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An update on trends in catch of Pacific salmon in Canada

by

D.W. Welch, D.J. Noakes and C.G. Wallace

Department of Fisheries and Oceans
Sciences Branch, Pacific Region
Pacific Biological Station
Nanaimo, B.C. V9R 5K6
CANADA

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INTRODUCTION

Six species of Pacific salmon are harvested in British Columbia coastal waters. Sockeye, pink, and chum salmon are mainly harvested in commercial net fisheries while chinook and coho salmon are targeted by commercial, troll, and (increasingly) by sport fisheries located primarily in the Strait of Georgia. Steelhead constitute a minor component of the catch, and are not discussed in this document.

In general, escapement goals are established in Canada for major sockeye, pink, and chum stocks, and fisheries are managed to meet these escapement objectives. Chinook and coho fisheries are managed to achieve specified harvest rates although escapement goals have also been established for key stocks.

This document reports data on the changes in catch (numbers and total weight) for the five major salmon species caught in British Columbian waters for the period 1952-1997.

Catch Trends

The 1997 catch to date of 25,818 tonnes is the lowest catch on record for the period 1952-1997. Some fisheries are still in progress and the final salmon catch in 1997 is likely to be similar to the level recorded in 1996. Slightly more than half the 1997 catch was composed of sockeye (16,195 tonnes). The sockeye catch was about average for the period of 1952-1997. The 1997 pink salmon catch of 6,456 tonnes was the lowest odd-year catch on record and well below the average odd-year pink salmon catch of 22,430 tonnes. To date 1997 catches of chum salmon (1,491 tonnes) are well below the long term average of 13,600 tonnes. Some chum salmon fisheries are still in progress and catches are expected to increase substantially based on preliminary reports. Chinook salmon production has decreased steadily since the early 1970s and the 1997 catch of 1,127 tonnes was the second lowest catch on record and well below the average catch of 5,400 tonnes. Coho salmon catches in 1997 at 550 tonnes are by far the lowest on record and were well below the long term average catch of 9,150 tonnes. Coho catches were low both as a result of decreases in productivity as well as the curtailment of a number of fisheries imposed as special conservation initiatives.

Total catch by numbers and weight is reported in Tables 1 and 2 for the period 1952-97. Tables 3 and 4 provide a breakdown of salmon catch by major statistical area for 1997 by numbers and weight, respectively.

FIGURES

Fig. 1 a,b. Major statistical reporting areas for Pacific salmon catches in British Columbia.

Table 1 Total Salmon Catch (numbers) by species in British Columbia 1952 - 1997*

	<u>Chinook</u>	<u>Sockeye</u>	<u>Coho</u>	<u>Pink</u>	<u>Chum</u>	<u>TOTAL</u>
1952	806565	4887820	2966502	11416033	2645107	22722027
1953	888674	5920709	2972600	11213961	4885694	25881638
1954	781715	6964746	2558586	5617362	6535427	22457836
1955	717912	2835625	3039628	11427728	1632816	19653709
1956	748858	3257452	3049662	7351861	2458288	16866121
1957	720679	3033987	3136839	11310116	2412105	20613726
1958	813240	12047521	2989288	6908186	3191765	25950000
1959	770738	3254309	2896886	6776401	2015339	15713673
1960	593482	2857635	2030207	4097540	1836758	11415622
1961	512608	4564717	3297302	8304983	1217512	17897122
1962	517925	3499193	3625679	23428633	1496001	32567431
1963	803247	2085976	3421397	12201446	1463240	19975306
1964	965186	3619050	4148485	9628385	2252798	20613904
1965	981091	3019510	4443095	5109269	633143	14186108
1966	1164642	4020471	5411764	17261355	1310722	29168954
1967	1129839	6749885	3318203	9846051	1130035	22174013
1968	1082726	6345805	5262190	20248961	3095039	36034721
1969	1099993	4267739	2407299	2570508	1310461	11656000
1970	1212368	4078274	3945433	13601475	3680227	26517777
1971	1593252	6306007	4788842	8455992	1262977	22407070
1972	1548849	3562689	3355852	13996264	6031462	28495116
1973	1423792	7585778	3530197	6521341	6225042	25286150
1974	1466846	7225360	3693968	7373961	2201804	21961939
1975	1411706	2271494	2331676	4633607	1147184	11795667
1976	1543060	4813793	3698416	10348865	1901061	22305195
1977	1492516	6346302	3316546	10356377	1088184	22599925
1978	1367868	7221754	3349967	10748013	2978708	25666310
1979	1329230	5691342	3646858	11822526	866324	23356280
1980	1476408	3260096	3835871	8418658	3452751	20443784
1981	1331589	8443091	3138642	18085803	1122961	32122086
1982	1365458	10074474	3588233	2679553	2974848	20682566
1983	1154668	5523728	4534183	24000538	1005661	36218778
1984	1424876	5081199	4048203	7500864	1850797	19905939
1985	1137642	12250917	3681122	20319522	5492723	42881926
1986	1019717	10557884	5479257	17980804	5581417	40619079
1987	937419	5424675	4027972	13446962	2302062	26139090
1988	892440	4490092	3835265	23131194	6194142	38543133
1989	847471	13796395	3977130	17174907	1828401	37624304
1990	859345	14242568	4522247	17268954	3146630	40039744
1991	855936	10467706	3742379	24275731	2364147	41705899
1992	881621	8339244	3645070	10321920	4029580	27217435
1993	827351	18258281	2748680	10300434	4231334	36366080
1994	577761	11607807	2870295	2225785	4340908	21622556
1995	296968	4431769	1991856	11731545	2226959	20679097
1996	153066	5501880	1545199	5685450	1215808	14101403
1997	210694	7009776	283274	3991332	317234	11812310

* 1997 data are preliminary

Table 2 Total Salmon Catch (tonnes) by species in British Columbia 1952 - 1997*

	<u>Chinook</u>	<u>Sockeye</u>	<u>Coho</u>	<u>Pink</u>	<u>Chum</u>	<u>TOTAL</u>
1952	5828	13965	8892	23200	14452	66338
1953	6379	16029	9570	27901	24686	84565
1954	5551	21319	8586	11673	33747	80875
1955	5129	7549	9768	28624	8245	59315
1956	5544	9751	10531	13125	12441	51391
1957	5079	7130	9349	25840	12355	59753
1958	5828	33571	10140	15308	17283	82131
1959	5540	8172	8085	15601	10481	47878
1960	4248	7017	5827	7672	9214	33978
1961	3719	12063	10209	22464	6623	55079
1962	3712	9107	10952	42281	8186	74238
1963	4147	5376	10465	27079	6991	54058
1964	5485	10397	12967	16532	10847	56229
1965	5151	7350	15040	10310	3014	40864
1966	6176	11636	15889	33064	6965	73730
1967	6254	16732	9296	22721	5514	60517
1968	6205	18921	13813	25583	16645	81168
1969	5755	10877	7114	5993	6073	35813
1970	5915	11240	12484	23710	16748	70097
1971	7669	17039	12640	17202	5410	59960
1972	7387	9467	9429	17653	29925	73861
1973	6692	21413	10146	12936	32644	83831
1974	6721	21276	9264	11061	12465	60786
1975	6436	5635	7091	9961	5380	34502
1976	6841	12295	8283	16869	10913	55200
1977	6693	17328	8798	23759	6013	62591
1978	6987	21813	8139	15221	15804	67964
1979	6080	14343	9137	23406	4723	57690
1980	5893	8054	8225	13766	17358	53296
1981	5244	20950	6688	36861	6137	75881
1982	6341	28980	8224	3933	15055	62533
1983	4786	14197	9173	38720	4890	71767
1984	5509	12792	8779	11695	8978	47753
1985	4865	31062	7971	36546	23479	103924
1986	4486	29811	11666	29264	24922	100148
1987	4622	14714	7357	25865	11037	63596
1988	5218	11842	6155	31467	30205	84887
1989	4698	33674	7704	29593	9288	84956
1990	4642	35861	9221	25615	16846	92186
1991	4538	24525	8733	34130	10203	82129
1992	4731	20785	6370	14563	17953	64403
1993	4301	41797	3764	15328	17167	82357
1994	3179	29757	6758	3277	20299	63269
1995	1343	10309	4158	18636	10689	45135
1996	424	14269	3298	8039	5655	31685
1997	1127	16195	550	6456	1491	25818

* 1997 data are preliminary

Table 3 1997 Salmon Catch (number) by Statistical Area*

	<u>Chinook</u>	<u>Sockeye</u>	<u>Coho</u>	<u>Pink</u>	<u>Chum</u>	<u>TOTAL</u>
1	47237	431653	140696	616822	64230	1300638
2E	10641	3584	6629	1962	1936	24752
2W	3649	112520	7115	36084	3003	162371
3	4998	442576	5586	511924	87126	1052210
4	13818	964259	28017	429263	43465	1478822
5	3314	18324	7114	22317	5059	56128
6	4533	6793	6027	75091	6147	98591
7	3457	1285	5268	15310	16836	42156
8	1524	18257	4593	233573	73717	331664
9	2	0	102	0	4	108
10	236	601	562	4426	1223	7048
11	93	82163	355	11831	590	95032
12	1456	3040503	3755	1288830	10466	4345010
13	11506	873242	914	343393	2889	1231944
14	14692	715	541	2136	0	18084
15	2845	267	158	598	13	3881
16	4373	58104	153	39763	66	102459
17	2910	827	163	465	0	4365
18	676	429	98	1265	0	2468
19	0	0	0	0	0	0
19A	138	0	0	96	0	234
19B	12399	5444	63620	66035	0	147498
20	282	202150	228	219081	195	421936
21	6	0	0	0	0	6
22	0	0	0	0	0	0
23	25479	36652	6	5606	57	67800
23A	0	0	0	0	0	0
23B	0	0	0	0	0	0
24	1172	932	0	3683	12	5799
25	2941	689	0	1351	5	4986
26	12951	323	0	442	29	13745
27	7996	1214	37	1741	151	11139
28	1024	229	669	96	0	2018
29	14346	706041	868	58148	15	779418
TOTAL	210694	7009776	283274	3991332	317234	11812310

* 1997 data are preliminary

Table 4 1997 Salmon Catch (tonnes) by Statistical Area*

<u>AREA</u>	<u>Chinook</u>	<u>Sockeye</u>	<u>Coho</u>	<u>Pink</u>	<u>Chum</u>	<u>TOTAL</u>
1	363	1002	343	1006	278	2993
2E	84	8	17	3	9	121
2W	30	255	18	57	12	372
3	32	1088	17	853	436	2428
4	102	2543	77	748	214	3684
5	25	49	17	37	25	153
6	34	17	16	125	28	220
7	26	3	14	27	71	140
8	12	44	14	417	340	828
9	0	0	0	0	0	0
10	2	1	1	7	4	16
11	1	201	1	21	3	227
12	9	6768	11	2065	53	8907
13	3	1893	0	544	14	2455
14	0	0	0	0	0	0
15	0	0	0	0	0	0
16	0	127	0	64	0	192
17	0	0	0	0	0	0
18	0	1	0	1	0	2
19	0	0	0	0	0	0
19A	0	0	0	0	0	0
19B	0	0	0	0	0	0
20	1	450	0	360	1	812
21	0	0	0	0	0	0
22	0	0	0	0	0	0
23	126	83	0	8	0	218
23A	0	0	0	0	0	0
23B	0	0	0	0	0	0
24	7	2	0	5	0	15
25	21	1	0	2	0	24
26	90	1	0	1	0	91
27	61	3	0	3	1	67
28	0	0	0	0	0	0
29	99	1654	0	101	0	1855
TOTAL	1127	16195	550	6456	1491	25818

* 1997 data are preliminary

READ CAREFULLY

- 1 Reporting of all catches to the Dept. of Fisheries and Oceans is the responsibility of the fisherman and a condition of licence renewal.
- 2 Accurate catch reports must include the map number or numbers showing the area in which your fish were caught.
- 3 The statistical areas shown on this map are to be used as a guide only. For more exact information refer to the Pacific Fishery Management Area Regulations.

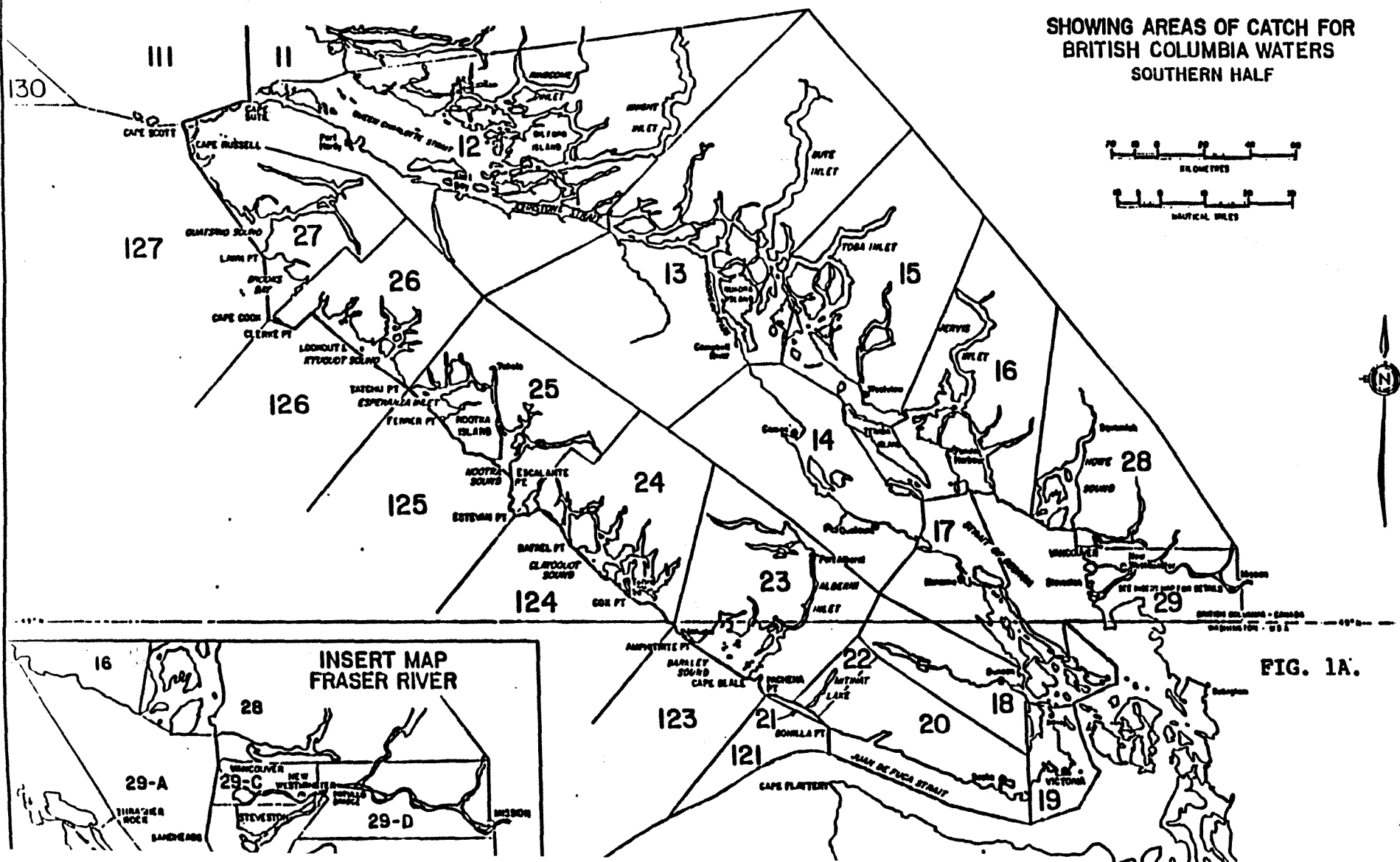
● Dept. of Fisheries and Oceans Office
 — Statistical areas are divided by red lines
 — Surline
 Note: All areas revised February 1985

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Figure 1a
 Canada

STATISTICAL AREA MAP

SHOWING AREAS OF CATCH FOR
 BRITISH COLUMBIA WATERS
 SOUTHERN HALF



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- 3 Dept. of Fisheries and Oceans Office
- Statistical areas are divided by red lines
- Surfline

Note: All areas revised February 1985

STATISTICAL AREA MAP

SHOWING AREAS OF CATCH FOR
BRITISH COLUMBIA WATERS
NORTHERN HALF

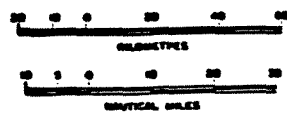


FIG. 1B

