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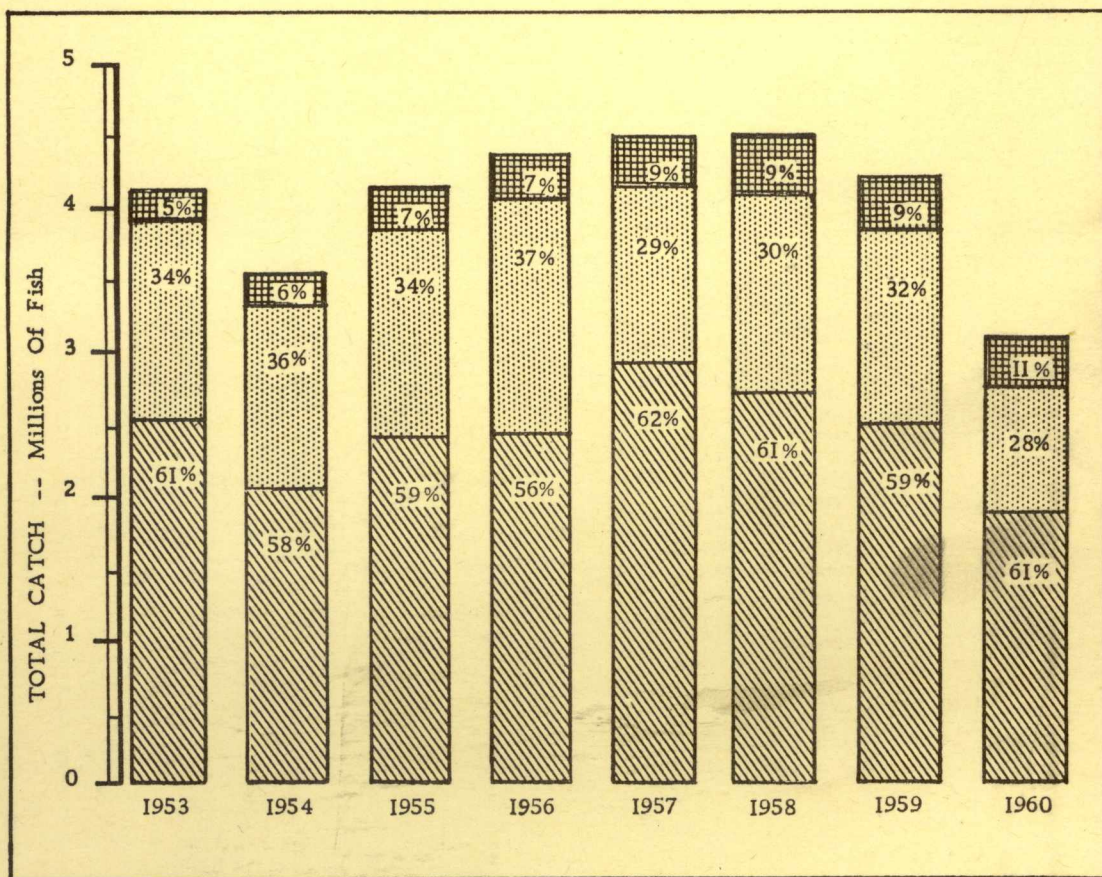


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STATISTICS ON SALMON SPORT FISHING IN THE TIDAL WATERS OF BRITISH COLUMBIA 1960

PERCENTAGE DIVISION OF THE CATCH OF SPRING SALMON, JACKS
AND COHO BETWEEN SPORT & COMMERCIAL FISHERMEN 1953 - 1960

(Sport Catch Includes Grilse)



Percentage
of Catch : -

Sport



Commercial
Troll



All other
Commercial



Department of Fisheries of Canada

Pacific Area

70320

30/6/61

FOREWORD:

Since 1953, the Department of Fisheries of Canada has compiled estimates of salmon catches by sport fishermen in the tidal waters of British Columbia. While these sport catch estimates are not as precise as the statistics compiled and published on commercial salmon catches, they are nevertheless being refined each year as more experience is gained and sampling techniques improved.

During the 8 years, 1953 - 1960, the trend in catch of salmon by sport fishermen has been rising as more and more effort is exerted on the salmon resource by sport fishermen. In terms of total catch of all species of salmon, the catch made by sport fishermen is small. However, in the Gulf of Georgia areas, the number of coho and spring salmon taken by sport gear has, during certain years, approached the number taken by commercial trollers.

Each year, several million dollars in funds is provided by the Parliament of Canada for the conservation and improvement of stocks of fish that are important to commercial and sport fishermen. In addition to the management and protection services of the Department of Fisheries, these funds also include those required for related research carried on by the Fisheries Research Board of Canada. It should also be noted that in matters of mutual interest there is liaison between the Department of Fisheries and the Provincial Department of Recreation and Conservation.

Salmon sport fishing in tidal waters is becoming of increasing importance each year as a recreational activity. To meet the demands for information on catch in the various areas, the Department of Fisheries publishes weekly during the season a Sport Fish Bulletin. This weekly Bulletin is prepared by the Information and Economics Branches of the Department based on information provided regularly by local Fishery Officers for each of the major tidal sport fish areas of the Province.

In addition, this annual tidal sport fish statistics report gives a detailed summary of salmon sport catches by species for each area of the Province. In addition to information on salmon catches, this 1960 report also includes in the appendix the results of two special sport fish surveys carried on during the year.

Appendix I - summarizes the results of a special tidal sport fish survey conducted on August 7th, 1960.

Appendix II - summarizes the results of a bar fishing survey on the Fraser River on October 17th, 1960.

In addition to these two surveys, another survey was conducted in 1960 dealing with United States' pleasure craft that operated in British Columbia. Questionnaires dealing with catch and effort were distributed to a total of 464 captains of these American pleasure boats by Fishery Officers at the Customs ports of Sidney and Bedwell Harbour. The return of these Questionnaires was not mandatory but despite this fact, the co-operation received was overwhelming and 96% of the Questionnaires were returned. A special report is being prepared on this survey.

The co-operation of boat rental agencies, fishing lodges and other sport-fishing establishments is acknowledged and has been most valuable in assisting resident Fishery Officers of the Department in assessing catch and effort in the various areas.

The assistance of sport fishermen who have completed survey questionnaires is also acknowledged. Only by the continued co-operation and assistance by all concerned in the tidal sport fishery can proper statistics be issued that can be used in evaluating and ensuring adequate management procedures.

This annual report, along with the results of the two special surveys included in the Appendixes, was compiled and analyzed by A. L. W. Tuomi, Economist for the Economics Branch, working in close consultation with Fishery Officers in each of the local areas.

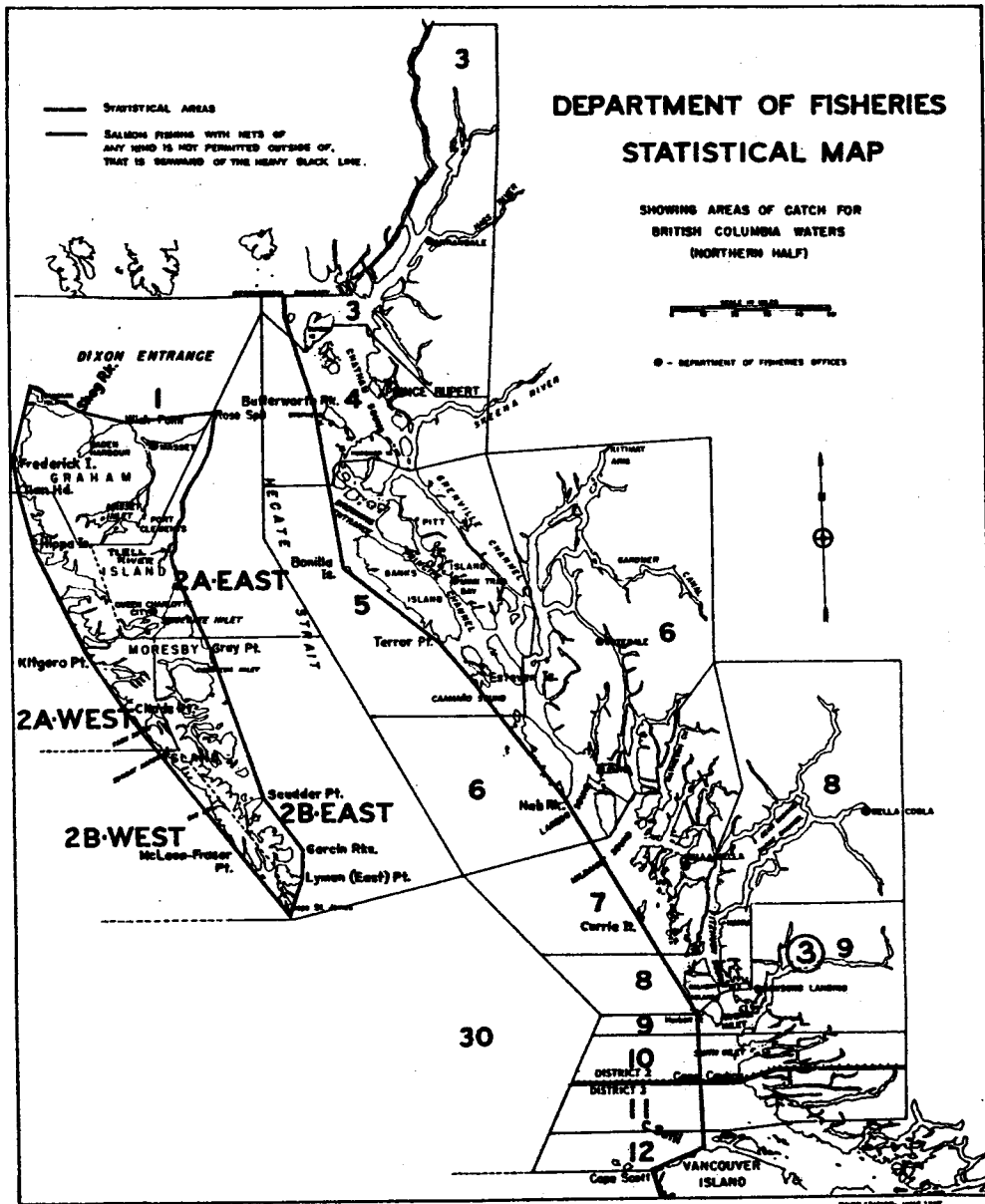
Department of Fisheries of Canada
1110 West Georgia Street
Vancouver 5, B. C.

March 31, 1961

W. R. Hourston
Director, Pacific Area

Blake A. Campbell
Chief, Economics Branch

SALMON SPORT FISHING MAP OF THE TIDAL WATERS OF BRITISH COLUMBIA



Showing the statistical areas of catch for commercial fishing, which are also used as the basis of reporting for sport fishing, except for the following changes as marked on the map by arrows, and described below:

- (a) All of North Saanich, and Saanich Inlet to the south of Mill Bay is included in area 19.
- (b) Area 15 includes Westview and that part of area 16 as marked on the map.

SPECIAL SALMON ANGLING LICENCE AREAS

- (1) Phillips Arm, in area 13
- (2) Gold & Burman Rivers, in area 25
- (3) Rivers Inlet, in area 9

DEPARTMENT OF FISHERIES

STATISTICAL MAP

— STATISTICAL AREAS

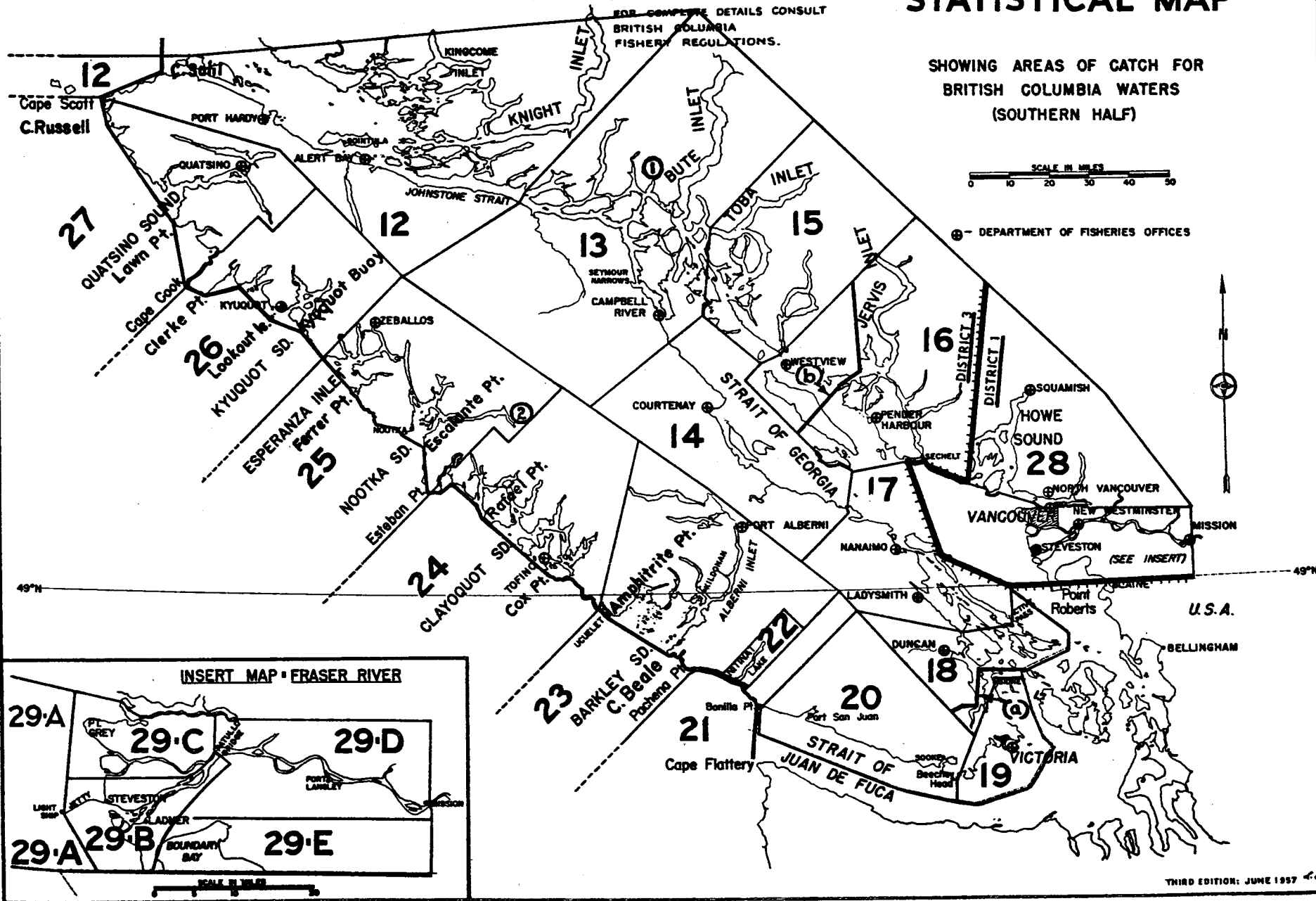
— SALMON FISHING WITH NETS OF ANY KIND IS NOT PERMITTED OUTSIDE OF, THAT IS SEAWARD OF THE HEAVY BLACK LINE.

FOR COMPLETE DETAILS CONSULT BRITISH COLUMBIA FISHERY REGULATIONS.

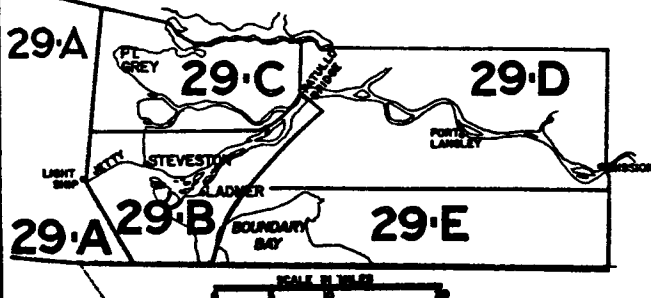
SHOWING AREAS OF CATCH FOR BRITISH COLUMBIA WATERS (SOUTHERN HALF)

SCALE IN MILES
0 10 20 30 40 50

Ⓛ - DEPARTMENT OF FISHERIES OFFICES



INSERT MAP - FRASER RIVER



S U M M A R Y

For the second year in a row, the salmon sport catch in British Columbia showed a drop, with 331,425 salmon and grilse* taken in 1960, down by 64,950 from 1959. Tidal sport catch statistics were first compiled in 1953, and in that year a total of 204,550 salmon were reported. After a slight increase in 1954, catches rose rapidly from 1955 to 1957, and reached a peak of 408,900 in 1958. In 1959, the catch dropped 3% to 396,375 fish despite an unprecedented sport catch of pink salmon. In 1960 the decline continued, with the total of all species of salmon taken by sport fishermen showing a 16.4% drop from 1959.

The sports catch of all species of salmon, with the exception of coho, was down from 1959. The sport catch of spring salmon dropped 30.2% from 1959, and was less than half of the 1957 catch. As 1960 was not the dominant pink cycle-year in the southern portion of the province, the pink catch of 825 was only a fraction of the 36,825 caught in 1959, and represented about a quarter of the catch during the corresponding cycle-year of 1958. Grilse likewise showed a drop with 16,750 less taken in 1960. However, this decline was largely the result of the introduction of the 12-inch legal minimum size limit for grilse on August 24, of 1960. Previously, grilse measuring 8 inches in length could be taken, and evidence suggests that if this change in regulations had not been enacted, the grilse catch would have been maintained or would even have shown an increase. The one bright spot for sport fishermen was the prevalence of "blueback" or coho in the Strait of Georgia, particularly along the east shore of Vancouver Island from Active Pass north to the vicinity of Comox. During the year, a total of 97,625 coho was taken, representing an 8.4% increase over the 1959 catch and second only to the peak year catch of 126,475 taken in 1957. This increase in coho landings was also the dominant note in the grilse catch with 78% of the 1960 catch of grilse made up of coho as compared with 71% in 1959.

TABLE 1. COMPARISON OF SPORT & COMMERCIAL SALMON CATCH BY YEARS
(Numbers of Fish)

	Average -7 years 1953 - 1959	1956	1957	1958	1959	1960	Percent change in 1960 from 1959
SPORT CATCH							
Springs & Jacks	65 770	64 300	93 450	88 725	65 550	45 775	- 30.2
Coho	79 900	70 900	126 475	96 125	90 050	97 625	+ 8.4
Grilse	160 570	168 800	166 150	220 600	203 950	187 200	- 8.2
Pinks	(Not	--	10 150	3 100	36 825	825	- 97.7
Sockeye	Available)	--	--	350	--	--	--
Total	306 240	304 000	396 225	408 900	396 375	331 425	- 16.4
COMMERCIAL CATCH (by all gears)							
Springs & Jacks	957 185	983 100	938 600	1 068 700	948 300	745 200	- 21.4
Coho	2 911 600	3 049 600	3 136 700	2 989 500	2 896 900	2 030 100	- 29.9
Total	3 868 785	4 032 700	4 075 300	4 058 200	3 845 200	2 775 300	- 27.8
COMBINED TOTAL of above - Sport & Com- mercial Catch (Exclud- ing Pinks & Sockeye)							
	4 175 025	4 336 700	4 461 375	4 463 650	4 204 750	3 105 900	- 26.1
SPORT CATCH as a percent of above combined catch							
	7.3	7.0	8.6	9.1	8.6	10.6	

* salmon 3 pounds or less in weight.

TABLE 2

SUMMARY OF SPORT FISHING CATCHES BY AREA IN BRITISH COLUMBIA
1960 CATCH COMPARED WITH 1953 - 1959 AVERAGE

AREA	SPRINGS & JACKS			COHO			GRILSE		
	Average 1953-59	1960	% Change	Average 1953-59	1960	% Change	Average 1953-59	1960	% Change
9. RIVERS INLET	539	175	- 68	35	50	+ 43			
11 - 12. ALERT BAY	1 382	475	- 66	1 257	300	- 76	242	50	- 79
13. CAMPBELL RIVER	4 296	3 025	- 30	13 471	16 250	+ 21	2 085	2 500	+ 20
14. COMOX-COURTENAY	8 682	7 650	- 12	26 153	47 400	+ 81	25 242	45 350	+ 80
15. WESTVIEW	2 053	1 050	- 49	2 757	2 300	- 17	2 057	4 200	+ 104
16. PENDER HARBOUR	4 182	1 825	- 56	4 946	5 100	+ 3	(1) 7 314	12 050	+ 65
17. NANAIMO	2 767	1 975	- 29	2 303	6 950	+ 202	17 560	22 400	+ 28
18. COWICHAN BAY & MILL BAY AREA	7 010	3 475	- 50	4 757	3 250	- 32	14 235	8 350	- 41
19 - 20. VICTORIA-SAANICH	11 167	13 150	+ 18	10 242	3 550	- 65	49 307	53 000	+ 7
23. BARKLEY SOUND	1 332	1 350	+ 1	517	225	- 56			
25. NOOTKA	660	525	- 20	125	125	--	(2) 42	200	+ 376
28 - 29. VANCOUVER-HOWE SOUND-FRASER RIVER	20 164	9 700	- 52	10 332	9 125	- 12	41 835	37 650	- 10
OTHER AREAS	1 532	1 400	- 9	3 000	3 000	--	(3) 646	1 450	+ 124
	65 766	45 775	- 30	79 895	97 625	+ 22	160 565	187 200	+ 17

(1) 6-year Average - Excluding 1955

(2) 4-year Average - 1956 - 1959

(3) 4-year Average - 1956 - 1959

SPORT CATCH IN SPECIAL SALMON ANGLING LICENCE AREAS

	<u>1953</u>	<u>1954</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>	<u>1958</u>	<u>1959</u>	<u>1960</u>
RIVERS INLET	497	998	1 014	245	278	157	92	67 (1)
PHILLIPS ARM	103	101	95	89	66	120	66	52 (2)
GOLD & BURMAN RIVERS	--	--	317	433	206	194	248	191 (3)

(1) 67 springs included in Area 9 catch above

(2) 25 springs; 2 coho; 11 jacks; 14 grilse included in Area 13 catch above

(3) 170 springs; 3 coho; 1 pink; 8 jacks; 9 grilse included in Area 25 catch above.

Both sport and commercial fishermen experienced a sharp decline in salmon landings in 1960. However, the drop was proportionately more pronounced in commercial landings, with the overall catch the lowest since records were first kept in 1910. The commercial catch of spring salmon was down 21.4% from 1959 with coho showing a drop of 29.9%. The sport catch of springs was also down, but the sport catch of coho reversed the trend, showing an increase of 8.4% over 1959. The sport catch, in relation to the total catch of springs and jacks thus showed a relative gain and rose to a new high of 10.6% (Table 1).

The overall weight of salmon taken by sport fishermen was approximately 1,050,000 pounds which, if valued at the average commercial landed values of these species was worth approximately \$290,000.

Table 2 shows the 1960 catch by areas as compared with the average catch for the 7-year period 1953 to 1959. With one exception, the catch of spring salmon by areas was significantly below the average. Generally the catch of coho and grilse was up compared to the average of the preceding seven years, reflecting the general trend of increase in the sport catch.

The bulk of the 1960 sport catch was taken in the Strait of Georgia and other waters separating Vancouver Island and the mainland, as shown in Table 3. The sport's share of the total sport and commercial troll catch of springs and jacks in these areas reached a peak of 49.9% in 1958 but dropped to 45.6% in 1959 and in 1960 showed a further decline to 35.0%. In these areas, sport fishermen maintained their share of the catch of spring salmon, taking 44.8% of the combined sport and commercial troll catch. With coho, however, commercial trollers caught 80% more than in 1959, compared with a 3% increase for sport fishermen. As a result, the sport's share of the catch of coho and coho grilse in these areas fell from 45.6% in 1959 to 32.6% for 1960.

TABLE 3

COMPARISON OF COMMERCIAL TROLL CATCH & SPORT CATCH OF SALMON IN THE STRAIT OF GEORGIA 1953 - 1960 (Areas 13, 14, 15, 16, 17, 18, 19, 20, and District 1)

Species	Average 1953 - 1959			1959			1960		
	Comm- ercial Troll	Sport	Sport as percent of total	Comm- ercial Troll	Sport (in- cluding Grilse)	Sport as percent of total	Comm- ercial Troll	Sport (includ- ing grilse)	Sport as percent of total
	Numbers	Numbers	%	Numbers	Numbers	%	Numbers	Numbers	%
Springs & Jacks	129 360	61 000	32.0	143 120	119 375	45.5	102 800	83 450	44.8
Coho	339 360	75 425	18.2	274 195	230 350	45.6	492 700	237 825	32.6
Grilse		159 900*							
TOTAL	468 720	296 325	38.7	417 315	349 725	45.6	595 500	321 275	35.0

* Breakdown by species not available, prior to 1959.

The actual catch in these areas is given in detail in Table 4 which also shows the breakdown of the total catch of springs, coho and pinks taken in each of these areas by sport fishing, commercial trolling and by all other commercial fishing gear.

TABLE 4

DIVISION OF CATCH BY SPECIES IN THE STRAIT OF GEORGIA BETWEEN SPORT AND COMMERCIAL GEAR IN 1960 (Numbers of Fish)
(The sport catch includes the grilse catch by species)

AREA	Springs & Jacks			Coho & Bluebacks			Pinks		
	Sport	Commer- cial troll only	Commer- cial - all other gear	Sport	Commer- cial troll only	Commer- cial - all other gear	Sport	Commer- cial troll only	Commer- cial - all other gear
13	3 825	17 600	5 000	17 950	62 700	16 900	75	300	32 300
14	16 150	15 400	1 900	84 250	226 000	11 900	275	75	25
15	2 400	15 100	2 600	5 150	29 900	3 500	--	--	--
16	6 425	15 100	2 200	12 550	61 400	6 500	--	25	75
17	3 375	23 400	900	27 950	110 700	5 600	--	75	25
18	5 575	400	200	9 500	400	900	--	--	--
19-20	28 100	5 700	13 500	41 600	900	82 400	--	25	1 575
Dist. 1	17 600	10 100	119 500	38 875	700	56 500	75	--	200
TOTAL	83 450	102 800	145 800	237 825	492 700	184 200	425	500	34 200
Percent	25.1	31.0	43.9	26.0	53.9	20.1	1.2	1.4	97.4

Over the 8-year period 1953 - 1960, the catch of spring salmon and coho including grilse taken by sport fishermen, has shown a steady climb in relative importance to the overall provincial catch of these species. This is shown graphically on the cover, and is shown in detail by species and type of gear in Table 5.

TABLE 5

DIVISION OF CATCH OF SPRINGS, JACKS & COHO IN BRITISH COLUMBIA BETWEEN SPORT FISHERMEN, COMMERCIAL TROLLERS, & ALL OTHER COMMERCIAL GEAR - 1953 - 1960

YEAR	SPRINGS & JACKS (excluding Grilse)				COHO (excluding Grilse)				SPRINGS, JACKS & COHO (including sport-caught Grilse)			
	Catch No. of Fish (000)'s	% Taken By:			Catch No. of Fish (000)'s	% Taken By:			Catch No. of Fish (000)'s	% Taken By:		
		Sport Fisher- men	Comm- ercial Troll	Other Comm. Gear		Sport Fisher- men	Comm- ercial Troll	Other Comm. Gear		Sport Fisher- men	Comm- ercial Troll	Other Comm. Gear
1953	1 066	4.8	66.0	29.2	2 956	2.1	61.0	36.9	4 112	5.0	60.9	34.1
1954	919	4.7	62.7	32.6	2 481	1.4	59.8	38.8	3 531	5.9	58.3	35.8
1955	925	5.8	63.4	30.8	3 048	2.6	60.0	37.4	4 115	6.6	58.7	34.7
1956	1 047	6.1	70.0	23.9	3 121	2.3	54.3	43.4	4 337	7.0	56.0	37.0
1957	1 032	9.1	70.2	20.7	3 263	3.9	62.6	33.5	4 461	8.6	62.0	29.4
1958	1 157	7.7	63.0	29.3	3 086	3.1	64.4	32.5	4 464	9.1	60.9	30.0
1959	1 014	6.5	64.5	29.0	2 987	3.0	62.1	34.9	4 205	8.6	59.6	31.8
1960	791	5.8	62.6	31.6	2 128	4.6	66.4	29.0	3 106	10.6	61.4	28.0
Average	994	6.3	65.4	28.3	2 884	2.8	61.2	36.0	4 041	7.6	59.8	32.6

SPORT FISHING EFFORT

In recognition of the continuing growth of sport fishing, Fishery Officers for the first time prepared routine monthly estimates of the sport fishing effort for each area during 1960. This took the form of an estimate of the total boat days or trips made in sport fishing boats in each area. Boat rental operators have co-operated for many years in this regard by supplying catch and effort information from their rental boats; consequently the information from their records coupled with the data from various other sources (questionnaires, surveys, aerial counts, visual tallies, etc.) was combined to arrive at estimates of overall effort for each area. Although the figures in Table 6 were carefully compiled, the techniques of estimating effort are under continuing development and therefore, these figures should be regarded as preliminary pending another year of testing and improving techniques.

TABLE 6
SPORT CATCH OF SALMON PER BOAT DAY - 1960 (PRELIMINARY)

	TOTAL CATCH (No. of Fish)			TOTAL * BOAT DAYS	CATCH PER BOAT DAY OF:		
	Salmon (All Species)	Grilse	Total Sal. & Grilse		Salmon (All Species)	Grilse	Salmon & Grilse combined
District 1	16 700	22 500	39 200	45 475	.36	.50	.86
District 2	4 075	250	4 325	6 325	.64	.04	.68
District 3:							
Area 13	19 350	2 500	21 850	19 050	1.02	.13	1.15
14	55 325	45 350	100 675	52 750	1.05	.86	1.91
15	3 350	4 200	7 550	3 725	.90	1.13	2.03
16	6 925	12 050	18 975	7 200	.96	1.67	2.63
17	8 925	22 400	31 325	10 000	.89	2.24	3.13
18	6 725	8 350	15 075	16 250	.41	.51	.92
19 - 20	16 700	53 000	69 700	34 700	.48	1.53	2.01
21 - 23	1 575		1 575	3 225	.49		.49
11-12-24	1 700	1 250	2 950	4 675	.36	.27	.63
25-26-27	725	200	925	1 325	.55	.15	.70
DISTRICT 3	121 300	149 300	270 600	152 900	.79	.98	1.77
TOTAL	142 075	172 050	314 125	204 700	.69	.84	1.53

* Includes effort by both privately-owned boats and rental boats; also includes fisherman days of effort from wharves, docks, shoreline fishing, etc., converted to boat days for all areas except District 1 where the Fraser River bar fishing effort and catch is excluded.

PROTECTION REGULATIONS 1 9 6 0

Three amendments to tidal sport fishing regulations became effective on August 24, 1960. A number of special closures were also introduced in addition to the routine closures as provided for by British Columbia Fishery Regulations. The amendments and the special closures are reviewed below.

AMENDMENTS - effective date - August 24/60:

- (1) the legal minimum length of salmon (including grilse) that can be taken and retained, was raised from 8 inches to 12 inches, measured from the tip of the nose to the center of the tail.
The legal minimum length for trout remained unchanged at 8 inches.
- (2) the possession limit of salmon and trout was reduced from three days' to two days' catch limit.
- (3) a daily catch limit on crabs was introduced, with not more than 6 crabs to be taken and retained in any one day.

SPECIAL CLOSURES:

<u>ACTION</u>	<u>PERIOD CLOSED</u>	<u>PURPOSE</u>
- Tidal portion of Phillips River	July 22 - Aug. 31	Conservation of Spring Salmon
- Portion of Comox Harbour and tidal portion of Courtenay River closed	(River: Sept. 18 - Sept. 30) (Harbour: Sept. 18 - Oct. 31)	Conservation of Springs & Pinks
- Portion of Cowichan Bay and tidal waters of Cowichan River closed	Sept. 11 - Oct. 7	Conservation of Spring Salmon
- Tidal waters of Sooke River closed	Sept. 25 - Dec. 4	Conservation of Springs & Coho
- Portion of Nahmint Bay and tidal waters of Nahmint River closed	Sept. 5 - Dec. 31	Conservation of Springs
- Waters of Alberni Inlet and tidal waters of Somass River north of a line between Polly Point to Stamp Point, closed	Oct. 2 - Dec. 31	Conservation of Springs
- All of Nahmint Bay and tidal waters of Nahmint River closed	Oct. 2 - Dec. 31	Conservation of Springs
- Portion of the tidal waters at head of Muchalat Inlet, closed	Aug. 21 - Dec. 31	Conservation of Springs
- Portion of tidal waters of Varney Bay, closed	Aug. 14 - Oct. 2	Conservation of Springs & Coho
- Portion of the tidal waters of Rupert Inlet closed	Aug. 14 - Dec. 31	Conservation of Coho Salmon

RIVERS INLET - AREA 9

This area is primarily noted for the large spring salmon or "tyee" found at the head of Rivers Inlet during the period mid-July to early September. In recognition of the sport fishing importance of these springs, a specified area of these waters is designated as a special regulation area where sport fishermen are required to secure a no-fee licence to fish during the period July 20 to September 15, and where special daily and season limits also apply. Even though the number of fishermen showed only a slight drop, the catch in the special regulation area continued a decline in 1960, with only 67 spring salmon taken, compared with 84 in 1959, and with 278 in 1957 the year of the largest catch after the introduction of the latest special sport-fish boundary regulations.

Fishing began in the special regulation area late in July, but most of the catch was taken during the first week of August when 42 springs, averaging 40 pounds apiece, were taken. Effort continued until about August 13 despite the appearance of killer whales or blackfish. Seven of the "tyee" taken during the season weighed over 50 pounds, with the largest one weighed in at 71 pounds, some 11 pounds short of the record of 82 pounds for a spring salmon taken in this area in 1951. Licences were taken out by 158 Canadians and 165 Americans. The recorded catch by licence-holders in the special regulation area is shown below from 1956 onward.

YEAR	Number of Licences Issued	Number of Springs Caught	Average Weight lbs.	Weight of heaviest fish lbs.
1956	916	245	43.8	77.5
1957	398	278	35.3	71.5
1958	330	157	41.5	69.5
1959	353	84	40.3	74.0
1960	323	67	42.0	71.0

The catch elsewhere in the area was also light, with the overall catch for the area, including the catch under licence, made up of 100 springs, 75 jack springs, 50 coho and a few grilse.

SALMON CATCH BY MONTHS

	Springs	Average Weight	Jacks	Coho	Average Weight
January to April	Few			Few	
May	Few		Few	Few	
June	Few		25		
July	25	36	50		
August	75	31	Few	25	9
September				Few	
October	Few			25	10
November	Few		Few		
December	Few				
TOTAL	100		75	50	

PORT HARDY - ALERT BAY

(Areas 11 and 12)

Most of the sport fishing effort in these two large areas is carried out by local residents from the Port Hardy and Alert Bay areas, who confine much of their effort to the waters between Vancouver Island and the mainland in Area 12. In 1960, the catch of spring salmon showed an increase, rising from 325 in 1959 to 425 for 1960. The take of coho continued to decline with 300 reported, the lowest catch reported since sport catch records were introduced in 1953. Some 50 jack spring, 50 grilse and 350 pink salmon made up the balance of the catch.

A few fish were taken in February but beginning in March, effort became more widespread with some 25 springs taken in Kingcome Inlet and Sutlej Channel. Effort continued at this level until June when 125 springs and 100 coho were reported taken, with the best fishing being found in Greenway Sound and the top end of Kingcome Inlet.

Activity increased in August and on through to September, with springs taken in Parsons Bay, Hoeya Sound, and off the mouth of the Nimpkish River. Some 40 sport fishermen took 300 pink salmon in August from off the Keogh River. In September the pink run to Keogh River dropped off, replaced by coho as the main species of catch. At least 3 of the spring salmon taken weighed over 60 pounds with the Nimpkish River run averaging from 30 to 50 pounds in weight.

SALMON CATCH BY MONTHS

	<u>Springs</u>	<u>Av. Wt.</u>	<u>Jacks</u>	<u>Coho</u>	<u>Av. Wt.</u>	<u>Grilse</u>	<u>Pinks</u>
Jan. to Apr.	75	12				Few	
May	50	12				50	
June	125	17		100	5		
July	100	14	25	75	5		25
August	25	30	25	25	7	Few	300
September	50	30		75	9		25
October	Few			25	9		
November							
December	Few						
TOTAL	425		50	300		50	350

CAMPBELL RIVER - DISCOVERY PASSAGE (AREA 13)

The catch of spring salmon in this area showed a minor drop of 250 for a total catch of 2,875. The coho catch likewise showed a drop from 18,700 in 1959 to 16,250 in 1960; nevertheless, this was the third highest catch of coho for the area since records were first compiled in 1953. Some 150 jack springs; 2,500 grilse; and 75 pink salmon made up the balance of the catch for this area for the year.

Although some fish were taken throughout the early months of the year, effort increased slowly until June, when favourable weather and a better-than-average abundance of coho brought a sharp increase in activity.

July was the peak month for coho as some 6,600, ranging from 5 to 8 pounds, were reported taken, with the bulk of the catch coming from the Cape Mudge - Butler Point area. Spring salmon in the "tyee"-weight class (30 pounds and over) began to show in late July and a number in the 40-pound range were taken.

In August, sport fishermen made 7,500 boat trips and for this effort reported 4,775 coho and 1,550 springs; plus a few hundred grilse and pinks. About 10% (130) of the springs were in the "tyee" class, approximately double the number of these trophy fish taken in 1959. During the first two weeks of August over 60 "tyee" were taken with the top three weighing 61, 61 1/2 and 66 pounds respectively. Both effort and catch dropped off in September although coho remained in good supply until the early part of October.

Most of the sport fishing activity in the area took place in the Discovery Passage region extending southward from April Point in the north down to Cape Mudge and down to as far as Shelter Point. Good fishing was also found in less well-publicized regions of the area with large springs reported from such places as Stuart Island at various times during the season. The catch of spring salmon however, at the special licence area of Phillips Arm, showed another consecutive drop from the 56 taken in 1959 down to 25 taken during 1960. The two largest springs taken in Phillips Arm weighed in at 55 and 50 pounds respectively.

SALMON CATCH BY MONTHS

	Springs	Av. Wt.	Jacks	Coho	Av. Wt.	Grilse	Pinks
Jan. to April	75	9				Few	
May	50	9	25	75	3.5	50	
June	150	14	25	2 425	4	150	25
July	875	14		6 600	5	600	25
August	1 550	16	50	4 775	5	850	25
September	175	12	25	2 200	5	750	
October	Few	8	Few	175	8	100	
November	Few	5	25				
December	Few	6					
TOTAL	2 875		150	16 250		2 500	75

SHELTER POINT TO DORCAS POINT - (AREA 14)
(Including the waters off Oyster Bay, Comox-Courtenay, Qualicum Beach and French Creek)

Compared to 1959, this area showed the largest increase in the catch of coho and coho grilse of any of the major sport fishing areas of the province. A total of 47,400 coho was taken, an increase of 11,200 over 1959, and exceeded only by the catch of 53,775 taken in 1957. Similarly the take of 45,350 grilse, of which 80% were coho, was the second highest on record, surpassed only by the catch of 48,600 grilse in 1958. Spring salmon, however, showed a drop from 6,055 in 1959 to 2,725 for the current year. Pinks likewise showed a very sharp drop while jack springs were relatively unchanged at 4,925.

In contrast to 1958 and 1959, spring salmon did not show in Comox Harbour and in other readily accessible offshore waters during the winter months. This, plus unfavourable weather, kept effort and catch at low levels until mid-April when large blueback (coho close to the grilse-weight) started to appear in increasing numbers at the southern end of the area, principally in the Northwest Bay region. Toward month-end, some 60 springs averaging 15 pounds were taken in Comox Harbour but this dropped off in May. The rapidly maturing blueback however continued to increase in number off Northwest Bay and in the area to the north up to Hornby Island, with the catch increasing to 13,350 in July and up to 17,700 coho and 23,600 coho grilse in August. By August, the coho averaged 5 1/2 pounds and ranged as high as 9 1/2 pounds, and were being taken throughout the area even though spring salmon were proportionately more important north of Cape Lazo.

Sport fishing activity reached its peak during July and August with an estimated 17,000 boat trips reported in the area for July and over 20,000 in August. Coho and coho grilse continued to provide the bulk of the catch even though "tyee" in Comox Harbour diverted a great deal of sport-fish interest when some 155 springs were taken in August, ranging from 18 pounds to a high of 65 1/2 pounds. This fishing terminated when the Bay was closed to sport fishing from September 18 to October 31 in order to insure adequate spawning escapement.

Even though coho and coho grilse were well distributed throughout the area, a declining seasonal interest abetted by southeast winds brought a sharp reduction in activity after mid-September, with both effort and catch continuing at a low level through November and December.

SALMON CATCH BY MONTHS

	<u>Springs</u>	<u>Av. Wt.</u>	<u>Jacks</u>	<u>Coho</u>	<u>Av. Wt.</u>	<u>Grilse</u>	<u>Pinks</u>
Jan. to April	150	16	75	650	3	1 250	
May	100	10	75	4 750	4	3 800	
June	300	10	275	5 400	4	650	
July	700	10	1 850	13 350	4	6 350	
August	775	10	1 600	17 700	5.5	23 600	275
September	625	12	900	5 450	5	8 600	
October	50	8	100	75	8	950	
November	Few	10	25	25	8	50	
December	25	8	25			100	
TOTAL	2 725		4 925	47 400		45 350	275

WESTVIEW - POWELL RIVER (AREA 15)

The catch of coho and coho grilse showed an increase in this area over 1959. A total of 2,300 coho was landed compared with 1,625 in 1959 and 5,050 in 1958. The catch of grilse at 4,200 was almost double the catch of the two previous years with two-thirds of the grilse being coho. Jack spring catches increased, but spring salmon landings dropped to about a third of the 1958 and 1959 catches.

Fishing effort was light during the first four months with some 75 spring salmon providing most of the interest. In May, the Westview-Grief Point shoreline was fished for coho grilse, and whenever the weather permitted, fishermen went out as far as Texada Island and Harwood Island where better catches were being made. Catches dropped off in the latter part of May, continuing into June. Coho stocks did however start to increase in June, and during the peak month of July, an estimated 1,200 boat trips netted sport fishermen some 250 springs; 100 jack springs; 700 coho and 300 grilse. For a short time at mid-month, spring salmon in the 30-pound class attracted fishermen to Toba Inlet. Some springs close to the 20-pound weight bracket were also taken near Savary Island and False Pass, and as a result, the July catch of springs averaged out at 15 pounds.

Catches increased in August even though overall effort dropped in the face of frequent rain and strong winds, which curtailed fishing along the exposed waters off Westview and Powell River after the middle of the month. Coho catches which climbed to 900 in August dropped off sharply in September although grilse remained in good supply maintaining fisherman interest. Continued unsettled weather and light catches in October brought effort and catch to a low intermittent winter level for the remaining two months of the year.

SALMON CATCH BY MONTHS

	<u>Springs</u>	<u>Av. Wt.</u>	<u>Jacks</u>	<u>Coho</u>	<u>Av. Wt.</u>	<u>Grilse</u>	<u>Pinks</u>
Jan. to April	75	7	25			50	
May	25	7		175	4	1 150	
June	75	6	50	400	4	200	
July	250	15	100	700	5	300	
August	300	10	75	900	5	1 500	
September	25	7		100	5	1 000	
October	25	7		25	5		
November	25	6					
December	Few	5					
TOTAL	800		250	2 300		4 200	

PENDER HARBOUR - SECHELT (AREA 16)

The 1960 catch in this area consisted of 1,625 spring salmon; 200 jack springs; 5,100 coho; and 12,050 grilse. Jack springs remained practically unchanged from 1959, but the catch of spring salmon was down to less than half of 1958 and 1959 figures, while the take of grilse was down to about a half of the 1959 total. The catch of coho dropped from 6,075 in 1959 to 5,100 in 1960.

Fishermen were out in Pender Harbour and in other adjoining protected waters throughout the first quarter of the year, but outside of a few spring salmon, fishing was slow and the weather was often discouraging, particularly in April. Coho grilse continued to increase in availability in May as did coho that appeared in the catch after the middle of the month but cold windy weather kept effort at a low level. The weather improved in June with fishermen having success with spring salmon around Pender Harbour, and in Lees Bay. Coho and coho grilse were more plentiful to the south around Lasqueti Island, the south end of Texada Island, and in the vicinity of the Thormanby Islands. About 2,400 boat trips were made in this area in both July and August, with availability and catch improving rapidly in August even though fishermen were handicapped by variable weather after the middle of the month. Coho and spring salmon were in improved supply with 500 spring salmon and 2,200 coho landed. Small grilse were particularly abundant throughout the area.

A seasonal drop occurred in activity after the Labour Day weekend. Outside of small grilse, salmon were not abundant in the area even though stocks increased in the Sechelt Inlet at month-end. The largest spring salmon of the year was taken near Fearney Point, weighing 48 and 3/4 pounds. General interest dropped off in October with light catches and only a few fishermen out in the last quarter of the year.

SALMON CATCH BY MONTHS

	<u>Springs</u>	<u>Av. Wt.</u>	<u>Jacks</u>	<u>Coho</u>	<u>Av. Wt.</u>	<u>Grilse</u>
Jan. to April	200	9				450
May	50	10	25	375	3	900
June	350	13	50	900	4	400
July	300	17	25	1 000	6	2 400
August	500	14	50	2 200	6	5 300
September	125	12	50	600	6	2 450
October	50	7		25	5	150
November	25	5				
December	25	6				
TOTAL	1 625		200	5 100		12 050

NANAIMO - LADYSMITH - CROFTON (AREA 17)

Coho were in good supply in this area during the year, with sport fishermen landing a new high of 6,950 coho and as well, reporting the second highest catch of grilse, 22,400 of which 21,000 were coho grilse. The previous high catch for coho was 4,725 taken in 1957, with the highest catch for grilse reported in 1954 when 27,600 were taken. On August 24, the minimum size limit for salmon was raised from 8 inches to 12 inches in length and as a result, many grilse were returned to the water in the area, and undoubtedly caused a sizeable reduction in the grilse catch. The catch of spring salmon dropped from 1,025 in 1959 to 575, while the catch of jack spring more than doubled from 600 in 1959 to 1,400 for 1960.

Although the weather was variable, sport fishermen were out in fair numbers fishing for grilse in the vicinity of Crofton-Osborne Bay from January on to the end of March. In April, large stocks of blueback moved northward along the easterly shores of Galiano, Valdes and Gabriola Islands, and were subjected to an intensive fishery in the waters off Nanaimo and in the vicinity of the Flat Top Islands. Most of the blueback were in the grilse-weight bracket, but some weighed as much as 5 pounds.

In May, stocks of coho (blueback) and coho grilse appeared to drop off as they dispersed northward in the Strait of Georgia; nevertheless the catch remained relatively constant, as more fishermen turned out despite rainy weather. The weather further affected catches later in the season as strong winds reduced effort in the more favourable fishing locations in exposed waters. Although the grilse catch fluctuated, the coho catch remained at a uniform level until August when an estimated 2,250 boat trips resulted in a catch of 1,650 coho; 5,100 grilse and 925 springs and jack springs. In September, both catch and effort dropped with the take of grilse substantially reduced due to the new size limit. By November activity was at the low point for the year with December showing some increase in both effort and catch as a few red spring started to show off Nanaimo, as well as grilse in the vicinity of Crofton.

SALMON CATCH BY MONTHS

	<u>Springs</u>	<u>Av. Wt.</u>	<u>Jacks</u>	<u>Coho</u>	<u>Av. Wt.</u>	<u>Grilse</u>
Jan, to April	75	7	125	1 100	3	7 300
May	25	8	25	1 075	4	5 000
June	25	9	75	1 025	4	600
July	50	10	100	1 000	4	800
August	200	8	725	1 650	4	5 100
September	175	7	300	1 050	4	1 850
October	Few	6	25	50	4	500
November	Few	6	25	--		550
December	25	6	Few	--		700
TOTAL	575		1 400	6 950		22 400

COWICHAN BAY & THE MILL BAY AREA OF
SAANICH INLET (AREA 18)

The catch of all species of salmon showed a drop in this area in 1960. A total of 1,775 spring salmon and 1,700 jack springs was taken, together adding up to the lowest catch of springs and jack springs since sport records were introduced in 1953. The catch of coho at 3,250 was the second lowest on record, while the grilse catch of 8,350 was less than the previous low of 8,700 taken in 1954, and only about 39% of the 1959 catch. In the case of grilse however, much of this decline was due to the new 12-inch minimum size limit reducing the overall catch after August 24, particularly in the Mill Bay region.

Grilse were in good supply in Cowichan Bay in January, but after these stocks dispersed by month-end, effort was light in the area until late in June when fishing picked up in the region of Active Pass and North and South Pender Island.

Effort increased sharply in July when grilse and a few larger springs and coho started to show in Cowichan Bay. August was the peak month for activity with over 5,050 boat trips made in the area excluding the Mill Bay region. Some 750 spring salmon provided most of the catch interest in Cowichan Bay even though the catch of springs was spotty compared to 1959. The catch of spring salmon continued until September 11 when a sport fishing closure was put into effect off the mouth of the Cowichan River in Cowichan Bay. Coho continued to show in the Active Pass region, and as well, they started to appear in quantity in Cowichan Bay. On September 15, the largest coho taken from Cowichan Bay was weighed in at 24 pounds, 13 ounces. Coho fishing continued to improve until October when some 1,750 coho averaging 10 1/2 pounds were taken with most of the catch made during the first two weeks of the month. Thereafter, both effort and catch dropped off to a low seasonal level for the remaining months of the year.

Fishing in the Mill Bay region of Saanich Inlet was reasonably consistent during the year with grilse dominating most of the catch. During the peak month of August, some 836 boat trips were made resulting in a catch of 2,000 grilse; 150 jacks; 75 springs and 75 coho. The best catch of coho was made in June when 450 were taken.

SALMON CATCH BY MONTHS

	<u>Springs</u>	<u>Av. Wt.</u>	<u>Jacks</u>	<u>Coho</u>	<u>Av. Wt.</u>	<u>Grilse</u>
Jan. to April	50	7	175	Few		1 550
May	25	8	25	175	4	150
June	25	8	100	475	4	100
July	100	8	125	150	5	1 000
August	825	12	375	125	7	4 200
September	625	12	725	400	9	700
October	25	14	125	1 800	10.5	300
November	75	8	25	100	11	150
December	25	6	25	25		200
TOTAL	1 775		1 700	3 250		8 350

VICTORIA, SOOKE, EAST SHORELINE OF SAANICH INLET AND ALL OF SAANICH INLET SOUTH OF BAMBERTON (AREA 19-20)

Sport fishermen caught 4,550 springs; 8,600 jack springs; 3,550 coho and 53,000 grilse in this area in 1960. The catch of springs and jacks was down from 1959, but otherwise reasonably comparable to the catch of other earlier years. The catch of coho, however, was the lowest on record and was about a third of both the 1959 catch as well as the catch average for the years 1952 - 1959. The grilse take for the year was down by about 24,000 from 1959, largely as the result of the increase in the minimum size limit from 8 inches to 12 inches on August 24, 1960.

Sport fish effort in the sheltered waters of Saanich Inlet during the first quarter of the year reflected fluctuating grilse stocks as well as unfavourable weather. About 300 grilse, mostly coho, were taken in February. The grilse catch dropped in March but rose sharply again in April when springs and jacks also started to appear. A steady seasonal rise took place in effort until August when some 8,300 boat trips by sport fishermen yielded an estimated 1,050 springs averaging 12 pounds; 2,900 jack springs; 1,300 coho and 20,000 grilse. Despite these catch figures, springs and coho were not present in any great number, as contrasted with the abundance of grilse. The grilse averaged about 3/4 of a pound and were subjected to an intensive fishery until the new minimum size of 12 inches ruled the bulk of them as undersized. This new size limit, plus a seasonal drop in interest, brought a rapid decline in effort and catch to a low in November and December, even though fish stocks started to improve in December.

Fishing in the waters off Sooke - Victoria was generally disappointing in 1960, as a result of bad weather and the failure of both springs and coho to show in any appreciable volume. The year got off to a good start as 225 spring salmon averaging 8 pounds were taken off Victoria in January; however, strong winds curbed effort in February, and although effort increased in March, catches were declining. From April onward, through to the end of July, variable stocks of springs and coho and a general scarcity of grilse combined with strong winds to keep catch returns low. Some 2,500 boat trips were made in both July and August but catches of jacks, coho, and particularly grilse, jumped sharply in August when a catch of 6,000 grilse; 200 coho; and 450 springs and jack springs was reported. Catches dropped in September as all stocks became increasingly scarce. At year-end, some improvement occurred with 450 spring salmon taken in November and December.

SALMON CATCH BY MONTHS

	<u>Springs</u>	<u>Av. Wt.</u>	<u>Jacks</u>	<u>Coho</u>	<u>Av. Wt.</u>	<u>Grilse</u>
Jan. to April	850	9	875	--		10 150
May	350	11	1 100	300	4	4 100
June	475	12	775	750	4	1 300
July	950	10	1 750	400	7	4 200
August	1 200	10	3 200	1 500	7	26 000
September	200	8	550	500	7	2 800
October	50	8	125	100	7	1 350
November	225	10	100	Few		1 100
December	250	7	125	--		2 000
TOTAL	4 550		8 600	3 550		53 000

PORT ALBERNI - ALBERNI INLET
(Areas 21, 22, 23)

The catch of large spring salmon in this area showed no change from the previous year with sport fishermen catching some 1,200 spring salmon, the same number as was estimated for 1959. The notable feature of this catch, however, is the fact that these springs ranging from 10 - 52 pounds, averaged out at the "tyee" qualifying weight of 30 pounds, overshadowing the take of other species both in number and in importance. About 150 jack springs and some 225 coho were taken, both figures representing a drop to less than half of the 1959 catch for these species.

Sport fishing in this area is primarily conducted at Port Alberni, along Alberni Inlet notably at Nahmint Bay, and to a much lesser extent in Trevor Channel in Barkley Sound. Although fish were available in the West Coast region, no activity took place until late July when coho and a few spring salmon started to show in Alberni Inlet. In August sport fishermen made some 1,500 boat trips and landed some 375 spring salmon in Port Alberni Harbour, off Cous Creek and in Nahmint Bay with the largest one weighing just under 53 pounds. Effort increased to 1,700 trips in September while catches more than doubled with 800 spring salmon reported. In the interest of conservation, a partial closure went into effect in Nahmint Bay on September 5, and on October 2 the upper portion of Alberni Inlet and Nahmint Bay was closed to all sport fishing, practically spelling an end to all sport fishing activity in the area for 1960.

Fishing off Bamfield in Trevor Channel was light with both springs and coho reported in the catch.

SALMON CATCH BY MONTHS

	<u>Springs</u>	<u>Av. Wt.</u>	<u>Jacks</u>	<u>Coho</u>	<u>Av. Wt.</u>
Jan. to April					
May					
June					
July	Few			100	5
August	375	30	50	25	6
September	800	30	100	100	8
October	25	30		Few	
November					
December					
TOTAL	1 200		150	225	

NOOTKA SOUND - ZEBALLOS - GOLD & BURMAN RIVERS
(Area 25)

The number of licences issued in the special sportfish regulation area of Gold and Burman Rivers in Muchalat Inlet increased in 1960; however, the catch of spring salmon showed a drop. A total of 170 spring salmon averaging 28.6 pounds was weighed in with 88 of these in the "tyee" class of 30 pounds and over in weight. This was a drop from the 212 landed in 1959 of which 130 were in the "tyee" class, but was better than the 1958 catch of 50 "tyee" out of 116 springs landed. A total of 178 licences was issued, with 121 going to residents of the area; 46 to persons living outside of Area 25; 9 went to Americans; and 2 to European tourists. The three largest salmon weighed 50, 49 and 47 pounds respectively. Although these special regulations apply from June 1 to October 31, fishing came to a halt on August 21 when the posted area was closed to all angling in order to ensure an adequate spawning escapement.

GOLD & BURMAN RIVERS SPECIAL LICENCE AREA CATCH BY WEEKS

Week Ending	Number of Springs landed	Number of Springs 30 pounds & over
July 30	17	7
August 6	49	28
13	46	23
20	42	21
27 (one day)	<u>16</u>	<u>9</u>
	<u>170</u>	<u>88</u>

The total catch for the area including catch under licence, was made up of 375 spring salmon; 150 jack springs, 125 coho and 200 grilse. With the exception of jack spring and grilse, the catch was down from 1959 with most of the drop attributed to adverse weather and a scarcity of salmon. Most of the sport fishing activity took place in Tahsis Narrows, Tahsis Inlet and in the waters off Nootka.

SALMON CATCH BY MONTHS

	<u>Springs</u>	<u>Av. Wt.</u>	<u>Jacks</u>	<u>Coho</u>	<u>Av. Wt.</u>	<u>Grilse</u>
Jan. to April	50	9	25			150
May	Few	7	Few			50
June	25	8	Few			
July	75	12	25	50	6	
August	200	25	25	50	7	
September	25	11	25	25	5	
October	Few		25	Few		
November			25			
December						
TOTAL	375		150	125		200

VANCOUVER - HOWE SOUND - FRASER RIVER (DISTRICT 1)

The catch in District 1, which takes in the waters around Vancouver and includes the tidal section of the Fraser River up to the Mission Bridge, consisted of 3,750 spring salmon; 5,950 jack springs; 9,125 coho; 37,650 grilse and 75 pink salmon. The catch of coho and grilse was up from 1959 when 7,300 coho and 24,000 grilse were taken but jack springs were down and the catch of spring salmon dropped from 10,225 in 1959 to 3,750 in 1960. Pink salmon showed the most abrupt reduction in catch, with only 75 taken as compared with the pink-cycle year catch of 18,800 in 1959.

Very little activity took place during the winter months. In early April, activity increased and springs and jack springs were taken in Horseshoe Bay, lower Howe Sound and along the West Vancouver shoreline. Improved weather conditions at the end of the month brought out several hundred fishermen with catches of spring salmon taken at McNab Creek, Horseshoe Bay, Sunset Beach, Salmon Rock and Ambleside.

Fishermen found springs and jack springs in good supply through the early part of May in the above areas. By the end of the month, local waters became discoloured from Fraser River run-off and catches declined. These conditions existed throughout the month of June. Early in July, coho began to appear in the catch from Gower Point in the southern entrance of Howe Sound and off Ambleside. Coho fishing continued fair in these areas throughout the month. The run of large springs appeared at Britannia Beach early in the month and fishing effort increased in that area as hundreds of fishermen attempted to catch a trophy-size fish.

Peak fishing activity took place in August, notably due to participation by sport fishermen in two major salmon derbies. The Britannia Beach run was below normal strength, and the catch considerably less than in previous years. Coho fishing continued fair to good in all parts of the area throughout the month. Grilse were plentiful; however, few were of legal size at the end of the month. In early September the center of fishing activity was off Point Grey and lower Howe Sound where coho and jack springs were being taken. Coho fishing dropped off by mid-month as the runs migrated to their parent streams. Fishing interest continued to decline thereafter to a winter level. In November and December, spring salmon attracted by an abundance of anchovies, were taken by mooching in Horseshoe Bay.

Bar fishing for coho and coho jacks on the Fraser River increased during September and reached a peak in mid-October with this type of fishing becoming increasingly popular as a form of recreation.

SALMON CATCHES BY MONTHS

	<u>Springs</u>	<u>Av. Wt.</u>	<u>Jacks</u>	<u>Coho</u>	<u>Av. Wt.</u>	<u>Grilse</u>	<u>Pinks</u>
Jan. to April	225	9	250	Few		600	
May	475	9	500	25	3	500	
June	400	10	375	50	4	400	
July	1 000	9	1 100	900	5	1 250	
August	775	9	1 500	4 650	6	8 900	50
September	575	9	1 625	2 200	6	7 250	25
October	150	9	400	1 250	7	16 950	
November	100	7	125	50	6	1 250	
December	50	7	75			550	
TOTAL	3 750		5 950	9 125		37 650	75

O T H E R A R E A S

With few large population concentrations, sport fishing on the west coast of Vancouver Island and in the coastal waters north of Bute Inlet is of relatively minor proportions as compared to the activity in the protected waters between Vancouver Island and the mainland. Nevertheless, tidal sport fishing is an increasingly important recreational pastime for residents in many parts of this region. In a few instances, despite isolation and problems of transportation and accommodation, the fishing is of such a caliber and sufficiently well-known as to attract many non-residents, including American tourists. Some of the activity in these regions is described here.

WEST COAST VANCOUVER ISLAND (Areas 24, 26 and 27)

On the west coast of Vancouver Island salmon were, at best, in variable supply during the year with the sport catch from Area 24, Clayquot Sound, reported at 250 spring salmon, 25 jack spring, 300 coho and 1,200 grilse, with all species except grilse showing a drop as compared to 1959. Most of the grilse and some of the coho were taken from the vicinity of Tofino; however, the bulk of the catch was taken wherever fish stocks were to be found, primarily by Indians for their own consumption. Although more non-residents fished in the area in 1960, the overall effort was small, with an estimated 230 boat trips reported in August. Further to the north, a scarcity of salmon during the late summer and fall months resulted in a reduced effort and catch by local residents of Area 26 - Kyuquot, and Area 27, Quatsino.

QUEEN CHARLOTTE ISLANDS (Areas 1 and 2)

At the north end of Graham Island, salmon sport fishing by residents of Masset began in August and carried through until October. About 75 coho averaging 10 pounds in weight made up most of the catch with only a few springs and grilse reported. Further to the south, the Tlell River on the east coast of Graham Island, mid-way between Masset and Queen Charlotte City attracted both residents and non-residents when coho started to appear in mid-August. Some 200 coho were taken in August and 800 in September with the run tapering off in September. Despite its isolated location, the coho averaging close to 12 pounds and ranging up to 23 pounds, attracted many non-residents including as many as 40 to 50 American sport fishermen in one month. In September, coho were taken in Skidegate Inlet by local residents.

Most of the sport fishing activity on Moresby Island took place in September and October, south of Sandspit at Copper Bay. Close to 600 coho were taken in September and 75 in October. They averaged about 9 pounds in September, rising to 12 in October, with the largest coho weighed in at close to 17 pounds. The total catch for these two areas was 1,975 coho, a few springs, and some 250 coho grilse.

OTHER AREAS.....continued

PRINCE RUPERT (Area 4)

Spring salmon provided the main tidal sport fish interest in the vicinity of Prince Rupert during the first 6 months of the year. About 30 to 50 springs were caught each month until June when 100 were reported taken, for a total catch for the year of 325 springs. Most of the catch was made in Prince Rupert Harbour and Metlakatla Passage. Some 25 coho were taken from Cloyah Bay in August. The spring salmon averaged about 20 pounds in weight with the largest one weighing in at 54 pounds, 6 ounces.

KITIMAT-BUTEDALE (Area 6)

Fishing effort was light throughout the area until May when a few spring salmon were taken around Butedale. Effort became more wide-spread in June when catches were made at Butedale and in Altanash Inlet. At the same time, enthusiasts began to fish the tidal section of the Kitimat River. Weather conditions were favourable and in July, 300 spring salmon, 50 jack springs, 150 coho and 50 pink salmon were reported taken with over three-quarters of this catch made from the Kitimat River. The balance of the catch was made around Butedale, where a 55 pound spring was landed. In August, more coho than springs were taken as both effort and catch dropped off. The total catch for the year was made up of 450 springs and jack springs, 425 coho and 50 pink salmon.

BELLA BELLA - OCEAN FALLS, BELLA COOLA (Areas 7 and 8)

In Area 7 in the vicinity of Bella Bella, little sport fishing effort was reported until local residents went out for coho in Gull Chuck (Kadjusdis Harbour) in July and August. About 50 coho were taken. In Area 8, a few springs were taken in January at the head of north Bentinck Arm at Bella Coola and also in the vicinity of Ocean Falls. Later in May and June, springs and jack springs were taken in lower Dean Channel from Jenny Bay to Port John. Interest picked up and in September, the peak month, some 75 coho and a few coho grilse were taken although catch returns were light as coho did not appear to be as plentiful as in previous years. Lower Dean Channel, French Creek, Jenny Bay, Port John and the mouth of the Koeve River in Fitzhugh Sound were the favourite coho fishing spots. The total catch for the two areas for the year was 175 springs and jack springs, 175 coho and a few coho grilse.

NASS RIVER, GRENVILLE-PRINCIPE, SMITH INLET (Areas 3, 5 and 10)

In Area 3, taking in the Nass River and Portland Canal up to Stewart at the head of the Inlet, some intermittent sport fishing effort was reported from March through to August. This same pattern was true for Area 5, Grenville-Principe Channels, with a few residents making most of the light catch reported. The estimated total catch for the two areas was 100 springs and jack springs and 25 coho. In Smith Inlet (Area 10) sporadic effort was reported by loggers.

A P P E N D I X I

GENERAL SPORT FISH SURVEY - AUGUST 7, 1960

INTRODUCTION

Since 1957, general one-day surveys have been carried out annually in the more important tidal sport fishing areas of British Columbia to assess effort and catch during a representative day of the peak period of sport fishing activity. These surveys also supply current information on trends and measures which assist in evaluating catch and effort figures as derived from other sources.

ORGANIZATION AND SCOPE OF SURVEY

As in previous years, the survey was conducted in the major sport fishing areas between Vancouver Island and the mainland, with a total of 914 questionnaires issued on a random basis to persons who were sport fishing during the survey day. Only one questionnaire was issued per boat with the name and address of the person who actually received the questionnaire recorded. To obtain further catch data, boat rental operators were asked to keep a special record of the number of boats rented as well as the catch brought in by their boats. Fishery Officers were asked to complete a general report giving an estimate of the number of boat trips made during the day in their area. This was used in conjunction with the two aerial counts of sport fish boats operating in the various areas during the day. Fishery Officers were also asked to estimate the number of pleasure boats being used by commercially licensed fishermen in their area during the survey day so that appropriate adjustments could be made to the overall estimate of sport fishing trips for the day.

QUESTIONNAIRE ISSUE AND RETURNS

Questionnaires were issued in 8 statistical areas on August 7, but in the ninth area - Port Alberni (Areas 21 - 23) - the survey was delayed until August 21 in order to coincide with the early stages of the "tyee" season. A total of 38% of the questionnaires was returned within the first 10 days. A follow-up letter was then sent to those who had not returned their questionnaires and as a result, another 35% responded for a total return of 73% or 668 out of the 914 issued.

Questionnaires were dated on receipt and a comparison of results was made to ascertain if there were any difference between questionnaires that were returned in the first 10 days, as compared to the questionnaires received as a result of the reminder letter. Some variations were found but they did not follow a consistent pattern to the point of statistical significance.

ESTIMATE OF THE NUMBER OF SPORT FISH TRIPS MADE DURING THE DAY

An estimated 3,585 sport fishing trips were made in the 8 areas covered by the survey on August 7. This estimate is based on information compiled from the aerial count, the daily effort-cycle as derived and graphed from information given on questionnaires and finally from observations and estimates made by Fishery Officers.

Some 1,700 boats were counted from the air during the first flight which began at Cowichan Bay at 6:45 A.M., covered the areas to the north, and terminated at 11:55 A.M. at Sea Island. The major portion of the second count was scheduled to catch the evening fishery and started from Cowichan Bay again at 5:50 P.M.; retraced the route of the morning flight; and concluded at Sea Island at 8:50 P.M. Earlier in the afternoon, a count of boats was made off Victoria and in Saanich Inlet between 1:30 and 2:30 P.M. Generally the weather was favourable except that strong winds held back sport fishermen until early afternoon in some areas, particularly Area 14. No aerial count was made in conjunction with the August 21 survey at Port Alberni Area 21-23.

CHARACTERISTICS OF THE SAMPLE BY AREA

Of the 668 questionnaires returned, 648 were used in the analysis, representing a 17% sample of the estimated 3,585 boat trips for the day. This is shown below by area, together with a percentage breakdown of the sample according to the home address shown on the questionnaire. This breakdown points to the tourist importance of tidal sport fishing, as in three areas over half of the questionnaires were returned by British Columbia residents from the outside of the immediate area or from American citizens.

TABLE 1 SAMPLE CHARACTERISTICS BY AREA

AREA	No. of Quest.	Estimated Boat Trips August 7	Sample as % of Total Trips	Av. No. persons per boat	Av. Hours Fished per boat		Distribution of sample according to home address on Questionnaire				
					Private	Rental	Within area	Other B.C.	U.S.	Other Canadian	Incom-plete data
							%	%	%	%	%
13	84	294	29	2.3	4.8	6.4	34	23	35	2	6
14	95	715	13	2.4	4.9	3.9	44	40	11	2	3
15	23	150	15	2.7	5.0	--	73	22	--		5
16	57	176	32	2.7	5.3	5.5	11	73	9		7
17	53	390	14	3.2	4.3	3.6	75	15	4	2	4
18	54	224	24	2.2	3.9	3.6	59	34	5		2
* 19A	44	286	15	2.8	5.1	3.1	89	2	7	2	--
*19B-20	47	300	16	2.0	5.0	4.5	96	--	--		4
Dist. 1	148	1 050	14	2.4	5.2	5.3	91	3	--		6
Sub-Total	605	3 585	17%	2.5	4.8	4.0					
21-23	43			2.4	5.6	4.5	67	14	7		12
TOTAL	648										

SALMON CATCH

The catch of fish on the survey day ranged from a low of .83 salmon per boat in area 21-23 Port Alberni, to 3.90 salmon and grilse in area 19A Saanich Inlet. If grilse (salmon 3 pounds or less in weight) are excluded, fishermen in four areas - 13, 14, 15 and 16, caught an average of over 1 salmon per boat, primarily coho. The average catch per boat day by areas is shown in Table 2.

* 19A: refers to Saanich Inlet; 19B - 20: refers to Victoria-Sooke region.

TABLE 2. AVERAGE CATCH OF SALMON & GRILSE PER BOAT, AUGUST 7, 1960 (* August 21 for Area 21-23)

AREA	No. of Quest.	CATCH OF SALMON						Total catch of Salmon & grilse per boat day
		Springs over 5 lbs.	Jacks 3-5 lbs.	Coho over 3 lbs.	Pink over 3 lbs.	Total Salmon over 3 lbs.	Salmon Grilse 3 lbs. & under	
13	84	.13	.07	1.23		1.43	.37	1.80
14	95	.15	.15	.82	.03	1.15	1.54	2.69
15	23	.17	.17	.87		1.21	1.22	2.43
16	57	.28	.11	1.26		1.65	1.49	3.14
17	53	.02	.21	.43		.66	1.83	2.49
18	54	.20	.07	.04		.31	.74	1.05
19A	44	.11	.23	.11		.45	3.45	3.90
19B-20	47	.04	.13	.32	.11	.60	2.70	3.30
* 21-23	43	.79	--	.02		.81	.02	.83
Dist. 1	148	.07	.21	.53		.81	.66	1.47

Some 41.5% of the boats did not catch salmon or grilse on the survey day. The percentage of fishermen reporting no catch ranged from a high of 60% of the boats in Area 18 (Cowichan Bay) to a low of 27% in Area 14 (Comox-Courtenay). Fishermen in the vicinity of Lasqueti Island reported the best average catches per boat on this particular day.

Table 3 groups questionnaires by the number of fish caught per boat and shows the percentage of the total catch reported for each of these groups.

TABLE 3 QUESTIONNAIRES GROUPED BY THE NUMBER OF FISH CAUGHT PER BOAT SHOWING THE PERCENTAGE OF BOATS AND CATCH IN EACH OF THESE GROUPS

AREA	GROUPING BY NUMBER OF FISH CAUGHT PER BOAT						
	No Catch	1 - 2 fish		3 - 4 fish		5 or more fish	
	% of Boats	% of boats	% of fish	% of boats	% of fish	% of boats	% of fish
13	39	32	28	17	30	12	42
14	27	32	18	19	23	22	59
15	43	13	8	22	31	22	61
16	45	15	4	9	9	31	87
17	33	33	22	14	20	20	58
18	60	28	37	4	11	8	52
19A	33	20	8	20	18	27	74
19B	29	33	14	10	10	28	76
21-23	56	35	61	7	25	2	14
Dist. 1	55	23	21	12	27	10	52

ESTIMATE OF TOTAL CATCH FOR THE DAY

Using the information in the above tables in conjunction with the earlier estimate of 3,585 boat trips for the day, there were 380 spring salmon; 570 jack springs; 2,110 coho; 50 pink salmon and 5,000 grilse taken in the areas where the survey was conducted on August 7, 1960. This catch was made by 2,100 boats, with the remaining 1,485 making no catch.

SURVEY LIMITATIONS

The main problem posed by this general one-day survey was the difficulty encountered of obtaining samples from all areas at all times during the course of the survey day. As a result, questionnaire distribution was primarily arranged at larger moorages in order to secure adequate numerical coverage.

This one-day survey, conducted during the peak month of activity, serves as a good cross-section of sport-fish activity. However, there are many factors which can bear on the nature and extent of participation during any one day. Consequently, although August 7 and August 21 were typical sport fishing days for the season, care should be exercised in interpolating survey data into seasonal conclusions.

APPENDIX II

SPORT FISH SURVEY OF THE FRASER RIVER BAR FISHERY - OCTOBER 16, 1960

The tidal section of the Fraser River, extending downstream from the Mission Bridge, supports a commercial fishery of acknowledged importance. Less well-known is the fact that this section of the river also serves as the site of an important recreational sport fishery. This one-day survey, conducted on October 16, 1960, was undertaken primarily to secure information on the extent of effort and catch during a Sunday of the peak month of sport fishing activity along the river. Under favourable weather conditions, a total of 150 questionnaires were distributed to the estimated 900 fishermen out for the day.

A total of 92, or 61%, of the questionnaires were returned showing that the fishermen's catch for the day averaged .98 salmon, made up primarily of small jack coho as well as a few coho over 3 pounds in weight. They averaged 9.15 hours of fishing on this day, with over 80% of the total fishermen in this sample out on the bars between 8:00 A.M. and 4:00 P.M.

Fifty-three percent (49) of the fishermen reporting caught no salmon on the survey day; 20% caught only one; while 27% caught more than one salmon, with the catch of this group accounting for 80% of all salmon landed.

Other information obtained from those reporting showed that these fishermen had fished an average of 15 days in 1960 - two-thirds of which was tidal fishing, mostly on the Fraser River Bars.

The 900 fishermen on the River caught an estimated 765 jack coho and 117 coho on the survey day, October 16, 1960.