

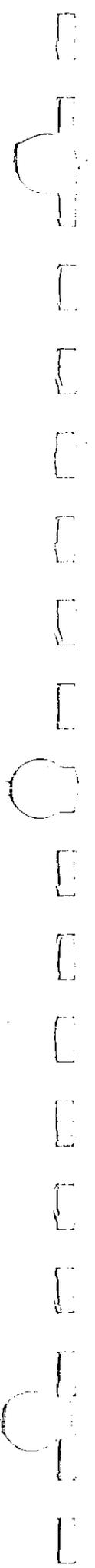
AGE, SEX, AND SIZE OF YUKON RIVER SALMON CATCH AND ESCAPEMENT, 1982

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FOREWORD

This publication is the first in a series of annual catch and escapement reports for the inshore return of Yukon River salmon. The objective of this report is to present the Alaska Department of Fish and Game's (ADF&G) most current estimates of Yukon River salmon abundance, utilization, and age, sex, and size composition. Estimation of these parameters is a prerequisite to studying the population dynamics of Yukon River salmon. Optimum management of the resource requires quantitative estimates of stock-specific production. Unfortunately, the magnitude of total returns is not known and the editors do not attempt to estimate this parameter. Likewise, no attempt has been made to determine the origin of fish caught in mixed stock fisheries. Some of this work is currently in progress and will be reported in future publications. However, catch and escapement data is presented in a manner that will facilitate future investigations of individual species and stock production.

ABSTRACT

Catches and escapements of chinook (*Oncorhynchus tshawytscha*), summer and fall chum (*O. keta*), and coho salmon (*O. kisutch*) for the Yukon River in 1982 are apportioned by age, sex, and size based on the best sample data available. Commercial and subsistence harvest of each species is summarized by age and fishing district. Sonar counts of salmon escapements to selected tributary streams are presented by day, while aerial and foot survey index counts are presented for all other streams surveyed.

INTRODUCTION

The Yukon River drainage supports major runs of chinook salmon (*Oncorhynchus tshawytscha* Walbaum), summer and fall chum salmon (*O. keta* Walbaum), and coho salmon (*O. kisutch* Walbaum). These species contribute to commercial and subsistence fisheries throughout the Yukon River drainage. Both pink salmon (*O. gorbuscha* Walbaum) and sockeye salmon (*O. nerka* Walbaum) are also indigenous to the Yukon River drainage and during some years, pink salmon return in large numbers. Sockeye salmon are only rarely found, and neither species is harvested by commercial or subsistence fishermen to any extent.

Most commercial fishing effort occurs in the lower 232 km (200 mi) of the river. These fisheries harvest mixed species and stocks of salmon bound for spawning areas throughout the Yukon River drainage. Resource management agencies, primarily Alaska Department of Fish and Game (ADF&G) and Environment Canada - Fisheries Service¹, conduct a variety of programs that supply information used to manage the fisheries. These programs include: (1) enumeration of catch in each fishery; (2) sampling major fisheries for age, sex, and size data; (3) indexing the magnitude of major spawning escapements by aerial survey; and (4) sampling major spawning escapements for age, sex, and size data. In some cases, escapements are estimated by visual or hydroacoustic counts, or by tagging studies. Some preliminary work has been done to estimate Yukon River salmon production through identification of major stocks in mixed stock fisheries and allocating these catches to the contributing spawning escapements. The most recent studies have concentrated on chinook salmon (McBride and Marshall 1983), Anvik River summer chum salmon (Buklis 1982), and Yukon and Tanana River fall chum salmon (Buklis 1981). Preliminary studies of total abundance and stock-specific run timing, through analysis of migrating timing of chinook salmon entering the lower Yukon River, have been reported by Mundy (1982) and Clark (1983).

Basic fishery statistics for Yukon River salmon have been presented by several sources. Final commercial catch data for Alaska is annually reported by ADF&G Division of Commercial Fisheries (1982). Total commercial and subsistence catch data (including Canadian catches) is reported in the ADF&G Annual Management Report series (1983). Escapement index and enumeration data are compiled in a computerized data base by Barton (in prep). Age, sex, and size summaries have been annually reported in the ADF&G Arctic-Yukon-Kuskokwim Region Age, Sex, and Size Composition of Salmon Report series (1981) and most recently for the Yukon River by Hamner (1982).

This report presents commercial and subsistence salmon harvest, and enumerated spawning escapements in numbers of fish by age and sex. Indices of relative abundance and age and sex summaries are also presented for other major spawning escapements. Length data is reported by sex and age for each sampled fishery

¹ Fisheries and Oceans, Canada. 122 Industrial Road, Whitehorse, Yukon Territory.

and escapement. No attempt has been made in this report to identify the origin of fish in mixed stock fisheries or to estimate the contribution of any spawning escapement to a fishery. It is hoped that this report will serve as an initial data base for future estimation of these parameters.

METHODS

Study Area Description

The Yukon Area includes all waters of the Yukon River and its tributary streams in Alaska (Figure 1) and the Yukon Territory (Figure 2), and all coastal waters from Canal Point light near Cape Stephens southward to the Naskonat Peninsula. The Alaska portion of the river is divided into six fishing districts as follows: Districts 1, 2, and 3 in the lower Yukon Area; and Districts 4, 5, and 6 in the upper Yukon Area. Commercial fishing occurs throughout the main Yukon River and in the lower 362 km (225 mi) of the Tanana River, however, most of the commercial harvest is taken in Districts 1 and 2. Set and drift gillnets are the legal gear in the lower Yukon, and set gillnets and fishwheels in the upper Yukon. Chinook and fall chum salmon are also commercially harvested in a gillnet fishery near Dawson City, Yukon Territory. Subsistence fishing is allowed throughout the drainage, although most of the effort is concentrated in the main Yukon River. The ADF&G Annual Management Report series (1983) provides a complete description of the Yukon River area and its fisheries.

Abundance Data

Alaskan commercial catch data used in this report was compiled by the Division of Commercial Fisheries for each management district and is based on preliminary computer tabulations of individual fish tickets (ADF&G 1983). These preliminary fish ticket tabulations will not differ significantly from final official tabulations published later by the Alaska Department of Fish and Game. Subsistence catch data was tabulated from catch calendars and personal interviews of subsistence fishermen throughout the drainage (ADF&G 1983). All Yukon Territory catch data was obtained from the Environment Canada - Fisheries Service.

Most of the escapement data presented in this report are peak aerial survey estimates for selected spawning streams (Barton in prep). These estimates are considered indices of relative abundance and do not represent a complete enumeration of season escapement. It is not possible to survey all of the spawning tributaries because of the wide distribution of salmon spawning populations throughout the Yukon River drainage, and personnel and budgetary constraints. However, most of the major spawning populations are surveyed and these indices are taken to represent overall trends in escapement. Total season escapement for several spawning tributaries is estimated by side-scan sonar. They are: (1) East Fork Andreafsky River summer chums, (2) Anvik River summer chums, (3) Melozita River summer chums, and (4) Sheenjek River fall chums. Chinook salmon escapement past the Whitehorse Dam in the Yukon Territory, Canada is visually counted through a fishway. Canadian Fisheries Service conducted a tagging study of chinook and fall chum salmon in the Yukon Territory in 1982, and this data may yield abundance estimates (Mulligan personal communication).

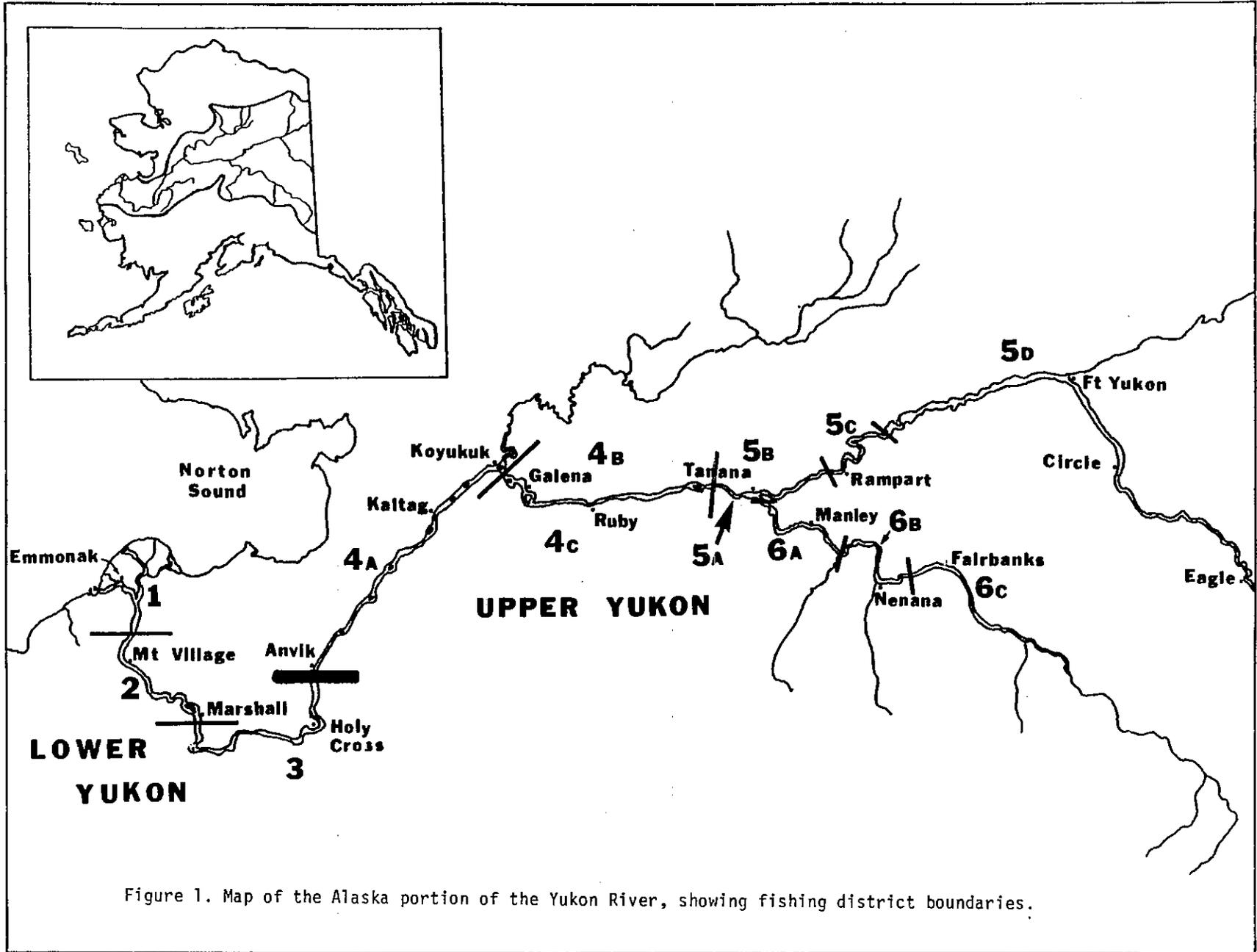


Figure 1. Map of the Alaska portion of the Yukon River, showing fishing district boundaries.

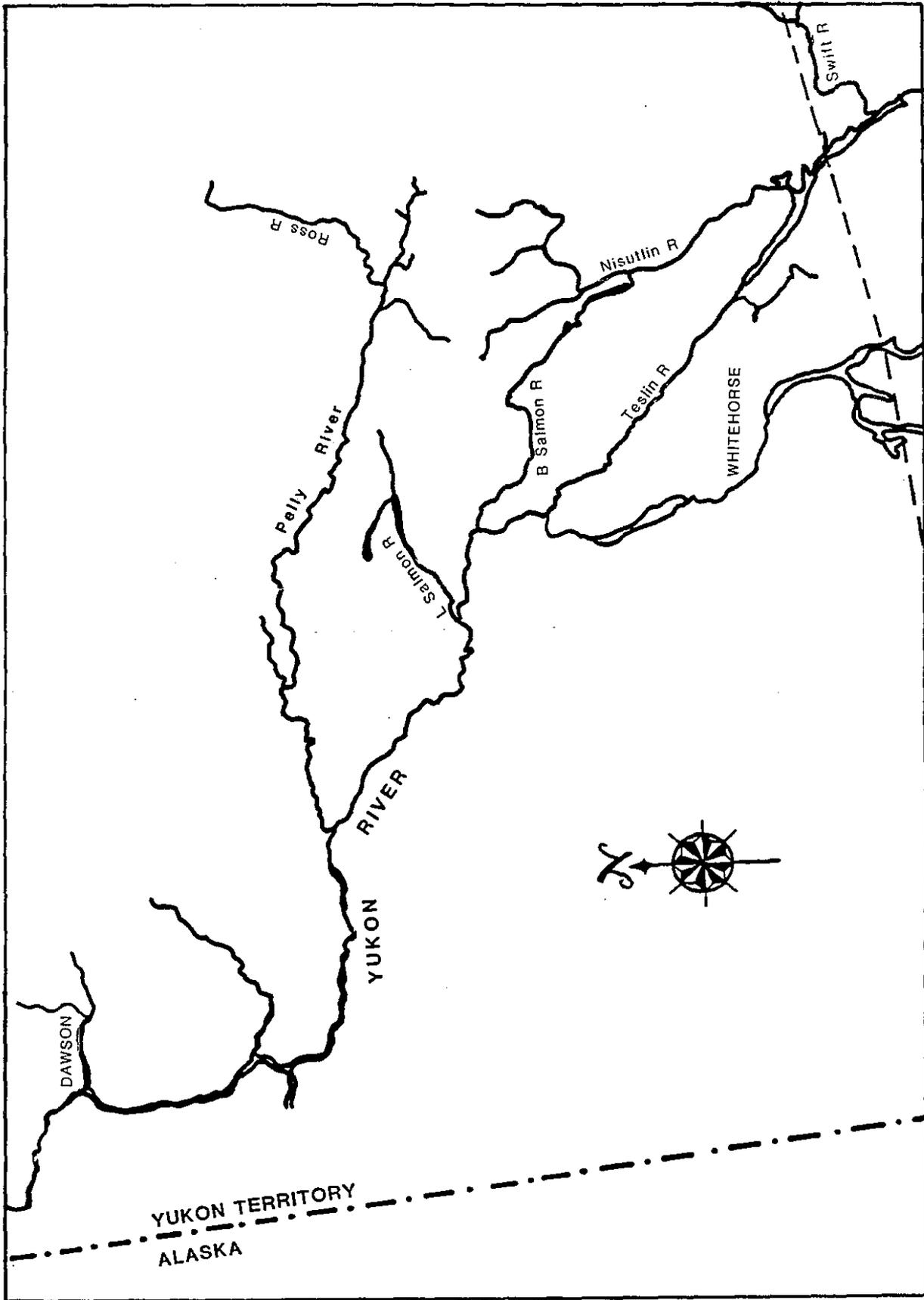


Figure 2. Map of the Canadian portion of the Yukon River.

Age, Sex, and Length Data

Salmon were sampled for scales, sex, and length. Examination of scale samples provided age information of salmon in the catch and escapement. Scales were taken from the left side of the fish approximately two rows above the lateral line and on the diagonal row downward from the posterior insertion of the dorsal fin (INPFC 1963). Scales were mounted on gum cards and impressions made in cellulose acetate (Clutter and Whitesel 1956). Ages are reported in Gilbert-Rich² notations. Sex determination was based on examination of either external morphological features or gonads. Fish length was measured from middle of eye to fork of tail.

An attempt was made to sample fish from the commercial catch for each gear type in each district. However, because of logistic considerations involved in sampling such a widely dispersed fishery, many of the smaller harvests were not sampled. The majority of the commercial catch samples were collected in Districts 1 and 2. Subsistence catches were generally not sampled although some subsistence catch samples were collected in Districts 1 and 6. Chinook, summer chum, fall chum, and coho salmon sample data collected in 1982, but not used to apportion catches, are presented in Appendix Tables 1-4. An attempt was made to sample most of the major chinook and chum salmon spawning populations. Most escapement samples were collected from carcasses, although some live samples were captured by beach seine and gillnet.

Fishery Age and Sex Composition:

Age and sex composition was computed for each fishery sampled and samples were stratified over time (i.e., sample periods) where there were sufficient data. A sample period is defined as the minimum number of samples needed to attain a level of precision, α , of 0.01 and a level of accuracy, d , of 0.05 for determination of the age composition. The number of categories or age groups, k , for each species was defined as the sum of those age groups that comprise at least 90% of the sample plus one (i.e., all of the remaining age groups that comprise the remaining 10% of the sample were pooled into an "other" category for the purpose of calculating k). The parameter, k , was calculated for each species as follows: chinook salmon $k=4$, chum salmon $k=3$, and coho salmon $k=2$. These parameters were then applied to the sample size determination formulas described by Cochran (1977). If there were insufficient samples to attain the above levels of precision and accuracy, the samples were pooled into a single sample period for that fishery. For those fisheries not sampled, age and sex composition was estimated based on samples collected from the nearest fishery in space and time. Catch was then allocated by age and sex.

² Gilbert-Rich formula: The first digit refers to the total age of the fish. The second digit, usually subscripted, refers to the number of years of freshwater residence. Marine age is the difference between these two.

Escapement Age and Sex Composition:

Age and sex composition was determined for each escapement sampled. Samples were collected from carcasses over a short period of time and only an index of relative abundance (aerial survey) was available in most cases. Samples were pooled in a single sample period and no attempt was made to allocate the index escapement estimate by age and sex. For those escapements enumerated by side-scan sonar, total escapement was allocated by age, sex, and size based on carcass, beach seine, or gillnet samples.

Length:

Average length, by sex and age, is reported as a single sample period for each sampled fishery and escapement. Length by age, for both sexes combined, was computed as a weighted average.

RESULTS

Total Utilization

Commercial harvest totaled 123,637 chinook, 614,174 summer chum, 225,027 fall chum, and 37,176 coho salmon in 1982 (Tables 1-7). Chinook, summer chum, and fall chum salmon catches were below the recent 5-year average, while the coho salmon catch was above average. The largest commercial harvest of each salmon species occurred in District 1.

Subsistence harvest totaled 24,114 chinook, 205,065 summer chum, 99,442 fall chum, and 29,813 coho salmon in 1982 (Table 8). The largest chinook and fall chum salmon harvests occurred in District 5, while the largest summer chum salmon harvest occurred in District 4. Most of the coho salmon harvest occurred in Districts 1 and 2.

Age, Sex, and Length Composition

Chinook Salmon:

Age 6₂ chinook made up the majority of the commercial harvest in Districts 1, 2, and 3 at 59%, 63%, and 63%, respectively (Tables 9-13). In Districts 1 and 2, age and sex composition during the first two sample periods (the chinook salmon season) did not change significantly over time. Catches in these districts during the third sample period (the summer chum salmon season) were mostly age 4₂ and 5₂ males (73% and 74%, respectively). District 3 commercial harvest was not sampled, and age and sex samples from the first sample period of District 2 were used to allocate this catch (Table 13).

Commercial gillnet and fishwheel fisheries in Districts 4, 5, and 6 were generally not sampled and the age and sex composition was applied from other sampling areas (Tables 14-21). Age and sex composition of the District 4 fishwheel catch was estimated using commercial catch samples from Galena and test fish catch samples from Stink Creek near Kaltag. Age and sex composition

Table 1. Yukon River District 1 salmon commercial catch by period, 1982^{1 2}.

Period Dates	Hours Fished	Number Fishermen	Chinook	Summer Chums	Fall Chums	Coho
6/14-6/15 ³	24	339	5,643	14,523		
6/17-6/18	24	391	12,395	19,705		
6/21-6/22	24	394	19,925	32,868		
6/24-6/25	24	386	7,103	19,320		
6/28-6/29	24	402	18,173	39,870		
7/01-7/02	24	397	7,504	29,702		
7/05-7/06 ⁴	24	287	1,920	33,800		
7/08-7/10	36	331	1,237	48,346		
7/12-7/13	24	291	287	10,816		1
7/15-7/17	36	173	85	428	6,213	
7/19-7/20 ⁵	24	200	58		4,310	
7/22-7/23	24	280	49		27,751	4
7/26-7/27	24	171	14		4,041	17
7/29-7/30	24	219	15		11,711	169
8/02-8/03	24	204	14		7,893	242
8/05-8/06	24	127	15		1,200	341
8/09-8/10	24	230	8		13,716	2,043
8/12-8/13	24	275	6		20,649	12,298
TOTAL			74,451	249,378	97,484	15,115

¹ Preliminary.

² Gillnet catches.

³ Chinook season thru 7/02.

⁴ Summer chum season thru 7/13.

⁵ Fall chum season thru 8/13.

Table 2. Yukon River District 2 salmon commercial catch by period, 1982^{1 2}.

Period Dates	Hours Fished	Number Fishermen	Chinook	Summer Chums	Fall Chums	Coho
6/16-6/17 ³	24	167	3,972	9,956		
6/20-6/21	24	188	7,779	11,231		
6/23-6/24	24	195	11,861	20,121		
6/27-6/28	24	169	3,442	7,575		
6/30-7/01	24	198	8,602	20,235		
7/04-7/05 ⁴	24	149	1,661	52,362		
7/07-7/09	36	153	1,065	31,613		
7/11-7/12	24	131	91	19,515		
7/14-7/16	36	107	215	8,611		
7/18-7/19	24	48	26	1,139	4,720	
7/21-7/22 ⁵	24	80	46		4,397	
7/25-7/26	24	143	34		17,117	16
7/28-7/29	24	118	18		6,817	17
8/01-8/02	24	132	5		16,066	90
8/04-8/05	24	109	3		9,172	139
8/08-8/09	24	65	4		967	224
8/11-8/12	24	124	3		5,672	934
8/15-8/16	24	171	5		31,653	12,759
TOTAL			39,132	182,358	96,581	14,179

- ¹ Preliminary.
- ² Gillnet catches.
- ³ Chinook season thru 7/01.
- ⁴ Summer chum season thru 7/19.
- ⁵ Fall chum season thru 8/16.

Table 3. Yukon River District 3 salmon commercial catch by period, 1982^{1 2}.

Period Dates	Hours Fished	Number Fishermen	Chinook	Summer Chums	Fall Chums	Coho
6/28-6/29 ³	24	21	1,107	1,063		
7/01-7/02	24	21	572	1,850		
7/05-7/06	24	19	929	1,173		
7/26-7/28 ⁴	36	3			216	
7/29-7/31	36	10	1		1,344	
8/02-8/04	36	11			850	
8/05-8/07	36	10			1,547	
8/09-8/11	36	5			781	
8/12-8/14	36	1			25	
8/16-8/18	36	11			1,052	87
TOTAL			2,609	4,086	5,815	87

¹ Preliminary.

² Gillnet catches.

³ Chinook season thru 7/06.

⁴ Fall chum season thru 8/18.

Table 4. Yukon River District 4 salmon commercial catch by period, 1982¹.

Period Dates	Hours Fished	Number Fishermen	Chinook			Summer Chum			Fall Chum ¹⁰	Coho ¹⁰
			GN ⁶	FW ⁷	Total	GN ⁸	FW ⁹	Total		
6/20-6/22 ³	48	2				11	201	212		
6/23-6/25	48	10	7	6	13	86	1,642	1,728		
6/27-6/29	48	17	21	10	31	159	3,016	3,175		
6/30-7/02	48	39	19	18	37	730	13,867	14,597		
7/04-7/06	48	51	29	89	118	1,299	24,680	25,979		
7/07-7/09	48	60	111	93	204	1,263	23,993	25,256		
7/11-7/13	48	64	107	167	274	1,912	36,332	38,244		
7/14-7/16	48	62	140	124	264	1,271	24,144	25,415		
7/18-7/20	48	56	51	66	117	556	10,562	11,118		
7/21-7/23	48	40	24	17	41	252	4,779	5,031		
7/25-7/27	48	24	2	6	8	87	1,657	1,744		
7/28-7/30	48	15				41	770	811		
8/01-8/03 ²	48	7				23	429	452		
8/04-8/06	48	1				2	33	35		
8/08-8/10	48	7				34	645	679		
8/11-8/13	48	8				23	429	452		
8/15-8/17 ⁴	48	8							580	
8/18-8/20	48	10							674	1
8/22-8/24 ⁵	48	2							122	5
8/26-8/28	48	2							696	9
8/29-8/31	48	4							560	
9/01-9/03	48	5							1,031	
9/05-9/07	48	3							259	
9/08-9/10	48	2							139	
TOTAL			511	596	1,107	7,749	147,179	154,928	4,061	15

- 10 -

- 1 Preliminary
- 2 Subdistricts 4B and 4C only.
- 3 Summer chum season thru 8/13.
- 4 Fall chum season thru 9/10.
- 5 Subdistrict 4C only.
- 6 Gillnets account for an estimated 75% of the subdistrict 4B chinook salmon catch, and 25% of the subdistrict 4C catch.
- 7 Fishwheels account for an estimated 100% of the subdistrict 4A chinook salmon catch, 25% of the subdistrict 4B catch, and 75% of the subdistrict 4C catch.
- 8 Gillnets account for an estimated 5% of the District 4 summer chum salmon catch.
- 9 Fishwheels account for an estimated 95% of the District 4 summer chum salmon catch.
- 10 Fishwheel catches.

Table 5. Yukon River District 5 salmon commercial catch by period, 1982^{1 2}.

Period Dates	Hours Fished	Number Fishermen	Chinook ⁹	Summer Chum ¹⁰	Fall Chum ¹⁰	Coho
6/25-6/27 ³	48	7	70			
6/29-7/01	48	20	345			
7/02-7/04	48	26	468			
7/06-7/08	48	32	813			
7/09-7/11	48	38	1,703	50		
7/13-7/14 ^{4 8}	48 ¹¹	50	1,385	184		
7/18-7/24 ⁵	11	2	211			
7/25-7/31 ⁵	11	2	278			
9/04-9/05 ⁶	48	4			2,034	
9/07-9/09 ⁶	48	5			3,935	
9/10-9/12	24 ¹²	21			6,543	
9/14-9/15 ⁷	24	8			1,166	
8/01-8/01 ⁵	24	2	106			
TOTAL			5,379	234	13,678	0

- ¹ Preliminary.
- ² Fishing periods apply to subdistricts 5A, 5B, and 5C unless otherwise indicated.
- ³ Summer chum season thru 7/14.
- ⁴ Includes 100 chinook salmon caught in subdistrict 5D during the period 7/11-7/17.
- ⁵ Subdistrict 5D only.
- ⁶ Subdistrict 5A only.
- ⁷ Subdistricts 5B and 5C only.
- ⁸ Fall chum season thru 9/15.
- ⁹ Gillnet catches.
- ¹⁰ Fishwheel catches.
- ¹¹ A total of 168 hrs fishing time was allowed in subdistrict 5D during the period 7/11-7/31.
- ¹² Except for subdistrict 5A, which had a 48-hour opening during the period 9/10-9/12.

Table 6. Yukon River District 6 salmon commercial catch by period, 1982¹.

Period Dates	Hours Fished	Number Fishermen	Chinook			Summer Chum			Fall Chum ⁸	Coho ⁸
			GN ⁴	FW ⁵	Total	GN ⁶	FW ⁷	Total		
7/02-7/04 ²	48	1	4		4					
7/05-7/07	48	3	12		12					
7/09-7/11	48	4	41		41	1	2	3		
7/12-7/14	48	6	47	14	61	17	74	91		
7/16-7/18	48	9	91	69	160	21	969	990		
7/19-7/21	48	11	201	146	347	29	1,198	1,227		
7/23-7/25	48	12	136	66	202	166	2,149	2,315		
7/26-7/28	48	14	82	14	96	362	3,817	4,179		
7/30-8/01	48	17	20		20	515	4,923	5,438		
8/02-8/04	48	17	11		11	410	5,261	5,671		
8/06-8/08	48	18	5		5	328	2,940	3,268		
9/14-9/15 ³	48	21						2,593	2,645	
9/17-9/19	24	25						4,823	5,135	
TOTAL			650	309	981	1,849	21,333	23,182	7,416	7,780

¹ Preliminary.

² Summer chum season thru 8/08.

³ Fall chum season thru 9/19.

⁴ Subdistricts 6A and 6C only.

⁵ Subdistrict 6B only.

⁶ Gillnets account for an estimated 5% of the subdistrict 6B summer chum salmon catch.

⁷ Fishwheels account for an estimated 100% of the subdistrict 6A summer chum salmon catch, 95% of the subdistrict 6B catch, and 75% of the subdistrict 6C catch.

⁸ Fishwheel catches.

Table 7. Yukon Territory salmon commercial catch by period, 1982¹.

Period Dates	Chinook					Fall Chinook		
	Dawson ²	Above Stewart River ³	Stewart River ⁴	Pelly River ⁵	Total	Dawson ²	Above Stewart River ³	Total
-07/11	79							
07/12-07/18	804							
07/19-07/25	1,991							
07/26-08/01	2,663					3		
08/02-08/08	1,900					5		
08/09-08/15	544					1		
08/16-08/22	62							
08/23-08/29	2					14		
08/30-09/05	10					1,422		
09/06-09/12						1,800		
09/13-09/19						1,317		
09/20-09/26						3,350		
09/27-10/03						2,231		
10/04-10/10						123		
10/11-10/17	1					48		
Total	8,056	352	121	111	8,640	10,314	844	11,158

¹ Gillnet catches.

² Catch below confluence of Stewart River.

³ Catch above confluence of Stewart River.

⁴ Catch in Stewart River.

⁵ Catch in Pelly River.

Table 8. Yukon River salmon subsistence catches, 1982¹.

District	Fishing Families	Chinook			Summer Chums ^{1 3}			Fall Chums ^{1 4}			Coho ^{1 5}		
		Gillnet	Fishwheel	Total	Gillnet	Fishwheel	Total	Gillnet	Fishwheel	Total	Gillnet	Fishwheel	Total
1 ²	205	2,311		2,311	18,452		18,452	10,016		10,016	11,192		11,192
2 ³	205	2,109		2,109	18,442		18,442	9,511		9,511	10,229		10,229
3 ⁴	42	3,359 ⁸		3,359	5,840		5,840	1,659		1,659	675		675
4 ⁵	141	877 ⁸	3,016 ⁹	3,893	22,832	129,381	152,213	1,615	14,537	16,152	232	2,085	2,317
5 ⁶	163	8,449		8,449	693	6,238	6,931	5,372	48,345	53,717	266	2,394	2,660
6 ⁷	228	681 ¹⁰	312 ¹¹	993	637	2,550	3,187	839	7,548	8,387	274	2,466	2,740
Canada		8,227 ¹²		8,227				3,459 ¹²		3,459			
TOTAL		26,013	3,328	29,341	66,896	138,169	205,065	32,471	70,430	102,901	22,868	6,945	29,813

- 1 Preliminary. Gear type derived from commercial catch estimates.
- 2 Villages of Sheldons Pt., Alakanuk, Emmonak, and Kotlik.
- 3 Villages of Mt. Village, Pikas Pt., St. Mary's, Pilot Station, and Marshall.
- 4 Villages of Russian Mission and Holy Cross.
- 5 Main Yukon villages from Anvik to Ruby, and Koyukuk River villages.
- 6 Main Yukon villages from Tanana to Eagle, and Chandalar River villages.
- 7 Manley, Nenana, and Fairbanks.
- 8 Catches from Galena and 25% of Ruby catches.
- 9 Catches from main Yukon villages from Anvik to Koyukuk, Koyukuk River villages, and 75% of Ruby catches.
- 10 Catches from Manley and Fairbanks.
- 11 Catches from Nenana.
- 12 Catches from Mayo, Pelly, Carmacks, Dawson, Ross River, and Burwash Landings. Includes both native and domestic catches.
- 13 Fishwheels account for an estimated 85% of the District 4 summer chum salmon subsistence catch, 90% of the District 5 catch, and 80% of the District 6 catch.
- 14 Fishwheels account for an estimated 90% of the fall chum salmon subsistence catch in Districts 4, 5, and 6.
- 15 Fishwheels account for an estimated 90% of the coho salmon subsistence catch in Districts 4, 5, and 6.

Table 9. Yukon Area District 1 chinook salmon commercial gillnet catch by age, length (mm), and sex, 1982¹.

	AGE GROUP ²								TOTAL
	42	52	53	62	63	72	73	83	
MALES									
NUMBER	4,299	13,148	58	15,655	396	3,387	698	70	37,711
AV LENGTH	576.33	730.35	502.00	876.95	697.43	1004.37	856.50	1057.00	800.50
STD ERROR	4.93	5.77	0.00	7.15	14.16	13.68	18.92	0.00	6.84
SAMP SIZE	147	309	1	266	6	55	10	1	795
FEMALES									
NUMBER	34	1,908	11	28,521	0	5,439	617	209	36,739
AV LENGTH	585.00	805.98	568.00	882.73	0.00	965.57	878.71	957.33	890.99
STD ERROR	34.64	10.79	0.00	3.31	0.00	7.39	14.99	14.68	4.81
SAMP SIZE	3	47	1	483	0	89	10	3	636
SEXES COMBINED									
NUMBER	4,333	15,056	69	44,176	396	8,826	1,315	279	74,450
AV LENGTH	576.39	739.93	512.52	880.68	697.43	980.46	866.92	982.34	845.16

¹ Allocation based on District 1 commercial catch samples.

² Gilbert-Rich Formula: first digit refers to the total age of the fish. The second digit (usually subscripted, but not here because of computer printing format) refers to the number of years of freshwater residence. Marine age is the difference between these two.

Table 10. Yield on Area District 1 chinook salmon commercial gillnet catch, age, and sex by sample period, 1982¹.

		AGE GROUP								
		42	52	53	62	63	72	73	83	TOTAL
SAMPLE PERIOD 1 6/15- 6/22 ²										
PERIOD SAMPLE SIZE		544								
MALE	COUNT	1,396	4,606	0	9,141	279	2,233	698	70	18,423
	PERCENT	3.68	12.13	0.00	24.08	.73	5.88	1.84	.18	48.53
FEMALE	COUNT	0	349	0	16,121	0	2,652	209	209	19,540
	PERCENT	0.00	.92	0.00	42.47	0.00	6.99	.55	.55	51.47
SEXES COMBINED	COUNT	1,396	4,955	0	25,262	279	4,885	907	279	37,963
	PERCENT	3.68	13.05	0.00	66.54	.73	12.87	2.39	.73	100.00
SAMPLE PERIOD 2 6/25- 7/ 2 ²										
PERIOD SAMPLE SIZE		562								
MALE	COUNT	1,808	7,174	58	6,183	117	1,108	0	0	16,448
	PERCENT	5.52	21.89	.18	18.86	.36	3.38	0.00	0.00	50.18
FEMALE	COUNT	0	1,342	0	11,841	0	2,741	408	0	16,332
	PERCENT	0.00	4.09	0.00	36.12	0.00	8.36	1.24	0.00	49.82
SEXES COMBINED	COUNT	1,808	8,516	58	18,024	117	3,849	408	0	32,780
	PERCENT	5.52	25.98	.18	54.98	.36	11.74	1.24	0.00	100.00
SAMPLE PERIOD 3 7/ 6- 7/27 ³										
PERIOD SAMPLE SIZE		325								
MALE	COUNT	1,095	1,368	0	331	0	46	0	0	2,840
	PERCENT	29.54	36.90	0.00	8.93	0.00	1.24	0.00	0.00	76.61
FEMALE	COUNT	34	217	11	559	0	46	0	0	867
	PERCENT	.92	5.85	.30	15.08	0.00	1.24	0.00	0.00	23.39
SEXES COMBINED	COUNT	1,129	1,585	11	890	0	92	0	0	3,707
	PERCENT	30.46	42.76	.30	24.01	0.00	2.48	0.00	0.00	100.00
PERIODS COMBINED										
SAMPLE SIZES COMBINED		1,431								
MALE	COUNT	4,299	13,148	58	15,655	396	3,387	698	70	37,711
	PERCENT	5.77	17.66	.08	21.03	.53	4.55	.94	.09	50.65
FEMALE	COUNT	34	1,908	11	28,521	0	5,439	617	209	36,739
	PERCENT	.05	2.56	.01	38.31	0.00	7.31	.83	.28	49.35
SEXES COMBINED	COUNT	4,333	15,056	69	44,176	396	8,826	1,315	279	74,450
	PERCENT	5.82	20.22	.09	59.34	.53	11.85	1.77	.37	100.00

¹ Allocation based on District 1 commercial catch samples.

² Chinook salmon season. No mesh size restrictions.

³ Chum salmon season. Six inch stretched mesh maximum.

Table 11. Yukon Area District 2 chinook salmon commercial gillnet catch by age, length (mm), and sex, 1982¹.

	AGE GROUP								TOTAL
	42	52	53	62	63	72	73	83	
MALES									
NUMBER	2,147	5,371	26	8,369	301	2,015	37	32	18,298
AV LENGTH	572.43	727.06	602.50	875.52	749.12	1025.21	830.00	1055.00	810.62
STD ERROR	4.91	6.78	2.50	8.17	34.18	9.65	0.00	0.00	7.63
SAMP SIZE	125	208	2	246	11	57	1	1	651
FEMALES									
NUMBER	0	675	0	16,288	0	3,169	595	107	20,834
AV LENGTH	0.00	819.32	0.00	879.42	0.00	967.41	881.42	919.01	891.11
STD ERROR	0.00	23.13	0.00	3.23	0.00	8.28	11.82	9.67	5.10
SAMP SIZE	0	27	0	485	0	91	17	3	623
SEXES COMBINED									
NUMBER	2,147	6,046	26	24,657	301	5,184	632	139	39,132
AV LENGTH	572.43	737.36	602.50	878.09	749.12	989.88	878.41	950.32	853.47

¹ Allocation based on District 2 commercial catch samples.

Tab'e 12. Yukon Area District 2 chinook salmon commercial gillnet catch, age, and sex by sample period, 1982¹.

		AGE GROUP								
		42	52	53	62	63	72	73	83	TOTAL
SAMPLE PERIOD 1 6/17- 6/24 ²										
PERIOD SAMPLE SIZE		633								
MALE	COUNT	298	2,499	0	5,783	37	1,455	37	0	10,109
	PERCENT	1.26	10.58	0.00	24.49	.16	6.16	.16	0.00	42.81
FEMALE	COUNT	0	261	0	10,518	0	2,164	485	75	13,503
	PERCENT	0.00	1.11	0.00	44.55	0.00	9.16	2.05	.32	57.19
SEXES COMBINED	COUNT	298	2,760	0	16,301	37	3,619	522	75	23,612
	PERCENT	1.26	11.69	0.00	69.04	.16	15.33	2.21	.32	100.00
SAMPLE PERIOD 2 6/28- 6/30 ²										
PERIOD SAMPLE SIZE		374								
MALE	COUNT	547	1,739	0	2,352	225	547	0	32	5,442
	PERCENT	4.54	14.44	0.00	19.53	1.87	4.54	0.00	.27	45.18
FEMALE	COUNT	0	258	0	5,249	0	966	97	32	6,602
	PERCENT	0.00	2.14	0.00	43.58	0.00	8.02	.81	.27	54.82
SEXES COMBINED	COUNT	547	1,997	0	7,601	225	1,513	97	64	12,044
	PERCENT	4.54	16.58	0.00	63.11	1.87	12.56	.81	.53	100.00
SAMPLE PERIOD 3 7/ 5- 7/ 8 ³										
PERIOD SAMPLE SIZE		267								
MALE	COUNT	1,302	1,133	26	234	39	13	0	0	2,747
	PERCENT	37.46	32.59	.75	6.73	1.12	.37	0.00	0.00	79.03
FEMALE	COUNT	0	156	0	521	0	39	13	0	729
	PERCENT	0.00	4.49	0.00	14.99	0.00	1.12	.37	0.00	20.97
SEXES COMBINED	COUNT	1,302	1,289	26	755	39	52	13	0	3,476
	PERCENT	37.46	37.08	.75	21.72	1.12	1.50	.37	0.00	100.00
PERIODS COMBINED										
SAMPLE SIZES COMBINED		1,274								
MALE	COUNT	2,147	5,371	26	8,369	301	2,015	37	32	18,298
	PERCENT	5.49	13.73	.07	21.39	.77	5.15	.09	.08	46.76
FEMALE	COUNT	0	675	0	16,288	0	3,169	595	107	20,834
	PERCENT	0.00	1.72	0.00	41.62	0.00	8.10	1.52	.27	53.24
SEXES COMBINED	COUNT	2,147	6,046	26	24,657	301	5,184	632	139	39,132
	PERCENT	5.49	15.45	.07	63.01	.77	13.25	1.62	.36	100.00

¹ Allocation based on District 2 commercial catch samples.

² Chinook salmon season. No mesh size restrictions.

³ Chum salmon season. Six inch stretched mesh maximum.

Table 13. Yukon Area District 3 chinook salmon commercial gillnet catch, age, and sex by sample period, 1982¹.

		AGE GROUP							
		42	52	62	63	72	73	83	TOTAL
SAMPLE PERIOD 1 6/28- 8/18 ¹									
PERIOD SAMPLE SIZE		633							
MALE	COUNT	33	276	639	4	161	4	0	1,117
	PERCENT	1.26	10.58	24.49	.15	6.17	.15	0.00	42.81
FEMALE	COUNT	0	29	1,162	0	239	54	8	1,492
	PERCENT	0.00	1.11	44.54	0.00	9.16	2.07	.31	57.19
SEXES COMBINED	COUNT	33	305	1,801	4	400	58	8	2,609
	PERCENT	1.26	11.69	69.03	.15	15.33	2.22	.31	100.00

¹ Allocation based on samples from District 2 commercial catch sample period 1.

Table 14. Yukon Area District 4 chinook salmon commercial gillnet catch by age, length (mm), and sex, 1982¹.

	AGE GROUP					TOTAL
	32	42	52	62	72	
MALES						
NUMBER	46	23	70	94	23	256
AV LENGTH	433.50	438.00	729.00	890.50	962.00	729.99
STD ERROR	43.50	0.00	6.51	27.89	0.00	19.83
SAMP SIZE	2	1	3	4	1	11
FEMALES						
NUMBER	0	70	23	140	23	256
AV LENGTH	0.00	577.67	717.00	913.50	939.00	806.31
STD ERROR	0.00	28.26	0.00	11.68	0.00	14.08
SAMP SIZE	0	3	1	6	1	11
SEXES COMBINED						
NUMBER	46	93	93	234	46	512
AV LENGTH	433.50	543.13	726.03	904.26	950.50	768.15

¹ Allocation based on District 4 commercial catch samples.

Table 15. Yukon Area District 4 chinook salmon commercial gillnet catch, age, and sex by sample period, 1982¹.

		AGE GROUP					
		32	42	52	62	72	TOTAL
SAMPLE PERIOD 1 7/12- 7/19							
PERIOD SAMPLE SIZE		22					
MALE	COUNT	46	23	70	94	23	256
	PERCENT	8.98	4.49	13.67	18.36	4.49	50.00
FEMALE	COUNT	0	70	23	140	23	256
	PERCENT	0.00	13.67	4.49	27.34	4.49	50.00
SEXES COMBINED	COUNT	46	93	93	234	46	512
	PERCENT	8.98	18.16	18.16	45.70	8.98	100.00

¹ Allocation based on District 4 commercial catch samples.

Table 16. Yukon Area District 4 chinook salmon commercial fishwheel catch by age, length (mm), and sex, 1982¹.

	AGE GROUP				
	32	42	52	62	TOTAL
MALES					
NUMBER	39	233	168	39	479
AV LENGTH	385.33	527.56	695.15	815.00	598.16
STD ERROR	14.52	13.67	13.00	2.89	12.63
SAMP SIZE	3	18	13	3	37
FEMALES					
NUMBER	0	91	13	13	117
AV LENGTH	0.00	512.14	675.00	895.00	572.78
STD ERROR	0.00	9.18	0.00	0.00	7.14
SAMP SIZE	0	7	1	1	9
SEXES COMBINED					
NUMBER	39	324	181	52	596
AV LENGTH	385.33	523.23	693.70	835.00	593.18

¹ Allocation based on District 4 commercial catch samples and Kaltag (Stink Creek) test fish samples.

Table 17. Yukon Area District 4 chinook salmon commercial fishwheel catch, age, and sex by sample period, 1982¹.

		AGE GROUP				
		32	42	52	62	TOTAL
SAMPLE PERIOD 1 7/ 8- 8/20						
PERIOD SAMPLE SIZE 46						
MALE	COUNT	39	233	168	39	479
	PERCENT	6.54	39.09	28.19	6.54	80.37
FEMALE	COUNT	0	91	13	13	117
	PERCENT	0.00	15.27	2.18	2.18	19.63
SEXES COMBINED	COUNT	39	324	181	52	596
	PERCENT	6.54	54.36	30.37	8.72	100.00

¹ Allocation based on District 4 commercial catch samples and Kaltag (Stink Creek) test fish samples.

Table 18. Yukon Area District 5 chinook salmon commercial gillnet catch, age, and sex by sample period, 1982¹.

		AGE GROUP							
		42	52	53	62	63	72	73	TOTAL
SAMPLE PERIOD 1 6/25- 8/ 1									
PERIOD SAMPLE SIZE		279							
MALE	COUNT	251	675	19	983	116	443	39	2,526
	PERCENT	4.67	12.55	.35	18.27	2.16	8.24	.73	46.96
FEMALE	COUNT	0	212	0	1,696	39	790	116	2,853
	PERCENT	0.00	3.94	0.00	31.53	.73	14.69	2.16	53.04
SEXES COMBINED	COUNT	251	887	19	2,679	155	1,233	155	5,379
	PERCENT	4.67	16.49	.35	49.80	2.88	22.92	2.88	100.00

¹ Allocation based on Dawson commercial catch samples.

Table 19. Yukon Area District 6 chinook salmon commercial gillnet catch, age, and sex by sample period, 1982¹.

		AGE GROUP				
		42	52	53	62	TOTAL
SAMPLE PERIOD 1 7/ 6- 8/ 7						
PERIOD	SAMPLE SIZE	91				
MALE	COUNT	222	114	7	107	450
	PERCENT	34.15	17.54	1.08	16.46	69.23
FEMALE	COUNT	57	36	0	107	200
	PERCENT	8.77	5.54	0.00	16.46	30.77
SEXES COMBINED	COUNT	279	150	7	214	650
	PERCENT	42.92	23.08	1.08	32.92	100.00

¹ Allocation based on District 6 subsistence (Tanana check station) catch samples.

Table 20. Yukon Area District 6 chinook salmon commercial fishwheel catch, age, and sex by sample period, 1982¹.

		AGE GROUP				
		42	52	62	72	TOTAL
SAMPLE PERIOD 1 7/20- 7/20						
PERIOD SAMPLE SIZE		19				
MALE	COUNT	49	130	0	0	179
	PERCENT	15.86	42.07	0.00	0.00	57.93
FEMALE	COUNT	0	16	98	16	130
	PERCENT	0.00	5.18	31.72	5.18	42.07
SEXES COMBINED	COUNT	49	146	98	16	309
	PERCENT	15.86	47.25	31.72	5.18	100.00

¹ Allocation based on District 6 subsistence (Nenana) catch samples.

Table 21. Yukon Area Dawson chinook salmon gillnet catch by age, length (mm), and sex, 1982¹.

	AGE GROUP							TOTAL
	42	52	53	62	63	72	73	
MALES								
NUMBER	403	1,084	31	1,579	186	712	62	4,057
AV LENGTH	639.46	759.83	632.00	992.39	693.50	1094.78	950.00	896.06
STD ERROR	20.58	12.85	0.00	12.37	30.54	12.74	18.00	14.20
SAMP SIZE	13	35	1	51	6	23	2	131
FEMALES								
NUMBER	0	341	0	2,724	62	1,270	186	4,583
AV LENGTH	0.00	826.36	0.00	942.62	809.00	1019.10	877.67	950.72
STD ERROR	0.00	29.26	0.00	4.76	46.00	6.14	14.51	7.91
SAMP SIZE	0	11	0	88	2	41	6	148
SEXES COMBINED								
NUMBER	403	1,425	31	4,303	248	1,982	248	8,640
AV LENGTH	639.46	775.75	632.00	960.88	722.37	1046.29	895.75	925.05

¹ Allocation based on Dawson commercial catch samples.

of the District 5 gillnet fishery was estimated using commercial catch samples from Dawson, while composition of the District 6 commercial catch is based on District 6 subsistence catch samples.

Age 6₂ chinook predominated gillnet catches in Districts 4 and 5 (46% and 50%, respectively), while collectively, age 4₂ and 5₂ fish predominated the District 4 and District 6 fishwheel catches (85% and 63%, respectively) and the District 6 gillnet catch (66%). The sample sizes were very small and the precision of these estimates is questionable.

The Yukon Territory commercial harvest was primarily 6₂ (50%), 7₂ (23%), and 5₂ (16%) chinook salmon (Tables 21-22).

Subsistence fisheries in Districts 1-5 were not sampled and allocations by gear type, age, and sex are estimated from the appropriate commercial fishery samples (Tables 23-28). The District 6 subsistence harvest was sampled and age 4₂ and 5₂ fish were the predominant age classes (Tables 29-32). Age and sex composition of Yukon Territory subsistence chinook salmon catches were estimated based on Dawson commercial fishery samples (Table 33).

A total of 161,669 chinook salmon were harvested in commercial and subsistence fisheries in all 6 districts and the Yukon Territory combined (Table 34). Age 6₂ (92,608 or 57%) fish were the most abundant age class, followed by age 5₂ (29,672 or 18%), 7₂ (22,697 or 14%), and 4₂ (10,989 or 7%).

Chinook salmon spawn in tributary streams throughout the Yukon River drainage (Figure 3). Aerial survey conditions of spawning escapement during 1982 were generally poor because of inclement weather conditions (Tables 35-37). The only chinook salmon escapement surveyed in the lower portion of the drainage was the Andrafsky River (peak estimate of 1,973 fish). The largest escapements in the middle portion of the drainage were the Salcha, Chena, and Gisasa Rivers (peak estimates of 2,534, 2,073, and 421 fish, respectively). The largest spawning escapements in the Canadian portion of the drainage were the Big Salmon, Nisutlin, Little Salmon, and Wolf Rivers (peak estimates of 1,168, 843, 305, and 225 fish, respectively). A total of 473 chinook salmon passed through the Whitehorse fishway (Table 38). Magnitude of spawning escapements was generally much reduced from levels observed in 1980 and 1981 (ADF&G 1982).

Male fish were more abundant than females in the lower Yukon River escapements (Tables 39-40). Males composed 85% of the Andrafsky River sample and 72% of the Anvik River sample. Age 5₂ was the predominant age class for both rivers (49% and 38%, respectively); followed by age 4₂ (35% and 34%, respectively), and 6₂ (12% and 28%, respectively) fish. All fish had one freshwater check.

Male fish also predominated the middle Yukon River escapements (Tables 41-43). Percentage of males for the Gisasa, Salcha, and Chena Rivers was similar (66%, 62%, and 64%, respectively). Age 6₂ fish predominated the Salcha and Chena River escapements (40% and 38%, respectively), while age 5₂ fish predominated the Gisasa River escapement (44%). Collectively, age 4₂, 5₂, and 6₂ fish composed over 90% of these spawning populations. Only two chinook salmon (both from the Salcha River) had two freshwater annuli (checks) while all other samples were one check.

Table 22. Yukon Area Dawson chinook salmon commercial gillnet catch, age, and sex by sample period, 1982¹.

		AGE GROUP							
		42	52	53	62	63	72	73	TOTAL
SAMPLE PERIOD 1 7/28- 8/ 7									
PERIOD SAMPLE SIZE		279							
MALE	COUNT	403	1,084	31	1,579	186	712	62	4,057
	PERCENT	4.66	12.55	.36	18.28	2.15	8.24	.72	46.96
FEMALE	COUNT	0	341	0	2,724	62	1,270	186	4,583
	PERCENT	0.00	3.95	0.00	31.53	.72	14.70	2.15	53.04
SEXES COMBINED	COUNT	403	1,425	31	4,303	248	1,982	248	8,640
	PERCENT	4.66	16.49	.36	49.80	2.87	22.94	2.87	100.00

¹ Allocation based on Dawson commercial catch samples.

Table 23. Yukon Area District 1 chinook salmon subsistence gillnet catch, age, and sex by sample period, 1982¹.

		AGE GROUP								
		42	52	53	62	63	72	73	83	TOTAL
SAMPLE PERIOD 1 6/14- 8/13										
PERIOD SAMPLE SIZE		1,431								
MALE	COUNT	237	498	2	430	10	89	16	2	1,284
	PERCENT	10.26	21.55	.09	18.61	.43	3.85	.69	.09	55.56
FEMALE	COUNT	5	76	2	779	0	144	16	5	1,027
	PERCENT	.22	3.29	.09	33.71	0.00	6.23	.69	.22	44.44
SEXES COMBINED	COUNT	242	574	4	1,209	10	233	32	7	2,311
	PERCENT	10.47	24.84	.17	52.32	.43	10.08	1.38	.30	100.00

¹ Allocation based on District 1 commercial catch samples.

Table 24. Yukon Area District 2 chinook salmon subsistence gillnet catch, age, and sex by sample period, 1982¹.

		AGE GROUP								
		42	52	53	62	63	72	73	83	TOTAL
SAMPLE PERIOD 1 6/16- 8/16										
PERIOD SAMPLE SIZE		1,274								
MALE	COUNT	207	344	3	408	18	94	2	2	1,078
	PERCENT	9.82	16.31	.14	19.35	.85	4.46	.09	.09	51.11
FEMALE	COUNT	0	45	0	802	0	151	28	5	1,031
	PERCENT	0.00	2.13	0.00	38.03	0.00	7.16	1.33	.24	48.89
SEXES COMBINED	COUNT	207	389	3	1,210	18	245	30	7	2,109
	PERCENT	9.82	18.44	.14	57.37	.85	11.62	1.42	.33	100.00

¹ Allocation based on District 2 commercial catch samples.

Table 25. Yukon Area District 3 chinook salmon subsistence gillnet catch, age, and sex by sample period, 1982¹.

		AGE GROUP							
		42	52	62	63	72	73	83	TOTAL
SAMPLE PERIOD 1 6/28- 8/18									
PERIOD SAMPLE SIZE		633							
MALE	COUNT	42	356	823	5	207	5	0	1,438
	PERCENT	1.25	10.60	24.50	.15	6.16	.15	0.00	42.81
FEMALE	COUNT	0	37	1,496	0	308	69	11	1,921
	PERCENT	0.00	1.10	44.54	0.00	9.17	2.05	.33	57.19
SEXES COMBINED	COUNT	42	393	2,319	5	515	74	11	3,359
	PERCENT	1.25	11.70	69.04	.15	15.33	2.20	.33	100.00

¹ Allocation based on District 2 commercial catch sample period 1.

Table 26. Yukon Area District 4 chinook salmon subsistence gillnet catch, age, and sex by sample period, 1982¹.

		AGE GROUP					
		32	42	52	62	72	TOTAL
SAMPLE PERIOD 1 7/12- 7/19							
PERIOD SAMPLE SIZE 22							
MALE	COUNT	163	82	245	327	82	899
	PERCENT	9.07	4.56	13.63	18.19	4.56	50.00
FEMALE	COUNT	0	245	82	490	82	899
	PERCENT	0.00	13.63	4.56	27.25	4.56	50.00
SEXES COMBINED	COUNT	163	327	327	817	164	1,798
	PERCENT	9.07	18.19	18.19	45.44	9.12	100.00

¹ Allocation based on District 4 commercial catch samples.

Table 27. Yukon Area District 4 chinook salmon subsistence fishwheel catch, age, and sex by sample period, 1982¹.

		AGE GROUP				
		32	42	52	62	TOTAL
SAMPLE PERIOD 1 7/08- 8/20						
PERIOD SAMPLE SIZE 46						
MALE	COUNT	137	820	592	137	1,686
	PERCENT	6.54	39.12	28.24	6.54	80.44
FEMALE	COUNT	0	318	46	46	410
	PERCENT	0.00	15.17	2.19	2.19	19.56
SEXES COMBINED	COUNT	137	1,138	638	183	2,096
	PERCENT	6.54	54.29	30.44	8.73	100.00

¹ Allocation based on District 4 commercial catch samples and Kaltag (Stink Creek) test fish samples.

Table 28. Yukon Area District 5 chinook salmon subsistence gillnet catch, age, and sex by sample period, 1982¹.

		AGE GROUP							
		42	52	53	62	63	72	73	TOTAL
SAMPLE PERIOD 1 7/28- 8/ 7									
PERIOD SAMPLE SIZE		279							
MALE	COUNT	394	1,060	30	1,543	182	697	61	3,967
	PERCENT	4.66	12.55	.36	18.26	2.15	8.25	.72	46.95
FEMALE	COUNT	0	333	0	2,664	61	1,242	182	4,482
	PERCENT	0.00	3.94	0.00	31.53	.72	14.70	2.15	53.05
SEXES COMBINED	COUNT	394	1,393	30	4,207	243	1,939	243	8,449
	PERCENT	4.66	16.49	.36	49.79	2.88	22.95	2.88	100.00

¹ Allocation based on Dawson commercial catch samples.

Table 29. Yukon Area District 6 chinook salmon subsistence gillnet catch by age, length (mm), and sex, 1982¹.

	AGE GROUP				
	42	52	53	62	TOTAL
MALES					
NUMBER	232	120	7	112	471
AV LENGTH	578.87	679.69	585.00	861.67	671.90
STD ERROR	8.01	14.50	0.00	15.33	11.27
SAMP SIZE	31	16	1	15	63
AV WEIGHT	.56	1.05	.70	2.11	1.06
STD ERROR	.02	.07	0.00	.12	.06
SAMP SIZE	31	16	1	15	63
FEMALES					
NUMBER	60	37	0	113	210
AV LENGTH	561.87	697.00	0.00	878.33	755.96
STD ERROR	12.53	34.77	0.00	15.89	18.30
SAMP SIZE	8	5	0	15	28
AV WEIGHT	.50	1.10	0.00	2.10	1.47
STD ERROR	.04	.19	0.00	.11	.10
SAMP SIZE	8	5	0	15	28
SEXES COMBINED					
NUMBER	292	157	7	225	681
AV LENGTH	575.38	683.77	585.00	870.04	697.82
STD ERROR	8.94	19.33	0.00	15.61	13.44
SAMP SIZE	39	21	1	30	91
AV WEIGHT	.55	1.06	.70	2.10	1.18

¹ Allocation based on District 6 subsistence (Tanana check station) catch samples.

Table 30. Yukon Area District 6 chinook salmon subsistence gillnet catch, age, and sex by sample period, 1982¹.

		AGE GROUP				
		42	52	53	62	TOTAL
SAMPLE PERIOD 1 7/ 6- 8/ 7						
PERIOD SAMPLE SIZE		91				
MALE	COUNT	232	120	7	112	471
	PERCENT	34.07	17.62	1.03	16.45	69.16
FEMALE	COUNT	60	37	0	113	210
	PERCENT	8.81	5.43	0.00	16.59	30.84
SEXES COMBINED	COUNT	292	157	7	225	681
	PERCENT	42.88	23.05	1.03	33.04	100.00

¹ Allocation based on District 6 subsistence (Tanana check station) catch samples.

Table 31. Yukon Area District 6 chinook salmon subsistence fishwheel catch by age, length (mm), and sex, 1982¹.

	AGE GROUP				TOTAL
	42	52	62	72	
MALES					
NUMBER	49	132	0	0	181
AV LENGTH	625.33	755.12	0.00	0.00	719.98
STD ERROR	16.56	8.23	0.00	0.00	10.50
SAMP SIZE	3	8	0	0	11
AV WEIGHT	.77	1.28	0.00	0.00	1.14
STD ERROR	.09	.05	0.00	0.00	.06
SAMP SIZE	3	8	0	0	11
FEMALES					
NUMBER	0	16	99	16	131
AV LENGTH	0.00	776.00	887.33	1008.00	888.47
STD ERROR	0.00	0.00	23.14	0.00	17.35
SAMP SIZE	0	1	6	1	8
AV WEIGHT	0.00	1.30	2.08	3.50	2.16
STD ERROR	0.00	0.00	.18	0.00	.14
SAMP SIZE	0	1	6	1	8
SEXES COMBINED					
NUMBER	49	148	99	16	312
AV LENGTH	625.33	757.38	887.33	1008.00	790.73
STD ERROR	16.56	7.32	23.14	0.00	13.39
SAMP SIZE	3	9	6	1	19
AV WEIGHT	.77	1.28	2.08	3.50	1.57

¹ Allocation used on District 6 subsistence (Nenana) catch samples.

Table 32. Yukon Area District 6 chinook salmon subsistence fishwheel catch, age, and sex by sample period, 1982¹.

		AGE GROUP				
		42	52	62	72	TOTAL
SAMPLE PERIOD 1 7/20-7/20						
PERIOD SAMPLE SIZE 19						
MALE	COUNT	49	132	0	0	181
	PERCENT	27.07	72.93	0.00	0.00	100.00
FEMALE	COUNT	0	16	99	16	131
	PERCENT	0.00	12.21	75.57	12.21	100.00
SEXES COMBINED	COUNT	49	148	99	16	312
	PERCENT	15.71	47.44	31.73	5.13	100.00

¹ Allocation based on District 6 subsistence (Nenana) catch samples.

Table 33. Yukon Area Dawson chinook salmon subsistence gillnet catch, age, and sex by sample period, 1982¹.

		AGE GROUP							
		42	52	53	62	63	72	73	TOTAL
SAMPLE PERIOD 1 7/28- 8/ 7									
PERIOD SAMPLE SIZE 279									
MALE	COUNT	386	1,038	30	1,513	178	682	59	3,886
	PERCENT	4.66	12.54	.36	18.28	2.15	8.24	.71	46.95
FEMALE	COUNT	0	326	0	2,612	59	1,216	178	4,391
	PERCENT	0.00	3.94	0.00	31.56	.71	14.69	2.15	53.05
SEXES COMBINED	COUNT	386	1,364	30	4,125	237	1,898	237	8,277
	PERCENT	4.66	16.48	.36	49.84	2.86	22.93	2.86	100.00

¹ Allocation based on Dawson commercial catch samples.

Table 34. Total utilization of chinook salmon by age and fishery, 1982.

FISHERY	AGE GROUP									TOTAL
	32	42	52	53	62	63	72	73	83	
DISTRICT 1										
COMMERCIAL		4,333	15,056	69	44,176	396	8,826	1,315	279	74,450
SUBSISTENCE		242	574	4	1,209	10	233	32	7	2,311
TOTAL		4,575	15,630	73	45,385	406	9,059	1,347	286	76,761
DISTRICT 2										
COMMERCIAL		2,147	6,046	26	24,657	301	5,184	632	139	39,132
SUBSISTENCE		207	389	3	1,210	18	245	30	7	2,109
TOTAL		2,354	6,435	29	25,867	319	5,429	662	146	41,241
DISTRICT 3										
COMMERCIAL		33	305		1,801	4	400	58	8	2,609
SUBSISTENCE		42	393		2,319	5	515	74	11	3,359
TOTAL		75	698		4,120	9	915	132	29	5,968
DISTRICT 4										
COMMERCIAL	85	417	274		286		46			1,108
SUBSISTENCE	300	1,465	965		1,000		164			3,894
TOTAL	385	1,882	1,239		1,286		210			5,002
DISTRICT 5										
COMMERCIAL		251	887	19	2,679	155	1,233	155		5,379
SUBSISTENCE		394	1,393	30	4,207	243	1,939	243		8,449
TOTAL		645	2,280	49	6,886	398	3,172	398		13,828
DISTRICT 6										
COMMERCIAL		328	296	7	312		16			959
SUBSISTENCE		341	305	7	324		16			993
TOTAL		669	601	14	636		32			1,952
YUKON TERRITORY										
COMMERCIAL		403	1,425	31	4,303	248	1,982	248		8,640
SUBSISTENCE		386	1,364	30	4,125	237	1,898	237		8,277
TOTAL		789	2,789	61	8,428	485	3,880	485		16,917
TOTAL HARVEST										
COMMERCIAL	85	7,912	24,289	152	78,214	1,104	17,687	2,408	426	132,277
SUBSISTENCE	300	3,077	5,383	74	14,394	513	5,010	616	25	29,392
TOTAL	385	10,989	29,672	226	92,608	1,617	22,697	3,024	451	161,669

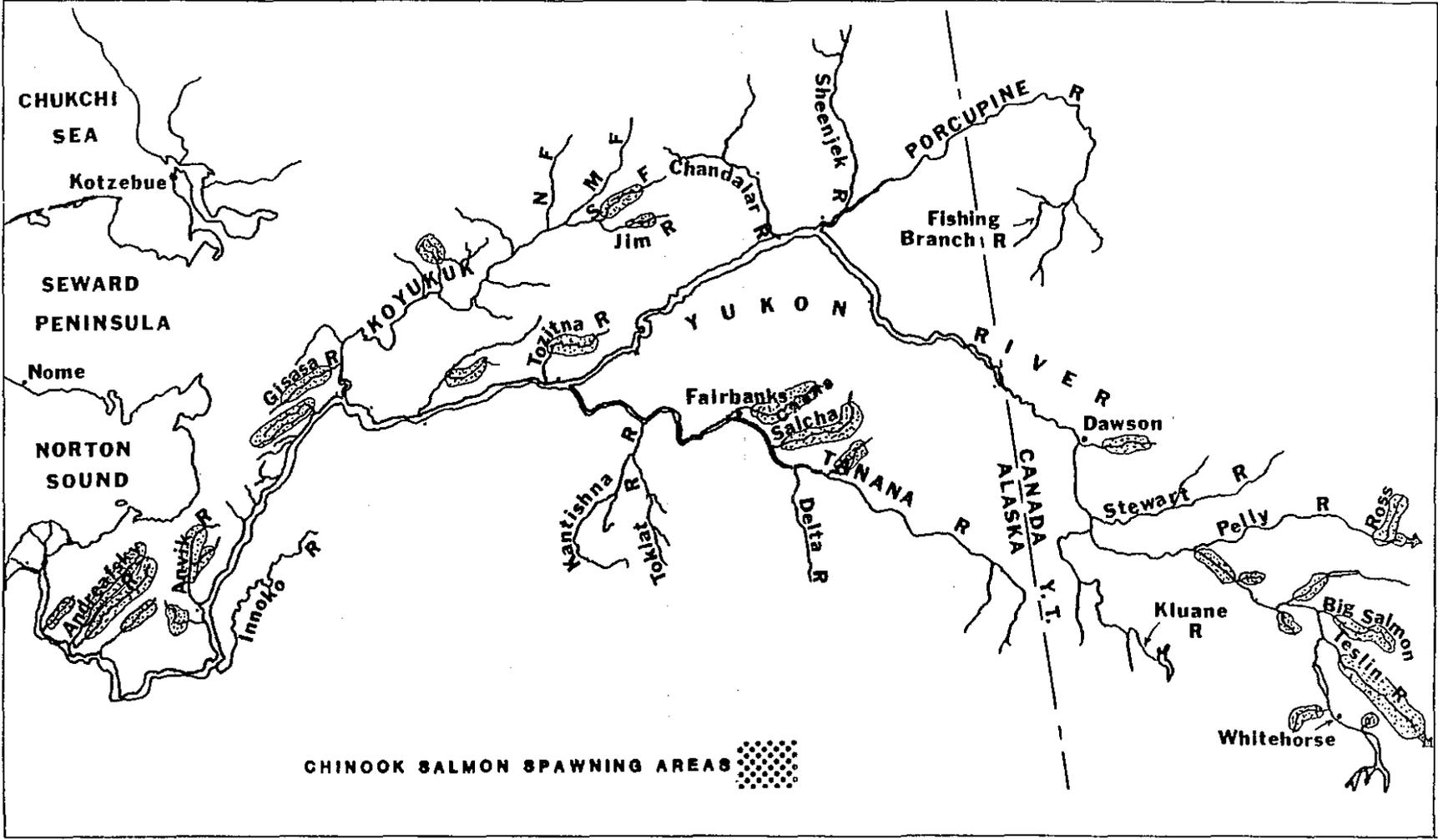


Figure 3. Map of the Yukon River drainage, showing chinook salmon spawning areas.

Table 35. Chinook salmon escapement to Lower Yukon River spawning areas, 1982¹.

Date	Andreafsky		Total
	East Fork	West Fork	
7/20	1,274	699	1,973
8/06		851	

¹ Aerial surveys unless otherwise noted.

Table 36. Chinook salmon escapement to upper Alaskan Yukon River spawning areas, 1982¹.

Date	Tanana River Drainage					Koyukuk River Drainage							Melozitna	Tozitna	
	Salcha	Chena	Chatanika	Kantishna	Total	Gisasa	Jim	North Fk.	South Fk.	Henshaw	Indian	Dakli			Total
7/23														82 ²	
7/28	2,534	2,073			4,607										
8/03			62 ³				15 ³								
8/04								1 ³	5 ³	14					38 ³
8/05						421					4				51 ³
8/06												1	461 ⁴		
8/12	247	186	159	22	614										

¹ Aerial surveys unless otherwise noted.

² Sonar count 6/26 - 7/23.

³ Fair to poor survey conditions.

⁴ Total for 8/3 - 8/6.

Table 37. Chinook salmon escapement to Canadian Yukon River spawning areas, 1982¹.

Date	Stewart ²	Klondike	Takhini	Tatchun	Teslin River System							Total	Big Salmon	Little Salmon	
					Jennings	Nisutlin	Wolf	Marley	Swift	Gladys	Teslin				
8/09	39	40													
8/14						843	225							1,168	305
8/15															
8/16					40			176	31	25			1,340 ⁵		
8/17															
8/18															
8/19															
8/20															
8/21															
8/22															
8/27															
8/28															
8/29															
8/30															
8/31															
9/01															
9/02															
9/08															

-Continued-

Table 37. Chinook salmon escapement to Canadian Yukon River spawning areas, 1982¹(continued).

Date	Pelly					Total	Yukon	Mitchie Cr.	Whitehorse
	Hoole	MacMillan	Ross	Lewis Lk.	Blind Cr.				
8/09									
8/14									
8/15									
8/16									
8/17	14								
8/18									
8/19		3	116	39					
8/20									
8/21					6	178 ⁵			
8/22								150	
8/27									
8/28									
8/29							20		
8/30									
8/31									
9/01									
9/02									473 ⁴
9/08									

- ¹ Aerial survey unless otherwise indicated.
- ² All fish observed in North McQuesten Creek.
- ³ Foot survey.
- ⁴ Fishway count from 8/01 - 9/02.
- ⁵ Total for 8/14 - 8/16.
- ⁶ Total for 8/17 - 8/21.

Table 38. Whitehorse fishway daily escapement counts of chinook salmon by sex¹, 1982.

Date	Males			Females	Total
	Jacks ²	Other ³	Total		
8/01		1	1		1
8/02					0
8/03		2	2	4	6
8/04		3	3	2	5
8/05		3	3	1	4
8/06	2	8	10	6	16
8/07	1	6	7	6	13
8/08	1	10	11	11	22
8/09	2	5	7	14	21
8/10		9	9	16	25
8/11	1	4	5	15	20
8/12	4	9	13	15	28
8/13	3	9	12	12	24
8/14	4	10	14	7	21
8/15	3	7	10	19	29
8/16	5	16	21	22	43
8/17	8	14	22	20	42
8/18	2	21	23	33	56
8/19	5	6	11	13	24
8/20	3	3	6	14	20
8/21	3		3	3	6
8/22	3	1	4	5	9
8/23	2	4	6	5	11
8/24	4	1	5	2	7
8/25	2		2	1	3
8/26		1	1	1	2
8/27	1		1	1	2
8/28	2		2	1	3
8/29		1	1	3	4
8/30	1	2	3	1	4
8/31	1		1		1
9/01					0
9/02	1		1		1
TOTAL	64	156	230	253	473

¹ Determination of sex based on observations of fish passing through the fishway.

² Small, presumably age 4₂, males.

³ Larger, presumably 3-, 4-, and 5-ocean, males.

Table 39. Andreafsky River escapement sample of chinook salmon, age, and length (mm) by sex, 1982.

	AGE GROUP					TOTAL
	32	42	52	62	72	
MALES						
PERCENT	1.20	29.50	48.30	4.60	.80	84.40
AV LENGTH	365.00	543.00	695.09	777.27	867.50	643.35
STD ERROR	15.28	5.29	4.98	17.83	7.50	5.98
SAMP SIZE	3	70	114	11	2	200
FEMALES						
PERCENT	0.00	3.70	2.10	8.60	1.20	15.60
AV LENGTH	0.00	500.00	738.00	820.00	920.00	740.76
STD ERROR	0.00	17.83	33.49	9.11	26.46	15.93
SAMP SIZE	0	9	5	20	3	37
SEXES COMBINED						
PERCENT	1.20	33.20	50.40	13.20	2.00	100.00
AV LENGTH	365.00	538.21	696.88	805.11	899.00	658.55

Table 40. Anvik River escapement sample of chinook salmon, age, and length (mm) by sex, 1982.

	AGE GROUP			
	42	52	62	TOTAL
MALES				
PERCENT	34.20	34.00	4.30	72.50
AV LENGTH	560.11	678.72	814.17	630.80
STD ERROR	8.66	7.83	53.22	10.94
SAMP SIZE	47	47	6	100
FEMALES				
PERCENT	.70	3.60	23.20	27.50
AV LENGTH	660.00	792.00	840.00	829.13
STD ERROR	0.00	36.52	8.46	11.93
SAMP SIZE	1	5	32	38
SEXES COMBINED				
PERCENT	34.90	37.60	27.50	100.00
AV LENGTH	562.11	689.57	835.96	685.34

Table 41. Gisasa River escapement sample of chinook salmon, age, and length (mm) by sex, 1982.

	AGE GROUP			TOTAL
	42	52	62	
MALES				
PERCENT	21.80	40.70	3.10	65.60
AV LENGTH	536.43	701.08	935.00	657.42
STD ERROR	8.15	14.77	0.00	11.86
SAMP SIZE	7	13	1	21
FEMALES				
PERCENT	0.00	3.10	31.30	34.40
AV LENGTH	0.00	775.00	835.90	830.41
STD ERROR	0.00	0.00	18.24	16.58
SAMP SIZE	0	1	10	11
SEXES COMBINED				
PERCENT	21.80	43.80	34.40	100.00
AV LENGTH	536.43	706.31	844.83	716.93

Table 42. Salcha River escapement sample of chinook salmon, age, and length (mm) by sex, 1982.

	AGE GROUP							TOTAL
	32	42	52	62	63	72	73	
MALES								
PERCENT	.50	22.50	27.40	11.70	.10	1.80	.10	64.10
AV LENGTH	377.67	561.55	700.29	868.98	710.00	980.50	915.00	688.08
STD ERROR	14.88	4.42	4.20	10.33	0.00	25.36	0.00	6.10
SAMP SIZE	3	119	142	62	1	10	1	338
FEMALES								
PERCENT	0.00	0.00	2.40	28.40	0.00	5.10	0.00	35.90
AV LENGTH	0.00	0.00	715.15	856.30	0.00	944.67	0.00	859.42
STD ERROR	0.00	0.00	14.46	4.02	0.00	10.86	0.00	5.72
SAMP SIZE	0	0	13	149	0	27	0	189
SEXES COMBINED								
PERCENT	.50	22.50	29.80	40.10	.10	6.90	.10	100.00
AV LENGTH	377.67	561.55	701.49	860.00	710.00	954.02	915.00	749.59

Table 43. Chena River escapement sample of chinook salmon, age, and length (mm) by sex, 1982.

	AGE GROUP				TOTAL
	42	52	62	72	
MALES					
PERCENT	32.10	17.50	11.50	1.00	62.10
AV LENGTH	552.29	689.44	803.86	936.50	643.71
STD ERROR	5.97	11.06	24.48	121.50	12.90
SAMP SIZE	58	32	21	2	113
FEMALES					
PERCENT	1.00	9.80	26.60	.50	37.90
AV LENGTH	595.00	712.61	845.92	930.00	805.94
STD ERROR	10.00	15.22	6.54	0.00	8.81
SAMP SIZE	2	18	48	1	69
SEXES COMBINED					
PERCENT	33.10	27.30	38.10	1.50	100.00
AV LENGTH	553.58	697.76	833.22	934.33	705.20

Female fish were more abundant than males for most Canadian escapements (Tables 44-53). Percentage of females for the Big Salmon, Nisutlin, and Little Salmon Rivers was 67%, 74%, and 59%, respectively. Age 6₂ fish predominated all of these escapements (60%, 77%, and 51%, respectively). Age 7₂ fish contributed a large percentage to the Big Salmon (21%) and Little Salmon River (18%) escapements. Fifty-three chinook salmon with two freshwater checks were found in the Canadian portion of the drainage.

Summer Chum Salmon:

Summer chum salmon commercial catches were sampled in Districts 1 and 2 in the lower Yukon and District 4 in the upper Yukon. Age composition was very similar between District 1 and District 2 catches with age 4₁ contributing 65% and age 5₁ 32% in District 1, while they composed 63% and 33% of the catch in District 2 (Tables 54-57). District 1 samples were separated into three sample periods, with period 1 (6/15-6/22) and period 2 (6/25-7/2) taken during the chinook salmon season and period 3 (7/6-7/13) taken during the summer chum salmon season. Contribution of age 5₁ fish declined, while age 4₁ increased in the catch during these three periods (Table 55). Sex composition did not show any trends through time and averaged 56% male for all samples pooled. District 2 samples were separated into two sample periods, with period 1 (6/17-6/30) taken during the chinook salmon season and period 2 (7/5-7/8) taken during the summer chum salmon season. As in District 1, more age 5₁ fish were taken during the chinook salmon season, while age 4₁ increased during the summer chum season (Table 57). Sex composition was identical for the two periods, averaging 61% male. The District 3 summer chum salmon commercial catch was not sampled, but was allocated to age and sex groups based on District 2 large mesh season samples (Table 58). Most of the District 3 catch was taken with large mesh gear.

Commercial gillnet and fishwheel summer chum salmon catches were sampled in District 4, but not enough samples were collected to allow for separating the data by time period (Tables 59-62B). Gillnet catches were 59% age 4₁ and 36% age 5₁, which is similar to the age composition in the lower Yukon districts. Age composition of commercial fishwheel catches differed between Subdistrict 4A and Subdistricts 4B and 4C. Age 4₁ accounted for 53% and age 5₁ 42% of the Subdistrict 4A catch (Table 62A), while these ages were 77% and 14% of the Subdistrict 4B and 4C catch (Table 62B). District 5 had a commercial catch of only 234 summer chum salmon, no samples were collected, and no attempt was made to allocate this small catch to age and sex groups. District 6 commercial gillnet and fishwheel catches were not sampled, but are presented by age and sex group based on samples collected from other fisheries (Tables 63 and 64). The District 6 commercial gillnet catch of 1,849 summer chum salmon was apportioned based on the District 6 subsistence gillnet sample of 118 fish, and the District 6 commercial fishwheel catch of 21,333 summer chum salmon was apportioned based on the District 4B commercial fishwheel sample of 307 fish. These sample sizes are below the minimum sizes as outlined earlier in this report, and were not collected directly from the catch being apportioned. Therefore, results are of questionable value. This same problem is found in later sections of this report, and indicates the need for increased sampling of some fisheries in the Yukon area.

Table 44. Ross River escapement sample of chinook salmon, age, and length (mm) by sex, 1982.

	AGE GROUP		
	62	72	TOTAL
MALES			
PERCENT	30.00	25.00	55.00
AV LENGTH	933.33	1018.00	971.82
STD ERROR	45.22	19.34	33.45
SAMP SIZE	6	5	11
FEMALES			
PERCENT	25.00	20.00	45.00
AV LENGTH	872.00	930.00	897.78
STD ERROR	15.94	20.41	17.93
SAMP SIZE	5	4	9
SEXES COMBINED			
PERCENT	55.00	45.00	100.00
AV LENGTH	905.45	978.89	938.50

Table 45 Tahohoo Creek escapement sample of chinook salmon, age, and length (mm) by sex, 1982.

	AGE GROUP				TOTAL
	52	53	62	72	
MALES					
PERCENT	25.00	0.00	25.00	8.30	58.30
AV LENGTH	809.00	0.00	850.33	604.00	797.54
STD ERROR	116.91	0.00	56.71	0.00	74.41
SAMP SIZE	3	0	3	1	7
FEMALES					
PERCENT	8.30	16.80	8.30	8.30	41.70
AV LENGTH	1040.00	628.50	910.00	924.00	825.25
STD ERROR	0.00	40.50	0.00	0.00	16.20
SAMP SIZE	1	2	1	1	5
SEXES COMBINED					
PERCENT	33.30	16.80	33.30	16.60	100.00
AV LENGTH	866.58	628.50	865.20	764.00	809.09

Table 46. Little Salmon River escapement sample of chinook salmon, age, and length (mm) by sex, 1982.

	AGE GROUP					TOTAL
	52	62	72	73	83	
MALES						
PERCENT	25.60	11.70	3.90	0.00	0.00	41.20
AV LENGTH	694.85	835.33	1029.00	0.00	0.00	766.37
STD ERROR	12.91	30.86	41.00	0.00	0.00	20.71
SAMP SIZE	13	6	2	0	0	21
FEMALES						
PERCENT	1.90	39.40	13.70	1.90	1.90	58.80
AV LENGTH	770.00	861.15	959.29	925.00	895.00	894.68
STD ERROR	0.00	9.81	12.12	0.00	0.00	9.37
SAMP SIZE	1	20	7	1	1	30
SEXES COMBINED						
PERCENT	27.50	51.10	17.60	1.90	1.90	100.00
AV LENGTH	700.04	855.24	974.74	925.00	895.00	892.03

Table 47. Big Salmon River escapement sample of chinook salmon, age, and length (mm) by sex, 1962.

	AGE GROUP						TOTAL
	52	53	62	72	73	83	
MALES							
PERCENT	14.10	.60	15.60	2.40	.60	0.00	33.30
AV LENGTH	700.87	515.00	874.20	998.75	805.00	0.00	802.07
STD ERROR	17.27	0.00	22.19	34.97	0.00	0.00	20.22
SAMP SIZE	23	1	25	4	1	0	54
FEMALES							
PERCENT	1.20	0.00	44.60	18.50	1.20	1.20	66.70
AV LENGTH	790.00	0.00	858.36	944.67	952.50	965.00	884.68
STD ERROR	85.00	0.00	6.13	8.69	62.50	5.00	9.33
SAMP SIZE	2	0	72	30	2	2	108
SEXES COMBINED							
PERCENT	15.30	.60	60.20	20.90	1.80	1.20	100.00
AV LENGTH	707.86	515.00	862.46	950.88	903.33	965.00	857.17

Table 48. Nisutlin River escapement sample of chinook salmon, age, and length (mm) by sex, 1982.

	AGE GROUP					TOTAL
	52	53	62	72	73	
MALES						
PERCENT	12.90	.80	12.80	0.00	0.00	26.50
AV LENGTH	714.80	520.00	874.13	0.00	0.00	785.88
STD ERROR	11.64	0.00	17.59	0.00	0.00	14.14
SAMP SIZE	15	1	15	0	0	31
FEMALES						
PERCENT	2.50	0.00	64.20	3.40	3.40	73.50
AV LENGTH	728.33	0.00	837.75	931.00	834.50	838.19
STD ERROR	14.24	0.00	4.61	13.85	34.37	6.76
SAMP SIZE	3	0	75	4	4	86
SEXES COMBINED						
PERCENT	15.40	.80	77.00	3.40	3.40	100.00
AV LENGTH	717.00	520.00	843.80	931.00	834.50	824.33

Table 49. Morley River escapement sample of chinook salmon, age, length (mm) by sex, 1982.

	AGE GROUP			
	42	52	62	TOTAL
MALES				
PERCENT	20.00	20.00	0.00	40.00
AV LENGTH	600.00	750.00	0.00	675.00
STD ERROR	0.00	0.00	0.00	0.00
SAMP SIZE	1	1	0	2
FEMALES				
PERCENT	0.00	0.00	60.00	60.00
AV LENGTH	0.00	0.00	803.33	803.33
STD ERROR	0.00	0.00	14.53	14.53
SAMP SIZE	0	0	3	3
SEXES COMBINED				
PERCENT	20.00	20.00	60.00	100.00
AV LENGTH	600.00	750.00	803.33	752.00

Table 50. Wolf River escapement sample of chinook salmon, age, and length (mm) by sex, 1982.

	AGE GROUP					TOTAL
	52	62	63	72	73	
MALES						
PERCENT	5.00	25.00	5.00	5.00	10.00	50.00
AV LENGTH	810.00	919.00	690.00	910.00	932.50	887.00
STD ERROR	0.00	36.45	0.00	0.00	22.50	22.72
SAMP SIZE	1	5	1	1	2	10
FEMALES						
PERCENT	0.00	25.00	0.00	10.00	15.00	50.00
AV LENGTH	0.00	912.60	0.00	995.00	905.00	926.80
STD ERROR	0.00	15.79	0.00	60.00	59.23	37.66
SAMP SIZE	0	5	0	2	3	10
SEXES COMBINED						
PERCENT	5.00	50.00	5.00	15.00	25.00	100.00
AV LENGTH	810.00	915.80	690.00	966.67	916.00	906.90

Table 5. Tahini River escapement sample of chinook salmon, age, and length (mm) by sex, 1982.

	AGE GROUP		
	62	73	TOTAL
MALES			
PERCENT	9.00	18.30	27.30
AV LENGTH	1050.00	1085.00	1073.46
STD ERROR	0.00	5.00	3.33
SAMP SIZE	1	2	3
FEMALES			
PERCENT	45.50	27.20	72.70
AV LENGTH	993.40	953.33	978.41
STD ERROR	24.34	6.01	17.47
SAMP SIZE	5	3	8
SEXES COMBINED			
PERCENT	54.50	45.50	100.00
AV LENGTH	1002.75	1006.29	1004.36

Table 52. Teslin River escapement sample of chinook salmon, age, and length (mm) by sex, 1982.

	AGE GROUP		
	62	72	TOTAL
MALES			
PERCENT	14.30	0.00	14.30
AV LENGTH	765.00	0.00	765.00
STD ERROR	55.00	0.00	55.00
SAMP SIZE	2	0	2
FEMALES			
PERCENT	71.50	14.20	85.70
AV LENGTH	842.00	950.00	859.89
STD ERROR	13.40	20.00	14.50
SAMP SIZE	10	2	12
SEXES COMBINED			
PERCENT	85.80	14.20	100.00
AV LENGTH	829.17	950.00	846.33

Table 53. Mitchie Creek escapement sample of chinook salmon, age, and length (mm) by sex, 1982.

	AGE GROUP							TOTAL
	42	52	53	62	63	72	73	
MALES								
PERCENT	7.50	22.50	15.00	2.50	5.00	0.00	2.50	55.00
AV LENGTH	631.67	680.56	536.67	900.00	647.50	0.00	810.00	647.50
STD ERROR	44.75	9.41	13.27	0.00	22.50	0.00	0.00	15.62
SAMP SIZE	3	9	6	1	2	0	1	22
FEMALES								
PERCENT	0.00	10.00	0.00	30.00	0.00	2.50	2.50	45.00
AV LENGTH	0.00	730.00	0.00	797.92	0.00	930.00	820.00	791.39
STD ERROR	0.00	20.10	0.00	7.84	0.00	0.00	0.00	9.70
SAMP SIZE	0	4	0	12	0	1	1	18
SEXES COMBINED								
PERCENT	7.50	32.50	15.00	32.50	5.00	2.50	5.00	100.00
AV LENGTH	631.67	695.77	536.67	805.77	647.50	930.00	815.00	712.25

Table 54. Yukon Area District 1 summer chum salmon commercial gillnet catch by age, length (mm) and sex, 1982¹.

	AGE GROUP				
	31	41	51	61	TOTAL
MALES					
NUMBER	669	88,387	45,603	4,686	139,345
AV LENGTH	560.08	592.37	620.76	621.43	602.48
STD ERROR	9.67	2.21	3.65	10.94	3.04
SAMP SIZE	3	452	255	25	735
FEMALES					
NUMBER	692	72,814	34,130	2,397	110,033
AV LENGTH	560.33	572.75	590.85	594.26	578.76
STD ERROR	13.95	2.20	3.19	8.99	2.76
SAMP SIZE	3	364	193	14	574
SEXES COMBINED					
NUMBER	1,361	161,201	79,733	7,083	249,378
AV LENGTH	560.20	583.51	607.96	612.24	592.01

¹ Allocation based on 8-1/2 inch and 6 inch gillnet samples from District 1 commercial catch.

Table 55. Yukon Area District 1 summer chum salmon commercial gillnet catch, age, and sex by sample period, 1982.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1 6/15- 6/22 ¹						
PERIOD SAMPLE SIZE		476				
MALE	COUNT	0	18,606	17,479	1,410	37,495
	PERCENT	0.00	27.73	26.05	2.10	55.88
FEMALE	COUNT	0	13,673	14,800	1,128	29,601
	PERCENT	0.00	20.38	22.06	1.68	44.12
SEXES COMBINED	COUNT	0	32,279	32,279	2,538	67,096
	PERCENT	0.00	48.11	48.11	3.78	100.00
SAMPLE PERIOD 2 6/25- 7/ 2 ¹						
PERIOD SAMPLE SIZE		428				
MALE	COUNT	208	36,345	18,900	1,662	57,115
	PERCENT	.23	40.89	21.26	1.87	64.25
FEMALE	COUNT	0	22,016	8,723	1,038	31,777
	PERCENT	0.00	24.77	9.81	1.17	35.75
SEXES COMBINED	COUNT	208	58,361	27,623	2,700	88,892
	PERCENT	.23	65.65	31.07	3.04	100.00
SAMPLE PERIOD 3 7/ 6- 7/13 ²						
PERIOD SAMPLE SIZE		405				
MALE	COUNT	461	33,436	9,224	1,614	44,735
	PERCENT	.49	35.80	9.88	1.73	47.90
FEMALE	COUNT	692	37,125	10,607	231	48,655
	PERCENT	.74	39.75	11.36	.25	52.10
SEXES COMBINED	COUNT	1,153	70,561	19,831	1,845	93,390
	PERCENT	1.23	75.56	21.23	1.98	100.00
PERIODS COMBINED						
SAMPLE SIZES COMBINED		1,309				
MALE	COUNT	669	88,387	45,603	4,686	139,345
	PERCENT	.27	35.44	18.29	1.88	55.88
FEMALE	COUNT	692	72,814	34,130	2,397	110,033
	PERCENT	.28	29.20	13.69	.96	44.12
SEXES COMBINED	COUNT	1,361	161,201	79,733	7,083	249,378
	PERCENT	.55	64.64	31.97	2.84	100.00

¹ Fishery has no gillnet mesh size restrictions during the chinook salmon season. Allocation is based on 8 inch gillnet samples from District 1 commercial catch.

² Maximum mesh size 6 inches by regulation during the chum salmon season. Allocation is based on 6 inch gillnet samples from District 1 commercial catch.

Table 56. Yukon Area District 2 commercial summer chum salmon gillnet catch by age, length (mm) and sex, 1982¹.

	AGE GROUP				TOTAL
	31	41	51	61	
MALES					
NUMBER	2,568	70,280	35,839	3,090	111,777
AV LENGTH	552.42	599.66	627.85	643.75	608.83
STD ERROR	10.97	2.28	2.73	10.24	2.87
SAMP SIZE	8	331	237	22	598
FEMALES					
NUMBER	789	44,741	23,861	1,190	70,581
AV LENGTH	565.50	582.68	598.07	581.24	587.66
STD ERROR	5.50	2.68	2.65	7.44	2.76
SAMP SIZE	2	226	144	6	378
SEXES COMBINED					
NUMBER	3,357	115,021	59,700	4,280	182,358
AV LENGTH	555.50	593.05	615.95	626.37	600.64

¹ Allocation based on 8-1/2 inch and 6 inch gillnet samples from District 2 commercial catch.

Table 57. Yukon Area District 2 summer chum salmon commercial gillnet catch, age, and sex by sample period, 1982.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1 6/17- 6/30 ¹						
PERIOD SAMPLE SIZE		689				
MALE	COUNT	201	20,565	19,662	1,906	42,334
	PERCENT	.29	29.75	28.45	2.76	61.25
FEMALE	COUNT	0	15,148	11,235	401	26,784
	PERCENT	0.00	21.92	16.25	.58	38.75
SEXES COMBINED	COUNT	201	35,713	30,897	2,307	69,118
	PERCENT	.29	51.67	44.70	3.34	100.00
SAMPLE PERIOD 2 7/ 5- 7/ 8 ²						
PERIOD SAMPLE SIZE		287				
MALE	COUNT	2,367	49,715	16,177	1,184	69,443
	PERCENT	2.09	43.90	14.29	1.05	61.32
FEMALE	COUNT	789	29,593	12,626	789	43,797
	PERCENT	.70	26.13	11.15	.70	38.68
SEXES COMBINED	COUNT	3,156	79,308	28,803	1,973	113,240
	PERCENT	2.79	70.04	25.44	1.74	100.00
PERIODS COMBINED						
SAMPLE SIZES COMBINED		976				
MALE	COUNT	2,568	70,280	35,839	3,090	111,777
	PERCENT	1.41	38.54	19.65	1.69	61.30
FEMALE	COUNT	789	44,741	23,861	1,190	70,581
	PERCENT	.43	24.53	13.08	.65	38.70
SEXES COMBINED	COUNT	3,357	115,021	59,700	4,280	182,358
	PERCENT	1.84	63.07	32.74	2.35	100.00

¹ Fishery has no gillnet mesh size restrictions during the chinook salmon season. Allocation is based on 8 inch gillnet samples from District 2 commercial catch.

² Maximum mesh size 6 inches by regulation during the chum salmon season. Allocation is based on 6 inch gillnet samples from District 2 commercial catch.

Table 58. Yukon Area District 3 summer chum salmon commercial gillnet catch, age, and sex by sample period, 1982¹.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1 6/17- 6/30						
PERIOD SAMPLE SIZE 689						
MALE	COUNT	12	1,216	1,162	113	2,503
	PERCENT	.29	29.76	28.44	2.77	61.26
FEMALE	COUNT	0	895	664	24	1,583
	PERCENT	0.00	21.90	16.25	.59	38.74
SEXES COMBINED	COUNT	12	2,111	1,826	137	4,086
	PERCENT	.29	51.66	44.69	3.35	100.00

¹ Allocation based on 8-1/2 inch gillnet samples from District 2 commercial catch.

Table 59. Yukon Area District 4 summer chum salmon commercial gillnet catch by age, length (mm) and sex, 1982¹.

	AGE GROUP				
	31	41	51	61	TOTAL
MALES					
NUMBER	22	2,173	1,098	66	3,359
AV LENGTH	520.00	585.56	621.58	630.00	597.79
STD ERROR	0.00	2.61	5.34	14.74	3.72
SAMP SIZE	1	99	50	3	153
FEMALES					
NUMBER	176	2,414	1,690	110	4,390
AV LENGTH	534.00	559.85	580.74	598.60	567.83
STD ERROR	5.04	2.25	2.40	9.92	2.61
SAMP SIZE	8	110	77	5	200
SEXES COMBINED					
NUMBER	198	4,587	2,788	176	7,749
AV LENGTH	532.44	572.04	596.82	610.37	580.82

¹ Allocation based on 5-3/8 inch gillnet samples from District 4 commercial catch.

Table 60. Yukon Area District 4 summer chum salmon commercial gillnet catch, age and sex by sample period, 1982¹.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1 6/29- 7/27						
PERIOD SAMPLE SIZE		353				
MALE	COUNT	22	2,173	1,098	66	3,359
	PERCENT	.28	28.04	14.17	.85	43.35
FEMALE	COUNT	176	2,414	1,690	110	4,390
	PERCENT	2.27	31.15	21.81	1.42	56.65
SEXES COMBINED	COUNT	198	4,587	2,788	176	7,749
	PERCENT	2.56	59.19	35.98	2.27	100.00

¹ Allocation based on 5-3/8 inch gillnet samples from District 4 commercial catch.

Table 61A. Yukon Area District 4A summer chum salmon commercial fishwheel catch by age, length (mm) and sex, 1982¹.

	AGE GROUP				
	31	41	51	61	TOTAL
MALES					
NUMBER	1,110	23,308	21,458	1,480	47,356
AV LENGTH	559.67	589.67	621.24	645.00	605.00
STD ERROR	8.68	2.96	3.63	6.01	3.50
SAMP SIZE	3	63	58	4	128
FEMALES					
NUMBER	2,220	46,247	34,407	1,480	84,354
AV LENGTH	515.67	556.98	579.59	599.50	565.86
STD ERROR	8.40	2.12	2.95	13.08	2.82
SAMP SIZE	6	125	93	4	228
SEXES COMBINED					
NUMBER	3,330	69,555	55,865	2,960	131,710
AV LENGTH	530.34	567.93	595.59	622.25	579.93

¹ Allocation based on fishwheel samples from District 4A commercial catch.

Table 61B. Yukon Area District 4B and 4C summer chum salmon commercial fishwheel catch by age, length (mm) and sex, 1982¹.

	AGE GROUP				TOTAL
	31	41	51	61	
MALES					
NUMBER	453	4,838	1,008	50	6,349
AV LENGTH	543.22	591.27	626.55	613.00	593.61
STD ERROR	7.41	3.08	6.85	0.00	3.97
SAMP SIZE	9	96	20	1	126
FEMALES					
NUMBER	857	7,003	1,109	151	9,120
AV LENGTH	548.41	562.42	586.14	603.33	564.67
STD ERROR	4.94	1.98	7.14	28.48	3.32
SAMP SIZE	17	139	22	3	181
SEXES COMBINED					
NUMBER	1,310	11,841	2,117	201	15,469
AV LENGTH	546.62	574.21	605.38	605.74	576.55

¹ Allocation based on fishwheel samples from District 4B commercial catch.

Table 62A. Yukon Area District 4A summer chum salmon commercial fishwheel catch, age and sex by sample period, 1982¹.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1 6/25- 7/22						
PERIOD SAMPLE SIZE 356						
MALE	COUNT	1,110	23,308	21,458	1,480	47,356
	PERCENT	.84	17.70	16.29	1.12	35.95
FEMALE	COUNT	2,220	46,247	34,407	1,480	84,354
	PERCENT	1.69	35.11	26.12	1.12	64.05
SEXES COMBINED	COUNT	3,330	69,555	55,865	2,960	131,710
	PERCENT	2.53	52.81	42.42	2.25	100.00

¹ Allocation based on fishwheel samples from District 4A commercial catch.

Table 62B. Yukon Area District 4B and 4C summer chum salmon commercial fishwheel catch, age and sex by sample period, 1982 .

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1 7/ 6- 8/16						
PERIOD SAMPLE SIZE 307						
MALE	COUNT	453	4,838	1,008	50	6,349
	PERCENT	2.93	31.28	6.52	.32	41.04
FEMALE	COUNT	857	7,003	1,109	151	9,120
	PERCENT	5.54	45.27	7.17	.98	58.96
SEXES COMBINED	COUNT	1,310	11,841	2,117	201	15,469
	PERCENT	8.47	76.55	13.69	1.30	100.00

¹ Allocation based on fishwheel samples from District 4B commercial catch.

Table 63. Yukon Area District 6 summer chum salmon commercial gillnet catch, age and sex by sample period, 1982¹.

		AGE GROUP			
		31	41	51	TOTAL
SAMPLE PERIOD 1 7/11- 8/15					
PERIOD SAMPLE SIZE 118					
MALE	COUNT	110	846	219	1,175
	PERCENT	5.95	45.75	11.84	63.55
FEMALE	COUNT	110	360	204	674
	PERCENT	5.95	19.47	11.03	36.45
SEXES COMBINED	COUNT	220	1,206	423	1,849
	PERCENT	11.90	65.22	22.88	100.00

¹ Allocation based on gillnet samples from District 6 subsistence catch.

Table 64. Yukon Area District 6 summer chum salmon commercial fishwheel catch, age and sex by sample period, 1982¹.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1 7/ 6- 8/16						
PERIOD SAMPLE SIZE 307						
MALE	COUNT	625	6,672	1,390	69	8,756
	PERCENT	2.93	31.28	6.52	.32	41.04
FEMALE	COUNT	1,181	9,659	1,529	208	12,577
	PERCENT	5.54	45.28	7.17	.98	58.96
SEXES COMBINED	COUNT	1,806	16,331	2,919	277	21,333
	PERCENT	8.47	76.55	13.68	1.30	100.00

¹ Allocation based on fishwheel samples from District 4B commercial catch.

The only subsistence fishery sampled was the District 6 gillnet catch. Subsistence catches for Districts 1 through 4 were apportioned based on commercial catch sample data for that district and gear (Tables 65-69). The District 6 subsistence gillnet catch (Tables 70 and 71) was 65% age 4₁ and 23% age 5₁. Sex composition was 64% male. Sex and size composition does not appear to be substantially different than that of commercial gillnet catch samples from the lower Yukon districts. The District 6 subsistence fishwheel catch was not sampled, but is apportioned based on District 4B commercial fishwheel catch samples (Table 72). The District 5 subsistence harvest of 6,931 summer chum salmon was not sampled and is not presented by age and sex group.

A total of 819,231 summer chum salmon was harvested by commercial and subsistence fisheries in the Yukon Area in 1982 (Table 73). The majority of the catch was age 4₁ (61%), followed by age 5₁ (34%), age 6₁ (2%), and age 3₁ (2%) fish.

Summer chum salmon spawn primarily in tributaries of the lower Yukon and Koyukuk Rivers, although small populations occur in a few tributaries in the upper portion of the drainage as well (Figure 4). Aerial survey conditions were generally poor during 1982, and most estimates are only minimal indices of actual spawning escapements (Table 74). Summer chum salmon escapements were considered average in magnitude, based on data from side-scan sonar counters in selected tributaries, but down appreciably from the record levels of 1981. East Fork Andreafsky River escapement was estimated by sonar to be 181,352 summer chum salmon (Table 75). The majority of the fish were age 4₁ (73%), followed by age 5₁ (23%) (Table 76). Sex composition was 65% female. Summer chum salmon escapement to the Anvik River was estimated by sonar to be 444,581 fish (Table 77), and age, sex, and size composition was similar to that of the Andreafsky River. Age 4₁ accounted for 67% of the escapement, age 5₁ 27% (Table 78). Sex composition was 69% female. The sonar count for the Melozitna River was 22,710 summer chum salmon (Table 79). Only 15 samples were collected for age, sex, and size data, and the majority were 4₁ (Table 80). Carcass samples were collected from the Gisasa, Chena, and Salcha Rivers (Tables 81-83). Females outnumbered males and age 4₁ was predominant for each of these three streams, similar to the other escapement sampling.

In summary, age composition was similar between commercial and subsistence harvest and escapement samples of summer chum salmon, while a higher percentage of females were found in the escapement. Each sex was slightly larger (average length) in catch samples than in escapement samples, but the differences do not appear to be significant.

Fall Chum Salmon:

Fall chum salmon commercial catches were sampled in District 1 in the lower Yukon, and at Dawson in the upper Yukon. In addition, test fishing samples were collected in District 4, and were used to apportion commercial catches in Districts 4, 5, and 6.

The District 1 commercial catch was 62% age 4₁, 32% age 5₁, and sex composition was 57% female (Tables 84-85). The District 2 catch of 96,581 (Table 86) and the District 3 catch of 5,815 fall chum salmon (Table 87) were apportioned based on the District 1 sample percentages.

Table 65. Yukon Area District 1 subsistence summer chum salmon gillnet catch, age and sex by sample period, 1982¹.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD	1					
PERIOD	7/ 6- 7/13					
	PERIOD SAMPLE SIZE					405
MALE	COUNT	91	6,607	1,822	319	8,839
	PERCENT	.49	35.81	9.87	1.73	47.90
FEMALE	COUNT	137	7,334	2,096	46	9,613
	PERCENT	.74	39.75	11.36	.25	52.10
SEXES COMBINED	COUNT	228	13,941	3,918	365	18,452
	PERCENT	1.24	75.55	21.23	1.98	100.00

¹ Allocation based on 6 inch gillnet samples from District 1 commercial catch.

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Table 66. Yukon Area District 2 subsistence summer chum salmon gillnet catch, age and sex by sample period, 1982¹.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1	7/ 5-					
PERIOD SAMPLE SIZE	7/ 8					287
MALE	COUNT	386	8,095	2,635	193	11,309
	PERCENT	2.09	43.89	14.29	1.05	61.32
FEMALE	COUNT	129	4,819	2,056	129	7,133
	PERCENT	.70	26.13	11.15	.70	38.68
SEXES COMBINED	COUNT	515	12,914	4,691	322	18,442
	PERCENT	2.79	70.02	25.44	1.75	100.00

¹ Allocation based on 6 inch gillnet samples from District 2 commercial catch.

Table 67. Yukon Area District 3 summer chum salmon subsistence gillnet catch, age and sex by sample period, 1982¹.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1	7/ 5- 7/ 8					
PERIOD SAMPLE SIZE	287					
MALE	COUNT	122	2,564	834	61	3,581
	PERCENT	2.09	43.90	14.28	1.04	61.32
FEMALE	COUNT	41	1,526	651	41	2,259
	PERCENT	.70	26.13	11.15	.70	38.68
SEXES COMBINED	COUNT	163	4,090	1,485	102	5,840
	PERCENT	2.79	70.03	25.43	1.75	100.00

¹ Allocation based on 6 inch gillnet samples from District 2 commercial catch.

Table 68. Yukon Area District 4 summer chum salmon subsistence gillnet catch, age and sex by sample period, 1982¹.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1 6/29- 7/27						
PERIOD SAMPLE SIZE 353						
MALE	COUNT	65	6,403	3,234	194	9,896
	PERCENT	.28	28.04	14.16	.85	43.34
FEMALE	COUNT	517	7,116	4,980	323	12,936
	PERCENT	2.26	31.17	21.81	1.41	56.66
SEXES COMBINED	COUNT	582	13,519	8,214	517	22,832
	PERCENT	2.55	59.21	35.98	2.26	100.00

¹ Allocation based on 5-3/8 inch gillnet samples from District 4 commercial catch.

Table 69. Yukon Area District 4 summer chum salmon subsistence fishwheel catch, age and sex by sample period, 1982¹.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1	6/25- 7/22					
PERIOD SAMPLE SIZE	356					
MALE	COUNT	1,090	22,896	21,079	1,454	46,519
	PERCENT	.84	17.70	16.29	1.12	35.96
FEMALE	COUNT	2,181	45,428	33,799	1,454	82,862
	PERCENT	1.69	35.11	26.12	1.12	64.04
SEXES COMBINED	COUNT	3,271	68,324	54,878	2,908	129,381
	PERCENT	2.53	52.81	42.42	2.25	100.00

¹ Allocation based on fishwheel samples from District 4 commercial catch.

Table 70. Yukon Area District 6 summer chum salmon subsistence gillnet catch by age, length (mm), weight (kg), and sex, 1982 .

	AGE GROUP			
	31	41	51	TOTAL
MALES				
NUMBER	38	291	76	405
AV LENGTH	575.71	598.89	633.93	603.29
STD ERROR	8.34	3.83	7.27	4.90
SAMP SIZE	7	54	14	75
AV WEIGHT	2.68	3.05	3.61	3.12
STD ERROR	.15	.07	.20	.10
SAMP SIZE	7	54	14	75
FEMALES				
NUMBER	38	124	70	232
AV LENGTH	565.00	588.26	614.62	592.40
STD ERROR	9.19	4.08	6.39	5.61
SAMP SIZE	7	23	13	43
AV WEIGHT	2.26	2.56	2.91	2.62
STD ERROR	.09	.07	.11	.08
SAMP SIZE	7	23	13	43
SEXES COMBINED				
NUMBER	76	415	146	637
AV LENGTH	570.35	595.71	624.67	599.33
STD ERROR	8.77	3.91	6.85	5.16
SAMP SIZE	14	77	27	118
AV WEIGHT	2.47	2.90	3.27	2.94

¹ Allocation based on gillnet samples from District 6 subsistence catch.

Table 71. Yukon Area District 6 summer chum salmon subsistence gillnet catch, age, and sex by sample period, 1982¹.

		AGE GROUP			
		31	41	51	TOTAL
SAMPLE PERIOD 1	7/11- 8/15				
PERIOD SAMPLE SIZE	118				
MALE	COUNT	38	291	76	405
	PERCENT	5.97	45.68	11.93	63.58
FEMALE	COUNT	38	124	70	232
	PERCENT	5.97	19.47	10.99	36.42
SEXES COMBINED	COUNT	76	415	146	637
	PERCENT	11.93	65.15	22.92	100.00

¹ Allocation based on gillnet samples from District 6 subsistence catch.

Table 72. Yukon Area District 6 summer chum salmon subsistence fishwheel catch, age and sex by sample period, 1982¹.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1 7/ 6- 8/16						
PERIOD SAMPLE SIZE		307				
MALE	COUNT	75	798	166	8	1,047
	PERCENT	2.94	31.29	6.51	.31	41.06
FEMALE	COUNT	141	1,154	183	25	1,503
	PERCENT	5.53	45.25	7.18	.98	58.94
SEXES COMBINED	COUNT	216	1,952	349	33	2,550
	PERCENT	8.47	76.55	13.69	1.29	100.00

¹ Allocation based on fishwheel samples from District 4B commercial catch.

Table 73. Total utilization of Yukon River summer chum salmon by age and fishery, 1982.

FISHERY	AGE GROUP				TOTAL
	31	41	51	61	
DISTRICT 1					
COMMERCIAL	1,361	161,201	79,733	7,083	249,378
SUBSISTENCE	228	13,941	3,918	365	18,452
TOTAL	1,589	175,142	83,651	7,448	267,830
DISTRICT 2					
COMMERCIAL	3,357	115,021	59,700	4,280	182,358
SUBSISTENCE	515	12,914	4,691	322	18,442
TOTAL	3,872	127,935	64,391	4,602	200,800
DISTRICT 3					
COMMERCIAL	12	2,111	1,826	137	4,086
SUBSISTENCE	163	4,090	1,485	102	5,840
TOTAL	175	6,201	3,311	239	9,926
DISTRICT 4					
COMMERCIAL	4,838	85,983	60,770	3,337	154,928
SUBSISTENCE	3,853	81,843	63,092	3,425	152,213
TOTAL	8,691	167,826	123,862	6,762	307,141
DISTRICT 5 ¹					
COMMERCIAL	—	—	—	—	234
SUBSISTENCE	—	—	—	—	6,931
TOTAL	—	—	—	—	7,165
DISTRICT 6					
COMMERCIAL	2,026	17,537	3,342	277	23,182
SUBSISTENCE	292	2,367	495	33	3,187
TOTAL	2,318	19,904	3,837	310	26,369
TOTAL HARVEST					
COMMERCIAL	11,594	381,853	205,371	15,114	614,166
SUBSISTENCE	5,051	115,155	73,681	4,247	205,065
TOTAL	16,645	497,008	279,052	19,361	819,231

¹ No commercial or subsistence catch samples were collected from District 5, therefore catch is not allocated to age groups.

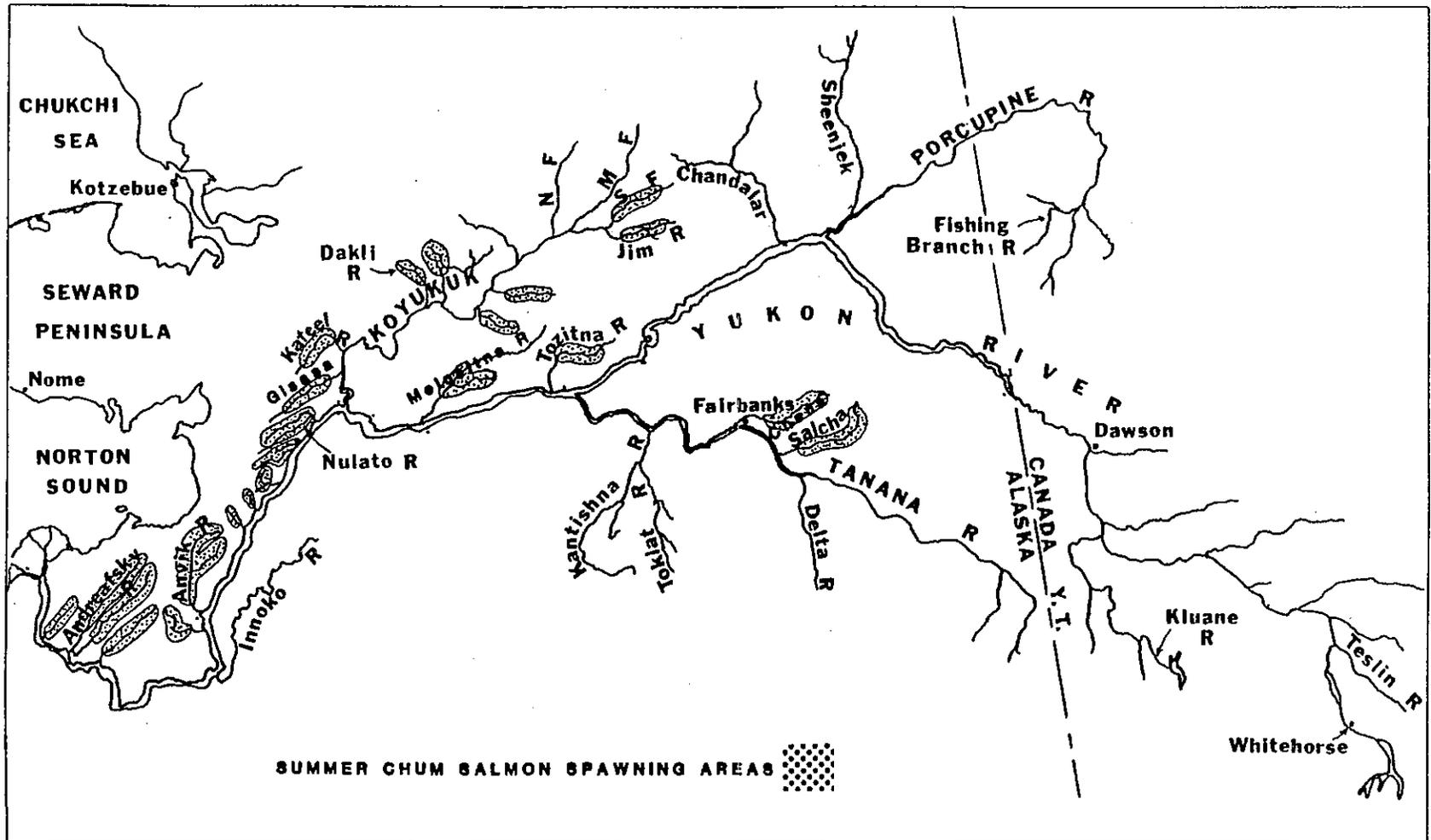


Figure 4. Map of the Yukon River drainage, showing summer chum salmon spawning areas.

Table 74. Yukon River summer chum salmon aerial survey escapement estimates, 1982.

Date	Andreafsky River			Anvik	Koyukuk River Drainage						Tanana River Drainage			
	East Fork	West Fork	Total		Gisasa	Dakli	Hogatza	Jim	Indian	Henshaw	Melozitna	Tozitna	Salcha	Chena
7/20	7,501 ^{1 2}	7,267 ¹	14,768											
7/23											22,710 ⁴			
7/26				444,581 ³										
7/28												483 ¹	847	
8/03								2 ¹						
8/04										12 ¹		466		11
8/05					334							874 ¹		
8/06							1,197	4,984		300 ¹				
8/12												3,756 ¹	1,509 ¹	265

¹ Fair to poor survey conditions.

² Side-scan sonar total season count was 181,352 summer chum salmon for the East Fork Andreafsky River.

³ No aerial survey flown due to poor conditions. This is the side-scan sonar total season count.

⁴ This is the side-scan sonar total season count. An aerial survey was flown only of Melozi Hot Springs Creek on 8/5, and 464 summer chum salmon were counted.

Table 75. Daily summer chum salmon escapement to the East Fork Andreafsky River, 1982, based on side-scan sonar counts¹.

Date	Daily		Cumulative	
	Count	Percent	Count	Percent
6/25	550	0.3	550	0.3
6/26	862	0.5	1,412	0.8
6/27	608	0.3	2,020	1.1
6/28	2,239	1.2	4,259	2.3
6/29	648	0.4	4,907	2.7
6/30	1,191	0.7	6,098	3.4
7/01	1,023	0.6	7,121	3.9
7/02	32,572	18.0	39,693	21.9
7/03	1,984	1.1	41,677	23.0
7/04	6,330	3.5	48,007	26.5
7/05	1,216	0.7	49,223	27.1
7/06	2,077	1.1	51,300	28.3
7/07	4,890	2.7	56,190	31.0
7/08	22,993	12.7	79,183	43.7
7/09	15,637	8.6	94,820	52.3
7/10	15,575	8.6	110,395	60.9
7/11	16,268	9.0	126,663	69.8
7/12	15,017	8.3	141,680	78.1
7/13	13,172	7.3	154,852	85.4
7/14	8,118	4.5	162,970	89.9
7/15	6,952	3.8	169,922	93.7
7/16	7,999	4.4	177,921	98.1
7/17	1,528	0.8	179,449	99.0
7/18	1,027	0.6	180,476	99.5
7/19	646	0.4	181,122	99.9
7/20	230	0.1	181,352	100.0

¹ From Buklis, Lawrence S. 1983. Anvik and Andreafsky River salmon studies, 1982. Alaska Department of Fish and Game, Commercial Fisheries Division, Anchorage, Yukon Salmon Escapement Report No. 20, 52 pp. Reference this report for specific counting methods and derivation of escapement estimate.

Table 76. East Fork Andreafsky River summer chum salmon escapement by age, length (mm), and sex, 1982¹.

	AGE GROUP				TOTAL
	31	41	51	61	
MALES					
NUMBER	787	42,879	18,489	1,967	64,122
PERCENT	0.43	23.64	10.20	1.08	35.36
AV LENGTH	495.00	573.19	601.28	598.00	581.09
STD ERROR	5.00	2.82	4.63	16.32	3.79
SAMP SIZE	2	109	47	5	163
FEMALES					
NUMBER	3,540	89,300	23,603	787	117,230
PERCENT	1.95	49.24	13.02	0.43	64.64
AV LENGTH	531.11	528.88	549.75	600.00	533.63
STD ERROR	8.07	1.62	3.90	20.00	2.40
SAMP SIZE	9	227	60	2	298
SEXES COMBINED					
NUMBER	4,327	132,179	42,092	2,754	181,352
PERCENT	2.38	72.88	23.22	1.51	100.00
AV LENGTH	524.54	543.25	572.38	598.57	550.41

¹ Allocation based on beach seine and carcass samples.

Table 77. Daily summer chum salmon escapement to the Anvik River, 1982, based on side-scan sonar counts¹.

Date	Daily		Cumulative	
	Count	Percent	Count	Percent
6/25	715	0.2	715	0.2
6/26	2,436	0.5	3,151	0.7
6/27	6,026	1.4	9,177	2.1
6/28	3,744	0.8	12,921	2.9
6/29	3,669	0.8	16,590	3.7
6/30	4,445	1.0	21,035	4.7
7/01	3,795	0.9	24,830	5.6
7/02	3,762	0.8	28,592	6.4
7/03	9,671	2.2	38,263	8.6
7/04	23,642	5.3	61,905	13.9
7/05	22,454	5.1	84,359	19.0
7/06	22,261	5.0	106,620	24.0
7/07	14,333	3.2	120,953	27.2
7/08	27,291	6.1	148,244	33.3
7/09	40,527	9.1	188,771	42.5
7/10	25,882	5.8	214,653	48.3
7/11	19,988	4.5	234,641	52.8
7/12	36,197	8.1	270,838	60.9
7/13	33,836	7.6	304,674	68.5
7/14	33,232	7.5	337,906	76.0
7/15	18,757	4.2	356,663	80.2
7/16	13,672	3.1	370,335	83.3
7/17	14,982	3.4	385,317	86.7
7/18	12,970	2.9	398,287	89.6
7/19	11,402	2.6	409,689	92.2
7/20	7,566	1.7	417,255	93.9
7/21	7,455	1.7	424,710	95.5
7/22	5,352	1.2	430,062	96.7
7/23	4,685	1.1	434,747	97.8
7/24	5,530	1.2	440,277	99.0
7/25	2,167	0.5	442,444	99.5
7/26	2,137	0.5	444,581	100.0

¹ From: Buklis, Lawrence S. 1983. Anvik and Andreafsky River salmon studies, 1982. Alaska Department of Fish and Game, Commercial Fisheries Division, Anchorage, Yukon Salmon Escapement Report No. 20, 52 pp. Reference this report for specific counting methods and derivation of escapement estimate.

Table 78. Anvik River summer chum salmon escapement by age, length (mm), and sex, 1982¹.

	AGE GROUP				
	31	41	51	61	TOTAL
MALES					
NUMBER	4,655	87,286	43,062	1,164	136,167
PERCENT	1.05	19.63	9.69	0.26	30.63
AV LENGTH	521.25	583.36	615.32	645.00	591.87
STD ERROR	9.44	2.58	5.74	0.00	3.79
SAMP SIZE	4	75	37	1	117
FEMALES					
NUMBER	19,785	210,652	75,649	2,328	308,414
PERCENT	4.45	47.38	17.02	0.52	69.37
AV LENGTH	521.18	541.30	561.89	550.00	545.13
STD ERROR	5.33	2.06	3.20	0.00	2.53
SAMP SIZE	17	181	65	2	265
SEXES COMBINED					
NUMBER	24,440	297,938	118,711	3,492	444,581
PERCENT	5.50	67.01	26.71	0.78	100.00
AV LENGTH	521.19	553.62	581.27	581.67	559.44

¹ Allocation based on beach seine and carcass samples.

Table 79. Daily summer chum salmon escapement to the Melozitna River, 1982, based on side-scan sonar counts¹.

Date	Daily		Cumulative	
	Count	Percent	Count	Percent
6/26	52	0.3	52	0.3
6/27	90	0.5	142	0.8
6/28	116	0.6	258	1.4
6/29	221	1.1	479	2.5
6/30	191	1.0	670	3.5
7/01	251	1.3	921	4.8
7/02	227	1.2	1,148	6.0
7/03	509	2.6	1,657	8.6
7/04	1,172	5.9	2,829	14.5
7/05	438	2.2	3,267	16.7
7/06	515	2.6	3,782	19.3
7/07	439	2.2	4,221	21.5
7/08	604	3.1	4,825	24.6
7/09	564	2.9	5,389	27.5
7/10	589	3.0	5,978	30.5
7/11	1,257	6.4	7,235	36.9
7/12	968	4.9	8,203	41.8
7/13	2,074	10.5	10,277	52.3
7/14	2,284	11.6	12,561	63.9
7/15	961	4.9	13,522	68.8
7/16	684	3.5	14,206	72.3
7/17	635	3.2	14,841	75.5
7/18	1,072	5.4	15,913	80.9
7/19	1,133	5.7	17,046	86.6
7/20	1,111	5.6	18,157	92.2
7/21	434	2.2	18,591	94.4
7/22	885	4.5	19,476	98.9
7/23	234	1.2	19,710	100.0
Total			22,710 2/	100.0

¹ From: Barton, Louis H. 1983. Enumeration of summer chum salmon and king salmon by side-scanning sonar in the Melozitna River in 1982. Alaska Department of Fish and Game, Commercial Fisheries Division, Fairbanks, Yukon Salmon Escapement Report No. 18, 19 pp. Reference this report for specific counting methods and derivation of escapement estimate.

² Uncounted midstream escapement estimated to 3,000 summer chum salmon for the season.

Table 80. Melozitna River summer chum salmon escapement by age, length (mm), and sex, 1982¹.

	AGE GROUP				TOTAL
	31	41	51	61	
MALES					
NUMBER	1,514	6,056	4,542	1,514	13,626
PERCENT	6.67	26.67	20.00	6.67	60.00
AV LENGTH	560.00	586.25	608.33	570.00	588.89
STD ERROR	0.00	11.06	19.22	0.00	11.32
SAMP SIZE	1	4	3	1	9
FEMALES					
NUMBER	0	6,056	3,028	0	9,084
PERCENT	0.00	26.67	13.33	0.00	40.00
AV LENGTH	0.00	588.75	600.00	0.00	592.50
STD ERROR	0.00	12.81	10.00	0.00	11.87
SAMP SIZE	0	4	2	0	6
SEXES COMBINED					
NUMBER	1,514	12,112	7,570	1,514	22,710
PERCENT	6.67	53.34	33.33	6.67	100.00
AV LENGTH	560.00	587.50	605.00	570.00	590.33

¹ Allocation based on 5-7/8 inch drift gillnet samples.

Table 81. Gisasa River summer chum salmon escapement sample by age, length (mm), and sex, 1982¹.

	AGE GROUP				
	31	41	51	61	TOTAL
MALES					
PERCENT	3.20	22.60	3.20	0.00	29.00
AV LENGTH	584.00	602.29	641.00	0.00	604.54
STD ERROR	0.00	9.90	0.00	0.00	7.70
SAMP SIZE	1	7	1	0	9
FEMALES					
PERCENT	6.50	58.00	0.00	6.50	71.00
AV LENGTH	516.00	540.11	0.00	558.00	539.54
STD ERROR	16.00	7.61	0.00	18.00	9.32
SAMP SIZE	2	18	0	2	22
SEXES COMBINED					
PERCENT	9.70	80.60	3.20	6.50	100.00
AV LENGTH	538.43	557.55	641.00	558.00	558.39

¹ Carcass samples.

Table 82. Chena River summer chum salmon escapement sample by age, length (mm), and sex, 1982¹.

	AGE GROUP				TOTAL
	31	41	51	61	
MALES					
PERCENT	3.00	23.30	3.90	.40	30.60
AV LENGTH	560.00	579.50	593.67	580.00	579.40
STD ERROR	10.64	3.40	12.32	0.00	5.20
SAMP SIZE	7	54	9	1	71
FEMALES					
PERCENT	6.50	52.10	9.90	.90	69.40
AV LENGTH	542.07	551.57	577.78	579.00	554.77
STD ERROR	7.71	2.42	6.45	14.00	3.63
SAMP SIZE	15	121	23	2	161
SEXES COMBINED					
PERCENT	9.50	75.40	13.80	1.30	100.00
AV LENGTH	547.73	560.20	582.27	579.31	562.31

¹ Carcass samples.

Table 83. Salcha River summer chum salmon escapement sample by age, length (mm), and sex, 1982¹.

	AGE GROUP				TOTAL
	31	41	51	61	
MALES					
PERCENT	2.00	28.70	5.90	1.00	37.60
AV LENGTH	558.00	591.79	628.33	623.00	596.56
STD ERROR	12.00	6.40	16.44	0.00	8.12
SAMP SIZE	2	29	6	1	38
FEMALES					
PERCENT	5.90	43.60	12.90	0.00	62.40
AV LENGTH	533.83	572.20	594.38	0.00	573.16
STD ERROR	3.26	4.13	7.02	0.00	4.64
SAMP SIZE	6	44	13	0	63
SEXES COMBINED					
PERCENT	7.90	72.30	18.80	1.00	100.00
AV LENGTH	539.95	579.98	605.03	623.00	581.96

¹ Carcass samples.

Table 84. Yukon Area District 1 fall chum salmon commercial gillnet catch by age, length (mm), and sex, 1982¹.

	AGE GROUP				
	31	41	51	61	TOTAL
MALES					
NUMBER	3,121	24,993	13,577	191	41,882
AV LENGTH	577.81	596.05	626.84	608.50	604.73
STD ERROR	6.45	2.51	3.82	.50	3.21
SAMP SIZE	33	272	146	2	453
FEMALES					
NUMBER	2,712	35,507	17,198	185	55,602
AV LENGTH	568.08	581.84	611.54	587.10	590.37
STD ERROR	6.77	1.71	3.10	0.00	2.38
SAMP SIZE	29	384	185	2	600
SEXES COMBINED					
NUMBER	5,833	60,500	30,775	376	97,484
AV LENGTH	573.29	587.71	618.29	597.97	596.54

¹ Allocation based on 6 inch gillnet samples from District 1 commercial catch.

Table 85. Yukon Area District 1 fall chum salmon commercial gillnet catch, age, and sex by sample period, 1982¹.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1 7/16- 7/27						
PERIOD SAMPLE SIZE		476				
MALE	COUNT	444	13,424	5,067	0	18,935
	PERCENT	1.05	31.72	11.97	0.00	44.75
FEMALE	COUNT	800	16,002	6,489	89	23,380
	PERCENT	1.89	37.82	15.33	.21	55.25
SEXES COMBINED	COUNT	1,244	29,426	11,556	89	42,315
	PERCENT	2.94	69.54	27.31	.21	100.00
SAMPLE PERIOD 2 7/30- 8/13						
PERIOD SAMPLE SIZE		577				
MALE	COUNT	2,677	11,569	8,510	191	22,947
	PERCENT	4.85	20.97	15.43	.35	41.59
FEMALE	COUNT	1,912	19,505	10,709	96	32,222
	PERCENT	3.47	35.35	19.41	.17	58.41
SEXES COMBINED	COUNT	4,589	31,074	19,219	287	55,169
	PERCENT	8.32	56.33	34.84	.52	100.00
PERIODS COMBINED						
SAMPLE SIZES COMBINED		1,053				
MALE	COUNT	3,121	24,993	13,577	191	41,882
	PERCENT	3.20	25.64	13.93	.20	42.96
FEMALE	COUNT	2,712	35,507	17,198	185	55,602
	PERCENT	2.78	36.42	17.64	.19	57.04
SEXES COMBINED	COUNT	5,833	60,500	30,775	376	97,484
	PERCENT	5.98	62.06	31.57	.39	100.00

¹ Allocation based on 6 inch gillnet samples from District 1 commercial catch.

Table 86. Yukon Area District 2 fall chum salmon commercial gillnet catch, age, and sex by sample period, 1982¹.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1 7/16- 8/13						
PERIOD	SAMPLE SIZE	1,053				
MALE	COUNT	3,027	24,948	13,391	183	41,549
	PERCENT	3.13	25.83	13.87	.19	43.02
FEMALE	COUNT	2,660	35,221	16,968	183	55,032
	PERCENT	2.75	36.47	17.57	.19	56.98
SEXES COMBINED	COUNT	5,687	60,169	30,359	366	96,581
	PERCENT	5.89	62.30	31.43	.38	100.00

¹ Allocation based on 6 inch gillnet samples from District 1 commercial catch.

Table 87. Yukon Area District 3 fall chum salmon commercial gillnet catch, age, and sex by sample period, 1982¹.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1 7/16- 8/13						
PERIOD SAMPLE SIZE 1,053						
MALE	COUNT	182	1,503	806	11	2,502
	PERCENT	3.13	25.85	13.86	.19	43.03
FEMALE	COUNT	160	2,120	1,022	11	3,313
	PERCENT	2.75	36.46	17.58	.19	56.97
SEXES COMBINED	COUNT	342	3,623	1,828	22	5,815
	PERCENT	5.88	62.30	31.44	.38	100.00

¹ Allocation based on 6 inch gillnet samples from District 1 commercial catch.

No commercial fall chum salmon harvest is taken in Subdistrict 4A. The Subdistrict 4B commercial fishwheel catch is allocated to age and sex groups based on fishwheel test fishing samples from Subdistrict 4B (Table 88A). Age 4₁ was 48% of the catch and age 5₁ 45%. Females accounted for 57% of the catch. The Subdistrict 4C commercial fishwheel catch is apportioned based on Subdistrict 4C fishwheel test fishing samples (Table 88B). Age 4₁ was 66% of the catch, age 5₁ 20%, and age 3₁ 14%. Females accounted for 61% of the total. Tagging studies have shown that fall chum salmon migrating along the north bank of the Yukon River (Subdistrict 4B) are bound for the upper Yukon and Porcupine Rivers, while those on the south bank (Subdistrict 4C) are bound for the Tanana River (Buklis 1981). As in 1981 (Hamner 1982), the north bank stock has a higher percentage of age 5₁ fish and fewer age 3₁ fish than the south bank stock (Tables 88A and 88B). Differences in age composition of the catch in the two subdistricts substantiate the distinct bank orientation of the two stocks first identified by the tagging study.

District 5 and District 6 fall chum salmon commercial fishwheel catches were not sampled. Based on the bank orientation of the two stocks, the Subdistrict 4B fishwheel test fishing sample was used to apportion the District 5 commercial catch (Table 89) and the Subdistrict 4C fishwheel test fishing sample was used for the District 6 commercial catch (Table 90). The commercial gillnet catch in the Dawson area, Yukon Territory was sampled (Tables 91 and 92). Age 5₁ accounted for 57% of the total, age 4₁ 40%. Sex composition was 43% female.

Subsistence harvests in Districts 1, 2, and 3 were apportioned by age and sex based on the District 1 commercial catch sample (Tables 93-95). The District 4 subsistence gillnet catch of 1,615 fall chum salmon was not sampled, and was not apportioned by age and sex because of the lack of any applicable sample data. Subsistence fishwheel catches in District 4 were apportioned based on the test fishing sample from Subdistricts 4B and 4C pooled (Table 96). The District 5 subsistence gillnet catch of 5,372 fall chum salmon was not sampled, and was not separated by age and sex. Although the District 5 subsistence fishwheel catch was not sampled either, the test fishing sample from Subdistrict 4B was applied (Table 97). District 6 gillnet catches were sampled, and age 4₁ was 58% and age 5₁ 32% of the total (Tables 98 and 99). Males accounted for 63% of the catch. The Subdistrict 4C test fishing sample was used to allocate the District 6 subsistence fishwheel catch (Table 100). The Dawson commercial gillnet sample was used for the Dawson subsistence gillnet catch apportionment, since the subsistence harvest was not sampled (Table 101).

A total of 339,094 fall chum salmon was harvested by commercial and subsistence fisheries in the Yukon Area (including Canada) in 1982 (Table 102). The majority of the catch was age 4₁ (59%), followed by age 5₁ (35%), age 3₁ (6%), and age 6₁ (0.3%).

Fall chum salmon spawn in spring fed upwelling areas in streams and sloughs in the upper Yukon River drainage (Figure 5). Aerial survey conditions were generally poor in 1982, although some spawning areas were counted by foot survey with no difficulty (Table 103). Escapements were below average, and record low numbers were observed in the upper Toklat River. Sheenjok River escapement was estimated by sonar to be 29,093 fall chum salmon (Table 104). Drift gillnet samples were 52% age 5₁ and 44% age 4₁ (Table 105). Females accounted for

Table 88A. Yukon Area District 4B fall chum salmon commercial fishwheel catch, age, and sex by sample period, 1982¹.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1 8/11- 9/ 7						
PERIOD SAMPLE SIZE 488						
MALE	COUNT	14	205	202	2	423
	PERCENT	1.43	20.96	20.65	.20	43.25
FEMALE	COUNT	46	269	240	0	555
	PERCENT	4.70	27.51	24.54	0.00	56.75
SEXES COMBINED	COUNT	60	474	442	2	978
	PERCENT	6.13	48.47	45.19	.20	100.00

¹ Allocation based on fishwheel samples from District 4B test fishing study.

Table 88B. Yukon Area District 4C fall chum salmon commercial fishwheel catch, age, and sex by sample period, 1982¹.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1	8/ 6- 9/11					
PERIOD SAMPLE SIZE	776					
MALE	COUNT	179	775	238	0	1,192
	PERCENT	5.81	25.14	7.72	0.00	38.66
FEMALE	COUNT	254	1,248	385	4	1,891
	PERCENT	8.24	40.48	12.49	.13	61.34
SEXES COMBINED	COUNT	433	2,023	623	4	3,083
	PERCENT	14.04	65.62	20.21	.13	100.00

¹ Allocation based on fishwheel samples from District 4C test fishing study.

Table 89. Yukon Area District 5 fall chum salmon commercial fishwheel catch, age, and sex by sample period, 1982¹.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1 8/11- 9/ 7						
PERIOD SAMPLE SIZE 488						
MALE	COUNT	196	2,859	2,831	28	5,914
	PERCENT	1.43	20.90	20.70	.20	43.24
FEMALE	COUNT	645	3,756	3,363	0	7,764
	PERCENT	4.72	27.46	24.59	0.00	56.76
SEXES COMBINED	COUNT	841	6,615	6,194	28	13,678
	PERCENT	6.15	48.36	45.28	.20	100.00

¹ Allocation based on fishwheel samples from District 4B test fishing study.

Table 90. Yukon Area District 6 fall chum salmon commercial fishwheel catch, age, and sex by sample period, 1982¹.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1	8/ 6- 9/11					
PERIOD SAMPLE SIZE	776					
MALE	COUNT	430	1,864	573	0	2,867
	PERCENT	5.80	25.13	7.73	0.00	38.66
FEMALE	COUNT	612	3,000	927	10	4,549
	PERCENT	8.25	40.45	12.50	.13	61.34
SEXES COMBINED	COUNT	1,042	4,864	1,500	10	7,416
	PERCENT	14.05	65.59	20.23	.13	100.00

¹ Allocation based on fishwheel samples from District 4C test fishing study.

Table 91. Dawson fall chum salmon commercial gillnet catch by age, length (mm), and sex, 1982¹.

	AGE GROUP				
	31	41	51	61	TOTAL
MALES					
NUMBER	145	2,550	3,594	29	6,318
AV LENGTH	621.20	670.74	696.45	760.00	684.64
STD ERROR	18.95	4.62	4.41	0.00	4.81
SAMP SIZE	5	88	124	1	218
FEMALES					
NUMBER	174	1,884	2,753	29	4,840
AV LENGTH	612.83	626.18	656.71	614.00	642.99
STD ERROR	8.70	4.88	3.12	0.00	3.98
SAMP SIZE	6	65	95	1	167
SEXES COMBINED					
NUMBER	319	4,434	6,347	58	11,158
AV LENGTH	616.63	651.81	679.21	687.00	666.57

¹ Allocation based on gillnet samples from the Dawson area commercial catch.

Table 92. Dawson fall chum salmon commercial gillnet catch, age, and sex by sample period, 1982¹.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1	7/30-10/ 2					
PERIOD SAMPLE SIZE	385					
MALE	COUNT	145	2,550	3,594	29	6,318
	PERCENT	1.30	22.85	32.21	.26	56.62
FEMALE	COUNT	174	1,884	2,753	29	4,840
	PERCENT	1.56	16.88	24.67	.26	43.38
SEXES COMBINED	COUNT	319	4,434	6,347	58	11,158
	PERCENT	2.86	39.74	56.88	.52	100.00

¹ Allocation based on gillnet samples from the Dawson area commercial catch.

Table 93. Yukon Area District 1 fall chum salmon subsistence gillnet catch, age, and sex by sample period, 1982¹.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1 7/16- 8/13						
PERIOD SAMPLE SIZE 1,053						
MALE	COUNT	314	2,587	1,389	19	4,309
	PERCENT	3.13	25.83	13.87	.19	43.02
FEMALE	COUNT	276	3,652	1,760	19	5,707
	PERCENT	2.76	36.46	17.57	.19	56.98
SEXES COMBINED	COUNT	590	6,239	3,149	38	10,016
	PERCENT	5.89	62.29	31.44	.38	100.00

¹ Allocation based on 6 inch gillnet samples from District 1 commercial catch.

Table 94. Yukon Area District 2 fall chum salmon subsistence gillnet catch, age, and sex by sample period, 1982¹.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1 7/16- 8/13						
PERIOD SAMPLE SIZE 1,053						
MALE	COUNT	298	2,457	1,319	18	4,092
	PERCENT	3.13	25.83	13.87	.19	43.02
FEMALE	COUNT	262	3,468	1,671	18	5,419
	PERCENT	2.75	36.46	17.57	.19	56.98
SEXES COMBINED	COUNT	560	5,925	2,990	36	9,511
	PERCENT	5.89	62.30	31.44	.38	100.00

¹ Allocation based on 6 inch commercial gillnet samples from District 1 commercial catch.

Table 95. Yukon Area District 3 fall chum salmon subsistence gillnet catch, age, and sex by sample period, 1982¹.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1 7/16- 8/13						
PERIOD SAMPLE SIZE 1,053						
MALE	COUNT	52	429	230	3	714
	PERCENT	3.13	25.86	13.86	.18	43.04
FEMALE	COUNT	46	605	291	3	945
	PERCENT	2.77	36.47	17.54	.18	56.96
SEXES COMBINED	COUNT	98	1,034	521	6	1,659
	PERCENT	5.91	62.33	31.40	.36	100.00

¹ Allocation based on 6 inch gillnet samples from District 1 commercial catch.

Table 96. Yukon Area District 4 fall chum salmon subsistence fishwheel catch, age, and sex by sample period, 1982¹.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1	8/ 6- 9/11					
PERIOD SAMPLE SIZE	1,264					
MALE	COUNT	598	3,415	1,852	12	5,877
	PERCENT	4.11	23.49	12.74	.08	40.43
FEMALE	COUNT	1,001	5,151	2,496	12	8,660
	PERCENT	6.89	35.43	17.17	.08	59.57
SEXES COMBINED	COUNT	1,599	8,566	4,348	24	14,537
	PERCENT	11.00	58.93	29.91	.17	100.00

¹ Allocation based on fishwheel samples from District 4B and 4C test fishing study.

Table 97. Yukon Area District 5 fall chum salmon subsistence fishwheel catch, age, and sex by sample period, 1982¹.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1 8/11- 9/ 7						
PERIOD SAMPLE SIZE 488						
MALE	COUNT	693	10,105	10,006	99	20,903
	PERCENT	1.43	20.90	20.70	.20	43.24
FEMALE	COUNT	2,279	13,275	11,888	0	27,442
	PERCENT	4.71	27.46	24.59	0.00	56.76
SEXES COMBINED	COUNT	2,972	23,380	21,894	99	48,345
	PERCENT	6.15	48.36	45.29	.20	100.00

¹ Allocation based on fishwheel samples from District 4B test fishing study.

Table 98. Yukon Area District 6 fall chum salmon subsistence gillnet catch by age, length (mm), weight (kg), and sex, 1982¹.

	AGE GROUP			
	31	41	51	TOTAL
MALES				
NUMBER	62	268	202	532
AV LENGTH	548.12	601.88	643.65	611.47
STD ERROR	5.64	3.74	5.00	4.44
SAMP SIZE	16	69	52	137
AV WEIGHT	2.28	3.33	4.18	3.53
STD ERROR	.09	.08	.11	.10
SAMP SIZE	16	69	52	137
FEMALES				
NUMBER	23	222	62	307
AV LENGTH	560.00	583.04	609.37	586.63
STD ERROR	9.74	4.05	8.16	5.31
SAMP SIZE	6	57	16	79
AV WEIGHT	2.23	2.60	3.20	2.69
STD ERROR	.12	.07	.13	.09
SAMP SIZE	6	57	16	79
SEXES COMBINED				
NUMBER	85	490	264	839
AV LENGTH	551.33	593.34	635.60	602.38
STD ERROR	6.76	3.88	5.75	4.76
SAMP SIZE	22	126	68	216
AV WEIGHT	2.27	3.00	3.95	3.22

¹ Allocation based on gillnet samples from District 6 subsistence catch.

Table 99. Yukon Area District 6 fall chum salmon subsistence gillnet catch, age, and sex by sample period, 1982¹.

		AGE GROUP			
		31	41	51	TOTAL
SAMPLE PERIOD 1 8/16- 9/27					
PERIOD SAMPLE SIZE 216					
MALE	COUNT	62	268	202	532
	PERCENT	7.39	31.94	24.08	63.41
FEMALE	COUNT	23	222	62	307
	PERCENT	2.74	26.46	7.39	36.59
SEXES COMBINED	COUNT	85	490	264	839
	PERCENT	10.13	58.40	31.47	100.00

¹ Allocation based on gillnet samples from District 6 subsistence catch.

Table 100. Yukon Area District 6 fall chum salmon subsistence fishwheel catch, age, and sex by sample period, 1982¹.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1	8/ 6- 9/11					
PERIOD SAMPLE SIZE	776					
MALE	COUNT	438	1,896	584	0	2,918
	PERCENT	5.80	25.12	7.74	0.00	38.66
FEMALE	COUNT	623	3,053	944	10	4,630
	PERCENT	8.25	40.45	12.51	.13	61.34
SEXES COMBINED	COUNT	1,061	4,949	1,528	10	7,548
	PERCENT	14.06	65.57	20.24	.13	100.00

¹ Allocation based on fishwheel samples from District 4C test fishing study.

Table 101. Dawson fall chum salmon subsistence gillnet catch, age, and sex by sample period, 1982¹.

		AGE GROUP				
		31	41	51	61	TOTAL
SAMPLE PERIOD 1	7/30-10/ 2					
PERIOD SAMPLE SIZE	385					
MALE	COUNT	45	791	1,114	9	1,959
	PERCENT	1.30	22.87	32.21	.26	56.63
FEMALE	COUNT	54	584	853	9	1,500
	PERCENT	1.56	16.88	24.66	.26	43.37
SEXES COMBINED	COUNT	99	1,375	1,967	18	3,459
	PERCENT	2.86	39.75	56.87	.52	100.00

¹ Allocation based on gillnet samples from the Dawson area commercial catch.

Table 102. Total utilization of Yukon River fall chum salmon by age and fishery, 1982.

FISHERY	AGE GROUP				TOTAL
	31	41	51	61	
DISTRICT 1					
COMMERCIAL	5,833	60,500	30,775	376	97,484
SUBSISTENCE	590	6,239	3,149	38	10,016
TOTAL	6,423	66,739	33,924	414	107,500
DISTRICT 2					
COMMERCIAL	5,687	60,169	30,359	366	96,581
SUBSISTENCE	560	5,925	2,990	36	9,511
TOTAL	6,247	66,094	33,349	402	106,092
DISTRICT 3					
COMMERCIAL	342	3,623	1,828	22	5,815
SUBSISTENCE	98	1,034	521	6	1,659
TOTAL	440	4,657	2,349	28	7,474
DISTRICT 4					
COMMERCIAL	493	2,497	1,065	6	4,061
SUBSISTENCE ¹	1,599	8,566	4,348	24	16,152
TOTAL	2,092	11,063	5,413	30	20,213
DISTRICT 5					
COMMERCIAL	841	6,615	6,194	28	13,678
SUBSISTENCE ²	2,972	23,380	21,894	99	53,717
TOTAL	3,813	29,995	28,088	127	67,395
DISTRICT 6					
COMMERCIAL	1,042	4,864	1,500	10	7,416
SUBSISTENCE	1,146	5,439	1,792	10	8,387
TOTAL	2,188	10,303	3,292	20	15,803
YUKON TERRITORY					
COMMERCIAL	319	4,434	6,347	58	11,158
SUBSISTENCE	99	1,375	1,967	18	3,459
TOTAL	418	5,809	8,314	76	14,617
TOTAL HARVEST					
COMMERCIAL	14,557	142,702	78,068	866	236,193
SUBSISTENCE	7,064	51,958	36,661	231	102,901
TOTAL	21,621	194,660	114,729	1,097	339,094

¹ District 4 subsistence gillnet catch of 1,615 fall chum salmon not allocated to age groups due to lack of catch samples, although gillnet catch is included in District total with fishwheel catch.

² District 5 subsistence gillnet catch of 5,372 fall chum salmon not allocated to age groups due to lack of catch samples, although gillnet catch is included in District total with fishwheel catch.

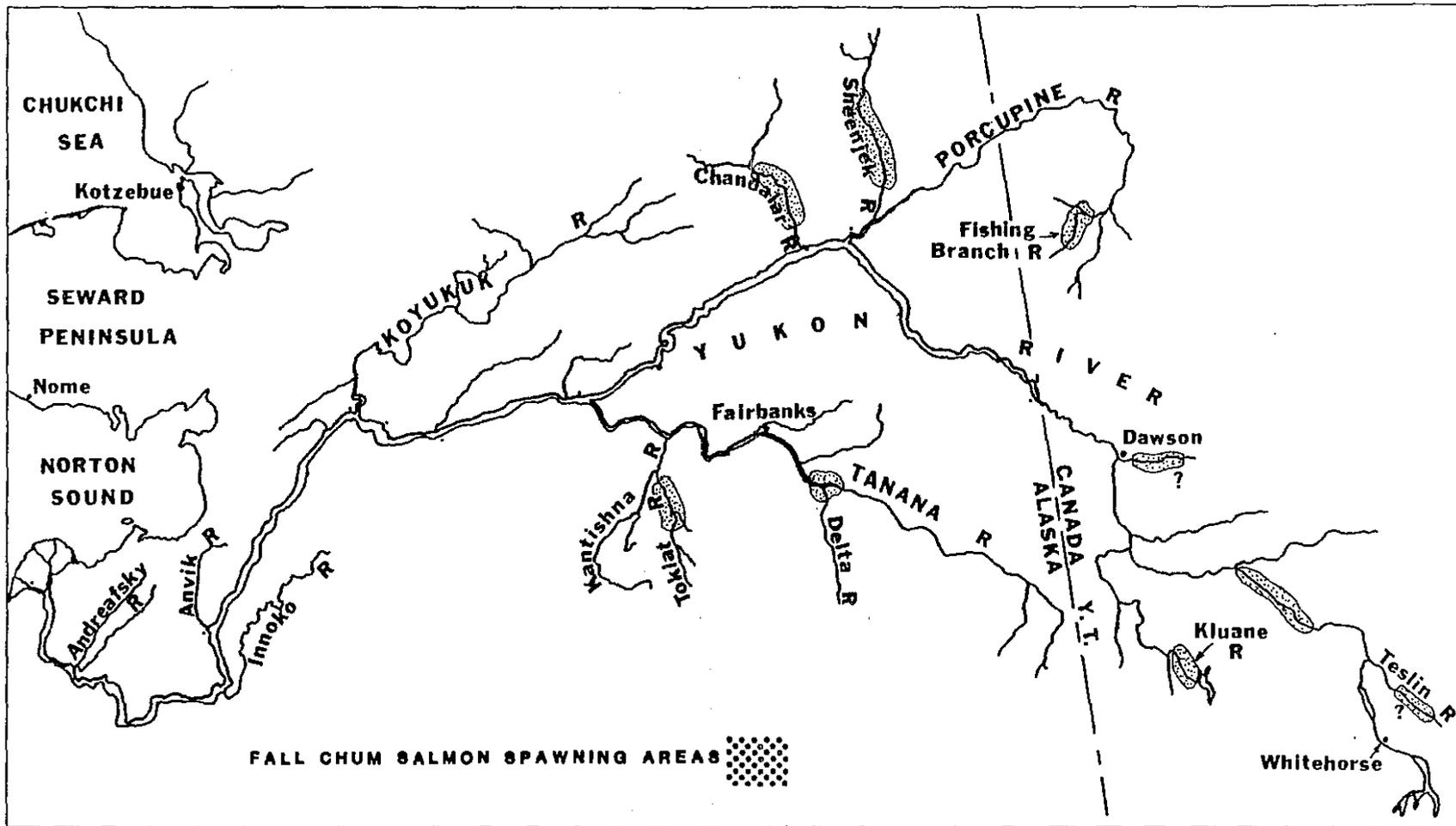


Figure 5. Map of the Yukon River drainage, showing fall chum salmon spawning areas.

Table 103. Yukon River fall chum salmon aerial survey escapement estimates, 1982.

Date	Porcupine River Drainage		Tanana River Drainage				Upper Yukon River Drainage			
	Sheenjek	Fishing Branch	Upper Toklat	Delta	Bluff Cabin Sl	Clear Creek	Julius Creek	Chandalar	Kluane	Yukon Crossing
9/14	717 ^{1, 2}									
10/06								1,145 ¹		
10/12		5,846								
10/14				1,278 ³					5,378	
10/15							38 ⁴			
10/18							37 ⁴			
10/21			3,309 ³							
10/23										1,020
10/26									449 ³	
10/27				3,433 ³						
10/28					1,156 ³					
11/10				2,325 ³						

- 1 Fair to poor survey conditions.
 2 Side-scan sonar total season count was 29,093 fall chum salmon for the Sheenjek River.
 3 Foot survey count.
 4 Weir count.

Table 104. Daily fall chum salmon escapement to the Sheenjek River, 1982, based on side-scan sonar counts¹.

Date	Daily		Cumulative	
	Count	Percent	Count	Percent
8/31	1,297	4.5	1,297	4.5
9/01	1,050	3.6	2,347	8.1
9/02	1,076	3.7	3,423	11.8
9/03	1,186	4.1	4,609	15.8
9/04	926	3.2	5,535	19.0
9/05	1,089	3.7	6,624	22.8
9/06	1,189	4.1	7,813	26.9
9/07	1,551	5.3	9,364	32.2
9/08	962	3.3	10,326	35.5
9/09	560	1.9	10,886	37.4
9/10	406	1.4	11,292	38.8
9/11	975	3.4	12,267	42.2
9/12	1,045	3.6	13,312	45.8
9/13	923	3.2	14,235	48.9
9/14	1,161	4.0	15,396	52.9
9/15	1,654	5.7	17,050	58.6
9/16	2,460	8.5	19,510	67.1
9/17	1,861	6.4	21,371	73.5
9/18	1,655	5.7	23,026	79.1
9/19	2,002	6.9	25,028	86.0
9/20	1,596	5.5	26,624	91.5
9/21	1,269	4.4	27,893	95.9
9/22	1,200	4.1	29,093	100.0

¹ From: Barton, Louis H. 1983. Enumeration of fall chum salmon by side-scanning sonar in the Sheenjek River in 1982. Alaska Department of Fish and Game, Commercial Fisheries Division, Fairbanks. Yukon Salmon Escapement Report No. 19, 29 pp. Reference this report for specific counting methods and derivation of escapement estimate.

Table 105. Sheenjek River fall chum salmon escapement by age, length (mm), and sex, 1982¹.

	AGE GROUP				TOTAL
	31	41	51	61	
MALES					
NUMBER	419	4,605	5,860	209	11,093
PERCENT	1.44	15.83	20.14	0.72	38.13
AV LENGTH	617.50	626.36	655.36	640.00	641.60
STD ERROR	47.50	6.32	6.99	0.00	8.11
SAMP SIZE	2	22	28	1	53
FEMALES					
NUMBER	419	8,163	9,418	0	18,000
PERCENT	1.44	28.06	32.37	0.00	61.87
AV LENGTH	525.00	598.46	615.33	0.00	605.58
STD ERROR	35.00	4.71	3.83	0.00	4.95
SAMP SIZE	2	39	45	0	86
SEXES COMBINED					
NUMBER	838	12,768	15,278	209	29,093
PERCENT	2.88	43.89	52.51	0.72	100.00
AV LENGTH	571.25	608.52	630.68	640.00	619.31

¹ Allocation based on 5-7/8 inch drift gillnet samples.

62% of the sample. Carcass samples were collected from the Toklat (Table 106) and Delta (Table 107) Rivers. The difference in age composition noted earlier for stocks of the north and south bank of the Yukon River in District 4 are evident between escapement samples in District 5 and District 6. The Sheenjek River sample (District 5) has a higher percentage of age 5₁ fish, while the Toklat and Delta Rivers (District 6) have a higher percentage of age 3₁ and 4₁ fish. These same differences were evident between test fishing samples from the north and south bank of the Yukon River in District 4.

Coho Salmon:

District 1 was the only coho salmon commercial fishery sampled in 1982. Age 4₃ comprised 87% of the catch, age 5₄, 8%, age 3₂ 4%, and age 5₃ about 1% (Tables 108 and 109). The occurrence of coho salmon with two marine checks is unusual for the Yukon River, and was found for only 2 out of the 220 fish sampled. Sex composition was 45% female. The District 2 commercial catch and District 1 and 2 subsistence catches are presented by age and sex based on the District 1 commercial catch sample (Tables 110-112). No other commercial catches in the Yukon Area are apportioned by age and sex because of the lack of any applicable sample data. Most of the District 6 subsistence harvest is taken by fishwheel and no samples were collected. However, an estimated 274 coho salmon were taken for subsistence use by gillnet in District 6, mostly near Fairbanks, and 100 fish were sampled (Tables 113 and 114). Once again ages 4₃ and 5₄ made up the majority of the catch, accounting for 65% and 29% of the total, respectively. Age 3₂ contributed 6%, and no age 5₃ fish were found. Males made up 72% of the catch.

A total of 66,989 coho salmon was taken in commercial and subsistence fisheries in the Yukon Area in 1982 (Table 115). The commercial catch of 37,176 is the second highest on record. Not all catches can be apportioned by age and sex because of the paucity of sample data, but based on the catches that were sampled, the total harvest was 87% age 4₃, 8% age 5₄, 4% age 3₂, and about 1% age 5₃ (Table 115).

Coho salmon spawn in widely scattered tributaries throughout the Yukon River drainage (Figure 6). Major concentrations have been documented in tributaries of the upper Tanana River. Escapements were estimated by foot survey on the Toklat and Delta Rivers, by boat survey on the Delta Clearwater River, and by weir on Julius and Clear Creeks in 1982 (Table 116). Escapements were above average in magnitude in the Tanana River drainage and overall run strength of Yukon River coho salmon was excellent.

ACKNOWLEDGMENTS

The authors would like to thank Henry Yuen for developing the program used to edit and compile the data presented in this report. His help was invaluable. Critical review was provided by Ron Regnart, Bill Arvey, Mike Geiger, and Fred Andersen. Final publication was edited by Gary Finger.

Table 106. Toklat River fall chum salmon escapement sample by age, length (mm), and sex, 1982¹.

	AGE GROUP			
	31	41	51	TOTAL
MALES				
PERCENT	12.30	27.40	1.40	41.10
AV LENGTH	561.89	589.50	630.00	582.62
STD ERROR	6.66	6.29	0.00	6.19
SAMP SIZE	9	20	1	30
FEMALES				
PERCENT	24.70	32.80	1.40	58.90
AV LENGTH	560.11	583.33	563.00	573.11
STD ERROR	4.72	4.41	0.00	4.44
SAMP SIZE	18	24	1	43
SEXES COMBINED				
PERCENT	37.00	60.20	2.80	100.00
AV LENGTH	560.70	586.14	596.50	577.02

¹ Carcass samples.

Table 107. Delta River fall chum salmon escapement sample by age, length (mm), and sex, 1982¹.

	AGE GROUP				
	31	41	51	61	TOTAL
MALES					
PERCENT	6.70	34.10	10.60	.50	51.90
AV LENGTH	583.21	610.45	620.91	655.00	609.50
STD ERROR	11.01	3.48	7.32	0.00	5.20
SAMP SIZE	14	71	22	1	108
FEMALES					
PERCENT	3.40	28.90	14.40	1.40	48.10
AV LENGTH	561.43	592.23	608.00	625.00	595.73
STD ERROR	10.39	3.31	3.80	15.28	4.31
SAMP SIZE	7	60	30	3	100
SEXES COMBINED					
PERCENT	10.10	63.00	25.00	1.90	100.00
AV LENGTH	575.88	602.09	613.47	632.89	602.88

¹ Carcass samples.

Table 108. Yukon Area District 1 coho salmon commercial gillnet catch by age, length (mm), and sex, 1982¹.

	AGE GROUP				TOTAL
	32	43	53	54	
MALES					
NUMBER	344	7,488	137	344	8,313
AV LENGTH	554.60	561.04	555.00	586.60	561.73
STD ERROR	9.62	3.05	9.00	9.36	3.68
SAMP SIZE	5	109	2	5	121
FEMALES					
NUMBER	275	5,703	0	824	6,802
AV LENGTH	577.50	574.22	0.00	576.33	574.61
STD ERROR	8.85	2.27	0.00	5.28	2.90
SAMP SIZE	4	83	0	12	99
SEXES COMBINED					
NUMBER	619	13,191	137	1,168	15,115
AV LENGTH	564.77	566.74	555.00	579.35	567.53

¹ Allocation based on 6 inch gillnet samples from District 1 commercial catch.

Table 109. Yukon Area District 1 coho salmon commercial gillnet catch, age, and sex by sample period, 1982¹.

		AGE GROUP				
		32	43	53	54	TOTAL
SAMPLE PERIOD 1 7/27- 8/13						
PERIOD SAMPLE SIZE 220						
MALE	COUNT	344	7,488	137	344	8,313
	PERCENT	2.28	49.54	.91	2.28	55.00
FEMALE	COUNT	275	5,703	0	824	6,802
	PERCENT	1.82	37.73	0.00	5.45	45.00
SEXES COMBINED	COUNT	619	13,191	137	1,168	15,115
	PERCENT	4.10	87.27	.91	7.73	100.00

¹ Allocation based on 6 inch gillnet samples from District 1 commercial catch.

Table 110. Yukon Area District 2 coho salmon commercial gillnet catch, age, and sex by sample period, 1982¹.

		AGE GROUP				
		32	43	53	54	TOTAL
SAMPLE PERIOD 1	7/27- 8/13					
PERIOD SAMPLE SIZE	220					
MALE	COUNT	322	7,025	129	322	7,798
	PERCENT	2.27	49.55	.91	2.27	55.00
FEMALE	COUNT	258	5,350	0	773	6,381
	PERCENT	1.82	37.73	0.00	5.45	45.00
SEXES COMBINED	COUNT	580	12,375	129	1,095	14,179
	PERCENT	4.09	87.28	.91	7.72	100.00

¹ Allocation based on 6 inch gillnet samples from District 1 commercial catch.

Table III. Yukon Area District 1 coho salmon subsistence gillnet catch, age, and sex by sample period, 1982 .

		AGE GROUP				
		32	43	53	54	TOTAL
SAMPLE PERIOD 1 7/27- 8/13						
PERIOD SAMPLE SIZE 220						
MALE	COUNT	254	5,546	102	254	6,156
	PERCENT	2.27	49.55	.91	2.27	55.00
FEMALE	COUNT	203	4,223	0	610	5,036
	PERCENT	1.81	37.73	0.00	5.45	45.00
SEXES COMBINED	COUNT	457	9,769	102	864	11,192
	PERCENT	4.08	87.29	.91	7.72	100.00

¹ Allocation based on 6 inch gillnet samples from District 1 commercial catch.

Table 112. Yukon Area District 2 coho salmon subsistence gillnet catch, age, and sex by sample period, 1982¹.

		AGE GROUP				
		32	43	53	54	TOTAL
SAMPLE PERIOD 1 7/27- 8/13						
PERIOD SAMPLE SIZE 220						
MALE	COUNT	232	5,069	93	232	5,626
	PERCENT	2.27	49.56	.91	2.27	55.00
FEMALE	COUNT	186	3,859	0	558	4,603
	PERCENT	1.82	37.73	0.00	5.46	45.00
SEXES COMBINED	COUNT	418	8,928	93	790	10,229
	PERCENT	4.09	87.28	.91	7.72	100.00

¹ Allocation based on 6 inch gillnet samples from District 1 commercial catch.

Table 113. Yukon Area District 6 coho salmon subsistence gillnet catch by age, length (mm), weight (kg), and sex, 1982¹.

	AGE GROUP			TOTAL
	32	43	54	
MALES				
NUMBER	14	120	63	197
AV LENGTH	568.00	568.98	569.13	568.96
STD ERROR	18.55	5.48	7.34	6.98
SAMP SIZE	5	44	23	72
AV WEIGHT	3.04	2.82	2.79	2.83
STD ERROR	.45	.10	.15	.14
SAMP SIZE	5	44	23	72
FEMALES				
NUMBER	3	58	16	77
AV LENGTH	580.00	585.95	595.83	587.77
STD ERROR	0.00	3.39	5.39	3.70
SAMP SIZE	1	21	6	28
AV WEIGHT	2.94	2.91	2.98	2.93
STD ERROR	0.00	.08	.19	.10
SAMP SIZE	1	21	6	28
SEXES COMBINED				
NUMBER	17	178	79	274
AV LENGTH	570.12	574.51	574.54	574.25
STD ERROR	15.45	4.80	6.94	6.06
SAMP SIZE	6	65	29	100
AV WEIGHT	3.02	2.85	2.83	2.85

¹ Allocation based on gillnet samples from District 6 subsistence catch.

Table 114. Yukon Area District 6 coho salmon subsistence gillnet catch, age, and sex by sample period, 1982¹.

		AGE GROUP			
		32	43	54	TOTAL
SAMPLE PERIOD 1	9/11-10/ 3				
PERIOD SAMPLE SIZE	100				
MALE	COUNT	14	120	63	197
	PERCENT	5.11	43.80	22.99	71.90
FEMALE	COUNT	3	58	16	77
	PERCENT	1.09	21.17	5.84	28.10
SEXES COMBINED	COUNT	17	178	79	274
	PERCENT	6.20	64.96	28.83	100.00

¹ Allocation based on gillnet samples from District 6 subsistence catch.

Table 115. Total utilization of Yukon River coho salmon by age and fishery, 1982.

FISHERY	AGE GROUP				TOTAL
	32	43	53	54	
DISTRICT 1					
COMMERCIAL	619	13,191	137	1,168	15,115
SUBSISTENCE	457	9,769	102	864	11,192
TOTAL	1,076	22,960	239	2,032	26,307
DISTRICT 2					
COMMERCIAL	580	12,375	129	1,095	14,179
SUBSISTENCE	418	8,928	93	790	10,229
TOTAL	998	21,303	222	1,885	24,408
DISTRICT 3					
COMMERCIAL ¹	--	--	--	--	87
SUBSISTENCE	--	--	--	--	675
TOTAL	--	--	--	--	762
DISTRICT 4 ¹					
COMMERCIAL	--	--	--	--	15
SUBSISTENCE	--	--	--	--	2,317
TOTAL	--	--	--	--	2,332
DISTRICT 5 ¹					
COMMERCIAL	--	--	--	--	0
SUBSISTENCE	--	--	--	--	2,660
TOTAL	--	--	--	--	2,660
DISTRICT 6 ²					
COMMERCIAL	--	--	--	--	7,780
SUBSISTENCE	--	--	--	--	2,740
TOTAL	--	--	--	--	10,520
TOTAL HARVEST					
COMMERCIAL	1,199	25,566	266	2,263	37,176
SUBSISTENCE	875	18,697	195	1,654	29,813
TOTAL	2,074	44,263	461	3,917	66,989

¹ No commercial or subsistence catch samples were collected, therefore District catch is not allocated to age groups.

² Only the subsistence gillnet catch was sufficiently sampled in District 6. No subsistence fishwheel samples and few commercial fishwheel samples were collected. Therefore, neither the commercial nor subsistence catch is allocated to age groups.

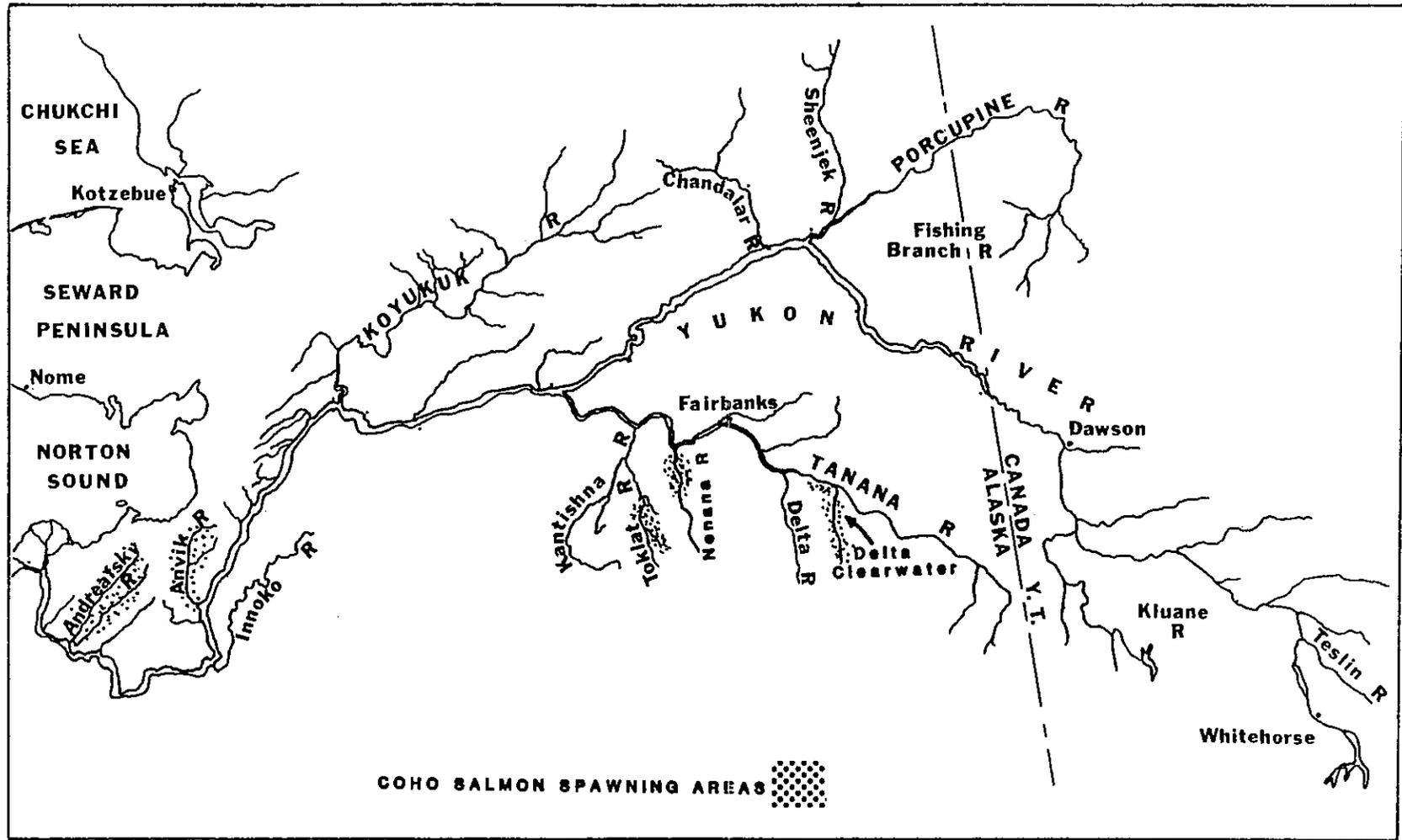


Figure 6. Map of the Yukon River drainage, showing coho salmon spawning areas.

Table 116. Tanana River coho salmon escapement estimates, 1982.

Date	Toklat	Delta	Delta Clearwater	Julius Creek	Clear Creek
10/14		20 ¹			
10/15				1,436 ²	
10/18					1,394 ²
10/21	82 ¹				
11/03			4,350 ³		
11/24				193 ¹	

- ¹ Foot survey.
- ² Weir count.
- ³ Boat survey.

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APPENDICES

Appendix Table 1. Age, sex, and size of Yukon Area chinook salmon catch samples collected in 1982, but not used to apportion harvest.

Gear & Date	Sex	Combined Age Classes			Age 42			Age 52			Age 62			Age 63			Age 72			Age 73			Age 83		
		N	%	Length	N	%	Length	N	%	Length	N	%	Length	N	%	Length	N	%	Length	N	%	Length	N	%	Length
Big Eddy (1)	Male	134	39.5	836.4	9	2.7	602.2	44	13.0	781.2	73	21.5	884.0	0	-	-	5	1.5	1031.4	3	0.9	864.7	0	-	-
8 1/2" Gillnet	Female	205	60.5	887.3	0	-	-	9	2.7	809.0	165	48.7	880.5	1	0.3	801.0	24	7.1	961.2	5	1.5	896.8	1	0.3	975.0
6/6-7/12	Total	339	100.0	867.1	9	2.7	602.2	53	15.6	785.9	238	70.2	881.6	1	0.3	801.0	29	8.5	973.3	8	2.4	884.8	1	0.3	975.0
Big Eddy (1)	Male	9	100.0	679.2	5	55.6	558.8	1	11.1	678.0	2	22.2	800.0	0	-	-	0	-	-	0	-	-	1	11.1	1041.0
5 1/2" Gillnet	Female	0	-	-	0	-	-	0	-	-	0	-	-	0	-	-	0	-	-	0	-	-	0	-	-
6/11-6/30	Total	9	100.0	679.2	5	55.6	558.8	1	11.1	678.0	2	22.2	800.0	0	-	-	0	-	-	0	-	-	1	11.1	1041.0
Middle Mouth (1)	Male	32	52.5	784.8	8	13.1	578.8	7	11.5	782.4	14	23.0	894.8	1	1.6	667.0	1	1.6	931.0	1	1.6	882.0	0	-	-
8 1/2" Gillnet	Female	29	47.5	884.8	0	-	-	6	9.8	826.3	20	32.8	891.7	0	-	-	3	4.9	956.0	0	-	-	0	-	-
6/11-7/14	Total	61	100.0	832.3	8	13.1	578.8	13	21.3	802.7	34	55.7	892.9	1	1.6	667.0	4	6.6	949.8	1	1.6	882.0	0	-	-
Middle Mouth (1)	Male	11	78.6	634.5	5	35.7	544.4	6	42.9	709.7	0	-	-	0	-	-	0	-	-	0	-	-	0	-	-
5 1/2" Gillnet	Female	3	21.4	878.7	0	-	-	0	-	-	3	21.4	878.7	0	-	-	0	-	-	0	-	-	0	-	-
6/19-6/30	Total	14	100.0	686.9	5	35.7	544.4	6	42.9	709.7	3	21.4	878.7	0	-	-	0	-	-	0	-	-	0	-	-

(1) Test fishing project located in District 1 near Emmonak.

Appendix Table 2. Age, sex, and size of Yukon Area summer chum salmon catch samples collected in 1982, but not used to apportion harvest.

Location Gear & Date	Sex	Combined Age Classes			Age 31			Age 41			Age 51			Age 61		
		N	%	Length	N	%	Length	N	%	Length	N	%	Length	N	%	Length
Big Eddy (1) 8 1/2" Gillnet 7/7	Male	1	25.0	578.0	0	-	-	1	25.0	578.0	0	-	-	0	-	-
	Female	3	75.0	598.3	0	-	-	2	50.0	602.0	1	25.0	591.0	0	-	-
	Total	4	100.0	593.2	0	-	-	3	75.0	594.0	1	25.0	591.0	0	-	-
Big Eddy (1) 5 1/2" Gillnet 6/16-7/2	Male	81	38.2	590.5	2	0.9	574.5	65	30.7	588.3	11	5.2	600.5	3	1.4	611.7
	Female	131	61.8	574.0	1	0.5	554.0	99	46.7	568.5	26	12.3	592.1	5	2.4	594.2
	Total	212	100.0	580.3	3	1.4	567.7	164	77.4	576.3	37	17.5	594.6	8	3.8	600.8
Middle Mouth (1) 5 1/2" Gillnet 6/11-7/8	Male	72	38.7	589.7	2	1.0	556.0	50	27.0	585.3	20	10.7	603.9	0	-	-
	Female	114	61.3	571.8	3	1.6	556.7	81	43.7	569.3	29	15.5	579.9	1	0.5	582.0
	Total	186	100.0	578.7	5	2.6	556.4	131	70.7	575.4	49	26.2	589.7	1	0.5	582.0
Stink Creek (2) Fishwheel 6/28-7/22	Male	185	36.9	590.6	6	1.1	527.5	127	25.6	585.2	46	9.1	610.5	6	1.1	615.0
	Female	317	63.1	554.7	28	5.5	519.3	228	45.6	552.7	57	11.3	575.9	4	0.7	622.5
	Total	502	100.0	568.0	34	6.6	520.7	355	71.2	564.4	103	20.4	591.3	10	1.8	617.9
Nenana (3) Fishwheel 7/20	Male	3	25.0	613.6	0	-	-	2	16.7	608.0	1	8.3	625.0	0	-	-
	Female	9	75.0	598.1	0	-	-	9	75.0	598.1	0	-	-	0	-	-
	Total	12	100.0	602.0	0	-	-	11	91.7	599.9	1	8.3	625.0	0	-	-

- (1) Test fishing project located in District 1 near Emmonak.
 (2) Test fishing project located in District 4 near Kaltag.
 (3) Subsistence catch sample, located in District 6.

Appendix Table 3. Age, sex, and size of Yukon Area fall chum salmon catch samples collected in 1982, but not used to apportion harvest.

Location Gear & Date	Sex	Combined Age Classes			Age 31			Age 41			Age 51			Age 61		
		N	%	Length	N	%	Length	N	%	Length	N	%	Length	N	%	Length
Big Eddy (1) 6" Gillnet 8/15-8/30	Male	13	44.8	602.0	3	10.3	572.0	9	31.1	611.1	1	3.4	609.0	0	-	-
	Female	16	55.2	611.1	3	10.3	604.3	10	34.6	611.0	3	10.3	618.3	0	-	-
	Total	29	100.0	607.0	6	20.6	588.2	19	65.7	611.0	4	13.7	616.0	0	-	-
Middle Mouth (1) 6" Gillnet 7/24-8/30	Male	96	42.3	614.0	6	2.6	567.8	51	22.5	605.0	36	15.9	630.7	3	1.3	658.3
	Female	131	57.7	602.2	10	4.4	575.5	75	33.0	593.7	46	20.3	622.0	0	-	-
	Total	227	100.0	607.2	16	7.0	572.6	126	55.5	598.3	82	36.1	625.8	3	1.3	658.3
Galena (2) Fishwheel 8/16	Male	10	41.7	644.0	0	-	-	7	29.2	640.3	3	12.5	652.7	0	-	-
	Female	14	58.3	584.8	1	4.1	590.0	9	37.6	572.4	4	16.6	611.5	0	-	-
	Total	24	100.0	609.5	1	4.1	590.0	16	66.8	602.1	7	29.1	629.2	0	-	-
Yukon Territory (3) Fishwheel 8/8-10/4	Male	146	48.5	682.6	4	1.3	605.0	50	16.6	666.8	92	30.6	694.4	0	-	-
	Female	155	51.5	616.7	18	5.9	563.3	60	19.9	608.4	77	25.7	635.4	0	-	-
	Total	301	100.0	648.7	22	7.2	570.8	110	36.5	635.0	169	56.3	667.5	0	-	-
Nerana (4) Fishwheel 9/18-9/19	Male	19	39.6	620.9	5	10.4	550.4	12	25.1	644.7	2	4.1	654.5	0	-	-
	Female	29	60.4	600.2	11	22.9	561.8	16	33.4	621.2	2	4.1	642.5	0	-	-
	Total	48	100.0	608.4	16	33.3	558.2	28	58.5	631.3	4	8.2	648.5	0	-	-

- (1) Test fishing project located in District 1 near Emmonak.
- (2) Commercial catch sample, located in District 4.
- (3) Tagging study located on Yukon River just upstream from U.S.-Canadian border.
- (4) Commercial catch sample, located District 6.

Appendix Table 4. Age, sex, and size of Yukon Area coho salmon catch samples collected in 1982, but not used to apportion harvest.

Location, Gear & Date	Combined Age Classes				Age 43			Age 54		
	Sex	N	%	Length	N	%	Length	N	%	Length
Nenana (1)	Male	22	68.8	580.0	20	62.6	586.0	2	6.2	519.0
Fishwheel	Female	10	31.3	594.4	9	28.2	594.7	1	3.1	592.0
9/18-9/19	Total	32	100.0	584.5	29	90.8	588.7	3	9.3	543.3

(1) Commercial catch sample, located in District 6.

