover sole	41.0	203.8	62.3	46.5	35.5	24.1	15.4	8.8	15.6	28.8	7.1		488.9
Rex sole	0.6	0.5		0.4	1.2	1.2		0.3		0.4			4.6
Butter sole													
Flathead s.								0.1		0.2			0.3
Sand sole													
Turbot	4.0	30.3	26.1	248.2	494.4	196.1	72.4	77.3	226.5	127.5	3.6		1,506.4
Starry flr										0.3			0.3
Other flat.													
Pacific cod	8.7	10.2	19.6	10.6	51.7	177.6	25.4	58.4	18.3	28.1	2.8		411.4
Lingcod		0.5		2.7	33.6	84.2	32.9	49.7	26.0	78.7	4.4		312.7
Sablefish	5.1	26.9	4.5	5.1	7.8	8.0	12.5	6.2	5.4	16.8	2.3	0.2	100.8
Pollock													
Ocean perch		11.9	2.0	38.0	32.9	31.0	17.0	9.4	10.7	147.6	18.3		318.8
Bocaccio	8.1	4.7	1.9	10.2	9.6	24.5	12.6	5.9	15.0	69.4	19.6		181.5
Canary rf	33.2	14.3	4.2	27.9	17.9	27.9	19.8	11.3	15.3	61.8	15.6		249.2
Redstripe r	6.2	9.9	2.7	6.0	8.4	12.7	4.1	3.0	13.1	42.0	16.8		124.9
Rougheye rf	22.6	29.0	8.9	16.7	9.8	6.2	5.4	7.5	15.3	41.8	10.0	2.1	175.3
Silvergray	13.4	9.3	3.6	12.7	9.8	6.8	6.0	3.0	6.7	25.3	9.6		106.2
Yel'mouth r		3.5	0.1	0.4	0.6	1.7	6.5	4.8	2.0	3.2	2.3		25.1
Yellowtail	136.0	146.0	14.5	44.5	16.0	45.8	88.0	43.5	34.1	641.1	20.1		1,229.6
Widow rf	23.1	22.8	4.4	6.9	5.5	11.2	54.6	17.0	16.0	419.8	13.6		594.9
Other rf	8.7	35.0	7.6	11.1	21.0	13.8	9.2	11.5	15.8	27.8	22.0	0.3	183.8
Hake													
Octopus				0.1	0.1	0.1							0.3
Perch													
Skate					0.2	0.8							1.0
Squid													
Sturgeon													
Misc. sp.													
Dogfish						0.5							0.5
Reduction	0.1	7.3	1.1	8.9	20.5	10.6	7.6	3.7	0.2				60.0
Animal food													
Total	316.9	578.0	167.1	500.9	781.6	708.2	399.7	332.5	444.9	1,771.5	170.2	3.2	6,174.7
Dumped fish													
Discards	2.6	8.0	1.4	56.7	68.1	144.9	12.5	6.6	4.9	126.6	0.5		432.8



Table 29. 1993 British Columbia trawl landings (t) of groundfish from statistical area 26.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
English s.	0.3	0.2	0.2	0.4	0.6	1.0	0.7		0.6	0.1			4.1
Rock sole	0.1				1.1	2.0	0.3		0.1	0.1			3.7
Petrale s.	0.5	1.2	0.8	0.6	0.8	0.8	0.1			0.6	0.9		6.3
Dover sole		5.8	0.3	0.3	2.9	8.4	1.6	1.1	2.3	2.1	0.2		25.0
Rex sole		0.1	0.7	0.1									0.9
Butter sole													
Flathead s.													
Sand sole													
Turbot				7.2	51.1	19.2	9.2	15.9	5.3	3.5			111.4
Starry flr													
Other flat.													
Pacific cod	3.3	8.6	5.4	29.8	7.1	17.0	1.9	1.2	0.5	0.7	0.4	0.1	76.0
Lingcod	0.6	0.2		1.0	6.8	6.8	3.2	1.4	0.5	2.1	1.4		24.0
Sablefish		1.0			0.7	2.2	2.0	1.6	0.1	0.9			8.5
Pollock							0.6						0.6
Ocean perch	33.4	33.4	2.1	1.8	5.7	1.8	0.2	0.6	0.6	23.4			103.0
Bocaccio	1.8	4.2	0.7	1.4	3.0	2.0	2.5	1.7	5.5	6.2	1.7		30.7
Canary rf	27.8	4.5	5.4	10.0	3.4	8.3	2.7	0.9	1.0	15.6	3.0	1.5	84.1
Redstripe r	6.4	18.5	0.7	0.2	0.1	2.3		1.0	0.2	2.2	1.1	1.3	34.0
Rougheye rf	4.6	6.6			0.1	0.6				0.3	0.5		12.7
Silvergray	15.5	6.8	1.1	3.8	2.7	4.7	0.1	2.2	2.0	9.2	2.9	1.5	52.5
Yel'mouth r	8.0	1.6			2.2	1.2		0.2		7.0			20.2
Yellowtail	65.2	12.4	5.6	16.8	6.7	4.6	7.4	2.9	17.7	35.6	5.4	0.3	180.6
Widow rf	19.7	3.9	1.8	12.6	2.7	0.3	6.7	0.5	19.9	42.3	2.4	1.9	114.7
Other rf	1.4	1.4	0.1	0.7	0.8	2.3	2.2	2.8	0.8	2.3	1.3		16.1
Hake													
Octopus													
Perch													
Skate		0.1			0.1	0.2							0.4
Squid													
Sturgeon													
Misc. sp.													
Dogfish				9.5									9.5
Reduction	0.8	0.8	0.2	0.8	5.0	1.0	0.1		0.1		0.1	0.2	9.1
Animal food				0.1						0.1			0.2
<b>Total</b>	<b>189.4</b>	<b>111.3</b>	<b>25.1</b>	<b>97.1</b>	<b>103.6</b>	<b>86.7</b>	<b>41.5</b>	<b>34.0</b>	<b>57.2</b>	<b>154.3</b>	<b>21.3</b>	<b>6.8</b>	<b>928.3</b>
Dumped fish													
Discards	1.8	6.8	5.7	27.2	58.2	36.5	15.0			30.9			182.1

Table 30. 1993 British Columbia trawl landings (t) of groundfish from statistical area 27.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
English s.	0.6	0.2	0.7	0.6	3.6	1.8	0.9	0.3	0.4	0.7	0.1		9.9
Rock sole		2.9	0.8	1.6	6.7	4.9	5.5	2.1	0.5	1.3	0.6		26.9
Petrale s.	3.6	7.1	11.0	5.4	1.7	1.0	0.9	0.1		0.5	0.2		31.5
Dover sole	0.1	1.0	14.2	11.5	9.6	7.8	7.4	4.1	3.9	8.2	2.6		70.4
Rex sole										0.1			0.1
Butter sole													
Flathead s.													
Sand sole													
Turbot	0.9	0.4	1.6	59.0	98.0	5.1				4.2			169.2
Starry flr					0.1								0.1
Other flat.										0.1	0.1		0.2
Pacific cod	7.6	19.4	61.3	49.1	98.4	60.9	19.9	6.3	11.3	8.9	2.9		346.0
Lingcod		0.1		1.0	23.5	26.8	13.4	4.2	4.5	23.7	13.4		110.6
Sablefish	0.5	0.1	0.2	1.7	3.1	2.1	4.5	2.1	2.7	8.3	3.5	0.2	29.0
Pollock										0.5			0.5
Ocean perch	108.8	37.2	22.4	40.0	97.9	34.3	51.8	21.0	25.4	95.1	22.6	2.1	558.6
Bocaccio	9.0	5.5	3.2	3.7	13.2	11.1	9.2	1.6	3.2	32.7	17.4		109.8
Canary rf	6.0	2.5	4.2	13.9	60.3	63.9	49.2	24.8	2.0	16.5	8.2		251.5
Redstripe r	40.6	15.6	13.1	33.0	30.9	2.6	4.8	2.4	1.1	15.2	3.3		162.6
Rougheye rf	6.8	10.5	5.3	5.5	7.1	2.9	1.1	5.5	9.0	27.0	4.4		85.1
Silvergray	9.3	6.0	20.5	10.8	13.8	16.2	14.2	14.2	31.1	80.4	19.2		235.7
Yel'mouth r	64.2	18.9	41.7	14.7	33.7	3.5	23.6	1.0	5.1	32.5	16.7		255.6
Yellowtail	28.6	13.3	8.3	6.5	4.7	13.3	49.2	46.3	0.9	10.9	5.2		187.2
Widow rf	11.6	1.7	6.2	4.0	3.2	2.2	1.2	0.5	0.3	5.1	1.7		37.7
Other rf	13.4	21.0	14.1	26.9	35.4	14.5	7.3	11.2	1.9	24.1	4.0		173.8
Hake													
Octopus													
Perch													
Skate						0.1	0.5						0.6
Squid													
Sturgeon													
Misc. sp.										0.3			0.3
Dogfish			13.8	11.0									24.8
Reduction	1.7	0.7	0.3	1.0	3.6	0.1	0.2			0.5	0.8		8.9
Animal food										0.1			0.1
<b>Total</b>	<b>313.3</b>	<b>164.1</b>	<b>242.9</b>	<b>300.9</b>	<b>548.5</b>	<b>275.1</b>	<b>264.8</b>	<b>147.7</b>	<b>103.3</b>	<b>396.9</b>	<b>126.9</b>	<b>2.3</b>	<b>2,886.7</b>
Dumped fish													
Discards	0.5	5.0		3.5	18.2	8.0	2.0		6.1	12.4			55.7

Table 31. 1993 British Columbia trawl landings (t) of groundfish from statistical area 9.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
English s.				0.1	0.8								0.9
Rock sole		0.5			1.1								1.6
Petrale s.													
Dover sole				0.1	0.4		0.3		0.3	0.1			1.2
Rex sole	1.0	3.2	0.3	1.3	4.1	8.1	3.1	8.4	0.4	0.2	0.1	0.0	28.0
Butter sole													
Flathead s.													
Sand sole													
Turbot													
Starry flr													
Other flat.	0.1	0.1	1.8	4.2	0.1	1.5			0.4	0.2	0.1		8.5
Pacific cod	0.3			11.4	10.9	0.4	0.3	0.2	0.1		0.1	0.1	22.6
Lingcod					2.1								2.1
Sablefish													
Pollock	88.2	42.3	33.2	32.4	31.5	51.5	13.8	1.3	50.2	0.8	51.8	0.8	0.8
Ocean perch	185.1	38.1	0.2	12.8	25.9	28.2	11.1	3.5	40.5	40.9	32.1	0.1	407.3
Bocaccio	0.4	0.5	0.2	5.5	3.8	34.4	18.1	0.8	10.9	2.9	3.0		16.1
Canary rf	2.7	0.9	0.2	1.4	1.4	28.4	51.5	20.1	24.3	41.8	38.8	3.0	3.6
Redstripe r	2.1	7.9	1.1	2.7	1.0	30.1	18.9	8.8	8.8	5.3	5.9		13.7
Rougheye rf	130.2	24.3	2.1	42.9	45.2	51.8	24.7	1.8	38.0	104.9	14.0	1.2	387.1
Silvergray	7.5	0.7	0.4	1.8	10.2	11.3	8.2	1.1	1.1	15.1	0.1		8.2
Yel'mouth r	18.3	38.1	4.1	30.8	18.3	18.3	32.0	4.8	33.4	50.3	40.9	1.1	341.1
Yellowtail	1.9	12.8	1.0	12.2	18.1	45.1	48.5	8.2	11.1	18.0	12.1	0.1	1.9
Widow rf													
Other rf	0.3	1.1	3.8	11.1	18.1	12.4	4.1	30.8	4.2	5.3	6.2	31.3	12.9
Hake	55.4	48.5	28.1	31.8	38.1	88.3	88.1	81.3	83.1	80.1	50.8	34.8	888.1
Octopus	31.1	11.5	18.3	24.3	51.1	151.8	18.8	88.3	52.5	42.3	31.1	1.1	183.1
Perch													
Skate			0.2	0.8						0.1			1.3
Squid									0.3				0.3
Sturgeon	0.3	1.5		0.2	8.8	148.1	82.2	83.8	88.5	8.8	1.4		381.8
Misc. sp.													
Dogfish													
Reduction			0.1			0.1					0.2		1.3
Animal food	0.1	0.2	0.5	0.5	4.8	11.8	15.8	6.0	8.1	8.3	3.1	3.1	88.3
	2.1	0.8	4.8	0.1	5.8	1.8	3.2	1.8	3.1	5.1	1.2	0.3	38.3
Total	15.2	11.6		19.7	19.7					9.0	9.2		84.4
Dumped fish													
Discards													

Table 32. 1993 British Columbia trawl landings (t) of groundfish from statistical area 11.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
English s.	2.8	3.0	2.1	5.1	8.0	10.0	4.7	3.5	4.7	3.5	3.5	0.2	51.1
Rock sole	1.8	8.4	6.4	24.3	104.1	157.9	63.7	40.6	18.1	26.4	3.3	0.2	455.2
Petrale s.	1.1	0.6	4.6	0.7	2.8	1.9	3.5	1.8	3.7	2.7	1.5	0.3	25.2
Dover sole	0.1	0.3	0.2	0.2	4.0	11.6	12.0	6.0	8.1	6.3	3.7	3.7	56.2
Rex sole			0.7			0.1					0.5		1.3
Butter sole													
Flathead s.													
Sand sole													
Turbot	0.8	1.2		0.5	8.6	146.4	85.5	53.9	80.2	9.3	1.4		387.8
Starry flr									0.3				0.3
Other flat.			0.5	0.6						0.1			1.2
Pacific cod	27.1	41.2	16.3	84.3	247.4	121.6	76.9	68.3	26.2	43.9	27.1	3.1	783.4
Lingcod	22.4	69.2	58.1	27.6	88.7	86.2	86.1	61.8	63.7	50.4	20.6	34.9	669.7
Sablefish	0.2			0.1	0.6	3.0	3.0	0.8	1.1	0.9	0.5		10.2
Pollock	96.8	77.0	2.6	17.7	19.7	13.4	4.1	20.6	4.5	3.6	2.5	37.3	299.8
Ocean perch	45.6	13.6	2.0	15.5	48.1	42.1	46.2	8.8	21.1	69.0	15.4	0.1	327.5
Bocaccio	19.3	26.4	4.1	30.9	16.9	18.3	25.0	4.8	23.4	20.3	42.9	1.7	234.0
Canary rf	13.0	5.3	0.4	7.8	10.5	11.7	8.5	1.1	7.1	12.4	3.7		81.5
Redstripe r	135.5	54.9	5.7	43.6	82.5	27.6	34.5	1.8	28.0	104.3	14.0	1.3	533.7
Rougheye rf	10.4	1.1	1.1	4.3	9.5	20.1	18.6	9.6	6.6	2.9	2.9		87.1
Silvergray	30.8	10.5	5.5	14.4	24.8	29.4	21.2	32.1	54.9	47.9	30.9	3.0	305.4
Yel'mouth r	123.4	35.6	5.5	24.8	37.7	24.1	16.7	0.6	10.5	55.5	19.4		353.8
Yellowtail	184.9	150.5	8.2	52.8	142.5	142.2	86.8	61.9	62.4	116.2	27.2	7.6	1,043.2
Widow rf	152.1	30.7	0.5	43.6	52.9	59.6	11.1	3.2	40.2	181.6	25.7	0.1	601.3
Other rf	56.5	45.3	23.5	73.4	97.3	21.2	13.9	7.2	20.5	23.0	27.8	0.9	410.5
Hake													
Octopus				0.1	0.3	0.4	0.3	0.3	0.7		0.1	0.1	2.3
Perch													
Skate	0.1	0.1	1.6	4.5	0.7	1.2			0.4	0.5	0.1		9.2
Squid													
Sturgeon													
Misc. sp.													
Dogfish													
Reduction	7.0	2.3	0.3	1.3	4.1	9.7	3.7	8.4	0.4	0.5	0.7	0.6	39.0
Animal food				0.1	0.4		0.2		0.9	0.1			1.7
Total	931.7	577.2	149.9	478.2	1,012.1	959.7	626.2	397.1	487.7	781.3	275.4	95.1	6,771.6
Dumped fish					3.0	2.3	0.3						5.6
Discards	38.7	55.0	27.5	7.9	40.5	54.0	46.3	71.0	3.0	53.2	32.6	20.9	450.6



Table 33. 1993 British Columbia trawl landings (t) of groundfish from statistical area 8.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
English s.		0.3	1.0	4.4	8.4	10.7	17.9	8.9	10.3	11.7	1.4		75.0
Rock sole	1.0	0.3	2.0	6.0	12.2	78.0	111.8	37.7	54.0	37.1	2.5		342.6
Petrale s.	10.3	3.3	5.0	22.3	2.6	9.9	7.8	7.2	5.9	4.7	1.7	0.1	80.8
Dover sole	8.7	1.7	11.4	16.6	16.1	86.2	19.2	30.0	19.4	39.3	27.3	3.5	279.4
Rex sole	0.1			0.1		0.5				0.5	0.2		1.4
Butter sole													
Flathead s.													
Sand sole									1.3				1.3
Turbot	88.1	225.0	77.6	0.1	306.8	57.7	91.6	31.9	46.3	77.2	8.8	26.8	1,037.9
Starry flr									1.1				1.1
Other flat.					0.7								0.7
Pacific cod	26.9	1.1	10.9	20.2	199.4	208.9	84.1	19.0	27.8	27.5	4.5	5.1	635.4
Lingcod	1.2	51.9	30.0	75.7	58.7	102.6	143.9	179.6	55.4	44.2	3.6	0.4	747.2
Sablefish	0.6	1.2	1.6	0.4	0.9	11.5	6.6	4.6	2.4	6.0	1.4	0.5	37.7
Pollock					1.2		1.2		2.2	4.5	0.5	11.9	21.5
Ocean perch	71.7	29.2	1.5	43.8	95.4	907.9	99.1	33.7	41.4	187.0	41.0	1.0	1,552.7
Bocaccio	14.7	7.6	8.9	13.2	14.3	31.0	49.8	28.8	27.9	30.6	10.3	2.3	239.4
Canary rf	1.3	2.0	1.0	13.1	18.8	21.5	13.8	5.2	6.1	19.2	5.8	1.5	109.3
Redstripe r	14.0	52.9	8.2	29.9	35.8	32.0	39.5	16.2	32.2	113.4	20.5		394.6
Rougheye rf	1.8	3.2	0.4	2.1	3.9	33.0	6.7	7.8	10.3	14.2	12.4		95.8
Silvergray	24.9	20.6	10.4	27.6	42.0	35.1	30.1	20.5	17.8	25.7	13.7	2.6	271.0
Yel'mouth r	16.1	6.5	5.3	17.1	11.7	111.0	22.5	1.8	5.6	41.7	4.0		243.3
Yellowtail	17.1	50.8	9.6	47.8	188.5	115.1	124.0	34.5	35.1	195.4	10.2	3.7	831.8
Widow rf	0.7	3.0		18.4	44.5	47.2	42.5	20.7	65.0	109.4	3.3	0.1	354.8
Other rf	5.8	33.2	15.2	17.8	75.0	89.8	93.3	64.7	95.9	98.4	67.6	17.4	674.1
Hake						0.6							0.6
Octopus					0.2	0.1	0.1		0.1	0.3			0.8
Perch													
Skate		0.4		1.1	3.2	12.3	0.7	0.1			0.2		18.0
Squid													
Sturgeon													
Misc. sp.							0.1						0.1
Dogfish													
Reduction	1.2	0.5	0.5	3.4	10.1	13.2	16.9	0.8		2.2	0.9		49.7
Animal food			0.2	0.2	0.3	0.5			0.9	0.1			2.2
<b>Total</b>	<b>306.2</b>	<b>494.7</b>	<b>200.7</b>	<b>381.3</b>	<b>1,150.7</b>	<b>2,016.3</b>	<b>1,023.2</b>	<b>553.7</b>	<b>564.4</b>	<b>1,090.3</b>	<b>241.8</b>	<b>76.9</b>	<b>8,100.2</b>
Dumped fish						1.0				0.6			1.6
Discards	38.1		1.1	5.6	101.9	91.0	15.6	17.2	59.9	92.0	12.0		434.4

Table 34. 1993 British Columbia trawl landings (t) of groundfish from statistical area 2BE.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
English s.	0.3	3.5	6.0	3.8	6.5	8.7	3.0	3.0	5.3	1.1	2.2	0.1	43.5
Rock sole	3.2	15.6	59.3	184.5	108.7	111.9	31.5	13.0	15.9	9.0	10.0		562.6
Petrals s.		0.2		0.9	2.4	5.5	2.2	0.6	1.8	1.4	0.7	0.1	15.8
Dover sole	0.1			2.5	2.1	5.2	4.6		1.7	1.4	7.4		25.0
Rex sole	1.4	0.2		0.8	0.8	0.2	0.1	0.2	0.2	0.4	0.7		5.0
Butter sole			0.4	0.7		0.2					0.2		1.5
Flathead s.													
Sand sole		4.5	9.0	21.0	9.6	10.9			1.3		0.1		56.4
Turbot						0.1							0.1
Starry fldr			0.1	0.3	4.4	0.4			0.7				5.9
Other flat.			0.3	0.6		0.1					0.1		1.1
Pacific cod	27.7	122.4	235.9	188.3	4.1	27.2	4.5	11.0	9.0	0.2	1.6		631.9
Lingcod	0.9	1.8	2.5	6.6	8.8	31.0	20.1	2.4	1.4	2.1	14.0	0.2	91.8
Sablefish				0.3	0.7	1.5	1.4	0.2	0.5	5.0	0.3		9.9
Pollock				1.0					0.6	0.3	0.6		2.5
Ocean perch	1.9	1.8	3.4	35.5	30.2	221.2	28.3	5.6	7.6	46.6	4.0	0.1	386.2
Bocaccio	0.5	1.0		2.5	1.4	3.1	0.7	1.1	0.9	1.5	0.6	0.8	14.1
Canary rf	2.4	3.8		2.6	5.1	7.5	2.2	1.2	0.1	2.3	2.3	1.5	31.0
Redstripe r	1.0	0.8		10.5	8.0	3.1		0.7	1.1	4.2	0.1		29.5
Rougheye rf				2.1	0.6				0.9	1.9			5.5
Silvergray	9.3	8.2	0.3	35.2	16.5	23.6	18.0	4.4	7.6	12.6	2.9	3.1	141.7
Yellowtail	0.8	3.4	0.3	10.1	0.7	1.1		1.9	2.1	4.5	2.5	0.5	27.9
Widow rf					0.4		1.2						1.6
Other rf	2.5	2.3	2.5	7.8	4.5	12.0	1.8	0.7	0.4	5.4	8.6	0.3	48.8
Hake													
Octopus	0.1	0.2	0.2	0.4	0.6	0.5		0.2	0.1	0.2	0.6		3.1
Perch													
Skate		1.8	0.2	0.9	1.1		0.9						4.9
Squid													
Sturgeon													
Misc. sp.													
Dogfish													
Reduction		0.2		4.0		5.4							9.6
Animal food			0.4	0.3		1.5	2.0	0.4	0.7	0.1	0.3		5.7
Total	52.1	171.7	320.8	523.3	217.5	497.9	123.0	46.8	59.9	100.9	59.8	6.7	2,180.4
Dumped fish						0.2							0.2
Discards		13.2	9.1	24.6	37.7	29.4	45.8	14.5	15.9	12.2	9.7		212.1

Table 35. 1993 British Columbia trawl landings (t) of groundfish from statistical area 5L.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
English s.	1.3	5.6	9.1	7.5	1.1	5.4	3.0	11.5	33.7	11.7	7.8	2.5	100.2
Rock sole	0.6	0.7	3.5	3.4	1.7	2.5	1.7	9.3	14.3	0.8	0.9		39.4
Petrale s.			0.5	0.1	0.2	11.8	5.6	4.0	3.7	3.0	4.6	0.3	33.8
Dover sole	0.1		1.6	0.3	0.4	23.9	25.5	0.6	8.0	19.0	48.3	0.5	128.2
Rex sole		0.2	0.1	0.1	0.2	2.7	1.4		0.8	3.0	3.5	0.6	12.6
Butter sole			0.2										0.2
Flathead s.											0.2		0.2
Sand sole				0.3	0.3								0.6
Turbot						0.8	13.5			0.1			14.4
Starry fldr								0.4					0.4
Other flat.			0.6							0.1		0.2	0.9
Pacific cod	5.6	102.6	283.4	129.6	17.5	115.5	36.1	10.5	31.8	20.1	5.8	2.1	760.6
Lingcod	0.7	0.6	5.8	6.9	0.4	19.1	23.5	23.2	5.5	6.0	12.6	0.6	104.9
Sablefish	0.2					0.7	2.4	0.2	0.8	3.3	1.6		9.2
Pollock				2.1	1.5	0.7		0.7	3.0	1.5	2.7	0.2	12.4
Ocean perch			0.1	5.6		6.9	8.4	0.2		13.3	10.0	2.1	46.6
Bocaccio	0.8	0.6		3.4	0.6	9.6	1.8	2.4	4.4	3.1	1.8	1.8	30.3
Canary rf	0.6	2.5	0.1	0.8	1.4	1.3	0.2	0.1	1.6	3.4	0.7	1.1	13.8
Redstripe r	0.7	0.5		1.3		0.1	7.2	2.2	2.3	0.6		0.1	15.0
Rougheye rf			0.1										0.1
Silvergray	7.1	1.9	0.1	5.6	3.1	19.2	8.5	2.8	9.9	8.7	9.1	5.7	81.7
Yel'mouth r													
Yellowtail	3.8	0.5	1.1	3.6	5.7	1.4	4.4		2.4	20.3	5.5	0.1	48.8
Widow rf	0.1			0.5									0.6
Other rf	7.0	0.2	1.0	1.6	2.3	5.8	11.9	0.8	3.9	16.4	18.2	5.2	74.3
Hake													
Octopus			0.1			0.1			0.1	0.2	0.2		0.7
Perch													
Skate	0.1	0.8	0.1	2.3	0.1	0.4	0.5		1.0				5.3
Squid													
Sturgeon													
Misc. sp.													
Dogfish													
Reduction		0.2				1.4							1.6
Animal food				0.2	0.1	0.3	0.6	1.0	0.8	0.3	0.1		3.4
Total	28.7	116.9	307.5	175.2	36.6	229.6	156.2	69.9	128.0	134.9	133.6	23.1	1,540.2
Dumped fish													
Discards	2.3		1.8	6.2	1.8	12.9	15.9	29.0	1.4	35.8	12.4		119.5

Table 36. 1993 British Columbia trawl landings (t) of groundfish from statistical area 6.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
English s.		0.2	0.1								0.5		0.8
Rock sole		0.9		1.8									2.7
Petrale s.	0.1		0.1	0.2		0.2				0.1	0.2		0.9
Dover sole			0.1	0.1	4.4	14.9	10.9	8.4	0.4	10.6	4.0	0.4	54.2
Rex sole	0.3		0.2		0.2	0.8				1.3	1.0	0.2	4.0
Butter sole				0.2									0.2
Flathead s.													
Sand sole		0.3											0.3
Turbot						1.2							1.2
Starry fldr													
Other flat.										0.1			0.1
Pacific cod	1.3	0.8		0.2	0.4	0.2					0.2		3.1
Lingcod		7.0	2.8							0.3			10.1
Sablefish						1.0	0.6			1.9	0.5	0.1	4.1
Pollock		0.6			1.2	0.6				0.9			3.3
Ocean perch		1.2		2.8	2.1	0.1	1.8		0.4	28.8	1.7		38.9
Bocaccio	0.2		0.1	0.3	0.7	1.5	0.5		0.1	0.8	0.4		4.6
Canary rf			0.7	4.4	1.3	1.2			0.2	0.2	0.8		8.8
Redstripe r	1.7	2.1	0.8	4.1		3.2	4.8				1.0		17.7
Rougheye rf							0.2						0.2
Silvergray	2.3	7.8	2.9	10.7	4.0	8.5	0.2		1.5	2.3	4.1		44.3
Yel'mouth r			0.1	0.1	0.5								0.7
Yellowtail			0.8	1.0	0.1	0.1			1.3	2.8	0.3		6.4
Widow rf				0.6									0.6
Other rf	0.4	3.4	0.5	0.4	0.4	14.1	2.6	0.6	1.3	5.3	5.1	2.3	36.4
Hake													
Octopus													
Perch													
Skate		0.2											0.2
Squid													
Sturgeon													
Misc. sp.													
Dogfish													
Reduction						0.5							0.5
Animal food							0.4	0.2					0.6
Total	6.3	24.5	9.2	26.9	15.3	48.1	22.0	9.2	5.2	55.4	19.8	3.0	244.9
Dumped fish													
Discards					0.5					1.4	2.3		4.2



Table 37. 1993 British Columbia trawl landings (t) of groundfish from statistical area 2AE.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
English s.	0.2	3.5	1.8	3.7	5.7	2.5	3.6	0.1	3.6	5.0	5.1	0.3	35.1
Rock sole	5.4	19.6	18.9	30.0	40.1	22.5	5.2	2.3	0.4	20.2	25.1	12.5	202.2
Petrale s.							0.4		0.1	0.1	0.1		0.7
Dover sole					0.1	1.1	0.2		0.5	3.1	0.7		5.7
Rex sole	0.1					0.2				1.7	1.9		3.9
Butter sole			0.6								1.7		2.3
Flathead s.						0.4							0.4
Sand sole		1.2	2.1	0.9	2.3	0.7	0.3			1.7	5.3	1.0	15.5
Turbot					0.9					9.0			9.9
Starry flr		0.2		0.1	0.9		0.2	0.2				0.1	1.7
Other flat.			0.5								0.1	0.2	0.8
Pacific cod	0.2	0.7	9.9	20.9	10.0	5.6	4.0		6.1	4.8	3.1	0.1	65.4
Lingcod	1.0		0.1	1.2	1.1	0.9	0.4		4.6	1.3	4.8		15.4
Sablefish													
Pollock			0.1			0.8	2.9	1.6	1.3	2.1	24.7	0.1	33.6
Ocean perch											0.2		0.2
Bocaccio							0.3	0.4	2.7	0.2	0.9		4.5
Canary rf											0.1		0.1
Redstripe r									2.6				2.6
Rougheye rf													
Silvergray				0.3			0.5		0.9		2.0		3.7
Yel'mouth r													
Yellowtail	0.1					0.5	1.3	0.1	0.4		1.9		4.3
Widow rf						0.3							0.3
Other rf	0.1	0.5		3.0	3.4	1.3	1.7		1.3	2.2	5.1	2.2	20.8
Hake													
Octopus				0.2	0.1	0.1				0.5	0.6	0.1	1.6
Perch													
Skate		0.3	0.7		0.3	0.1				0.5	1.3		3.2
Squid													
Sturgeon													
Misc. sp.													
Dogfish													
Reduction						0.9						0.1	1.0
Animal food		0.1		0.1	0.3	0.1	0.4			0.6	0.9		2.5
Total	7.1	26.1	34.7	60.4	65.2	38.0	21.4	4.7	24.5	53.0	85.6	16.7	437.4
Dumped fish													
Discards				0.6	0.8	9.3	2.7			6.4	2.3		22.1

Table 38. 1993 British Columbia trawl landings (t) of groundfish from statistical area 1E.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
English s.	5.6	8.3	20.6	10.5	30.1	6.7	3.5	1.9	1.5	6.4	29.2	6.6	130.9
Rock sole	1.7	2.9	13.0	19.5	8.1	0.8	2.3	0.9	13.2	18.6	6.2	1.6	88.8
Petrale s.	0.1				0.5	0.2	0.1	0.1	0.4	1.3	1.0	0.3	4.0
Dover sole				0.5	3.0	13.6	17.8	14.8	11.9	24.1	16.4	0.7	102.8
Rex sole	0.1	0.3	0.5		1.9	0.2	0.1	0.6	1.5	1.9	7.9	3.0	18.0
Butter sole									0.1				0.1
Flathead s.									0.2	0.1			0.3
Sand sole		0.1	0.2	4.6	1.5		0.3		3.7	0.1			10.5
Turbot		5.6			9.3	2.2				2.2	12.1	1.6	33.0
Starry flidr	0.2	0.1	0.3	2.4	2.7	0.2			0.5	0.4	0.5		7.3
Other flat.					0.5					0.2	0.1		0.8
Pacific cod	14.5	46.2	19.9	58.9	102.1	13.8	7.0	6.0	7.2	24.5	30.2	10.6	340.9
Lingcod	15.6	2.8	10.2	4.0	11.0	10.2	5.1	1.1	12.1	10.5	6.7	7.1	96.4
Sablefish				0.1	0.4	0.2	1.8	0.3	0.7	2.0	1.0	0.2	6.7
Pollock	1.2	0.1			17.6	2.4	45.2	7.3	64.3	335.9	1,709.7	841.1	3,024.8
Ocean perch		0.8			2.0	9.4	16.7	0.5	3.7	17.7	15.4	11.3	77.5
Bocaccio	0.7	0.2	0.2	0.7	12.0	4.2	2.6	0.6	3.8	13.2	9.7	6.5	54.4
Canary rf		0.6	0.3	0.6	1.3	2.3	0.3		0.4	1.3	1.0	1.0	9.1
Redstripe r		0.3			0.1	0.3	0.6		0.1	0.2	1.0	0.6	3.2
Rougheye rf		0.4						2.9		1.0		0.4	4.7
Silvergray	6.8	2.1	1.0	1.8	4.8	13.3	7.4	3.7	20.8	17.2	22.1	15.0	116.0
Yel'mouth r		0.7			0.2						0.1		1.0
Yellowtail	24.1	1.4	3.2	6.4	79.7	13.3	10.7	2.1	17.1	157.9	65.3	27.1	408.3
Widow rf			2.4		1.9	0.6	4.7	1.1	7.3	1.4	5.3	1.8	26.5
Other rf	0.1		0.5	0.5	2.8	3.0	5.7	1.2	7.4	8.2	13.8	8.3	51.5
Hake													
Octopus	0.2	0.1	0.3	0.1	0.2			0.3		0.8	0.2	0.1	2.3
Perch													
Skate		0.5			0.8			0.2	0.3	0.1	0.8	0.4	3.1
Squid													
Sturgeon													
Misc. sp.												0.5	0.5
Dogfish													
Reduction	0.2	0.1				1.6				1.4	9.2	3.2	15.7
Animal food			0.4	1.2	1.5	0.1	1.4	3.2	1.7	8.3	24.6	3.9	46.3
<b>Total</b>	<b>71.1</b>	<b>73.6</b>	<b>73.0</b>	<b>111.8</b>	<b>296.0</b>	<b>98.6</b>	<b>133.3</b>	<b>48.8</b>	<b>179.9</b>	<b>656.9</b>	<b>1,989.5</b>	<b>952.9</b>	<b>4,685.4</b>
Dumped fish													
Discards		1.4		29.5	38.3	6.1	20.9	4.5	0.5	27.4	19.7	4.3	152.6

Table 39. 1993 British Columbia trawl landings (t) of groundfish from statistical area 4.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
English s.	28.4	70.8	80.9	131.0	161.2	131.0	97.6	65.8	65.4	52.8	83.1	30.7	998.7
Rock sole	5.4	3.4	4.3	13.6	45.4	99.0	74.4	36.8	48.9	55.3	12.2	5.4	404.1
Petrale s.		0.1			0.1	0.3	0.1	1.0	1.0	1.2	0.4	0.1	4.3
Dover sole					4.2	49.8	112.3	84.9	94.0	64.7	33.1	1.4	444.4
Rex sole	0.3	1.3	0.1	0.6	3.6	3.4	10.1	9.2	15.7	15.5	19.2	3.2	82.2
Butter sole					1.9	4.4			0.1	0.9	4.5	0.4	12.2
Flathead s.				0.1					0.1	0.4			0.6
Sand sole	1.8	1.2		0.6	8.0	26.6	13.9	5.4	23.3	8.9	1.8	0.5	92.0
Turbot				6.4	9.7	81.6	63.7		29.2	15.4	81.3	6.2	293.5
Starry flr		0.2		7.1	14.8	5.0	8.4	6.8	5.5	0.8	1.0	5.4	55.0
Other flat.					0.1	0.4					0.2	0.2	0.9
Pacific cod	44.2	37.6	23.1	112.8	127.3	204.7	146.3	125.2	111.9	55.8	46.4	7.2	1,042.5
Lingcod	5.4	14.8	8.3	4.1	12.6	13.7	6.0	4.6	6.9	10.9	15.7	4.6	107.6
Sablefish						0.3	0.5	0.7	0.9	0.3	0.7		3.4
Pollock	0.2	1.2	7.8	2.0	11.7	33.3	128.0	190.5	203.6	97.0	509.0	20.2	1,204.5
Ocean perch						0.1		0.4	0.3	0.4	1.0	0.2	2.4
Bocaccio		0.7	0.2		0.2	0.3		0.4	1.3	3.8	11.6	0.3	18.8
Canary rf	0.1	1.6	0.2		0.1				0.1	0.1	1.8	0.5	4.5
Redstripe r					0.2					0.2			0.4
Rougheye rf					0.1				0.1				0.2
Silvergray		1.7	1.2			0.4	0.6	0.3	0.8	0.8	2.4	1.5	9.7
Yel'mouth r		0.4									0.7		1.1
Yellowtail	2.0	12.2	3.2	3.3	26.2	5.5	1.2	0.1	4.2	2.5	11.0	4.4	75.8
Widow rf		0.7			2.3	0.8			0.5		1.0	0.9	6.2
Other rf	0.4	1.6	0.2	0.2	0.4	1.0	2.6	3.7	4.3	6.7	4.8	2.2	28.1
Hake													
Octopus	0.1	0.5	0.1	0.4	0.4	0.5	0.2	0.2	0.8	1.2	1.3	0.5	6.2
Perch													
Skate	0.9	4.5	3.5	8.3	2.9	2.7	1.4	0.8	2.8	1.1	1.5		30.4
Squid													
Sturgeon													
Misc. sp.													
Dogfish													
Reduction	0.2	0.2				1.0	0.3			0.2	2.1	0.4	4.4
Animal food			0.2	1.8	4.2	5.9	4.6	15.0	7.2	4.6	5.2		48.7
<b>Total</b>	<b>89.4</b>	<b>154.7</b>	<b>133.3</b>	<b>292.3</b>	<b>437.6</b>	<b>671.7</b>	<b>672.2</b>	<b>551.8</b>	<b>628.9</b>	<b>401.5</b>	<b>853.0</b>	<b>96.4</b>	<b>4,982.8</b>
Dumped fish					1.8	1.0							2.8
Discards	5.0	28.1	25.4	5.8	217.6	104.3	63.5	25.2	17.1	40.4	35.5	15.4	583.3

Table 40. 1993 British Columbia trawl landings (t) of groundfish from statistical area 5U.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
English s.	9.7	9.6	18.0	19.6	10.6	2.4	10.1	8.2	8.6	6.5	10.1	10.1	123.5
Rock sole	29.4	28.5	52.1	106.2	128.8	138.8	55.5	34.9	59.5	70.8	51.5	24.5	780.5
Petrale s.	0.1		0.1	0.1	1.0	0.1	0.2	0.5	0.7	0.7	1.5	0.5	5.5
Dover sole			0.1		0.5	0.4	1.6	9.3	55.2	23.6	5.7		96.4
Rex sole	0.4		1.0	1.0	0.3	0.3			2.0	0.8	2.1	1.2	9.1
Butter sole				0.2	0.3	0.3					0.5		1.3
Flathead s.													
Sand sole	1.1	1.7	0.6	1.9	3.3	2.1	0.1		6.6	0.8	1.2	1.0	20.4
Turbot											1.2		1.2
Starry fdr				0.3	0.7	0.4	0.1	0.2	5.1	1.4	0.5	0.3	9.0
Other flat.			0.2	0.7	0.4						0.3	0.1	1.7
Pacific cod	16.8	9.5	290.2	439.7	220.7	52.5	7.1	10.3	14.9	1.6	33.7	20.7	1,117.7
Lingcod	0.6	0.8	2.0	16.0	4.6	1.4	0.3	0.5	0.7	0.6	0.9	0.8	29.2
Sablefish					3.6			0.8	4.2	6.9			15.5
Pollock	2.9	5.8	54.2	11.9	26.4	1.1		0.1	9.7	14.7	8.2	9.2	144.2
Ocean perch			1.3		1.5				0.1				2.9
Bocaccio	1.6		0.7	2.3	3.1				2.0		1.9	0.1	11.7
Canary rf	1.8		0.1	1.7	2.3	0.1		0.1	0.5	0.1	1.7	0.1	8.5
Redstripe r	3.7		0.1	0.7					0.7		0.1		5.3
Rougheye rf													
Silvergray	1.2		0.2	2.4	0.8			0.1	2.1		9.2	2.5	18.5
Yel'mouth r													
Yellowtail	10.8	4.1	3.4	1.8	2.6	7.3	1.1		6.3	12.8	4.1	1.3	55.6
Widow rf	2.5	0.5	0.4	1.5					2.4		0.3	0.3	7.9
Other rf	2.8	0.6	3.6	5.8	7.0	7.0	2.5	1.2	6.0	3.8	12.9	4.8	58.0
Hake													
Octopus	0.2		0.6	0.5	0.6	0.3	0.2	0.3	1.5	4.5	5.2	0.3	14.2
Perch													
Skate		4.2	2.9	3.3	1.7	0.5		0.3		0.3			13.2
Squid													
Sturgeon													
Misc. sp.													
Dogfish													
Reduction		0.1				6.1				0.9	1.0	0.8	8.9
Animal food			0.2	1.4	2.2	2.9	1.2	0.9	4.0	1.8	0.4		15.0
<b>Total</b>	<b>85.6</b>	<b>65.4</b>	<b>432.0</b>	<b>619.0</b>	<b>423.0</b>	<b>224.0</b>	<b>80.0</b>	<b>67.7</b>	<b>192.8</b>	<b>152.6</b>	<b>154.2</b>	<b>78.6</b>	<b>2,574.9</b>
Dumped fish													
Discards	30.8	20.3	1.4	31.8	9.6	23.9	4.5	4.5	12.7	34.9	10.4	9.5	194.3



Table 41. 1993 British Columbia trawl landings (t) of groundfish from statistical area 1W.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
English s.													
Rock sole					0.2								0.2
Petrale s.		1.3	0.1	19.2	8.5	0.3					0.1		29.5
Dover sole	0.1	73.8	40.8	74.1	70.2	2.7	1.5		1.8	1.8	2.4	2.5	271.7
Rex sole		7.8	0.3	8.9	8.3	9.5	0.3	0.2	0.2		1.2	1.8	38.5
Butter sole													
Flathead s.													
Sand sole													
Turbot		19.4	1.2										20.6
Starry flr													
Other flat.													
Pacific cod			0.2		3.1			0.1		0.2			3.6
Lingcod			0.1	0.1	0.4	0.8		0.5	0.2	0.4	0.1	1.0	3.6
Sablefish	0.4	2.2	3.8	2.0	2.3	1.2	0.8		0.1	1.8	2.3	1.5	18.4
Pollock											1.3	0.6	1.9
Ocean perch		2.0	1.4	4.4	4.1	4.2		0.2				2.4	18.7
Bocaccio					0.1	0.7				0.3	0.2	0.2	1.5
Canary rf			0.2		0.1	1.6		0.1	1.3	0.4			3.7
Redstripe r			1.3		1.2	2.0			1.4			6.1	12.0
Rougheye rf		16.7	2.3	10.8	4.0	1.7				2.6	11.4	4.6	54.1
Silvergray	0.5	0.1	0.7	5.4	4.1	3.7		6.4	4.9	2.6	3.1	2.3	33.8
Yel'mouth r		1.1			0.1	0.7						2.3	4.2
Yellowtail			1.3					0.9	0.3			6.1	8.6
Widow rf												2.8	2.8
Other rf		9.5	10.7	41.6	16.4	39.2	1.9	0.7	1.3	12.1	5.6	2.5	141.5
Hake													
Octopus													
Perch													
Skate													
Squid													
Sturgeon													
Misc. sp.													
Dogfish													
Reduction						0.3					0.1	0.1	0.5
Animal food						0.1	0.1	0.1	0.2	0.1	0.3		0.9
Total	1.0	133.9	64.4	166.5	123.1	68.7	4.6	9.2	11.7	22.3	28.1	36.8	670.3
Dumped fish													
Discards		18.1	4.1	18.6	72.8	5.4	2.7	1.8				4.5	128.0

Table 42. 1993 British Columbia trawl landings (t) of groundfish from statistical area 2AW.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
English s.					0.2								0.2
Rock sole													
Petrale s.	0.6	2.3	3.1	9.1	2.6	0.4			0.1	0.6	0.4	0.1	19.3
Dover sole	3.4	37.2	43.8	206.6	71.2	5.9	4.7	0.1	0.1	5.1	1.2	0.9	380.2
Rex sole	0.5	0.4	1.0	3.5	0.9	0.2	3.1	0.3		0.8	0.6		11.3
Butter sole													
Flathead s.													
Sand sole													
Turbot		9.3	1.3	3.3	0.5								14.4
Starry flwr													
Other flat.													
Pacific cod	1.3		0.3	0.4	0.8			0.3	0.1				3.2
Lingcod	0.8		0.2	0.7	1.6	0.7	0.1	0.2	0.5	0.5	0.1	0.9	6.3
Sablefish	1.9	14.7	3.7	10.8	7.2	4.2	7.6	3.1	2.5	10.9	6.0	1.3	73.9
Pollock													
Ocean perch	71.9	37.5	18.1	65.8	40.9	20.5	31.5	18.9	16.2	105.6	21.1	21.9	469.9
Bocaccio	1.8	0.5	2.7	3.6	1.6	0.6	5.7	3.5	4.8	11.0	4.9	0.1	40.8
Canary rf	4.3	0.1	4.2	9.8	1.7	0.4	0.3	0.1	2.2	1.1	0.5	0.3	25.0
Redstripe r	36.8	7.5	6.8	30.6	24.4	15.7	16.3	4.7	17.0	61.7	67.0	40.5	329.0
Rougheye rf	62.1	65.0	102.9	150.5	148.6	128.8	73.0	57.8	74.0	119.3	105.8	38.3	1,126.1
Silvergray	37.4	11.2	8.6	52.0	33.0	15.8	18.3	5.5	10.5	33.7	15.6	9.1	250.7
Yel'mouth r	34.5	3.7	7.4	19.4	20.7	2.6	7.3	0.9	6.8	27.0	6.3	7.0	143.6
Yellowtail	14.3	1.3		0.6	0.2	0.4	1.9		2.7	5.0	0.4		26.8
Widow rf	8.0	3.5	1.8	7.5	4.0	1.5				7.0	2.5	3.1	38.9
Other rf	2.6	6.0	16.3	38.8	28.8	25.3	26.0	41.1	11.8	101.6	11.6	65.6	375.5
Hake													
Octopus													
Perch													
Skate													
Squid													
Sturgeon													
Misc. sp.					0.4								0.4
Dogfish													
Reduction	0.1				9.3	0.8				0.4	1.0	0.1	11.7
Animal food				1.6	0.6	0.9	1.2	0.4	0.9	3.5	0.3		9.4
<b>Total</b>	<b>282.3</b>	<b>200.2</b>	<b>222.2</b>	<b>614.6</b>	<b>399.2</b>	<b>224.7</b>	<b>197.0</b>	<b>136.9</b>	<b>150.2</b>	<b>494.8</b>	<b>245.3</b>	<b>189.2</b>	<b>3,356.6</b>
Dumped fish													
Discards	1.8	3.6	11.0	23.1	22.2	2.3			19.5	59.4	5.4	19.1	167.4

Table 43. 1993 British Columbia trawl landings (t) of groundfish from statistical area 2BW.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
English s.													
Rock sole													
Petrale s.	0.4												0.4
Dover sole	0.4												0.4
Rex sole						0.7							0.7
Butter sole													
Flathead s.													
Sand sole													
Turbot	12.1												12.1
Starry flr													
Other flat.													
Pacific cod													
Lingcod													
Sablefish	0.1												0.1
Pollock													
Ocean perch	5.6	1.7											7.3
Bocaccio													
Canary rf													
Redstripe r		0.6											0.6
Rougheye rf													
Silvergray													
Yel'mouth r													
Yellowtail													
Widow rf													
Other rf		0.2		0.2		1.7							2.1
Hake													
Octopus													
Perch													
Skate													
Squid													
Sturgeon													
Misc. sp.													
Dogfish													
Reduction													
Animal food													
Total	18.6	2.5		0.2		2.4							23.7
Dumped fish													
Discards													

Table 44. 1993 British Columbia trawl landings (t) of groundfish - coastwide total.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
English s.	54.1	129.1	150.9	200.1	269.7	198.7	160.1	118.6	152.6	124.7	157.4	54.4	1,770.4
Rock sole	56.4	105.7	174.5	396.7	474.0	626.1	366.6	181.7	228.5	243.2	113.6	47.3	3,014.3
Petrale s.	89.7	103.9	43.6	66.7	31.3	49.9	47.1	26.5	42.0	42.0	33.0	2.8	578.5
Dover sole	165.6	533.8	510.0	941.5	333.9	288.6	259.5	195.6	241.2	280.3	185.5	21.8	3,957.3
Rex sole	4.2	19.7	12.4	30.0	17.6	21.2	16.2	14.8	22.5	29.9	41.5	10.0	240.0
Butter sole			1.2	1.1	2.2	4.9			0.2	0.9	6.9	0.4	17.8
Flathead s.				0.1		0.4	0.2	1.2	0.8	1.5	3.5		7.7
Sand sole	4.5	12.7	12.5	29.3	25.3	40.3	14.6	6.5	36.3	11.5	8.4	2.5	204.4
Turbot	119.6	302.7	201.6	447.5	1,035.2	537.8	376.8	181.7	410.0	260.7	110.7	35.7	4,020.0
Starry flr	8.3	10.1	1.8	11.2	24.0	6.1	8.7	7.6	13.2	4.4	2.6	6.8	104.8
Other flat.		2.5	3.6	1.9	1.7	0.5				0.6	0.9	0.9	12.6
Pacific cod	316.7	1,383.1	1,110.0	1,172.1	1,328.5	1,083.0	485.7	341.1	373.5	264.9	181.1	52.5	8,092.2
Lingcod	49.3	150.7	120.1	148.0	424.9	482.6	770.1	344.6	460.8	466.9	290.0	50.5	3,758.5
Sablefish	17.2	87.4	31.5	35.6	42.0	48.0	71.5	28.5	39.2	110.8	23.8	5.4	540.9
Pollock	352.8	1,644.6	1,102.4	161.0	79.3	52.3	182.0	220.8	289.2	461.8	2,261.0	1,165.9	7,973.1
Ocean perch	343.8	194.2	77.0	322.3	481.0	1,315.5	370.7	127.8	143.7	975.9	162.8	46.8	4,561.5
Bocaccio	60.4	70.1	22.8	80.2	106.9	126.3	128.3	61.5	106.8	211.7	131.1	15.5	1,121.6
Canary rf	106.8	50.6	24.1	112.3	171.3	192.2	134.5	65.8	60.6	155.6	50.3	8.2	1,132.3
Redstripe r	260.9	179.1	40.0	174.0	222.9	115.0	142.4	40.0	117.0	398.5	153.3	57.7	1,900.8
Rougheye rf	143.6	192.4	149.6	226.6	196.9	195.8	110.8	92.4	120.1	233.8	163.4	50.6	1,876.0
Silvergray	169.0	98.5	57.6	186.8	176.2	181.2	133.6	102.2	184.7	275.1	147.8	46.7	1,759.4
Yel'mouth r	252.1	73.2	61.6	78.8	118.6	164.3	83.9	10.6	32.2	178.1	50.4	10.4	1,114.2
Yellowtail	609.3	573.4	66.0	219.3	588.0	434.5	444.5	263.9	264.1	1,273.6	174.8	51.1	4,962.5
Widow rf	231.9	72.4	17.5	99.2	121.4	129.1	141.5	46.2	165.8	814.3	56.3	12.1	1,907.7
Other rf	112.8	203.9	133.5	275.3	346.4	285.4	224.4	153.6	190.6	380.4	224.6	112.1	2,643.0
Hake		569.7	1,632.5	678.5	562.3	1,233.1	1,372.8	2,223.1	3,492.8	2,280.1	1,914.3		15,959.2
Octopus	0.8	1.5	1.4	1.9	2.9	2.2	0.9	1.4	3.5	8.1	8.4	1.1	34.1
Perch													
Skate	2.4	15.7	10.2	21.5	13.3	19.2	5.6	2.5	6.3	3.9	4.7	0.7	106.0
Squid			0.1										0.1
Sturgeon					0.1								0.1
Misc. sp.					0.4	0.2	0.6	1.5	13.4	0.3		0.5	16.9
Dogfish		2.0	13.8	20.5	6.0	1.2		3.4	6.4		1.3	1.3	55.9
Reduction	22.4	116.8	56.3	61.6	59.0	61.2	56.9	127.4	122.8	33.5	37.9	14.7	770.5
Animal food		11.7	1.4	7.0	9.6	12.3	12.1	21.2	17.3	19.7	32.1	3.9	148.3
<b>Total</b>	<b>3,554.6</b>	<b>6,911.2</b>	<b>5,841.5</b>	<b>6,208.6</b>	<b>7,272.8</b>	<b>7,909.1</b>	<b>6,122.6</b>	<b>5,013.7</b>	<b>7,358.1</b>	<b>9,546.7</b>	<b>6,733.4</b>	<b>1,890.3</b>	<b>74,362.6</b>
Dumped fish		0.4			4.8	4.5	0.4			0.8			10.9
Discards	130.6	304.8	150.4	308.7	954.7	674.1	392.6	280.9	247.2	601.0	161.3	73.9	4,280.2



## OTHER GROUND FISH FISHERIES

Groundfish landings in this category are those caught by longline, trap, handline, troll, and incidental to shrimp trawl. In 1993, these landings totalled 8,743 t, 7% below the 1992 total. Sablefish (4,567 t), rockfish (1,988 t), lingcod (1,478 t) and dogfish (666 t) accounted for 99% of the catch by other gear. Catches by main species, gear type and major area are represented in Table 45.

No effort data are available for handline, troll, longline, incidental to shrimp trawl or miscellaneous gears. The catches for these gears were obtained from British Columbia Commercial Catch Statistics 1993, by Species, Gear, Month, and Area, Fisheries and Oceans, Canada, Pacific Region.

Interviews were conducted with skippers of sablefish trap vessels to obtain catch and effort data. Total trap landings of sablefish in 1993 were 4,195 t. This includes 4,143 t by vessels having individual quotas, as well as 52 t that were caught by vessels obtaining special scientific permits to fish on several offshore seamounts. The fish caught on the seamounts is not part of the coastwide quota for sablefish and the catch has been separated out in the tables and figure. The main areas of production for the quota trap fishery were the west coast of the Queen Charlotte Islands (area 5E), north Queen Charlotte Sound (area 5B), south Queen Charlotte Sound (area 5A) and the northwest coast of Vancouver Island (area 3D), accounting for 57%, 14%, 14% and 13%, respectively. Trap landings of groundfish in 1993 by major area, month and species, are presented in Tables 46-53. Eighty-one percent (by weight) of the trap landings were covered by interviews. Table 54 shows the monitored landings, effort and CPUE by major area. A separation of the 1993 trap landings by minor area is given in Table 55. Figure 5 illustrates total trap catches (t) and monitored effort (traps) by major area.

Table 45. British Columbia landings (t, round weight) of groundfish caught by gear other than trawl in 1993 by major area and species.

Gear and species	Major area								Total
	4B	3C	3D	5A	5B	5C	5D	5E	
<u>Handline and troll</u>									
Dogfish	28.0	-	2.3	-	-	-	-	-	30.3
Lingcod	13.0	159.2	372.2	20.5	6.4	21.0	60.9	21.8	675.0
Pacific cod	0.1	-	-	-	-	0.1	tr.	-	0.2
Pacific ocean perch	tr.	tr.	-	-	-	-	tr.	-	0.0
Other rockfish	160.7	20.6	130.1	8.5	25.9	21.4	36.9	15.1	419.2
Sablefish	-	0.1	-	-	-	-	-	-	0.1
Sole	0.3	tr.	tr.	-	-	-	-	-	0.3
Misc. species	10.3	0.8	0.7	tr.	0.4	-	0.5	-	12.7
<u>Incidental to shrimp trawl</u>									
Other rockfish	-	1.6	-	-	-	-	-	-	1.6
<u>Longline</u>									
Dogfish	322.6	212.8	-	27.1	-	4.2	-	68.5	635.2
Lingcod	2.8	62.2	301.0	37.1	38.2	74.8	139.5	138.5	794.1
Pacific cod	0.4	0.1	0.6	-	0.2	tr.	2.1	0.2	3.6
Pacific ocean perch	-	1.7	0.1	tr.	1.7	-	0.2	-	3.7
Other rockfish	38.0	44.1	476.4	139.9	138.0	163.6	237.7	324.5	1,562.2
Pollock	-	-	-	-	-	-	0.3	-	0.3
Sablefish	-	94.3	173.6	-	-	90.7	-	65.7	424.3
Sole	tr.	-	-	tr.	0.1	tr.	8.8	tr.	8.9
Misc. species	3.2	2.5	5.3	0.2	0.7	0.8	0.5	tr.	13.2
<u>Trap</u>									
Sablefish <sup>a</sup>	-	-	528.3	578.7	599.4	14.8	45.3	2,376.3	4,142.8
<u>Misc. gears<sup>b</sup></u>									
Lingcod	0.1	tr.	-	-	tr.	2.1	4.4	1.8	8.4
Pacific cod	tr.	-	-	-	-	-	-	-	tr.
Other rockfish	-	-	-	-	-	-	0.9	tr.	0.9
Misc. species	5.5	0.3	-	-	-	-	-	-	5.8
<u>Total</u>									
Dogfish	350.6	212.8	2.3	27.1	-	4.2	-	68.5	665.5
Lingcod	15.9	221.4	673.2	57.6	44.6	97.9	204.8	162.1	1,477.5
Pacific cod	0.5	0.1	0.6	-	0.2	0.1	2.1	0.2	3.8
Pacific ocean perch	-	1.7	0.1	-	1.7	-	0.2	-	3.7
Other rockfish	198.7	66.3	606.5	148.4	163.9	185.0	275.5	339.6	1,983.9
Pollock	-	-	-	-	-	-	0.3	-	0.3
Sablefish	-	94.4	701.9	578.7	599.4	105.5	45.3	2,442.0	4,567.2
Sole	0.3	-	-	-	0.1	-	8.8	-	9.2
Misc. species	19.0	3.6	6.0	0.2	1.1	0.8	1.0	-	31.7

<sup>a</sup> Sablefish catch data obtained from fishing logs and port validation logs and may differ from Statistics Unit figures. Does not include 55 t caught in special permit fisheries to offshore seamounts.

<sup>b</sup> Misc. gears include groundfish catches by salmon gillnet, salmon seine, prawn trap and beach seine.

Table 46. 1993 British Columbia trap landings<sup>a</sup> (t) of groundfish - International area 3D, northwest coast of Vancouver Island.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Sablefish	-	-	-	30.0	68.8	52.1	29.8	21.0	39.7	134.8	152.1	-	528.3
TOTAL	0.0	0.0	0.0	30.0	68.8	52.1	29.8	21.0	39.7	134.8	152.1	0.0	528.3

Table 47. 1993 British Columbia trap landings<sup>a</sup> (t) of groundfish - International area 5A, south Queen Charlotte Sound.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Sablefish	-	-	-	107.3	65.4	139.9	94.6	50.6	49.4	39.7	31.8	-	578.7
TOTAL	0.0	0.0	0.0	107.3	65.4	139.9	94.6	50.6	49.4	39.7	31.8	0.0	578.7

Table 48. 1993 British Columbia trap landings<sup>a</sup> (t) of groundfish - International area 5B, north Queen Charlotte Sound.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Sablefish	-	33.7	72.1	48.9	52.0	74.7	74.3	80.9	-	162.8	-	-	599.4
TOTAL	0.0	33.7	72.1	48.9	52.0	74.7	74.3	80.9	0.0	162.8	0.0	0.0	599.4

<sup>a</sup> Does not include catches from special permit trips to seamounts.

Table 49. 1993 British Columbia trap landings<sup>a</sup> (t) of groundfish - International area 5C, south Hecate Strait.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Sablefish	-	-	tr.	-	14.8	-	-	-	-	-	-	-	14.8
TOTAL	0.0	0.0	tr.	0.0	14.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.8

Table 50. 1993 British Columbia trap landings<sup>a</sup> (t) of groundfish - International area 5D, north Hecate Strait.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Sablefish	-	-	-	1.3	42.6	-	-	-	1.4	-	-	-	45.3
TOTAL	0.0	0.0	0.0	1.3	42.6	0.0	0.0	0.0	1.4	0.0	0.0	0.0	45.3

Table 51. 1993 British Columbia trap landings<sup>a</sup> (t) of groundfish - International area 5E, west coast Queen Charlotte Islands.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Sablefish	276.9	377.4	339.5	252.1	227.9	129.3	62.0	-	132.7	340.1	209.7	28.7	2,376.3
TOTAL	276.9	377.4	339.5	252.1	227.9	129.3	62.0	0.0	132.7	340.1	209.7	28.7	2,376.3

<sup>a</sup> Does not include catches from special permit trips to seamounts.



Table 52. 1993 British Columbia trap landings<sup>a</sup> (t) of groundfish - coastwide total.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Sablefish	276.9	411.1	411.6	439.6	471.5	396.0	260.7	152.5	223.2	677.4	393.6	28.7	4,142.8
TOTAL	276.9	411.1	411.6	439.6	471.5	396.0	260.7	152.5	223.2	677.4	393.6	28.7	4,142.8

Table 53. 1993 British Columbia trap landings<sup>a</sup> (t) of groundfish - offshore seamounts<sup>b</sup>.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Sablefish	-	-	-	7.9	2.1	14.3	-	27.6	-	-	-	-	51.9
Rougheye fl	-	-	-	0.2	-	1.8	-	1.5	-	-	-	-	3.5
TOTAL	0.0	0.0	0.0	8.1	2.1	16.1	0.0	29.1	0.0	0.0	0.0	0.0	55.4

<sup>a</sup> Does not include catches from special permit trips to seamounts.

<sup>b</sup> Special permit trips to seamounts. Landings are not part of the coastwide quota.

Table 54. Total landings (t), monitored landings<sup>a</sup> (t), and monitored effort for the British Columbia trap fleet in 1993.

Major area	Total landings (t)	Monitored landings (t)	Monitored effort (traps)	Monitored CPUE (t/trap)
3D	528.3	337.5	18,845	0.018
5A	578.7	480.6	18,982	0.025
5B	599.4	437.4	16,688	0.026
5C	14.8	tr.	120	0.000
5D	45.3	2.6	308	0.008
5E	2,376.2	2,083.5	99,745	0.021
SM <sup>b</sup>	55.4	31.2	5,343	0.006
Total	4,198.1	3,372.8	160,031	0.021

<sup>a</sup> Landings accompanied by mandatory logbook.

<sup>b</sup> Special permit trips to seamounts. Landings are not part of the coastwide quota.

Total trap catch (t) by major area in 1993 (excluding seamounts)

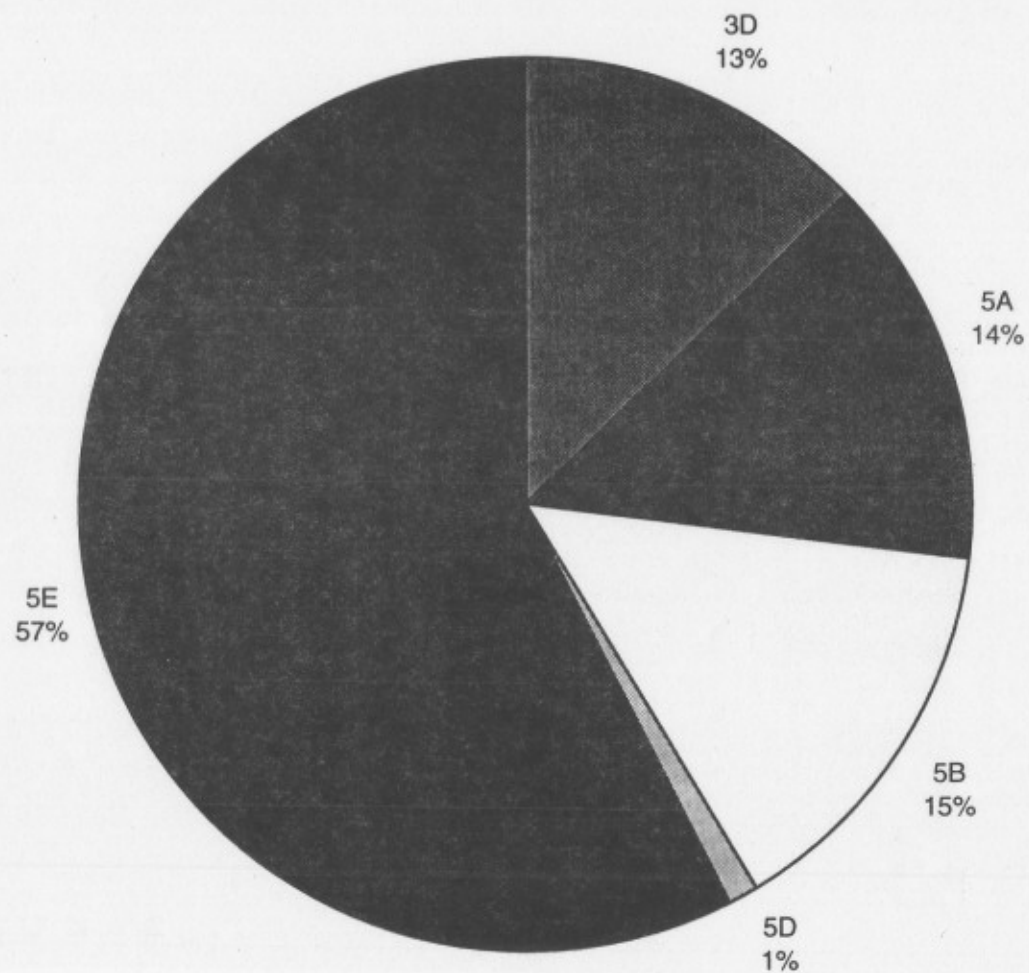


Figure 5 (a).





Total monitored effort (traps) by major area in 1993 (excluding seamounts)

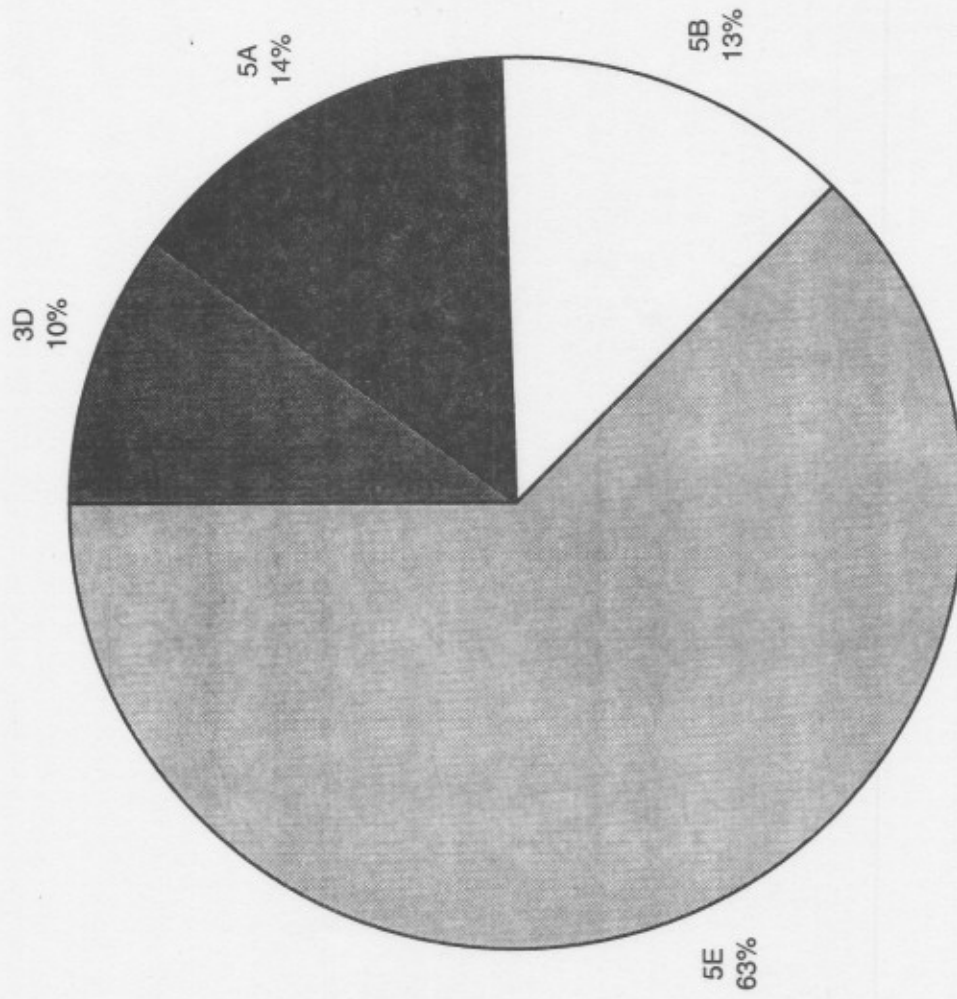


Figure 5 (b).



Table 55. British Columbia trap landings<sup>a</sup> (t) by species and minor area in 1993.

Species	Minor area							
	24	25	26	27	11	8	2BE	6
Sablefish	16.4	122.4	126.3	263.3	578.8	599.3	tr.	14.8
Total	16.4	122.4	126.3	263.3	578.8	599.3	tr.	14.8
Discards	-	15.6	1.3	3.8	3.6	8.3	tr.	-

Species	Minor area					
	1E	4	1W	2AW	2BW	Total
Sablefish	2.6	42.6	773.1	1254.8	348.3	4142.7
Total	2.6	42.6	773.1	1254.8	348.3	4142.7
Discards	-	-	3.0	13.5	4.1	53.2

<sup>a</sup> Does not include catches from special permit trips to seamounts.

### JOINT-VENTURE/FOREIGN FISHERIES

Since 1978, Canadian trawlers have participated in joint-venture fisheries. Canadian catcher vessels deliver Pacific hake and incidental species to foreign processing vessels in cooperative fishing arrangements. These fisheries take place off the southwest coast of Vancouver Island (Area 3C). These data are separated from the domestic landings because the joint-venture catches (converted from processed weight) are reported by the foreign processing vessels and cannot be verified by weight tallies. These data were collated and tallied by the Groundfish Management Unit of the Operations Branch in Vancouver.

In 1993, sixty-two Canadian catcher vessels delivered Pacific hake and incidental species to eight processing vessels. A total of 46,373 t of Pacific hake was processed by six Polish vessels and two Chinese vessels.

There were no national or supplemental fisheries for Pacific hake off the southwest coast of Vancouver Island in 1993.

The joint-venture catches of groundfish for 1993 are presented in Table 56.



Table 56. Joint-venture catches<sup>a</sup> (t) of groundfish from International area 3C -- southwest coast of Vancouver Island in 1993.

Nation and species	Quota (t)	Catch (t)
<u>Poland</u>		
Pacific hake	38,500	37,375
Pollock	incidental	464
Rockfish	incidental	2
Other species	incidental	707
<u>China</u>		
Pacific hake	9,000	8,998
Pollock	incidental	88
Rockfish	incidental	tr.
Other species	incidental	145
<u>Total</u>		
Pacific hake	47,500	46,373
Pollock	incidental	552
Rockfish	incidental	2
Other species	incidental	852

<sup>a</sup> Catches (converted from processed weight) are reported by foreign processing vessels and cannot be verified by weight tallies.

# CATCHES BY NPAFC AREA

This report is also produced to satisfy requirements of committees of the North Pacific Anadromous Fish Commission (NPAFC) , formerly known as the International North Pacific Fisheries Commission (INPFC) (Canada, Japan, and United States). To complement the previous tables, groundfish landings in metric tonnes (t) are presented in Tables 57-59 for trawl and other gears according to NPAFC areas. The relationship between these NPAFC areas and the major areas used in the first portion of this report is as follows:

INPFC	Major area	Latitude
Charlotte	5A, 5B, 5C, 5D, 5E <sup>5</sup>	50°30'N - 54°30'N
Vancouver	3B, 3C <sup>6</sup> , 3D, 4B <sup>7</sup>	47°30'N - 50°30'N

<sup>5</sup> Northernmost 10 miles actually in Southeastern

<sup>6</sup> Southernmost 10 miles actually in Columbia

<sup>7</sup> Inside waters (Strait of Georgia)

Table 57. British Columbia landings<sup>a</sup> (t) of groundfish taken by all types of gear in 1993, by NPAFC area.

Species	NPAFC area		Total
	Vancouver	Charlotte	
English sole	209.9	1,559.9	1,769.8
Rock sole	134.3	2,879.9	3,014.2
Petrale sole	358.1	220.6	578.7
Dover sole	2,113.0	1,844.4	3,957.4
Rex sole	51.7	188.5	240.2
Starry flounder	24.1	80.6	104.7
Turbot	2,194.0	1,825.9	4,019.9
Other flatfish	18.4	233.4	251.8
Pacific cod	2,682.6	5,413.6	8,096.2
Lingcod	2,784.5	2,451.3	5,235.8
Sablefish	1,147.9	3,960.5	5,108.4
Pollock	3,223.8	4,750.0	7,973.8
Hake	15,958.5	0.6	15,959.1
Pacific ocean perch	1,632.9	2,932.4	4,565.3
Other rockfish	8,024.4	12,378.4	20,402.8
Misc. species	66.8	123.3	190.1
Dogfish	621.7	99.8	721.5
Animal food	12.0	136.7	148.7
Reduction	627.8	142.4	770.2
Total	41,886.4	41,222.2	83,108.6

<sup>a</sup> Does not include catches from joint-venture fishery, see Table 56.

Table 58. British Columbia domestic trawl landings<sup>a</sup> (t) of groundfish in 1992, by NPAFC area.

Species	NPAFC area		Total
	Vancouver	Charlotte	
English sole	209.9	1,559.9	1,769.8
Rock sole	134.3	2,879.9	3,014.2
Petrale sole	358.1	220.6	578.7
Dover sole	2,113.0	1,844.4	3,957.4
Rex sole	51.7	188.5	240.2
Starry flounder	24.1	80.6	104.7
Turbot	2,194.0	1,825.9	4,019.9
Other flatfish	18.1	224.5	242.6
Pacific cod	2,681.4	5,411.0	8,092.4
Lingcod	1,874.0	1,884.3	3,758.3
Sablefish	351.6	189.6	541.2
Pollock	3,223.8	4,749.7	7,973.5
Hake	15,958.5	0.6	15,959.1
Pacific ocean perch	1,631.1	2,930.5	4,561.6
Other rockfish	7,152.9	11,266.0	18,418.9
Misc. species	38.2	120.2	158.4
Dogfish	56.0	0.0	56.0
Animal food	12.0	136.7	148.7
Reduction	627.8	142.4	770.2
<b>Total</b>	<b>38,710.5</b>	<b>35,655.3</b>	<b>74,365.8</b>

<sup>a</sup> Does not include catches from joint-venture fishery, see Table 56.



Table 59. British Columbia landings (t) of groundfish caught by gear other than trawl in 1993, by NPAFC area.

	NPAFC area		
Gear and species	Vancouver	Charlotte	Total
<u>Handline and troll</u>			
Dogfish	30.3	0.0	30.3
Lingcod	544.4	130.6	675.0
Pacific cod	0.1	0.1	0.2
Pacific ocean perch	0.0	0.0	0.0
Other rockfish	311.4	107.8	419.2
Sablefish	0.1	0.0	0.1
Sole	0.3	0.0	0.3
Misc. species	11.8	0.9	12.7
<u>Incidental to shrimp trawl</u>			
Other rockfish	1.6	0.0	1.6
<u>Longline</u>			
Dogfish	535.4	99.8	635.2
Lingcod	366.0	428.1	794.1
Pacific cod	1.1	2.5	3.6
Pacific ocean perch	1.8	1.9	3.7
Other rockfish	558.5	1,003.7	1,562.2
Pollock	0.0	0.3	0.3
Sablefish	267.9	156.4	424.3
Sole	0.0	8.9	8.9
Misc. species	11.0	2.2	13.2
<u>Trap</u>			
Sablefish <sup>a</sup>	528.3	3,614.5	4,142.8
<u>Misc. gears<sup>b</sup></u>			
Lingcod	0.1	8.3	8.4
Pacific cod	0.0	0.0	0.0
Other rockfish	0.0	0.9	0.9
Misc. species	5.8	0.0	5.8
<u>Total</u>			
Dogfish	565.7	99.8	665.5
Lingcod	910.5	567.0	1,477.5
Pacific cod	1.2	2.6	3.8
Pacific ocean perch	1.8	1.9	3.7
Other rockfish	871.5	1,112.4	1,983.9
Pollock	0.0	0.3	0.3
Sablefish	796.3	3,770.9	4,567.2
Sole	0.3	8.9	9.2
Misc. species	28.6	3.1	31.7
Total	3,175.9	5,566.9	8,742.8

# ERRATA

I. Additions have been made to the 1990 trap catches of sablefish. All tables containing sablefish catches by trap gear have been modified. The information from Table 54, total catch, monitored catch and monitored effort by major area are given here. Please contact the author if more detailed information is required.

Table 54. Total landings (t), monitored landings<sup>a</sup> (t), and monitored effort for the British Columbia trap fleet in 1990.

Major area	Total landings (t)	Monitored landings (t)	Monitored effort (traps)	Monitored CPUE (t/trap)
4B	1.2	1.2	115	0.010
3C	143.3	143.3	10,772	0.013
3D	756.1	730.5	46,468	0.016
5A	471.6	471.6	23,480	0.020
5B	149.1	149.1	8,065	0.018
5C	47.4	47.4	1,320	0.036
5D	11.2	11.2	798	0.014
5E	1,702.3	1,683.1	65,540	0.026
Total	3,282.2	3,237.4	156,558	0.021

<sup>a</sup> Landings accompanied by mandatory logbook.

## ACKNOWLEDGMENTS

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