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**COLVILLE DELTA WINTER FISH
HABITAT STUDY 1991-993**

Final Report

August 31, 1994

Prepared for:

**ARCO Alaska Inc.
700 G Street
Anchorage, Alaska 99510**

Prepared by:

**Lawrence L. Moulton
MJM Research
5460 NE Tolo Rd
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INTRODUCTION

ARCO Alaska Inc. has increased exploration activities in the Colville Delta, Alaska and these exploration activities may lead to eventual oil field development within the delta. Delta channels and lakes may be crossed by ice roads and seismic lines during exploration projects. Permanent access to the delta, which may be required for potential field development, will necessarily cross many channels. Water may be withdrawn from lakes to support both industrial and domestic needs.

During review of both exploration and development permits, information will be required on the biological sensitivity of delta channels and lakes. Lakes of interest include both lakes connected to river channels during the open water period, often called tapped lakes, and lakes isolated from regular connection with the river. Deep isolated lakes are often capable of supporting fish populations while the most critical use of tapped lakes is by anadromous fish that move into these lakes in the fall and remain through the winter.

The most critical use of delta channels is by anadromous fish that move into these channels and lakes connected to the channels in the fall and remain through the winter. A substantial body of information exists for the major channels of the Colville Delta (Kogl and Schell 1974, Bendock and Burr 1986, George and Kovalsky 1986, Fawcett et al. 1986, Moulton et al. 1992). These areas support substantial fisheries in the fall and fish use of these channels is well documented. Less information is available for the minor channels that lie between the Main (Kupigruak) Channel on the east and the Nechelik (Nigliq) Channel on the west.

The study was designed to provide physical and biological information on these habitat types to understand their use as winter habitat by various fish species. In addition, the results of the survey can be used, in concert with previous surveys within the area, to direct any future investigations that may be needed.

The objectives of the study are to document fish presence and winter habitat use in both lakes and minor delta channels. Lakes include both isolated and tapped lakes that have not been previously surveyed or had been surveyed during summer in the early to mid-1980's. Selected lakes are those that may be included in an eventual field development.

METHODS

The study consisted of 30 days of gill net sampling in lakes across the Colville Delta in late October to early November from 1991 and 1993 (Figure 1). The initial candidate sampling locations in lakes and delta channels were identified through inspection of maps of proposed pad locations, access roads and seismic plans prior to final design of the sampling program. Once identified, available information on lake depths was reviewed and lakes deeper than 2 m (6.5 ft) deep (i.e. likely to retain water through the winter) were selected for sampling with variable mesh gill nets set under the ice. In 1992, the thickness of the ice by October 28 restricted sampling to lakes 2.5 m deep (8 ft) or greater. Channel profiles were measured in the field and channels greater than 2 m (6.5 ft) deep were sampled.

The variable mesh gill nets used in the sampling program consisted of a set of two nets, each with three 1.8 m (6 ft) x 6.1 m (20 ft) panels. One net contained small meshes: 25 mm (1.00"), 32 mm (1.25"), and 41 mm (1.63"), the other net contained large meshes: 52 mm (2.06"), 70 mm (2.75") and 89 mm (3.50"). Nets were checked on a daily basis unless weather prevented safe travel. Both nets were fished for at least one day at a location. At some locations in 1991, the nets were fished for an additional day to verify initial findings. The primary objective was to document presence or absence, thus large sample sizes were neither needed nor desired.

Since salinity affects the suitability of the over-wintering habitat, salinity was measured at each of the sampling locations. A salinity profile in 0.5 m increments was measured at the beginning or end of each set using a YSI Model 33 salinometer.

Catches were separated by mesh size and enumerated by species; fork lengths were taken for all specimens. Duration of each set was recorded to allow calculation of catch rates. In 1993, weight to the nearest gram was also recorded. Otoliths were removed from all coregonines to determine age-length relationships. Otoliths were read using the break-and-burn technique.

Least cisco were classified into three growth forms: normal, stunted and large. Classification was by comparison with the age-length relationship observed in the least cisco caught in river channel and tapped lake stations, which are assumed to represent the anadromous population. Populations that averaged less than 275 mm by age 11 were classified as "stunted", those averaging greater than 330 mm by age 11 were classified as "large", while those averaging between 275-330 mm at age 11 were classified as "normal".

RESULTS AND DISCUSSION

HABITATS SAMPLED

Sampling was conducted during the periods November 1-10, 1991, October 28-November 6, 1992, and October 27-November 5, 1993. Thirty-seven stations were identified for sampling (Table 1, Figure 2). Sampling stations were located with a global positioning system (GPS).

The sampling stations were classified as river channel (RC), tapped lake (TL), or isolated lake (IL). Aerial photography of the delta region (taken July 23, 1983) was examined to verify that the sampled lakes were or were not connected to the river during summer. The presence of turbid water in the lake was used to indicate an active connection. Eight of the lakes showed obvious influence by river flow with the remaining 23 lakes all isolated from direct river influence. The remaining six stations were in river channels (Table 1).

Four of the lakes had been previously sampled by Bendock and Burr (1986) during their 1985 survey of the delta region (Figure 3). An additional two lakes were sampled by McElderry and Craig (1981) during a search for Arctic cisco spawning areas in 1979 and referenced by Bendock and Burr (1986). The comparable sample numbers are:

<u>Station No.</u>	Bendock & Burr <u>Lake No.</u>	McElderry & Craig <u>Lake No.</u>
9102	43	
9106	39	
9107	20	20
9111	14	13
9201	41	
9205	42	

PHYSICAL CHARACTERISTICS

Elevated salinities (maximum salinities greater than 5 ppt) were measured in three of the five tapped lakes and one isolated lake:

		Mean Salinity (ppt)	Bottom Salinity (ppt)
Tapped Lakes			
Station 9102 (B&B Lake 43)			
Nov 2, 1991	12.6	17.7	
Nov 5, 1991	15.1	19.8	
Station 9105	Nov 3, 1991	7.5	10.3
	Nov 6, 1991	9.5	13.2
Station 9107 (B&B Lake 20)			
Nov 6, 1991	4.0	7.9	
Isolated Lake			
Station 9210			
Nov 3, 1992	4.2	5.5	

Bendock and Burr (1986) report a salinity of 5 ppt in Stations 9106 (Lake 39) and 9201 (Lake 41) during the summer, we measured maximums of 0 and 3.6 ppt , respectively, at the

same lakes under the ice during the 1991-1992 surveys. At Station 9102 (Lake 43), Bendock and Burr (1986) reported a maximum depth of 1.8 m (6 ft), while we observed a depth of 3.7 m (12 ft) at the 1991 sample site in the same lake.

Salinities were highest in river channels with the lowest salinities being recorded in isolated lakes:

<u>Habitat Classification</u>	<u>Mean Salinity</u>	<u>Standard Deviation</u>	<u>Number of Observations</u>
River Channel	12.5	7.1	141
Tapped Lake	7.2	6.0	50
Isolated Lake	1.0	1.1	112

BIOLOGICAL FINDINGS

Biological and Habitat Patterns

Species captured were, in order of abundance, least cisco, Arctic cisco, broad whitefish, rainbow smelt, Alaska blackfish, fourhorn sculpin, burbot, humpback whitefish and round whitefish (Table 2). Maps showing the distribution of each species captured in relation to the sampled lakes are included as a separate section entitled Species Distribution Maps.

Fish were captured at 34 of the 37 sites sampled. Least cisco were caught at 27 of the 37 stations, with Arctic cisco present at 18 stations. The two species together contributed 831 of the 976 fish caught (85.1 percent). Fourhorn sculpin and rainbow smelt were the third and fourth most abundant species in 1991, but were not caught in 1992 or 1993. Similarly, Alaska blackfish were the second most abundant species in 1993, but not caught in the previous two years. The 1991 survey focused on river channels and tapped lakes, which are habitats to which these marine-associated species would have greater access during the fall.

Catch rates varied by habitat for each captured species (Figure 4). Arctic cisco were most abundant in river channels, with decreasing abundance in tapped lakes and isolated lakes.

Conversely, least cisco increased in abundance from river channel to isolated lake habitats. Broad whitefish, humpback whitefish and Alaska blackfish were only found in lakes (both tapped and isolated), while rainbow smelt and fourhorn sculpin were only found in river channels and tapped lakes. Round whitefish and burbot were only caught in isolated lakes.

The size of Arctic cisco increased from river channel to tapped lake to isolated lake habitat (Figure 5). Arctic cisco from river channels appeared to encompass all age groups expected to be in the region, based on size composition observed in summer fyke net sampling along the Beaufort Sea coast (LGL Alaska 1992). Age data indicated that age-1 fish (1990 year class) dominated the samples (Table 3). Arctic cisco from isolated lakes were primarily large fish at 340 mm or greater, some of which had reached maturity.

The size range of least cisco indicated a broad range of sizes in all habitats (Figure 6). Age data for least cisco indicated that more than one population was being sampled. The fish from river channels and tapped lakes had similar growth rates. Least cisco captured from isolated lakes reflected several different growth patterns, with some populations noticeably smaller for a given age than the anadromous form captured in river channels and tapped lakes, others noticeably larger and still others quite similar to the anadromous form (Figure 7, Appendix Table 14).

Least Cisco Growth Forms

The lake populations of least cisco were tentatively classified into three growth forms (normal, stunted and large) based on comparison with the age-length relationship observed in the least cisco caught in river channel and tapped lake stations, which are assumed to represent the anadromous population. The distribution of lakes containing these types is illustrated in Figure 8.

The large form fits the description of lake resident least cisco described by Lawrence et al. (1984) from the Mackenzie River delta:

"...compared to the anadromous type, the lake dwelling least cisco from the Tuktoyaktuk Peninsula and Richards Island grew larger, were deeper bellied, more darkly pigmented both dorsally and in the ventral fins, and had a less protruding jaw."

The largest fish were found in Lake 9307, where least cisco reached an average of 404 mm by age 11, and an observed maximum length of 430 mm. This is in contrast to McPhail and Lindsey (1970) and Scott and Crossman (1973), who describe the anadromous form as being larger than the non-migratory form, with the non-migratory form rarely exceeding 220 mm and lacking spotting.

The stunted form did not achieve the lengths-at-age normally found in the anadromous form, but the growth rates were too great for the fish to be considered the dwarf variety described by Mann and McCart (1981) and Philo et al. (1994), which rarely exceed 200 mm. The population with the smallest length-at-age was in Lake 9111, where least cisco averaged 248 mm by age 11. Maturity was reached by age 7 in males and age 9 in females, similar to the range reported for the anadromous form in the Colville River (Fawcett et al. 1986).

Comparison with Historical Information

Bendock and Burr (1986) reported data in a summarized form, thus it is not possible to compare size and abundance data by species on specific lakes. A comparison was possible for species presence and total CPUE (Tables 4 and 5). The results are reasonably consistent across years given the limited sampling conducted in each survey, although the number of species present appeared to be less during the 1991-1993 sampling. This reduction could be a result of the late fall sampling period because fish become less active as water temperature reduces and are not as susceptible to gill nets.

McElderry and Craig (1981) provided more detail on individual lakes. They report size ranges and mean length of fish in each lake. A comparison of mean lengths and ranges for least cisco indicates remarkably little difference between the two sampling periods, i.e. 1979

and 1991-1993 (Table 6). The minor differences may be caused by differences in mesh sizes. The other species show considerable shifts in the size structure of fish sampled, which should be expected given the small sample sizes involved.

One possible change between sampling periods is a reduction in the broad whitefish at Station 9107 (Lake 20). During summer sampling in 1979, there were multiple sizes present, while in the under-ice sampling in 1991, only larger fish were present. This difference could reflect either seasonal use patterns or long-term changes in utilization of the lake.

CONCLUSIONS

The survey indicated that over-wintering areas within delta channels off of the main river were limited in number and likely represented a small proportion of the surface area covered by the surveyed channels. In contrast, the lakes within the delta appeared to offer substantial opportunities for over-wintering. Many of the surveyed lakes contained water in excess of 2 m, with depths to 9 m recorded.

Three of the tapped lakes and one isolated lake near the coast showed elevated salinities during November. The lakes with elevated salinities may provide marginal habitat for freshwater species, but would be suitable for anadromous species, such as Arctic cisco, least cisco and rainbow smelt, if hypersaline conditions do not develop prior to break-up.

Species composition, relative abundance and size of fish in the survey area was similar to that previously reported during summer surveys. There were no noticeable changes that would indicate fish vacate the minor delta channels and tapped lakes prior to freeze-up. The observations are consistent with the hypothesis that fish move from the delta channels into the tapped lakes to take advantage of the greater volume of water represented by the latter habitat type.

Differential use of delta habitats by the various species was indicated by the catch patterns.

Arctic cisco were primarily found in river channel habitat with low catch rates of this species in both tapped and isolated lakes. Catch rates decreased as the mean salinity of the habitat decreased. In contrast, least cisco catches increased with decreasing salinity, with catches lowest in river channels and highest in isolated lakes.

The survey indicated that least cisco commonly inhabit isolated lakes within the Colville Delta and are abundant in some lakes. Least cisco have developed reproductively-isolated populations that reflect different growth forms in the variety of lakes found across the delta. Factors that lead to the development of one growth form over another are not known.

Broad whitefish and humpback whitefish may also be able to develop lake-resident populations, but the sample sizes were insufficient to address this point. Arctic cisco are not known to reproduce successfully in the Colville Delta, thus it is likely that most of these fish immigrate into the isolated lakes during high water and become stranded.

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Table 1. Sampling stations used during Colville Delta Winter Fish Habitat Study 1991-1993

Station Number	Latitude	Longitude	Date Sampled	Depth (m)	Mean Salinity (ppt)	Lake Area (hectares)	Habitat ¹
9101	70°24.46'	150°35.00'	Nov 2 91	2.0	8.2		RC
9102	70°26.34'	150°36.54'	Nov 3 91	4.0	13.7	76	TL
9103	70°23.77'	150°41.12'	Nov 3 91	3.0	5.6		RC
9104	70°23.91'	150°43.99'	Nov 5 91	9.0	16.9		RC
9105	70°24.26'	150°45.10'	Nov 5 91	2.5	8.5	23	TL
9106	70°25.53'	150°41.86'	Nov 6 91	4.0	0.0	87	TL
9107	70°24.93'	150°41.88'	Nov 6 91	2.5	4.0	157	TL
9108	70°24.47'	150°52.21'	Nov 7 91	3.5	10.0		RC
9109	70°24.55'	150°54.12'	Nov 7 91	5.0	11.2		RC
9110	70°24.07'	150°56.68'	Nov 9 91	4.0	11.7		RC
9111	70°22.59'	150°50.98'	Nov 9 91	3.0	0.0	231	IL
9201	70°25.62'	150°31.49'	Nov 6 92	3.0	2.6	57	TL
9202	70°26.76'	150°31.27'	Oct 28 92	2.7	2.0	0	IL
9203	70°27.45'	150°31.08	Oct 28 92	3.7	2.5	25	IL
9204	70°27.34'	150°34.00'	Nov 2 92	6.4	0.6	13	IL
9205	70°26.48'	150°34.39'	Oct 30 92	8.5	0.5	27	IL
9206	70°26.38'	150°34.66'	Oct 30 92	4.6	0.0	11	IL
9207	70°27.52'	150°38.79'	Oct 31 92	5.2	1.0	12	TL
9208	70°26.53'	150°43.38'	Nov 1 92	5.5	0.5	49	IL
9209	70°24.95'	150°44.16'	Nov 1 92	5.5	0.2	49	IL
9210	70°26.90'	150°50.94'	Nov 3 92	3.5	4.2	7	IL
9211	70°26.11'	150°51.70'	Nov 3 92	4.6	0.9	19	IL
9212	70°24.94'	150°51.49'	Nov 4 92	4.0	1.3	42	IL
9213	70°24.61'	150°55.14'	Nov 4 92	4.3	0.5	50	IL
9301	70°27.02'	150°31.20'	Oct 28 93	2.4	0.1	8	IL
9302	70°25.87'	150°35.58'	Oct 28 93	3.0	0.0	28	IL
9303	70°24.84'	150°32.31'	Oct 28 93	2.7	0.0	12	TL
9304	70°24.15'	150°27.60'	Oct 31 93	2.4	0.0	5	IL
9305	70°20.35'	150°38.20'	Oct 31 93	4.9	0.0	54	IL
9306	70°20.11'	150°41.36'	Nov 2 93	4.6	0.0	135	IL
9307	70°20.34'	150°46.70'	Nov 2 93	2.4	0.0	49	IL
9308	70°21.28'	150°46.47'	Nov 3 93	4.3	0.0	92	IL
9309	70°21.12'	150°48.63'	Nov 3 93	3.0	0.0	13	IL
9310	70°22.03'	150°45.60'	Nov 4 93	2.4	0.0	13	IL
9311	70°23.13'	150°42.67'	Nov 4 93	2.7	2.2	44	TL
9312	70°25.46'	150°50.32'	Nov 5 93	7.6	1.3	88	IL
9313	70°25.41'	150°53.69'	Nov 5 93	3.7	0.7	54	IL

¹Habitat: RC = river channel

IL = isolated lake

TL = tapped lake

Table 2. Summary of species caught by station during Colville Delta Winter Fish Habitat Study, 1991-1993.

Station	Date	Arctic cisco	Least cisco	Broad whitefish	Humpback whitefish	Round whitefish	Alaska Blackfish	Burbot	Rainbow smelt	Fourhorn sculpin	Total Catch
9101	Nov 2 91	6	3	0	0	0	0	0	1	1	11
9101	Nov 3 91	25	5	0	0	0	0	0	1	3	34
9102	Nov 3 91	0	0	0	0	0	0	0	3	0	3
9102	Nov 5 91	2	0	0	0	0	0	0	10	0	12
9103	Nov 3 91	22	13	0	0	0	0	0	0	3	38
9104	Nov 5 91	8	3	0	0	0	0	0	0	1	12
9104	Nov 6 91	4	0	0	0	0	0	0	2	0	6
9104	Nov 7 91	1	2	0	0	0	0	0	1	0	4
9105	Nov 5 91	2	3	0	0	0	0	0	0	0	5
9105	Nov 6 91	2	3	0	0	0	0	0	2	0	7
9106	Nov 6 91	0	5	4	0	0	0	0	0	0	9
9106	Nov 7 91	0	2	1	0	0	0	0	0	0	3
9107	Nov 6 91	3	13	4	1	0	0	0	0	1	22
9108	Nov 7 91	0	0	0	0	0	0	0	0	0	0
9108	Nov 9 91	0	0	0	0	0	0	0	0	0	0
9109	Nov 7 91	7	6	0	0	0	0	0	3	1	17
9109	Nov 9 91	8	5	0	0	0	0	0	4	1	18
9109	Nov 10 91	1	0	0	0	0	0	0	0	1	2
9110	Nov 9 91	14	0	0	0	0	0	0	9	0	23
9110	Nov 10 91	3	0	0	0	0	0	0	3	0	6
9111	Nov 9 91	0	150	0	0	0	0	0	0	0	150
9201	Nov 6 92	2	0	0	0	0	0	0	0	0	2
9202	Oct 28 92	0	0	0	0	0	0	0	0	0	0
9203	Oct 28 92	4	11	1	0	0	0	0	0	0	16
9204	Nov 2 92	0	13	0	0	0	0	0	0	0	13
9205	Oct 30 92	0	2	0	0	0	0	0	0	0	2
9206	Oct 30 92	1	16	0	0	0	0	0	0	0	17
9207	Oct 31 92	3	3	1	0	0	0	0	0	0	10
9208	Nov 1 92	1	0	1	1	0	0	0	0	0	3

Table 2. Summary of species caught by station during Colville Delta Winter Fish Habitat Study, 1991-1993.

Station	Date	Arctic cisco	Least cisco	Broad whitefish	Humpback whitefish	Round whitefish	Alaska Blackfish	Burbot	Rainbow smelt	Fourhorn sculpin	Total Catch
9209	Nov 1 92	0	12	2	0	0	0	0	0	0	14
9210	Nov 3 92	0	0	0	0	0	0	0	0	0	0
9211	Nov 3 92	8	6	0	0	0	0	0	0	0	14
9212	Nov 4 92	0	87	0	0	0	0	0	0	0	87
9213	Nov 4 92	0	50	0	0	0	0	0	0	0	50
9301	Oct 28 93	5	16	0	0	0	0	0	0	0	21
9302	Oct 28 93	0	0	0	0	0	1	0	0	0	1
9303	Oct 28 93	1	16	0	0	0	0	0	0	0	17
9304	Oct 31 93	0	20	2	0	2	0	0	2	0	26
9305	Oct 31 93	0	7	18	1	2	0	10	2	0	40
9306	Nov 2 93	0	11	7	0	0	0	0	1	0	19
9307	Nov 2 93	0	48	1	0	0	0	6	0	0	55
9308	Nov 3 93	0	64	2	0	0	0	0	0	0	66
9309	Nov 3 93	0	1	0	0	0	4	0	0	0	5
9310	Nov 4 93	1	0	0	0	0	13	0	0	0	14
9311	Nov 4 93	1	0	0	0	0	1	0	0	0	2
9312	Nov 5 93	0	21	0	0	0	0	0	0	0	21
9313	Nov 5 93	0	79	0	0	0	0	0	0	0	79
1991 Total:		108	213	9	1	0	0	0	39	12	382
1992 Total:		19	200	7	2	0	0	0	0	0	228
1993 Total:		8	283	30	1	4	35	5	0	0	366
All Years:		135	696	46	4	35	5	35	39	12	976

Table 3. Length at age for Arctic cisco captured in the Colville River delta during 1991-1993 gillnet sampling.

Age (years)	Length (mm)	Mean	Standard Deviation	Number of Fish
1	121.9	8.4	44	
2	163.3	6.3	4	
3	182.5	12.7	11	
4	250.7	16.8	23	
5	283.1	17.0	16	
6	316.2	8.9	5	
7	356.5	19.1	2	
8	335.0	21.2	2	
9	385.5	0.7	2	
10	375.5	26.2	2	
11	367.0		1	
12	404.5	34.6	2	
13	381.0	12.7	2	
14	363.0		1	
15	393.0	43.5	3	
16	405.5	13.4	2	
17	408.0		1	
18	410.0	28.3	2	

Total Examined: 125

Table 4. Comparison of fish species present in lakes sampled during 1991-1993 in the Colville River delta to sampling conducted in 1979 and 1985 (all meshes combined).

Station	Bendock Lake No.	1991-1993		Previous Species (summer)
		Species (winter)	Previous Sample Year	
9102	43	ARCS RBSM	1985	ARCS LSCS BDWF RDWF ARFL FHSC
9106	39	LSCS BDWF	1985	LSCS BDWF
9107	20	ARCS LSCS BDWF HBWF FHSC	1979	ARCS LSCS BDWF HBWF RBSM ARFL FHSC
9111	14	LSCS	1979	LSCS
9201	41	ARCS	1985	LSCS BDWF LNSK FHSC
9205	42	LSCS	1985	ARCS LSCS BDWF

ARCS: Arctic cisco

LSCS: Least cisco

BDWF: Broad whitefish

HBWF: Humpback whitefish

RDWF: Round whitefish

LNSK:

RBSM:

ARFL:

FHSC:

Longnose sucker

Rainbow smelt

Arctic flounder

Fourhorn sculpin

1979 sampling by McElderry and Craig (1981)

1985 sampling by Bendock and Burr (1986)

Table 5. Total CPUE in lakes sampled during 1991-1993 sampling in the Colville River delta compared to previously-reported total CPUE (all meshes combined).

Station	Bendock Lake No.	1991-1993 CPUE (winter) (fish/hr)	Previous Sample Year	Previous CPUE (summer) (fish/hr)
9102	43	0.26	1985	0.49
9106	39	0.33	1985	0.80
9107	20	1.31	1979	4.60
9111	14	4.25	1979	4.00
9201	41	0.11	1985	0.37
9205	42	0.13	1985	0.25

CPUE = fish per hour per 150 ft of net

1979 sampling by McElderry and Craig (1981)

1985 sampling by Bendock and Burr (1986)

Table 6. Comparison of mean lengths and length ranges between lakes sampled in 1991-1993 and 1979 in the Colville River delta (all meshes combined).

Station	Lake No.	Species	1991-1993			1979		
			Mean Length (mm)	Length Range (mm)	Number	Mean Length (mm)	Length Range (mm)	Number
9107	20	ARCS	161	114-245	3	309	247-352	5
		LSCS	272	151-335	13	259	130-332	50
		BDWF	358	343-370	4	309	120-445	26
		HBWF	164	164	1	352	332-372	2
9111	13	LSCS	245	125-340	150	221	130-367	83

1979 data from McElderry and Craig (1981)

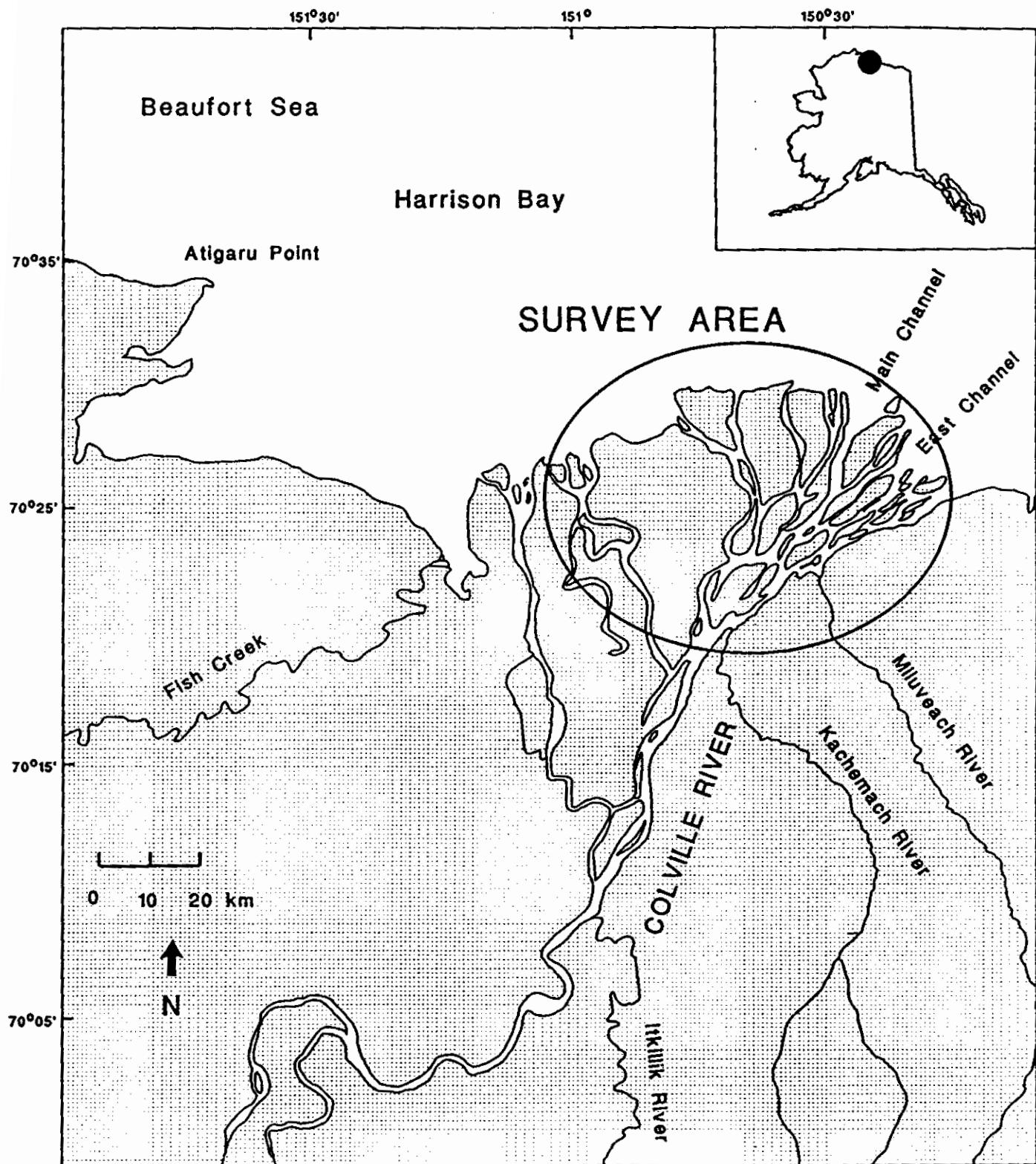


Figure 1. General sampling area within the Colville Delta, 1991-1993.

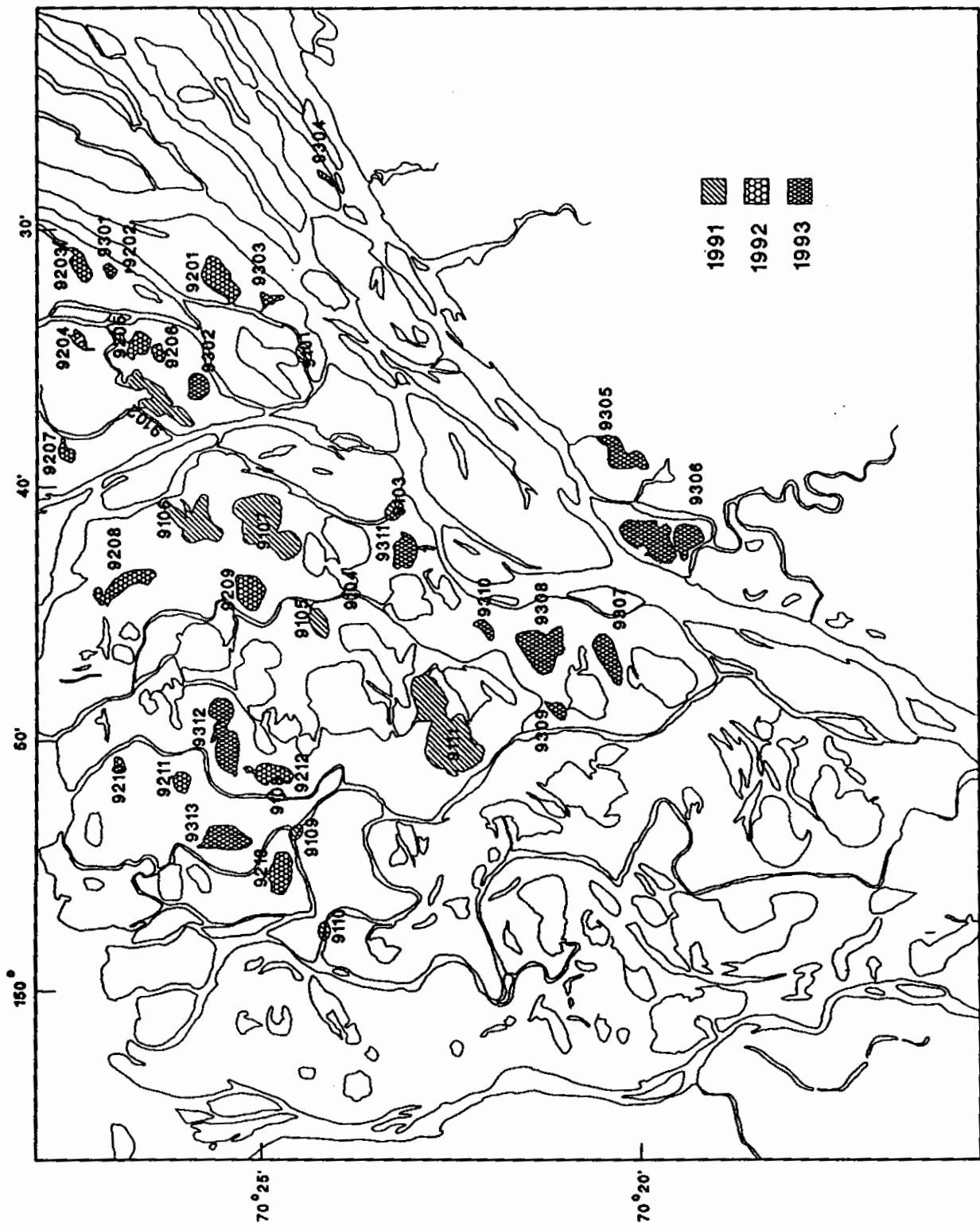


Figure 2. Stations in the Colville Delta sampled by variable mesh gill nets during October and November, 1991-1993.

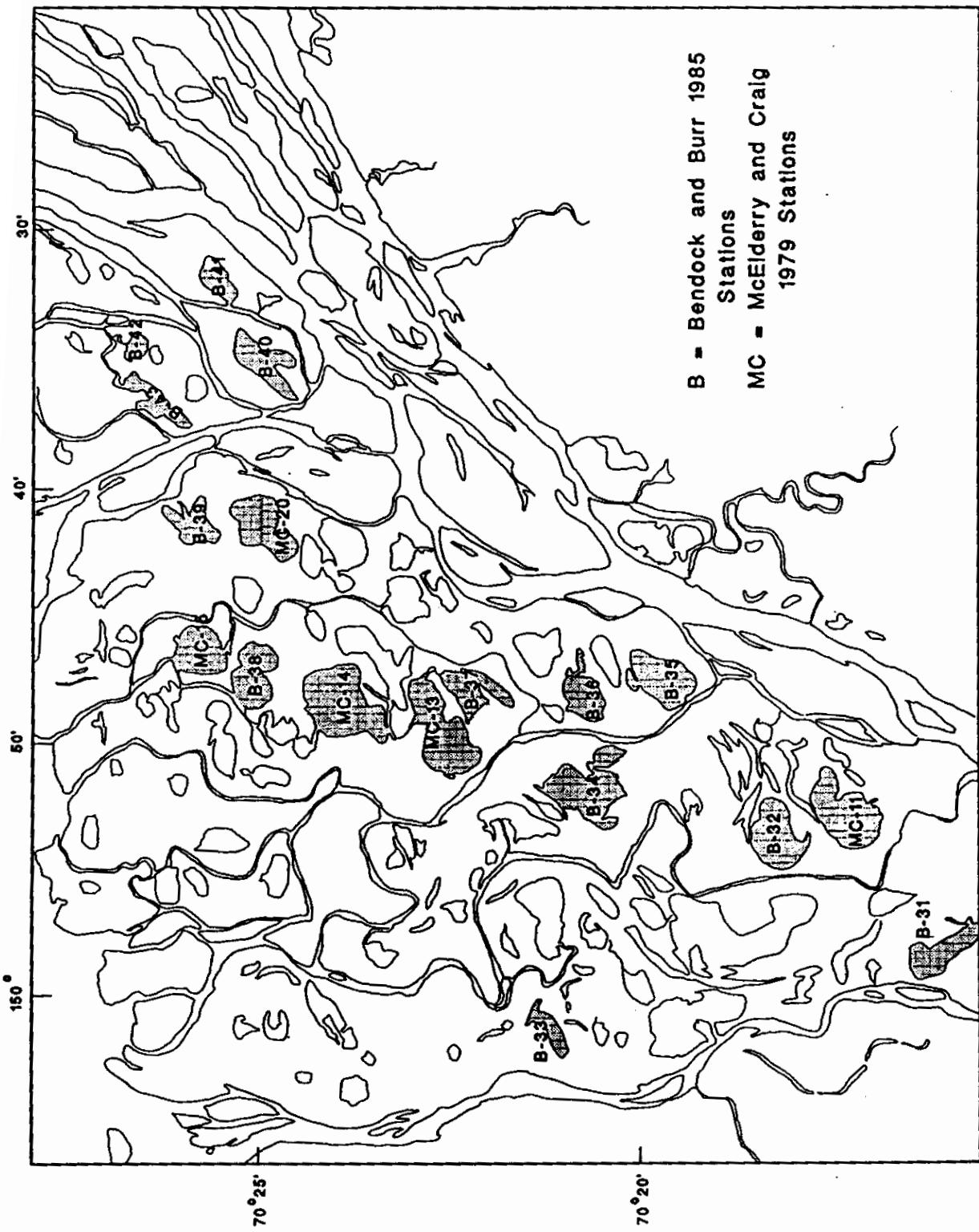


Figure 3. Stations sampled by Bendock and Burr in 1985 or McElderry and Craig in 1979.

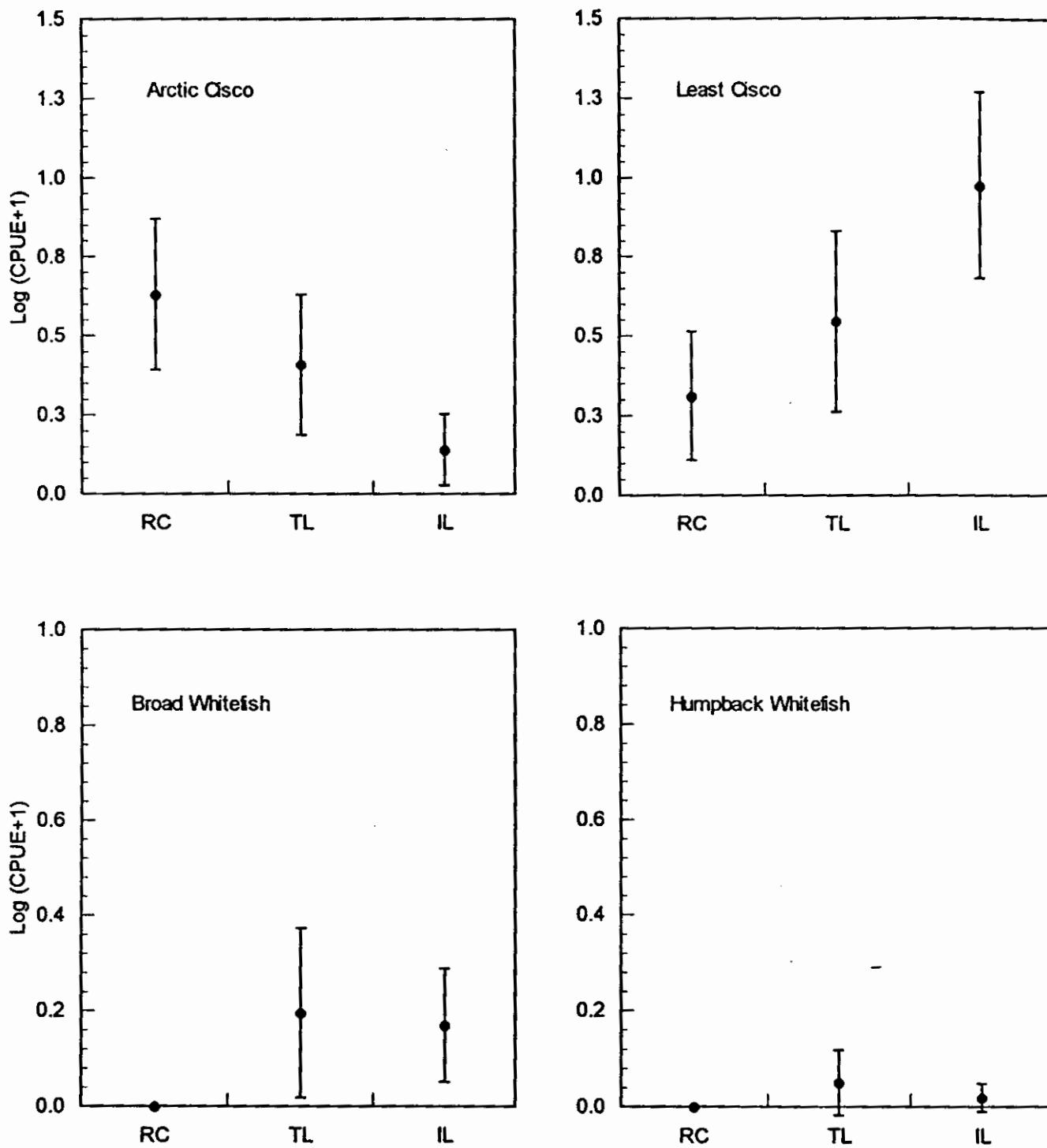


Figure 4. Mean catch rate by habitat for fish species captured during the 1991-1993 Colville Delta Fish Habitat Study (RC = river channel, TL = tapped lake, IL = isolated lake; vertical bars = 2 standard errors).

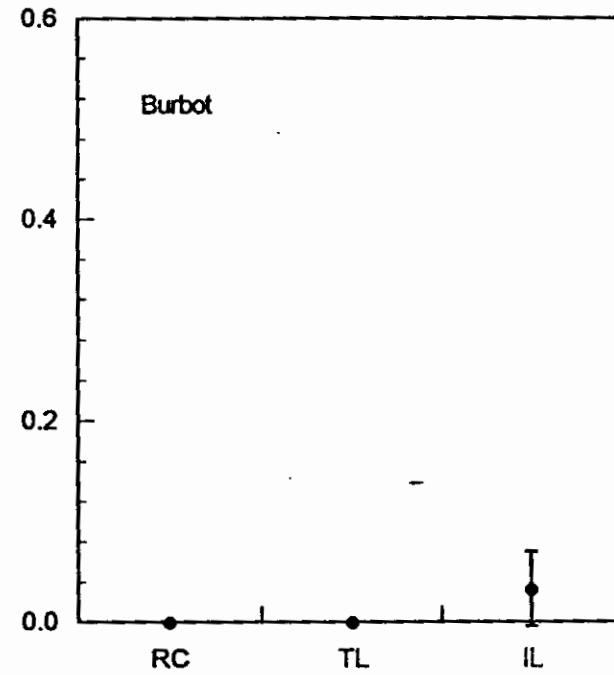
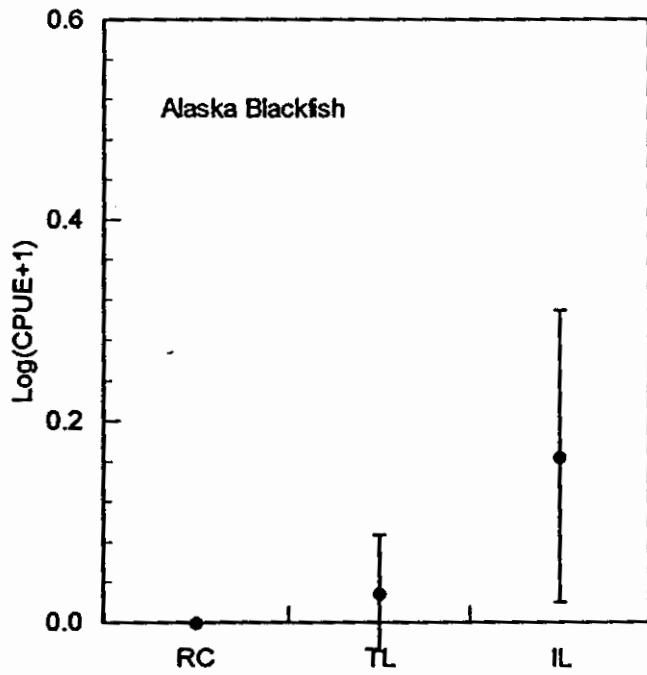
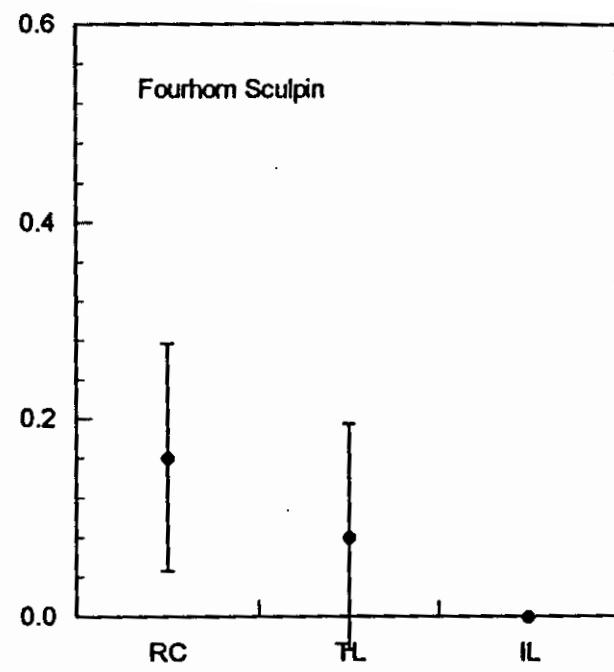
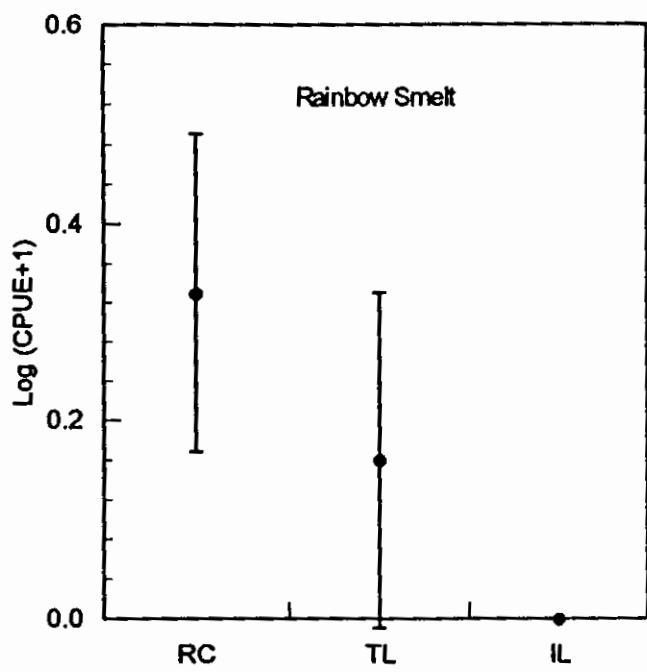


Figure 4. continued.

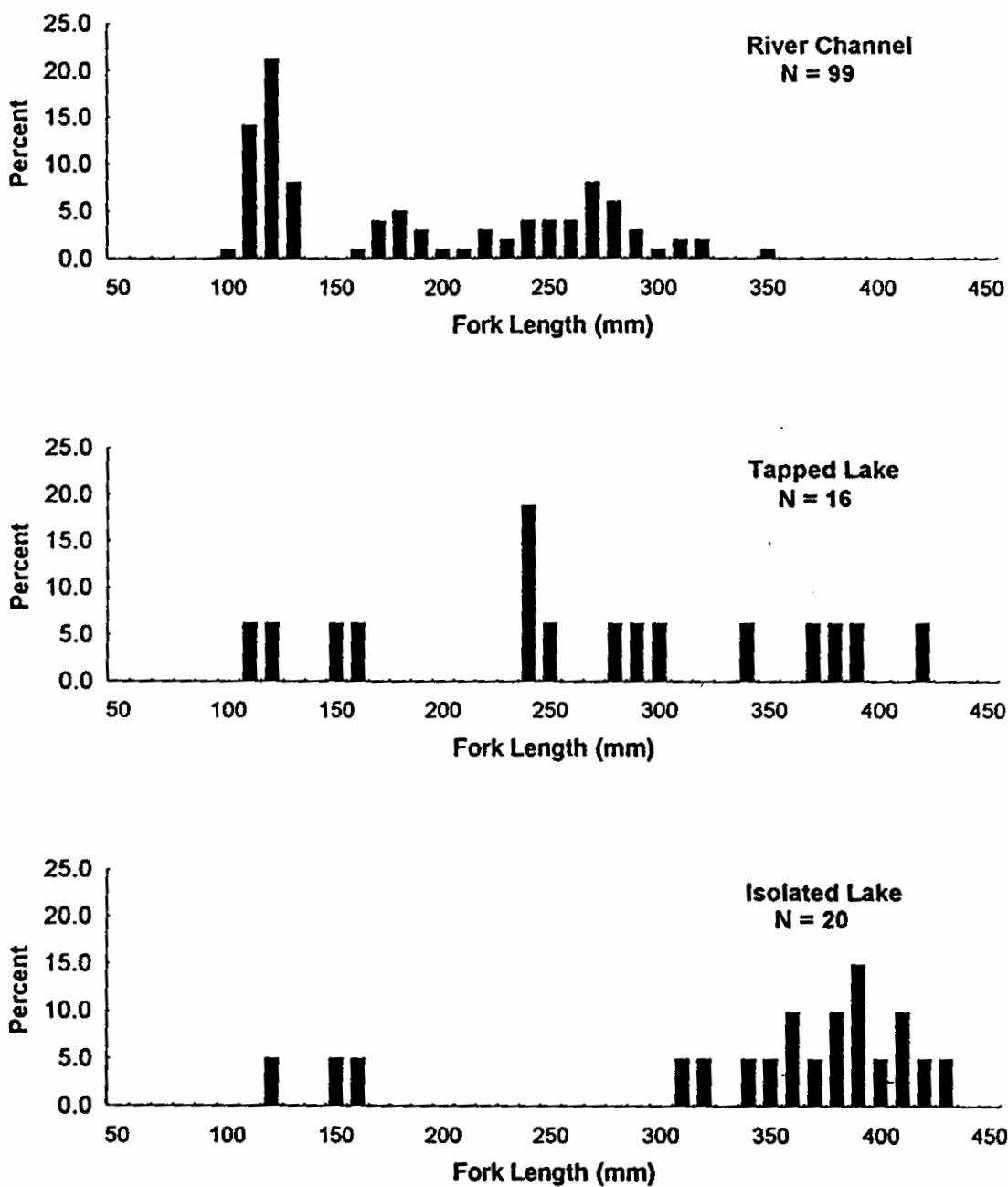


Figure 5. Size distribution of Arctic cisco captured during 1991-1993 sampling in Colville Delta habitats.

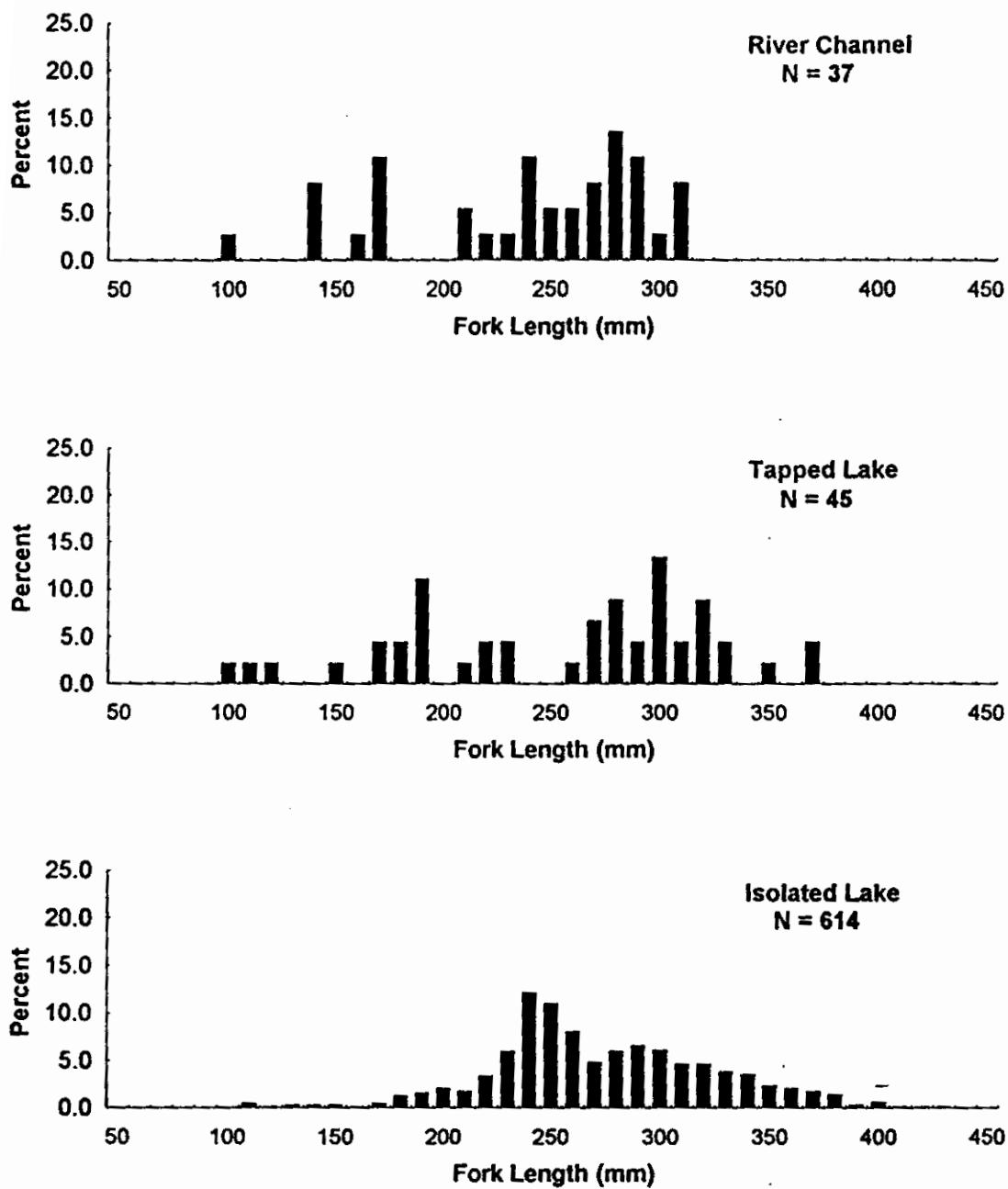


Figure 6. Size distribution of least cisco captured during 1991-1993 sampling in Colville Delta habitats.

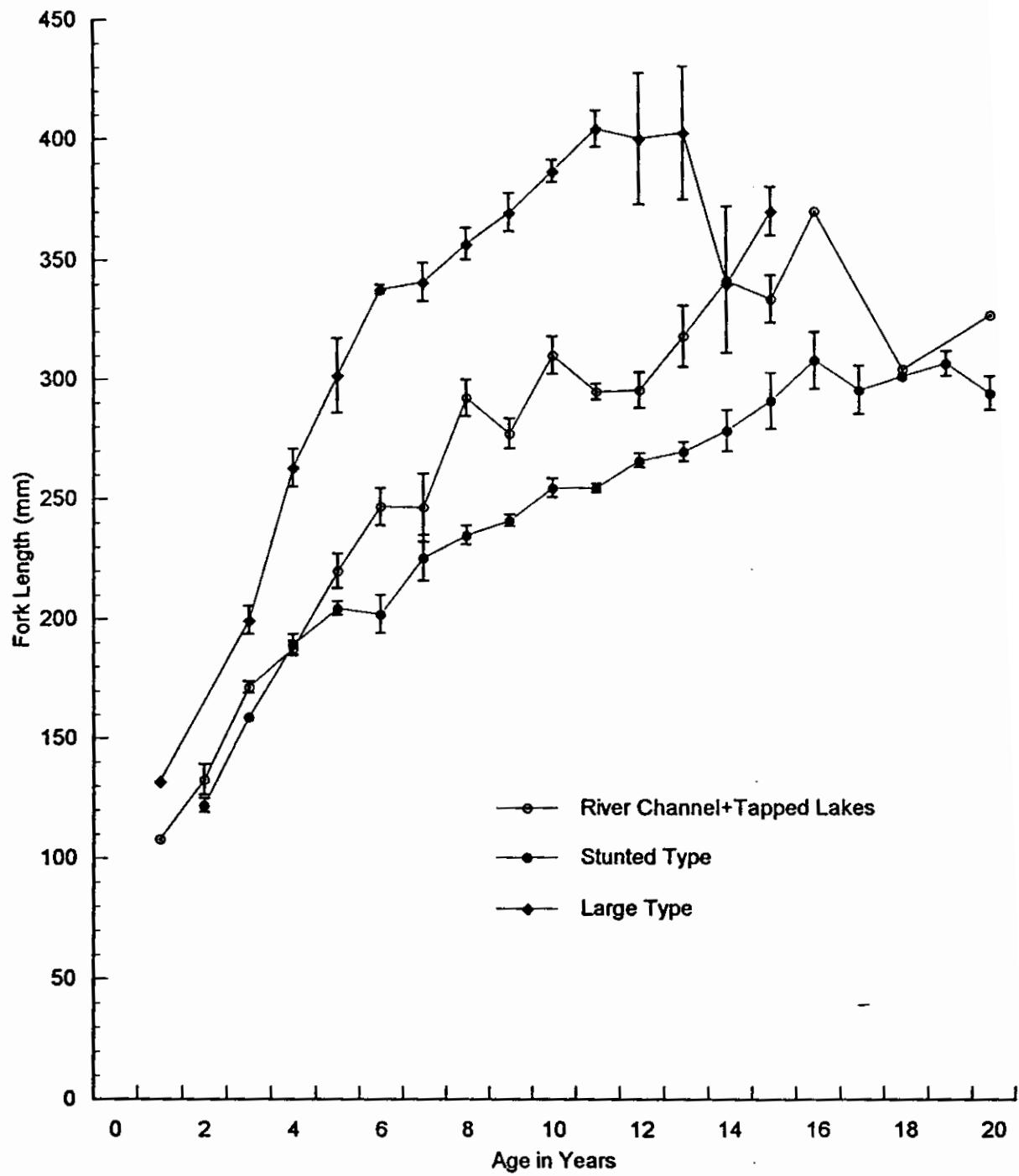


Figure 7. Mean length at age for least cisco by growth forms identified during sampling in the Colville Delta, 1991-1993.

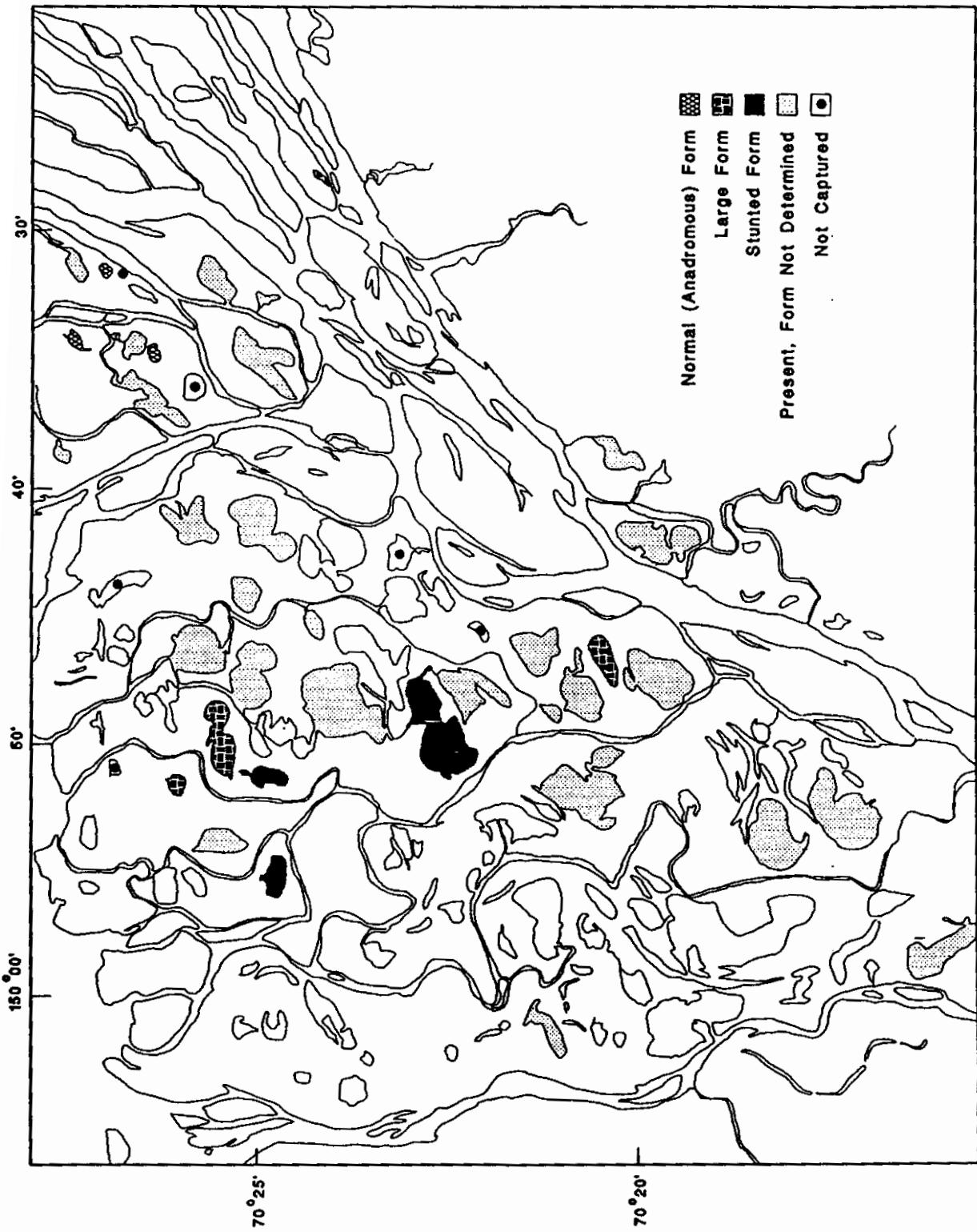
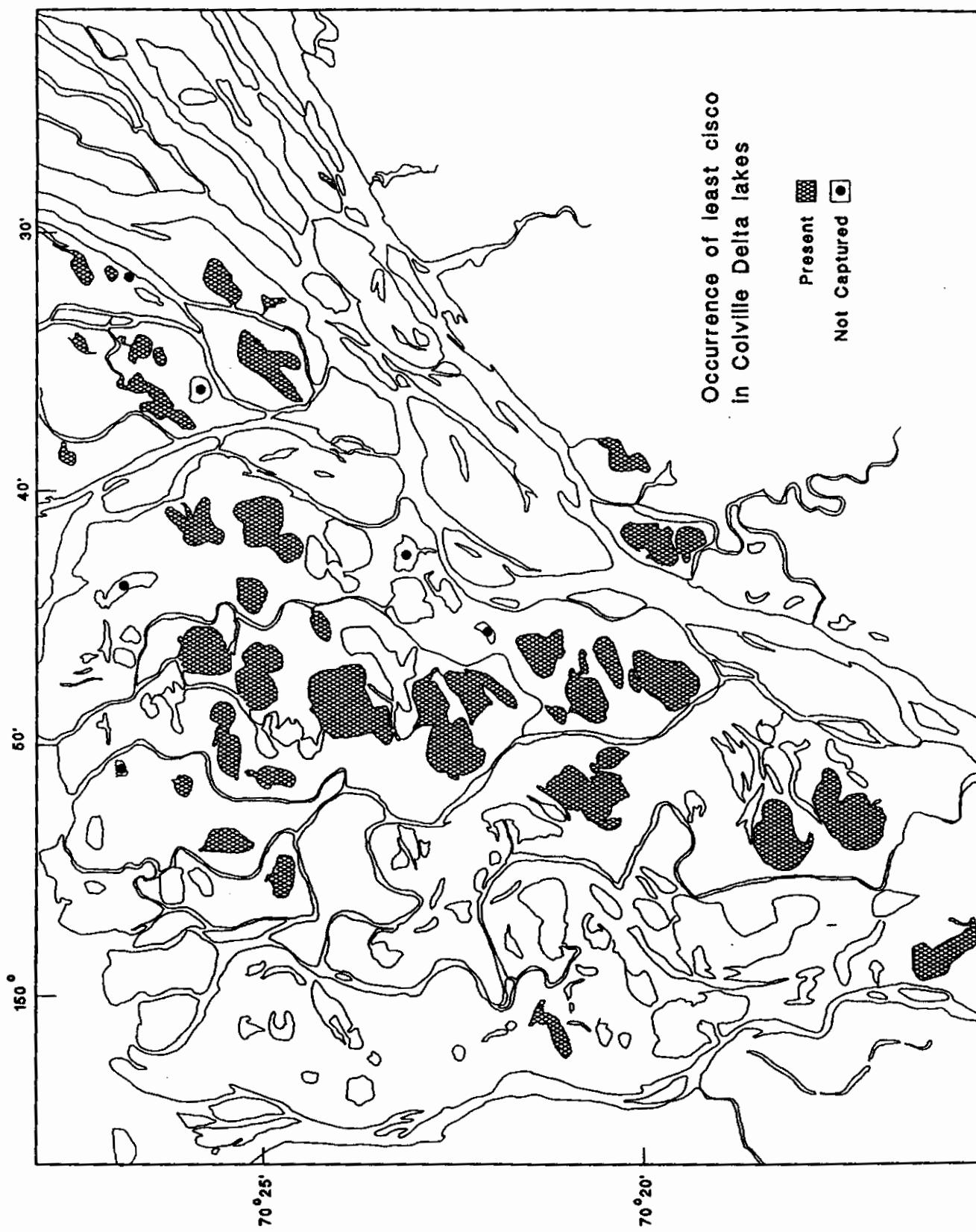


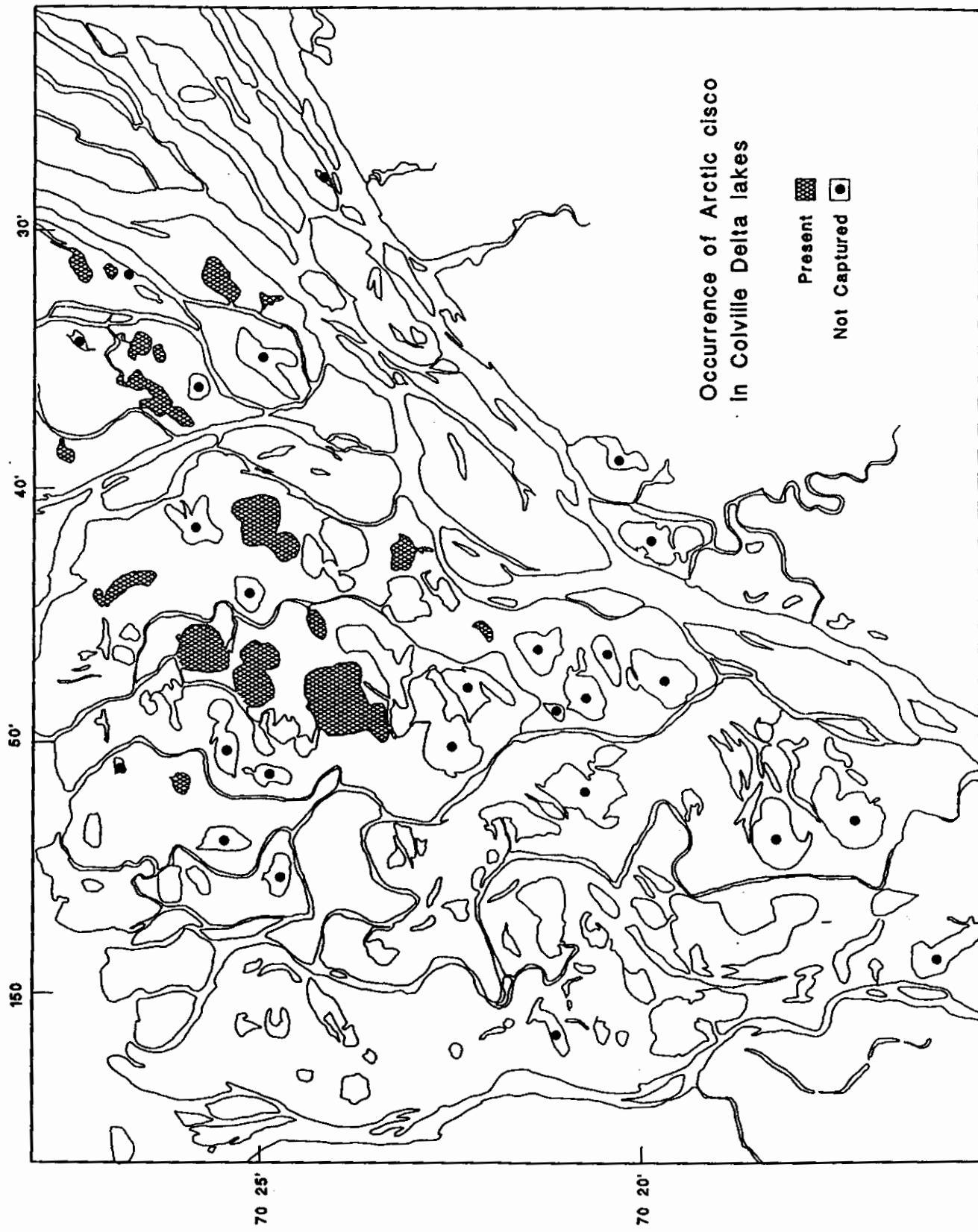
Figure 8. Distribution of least cisco growth forms identified during 1991-1993 sampling in the Colville Delta.

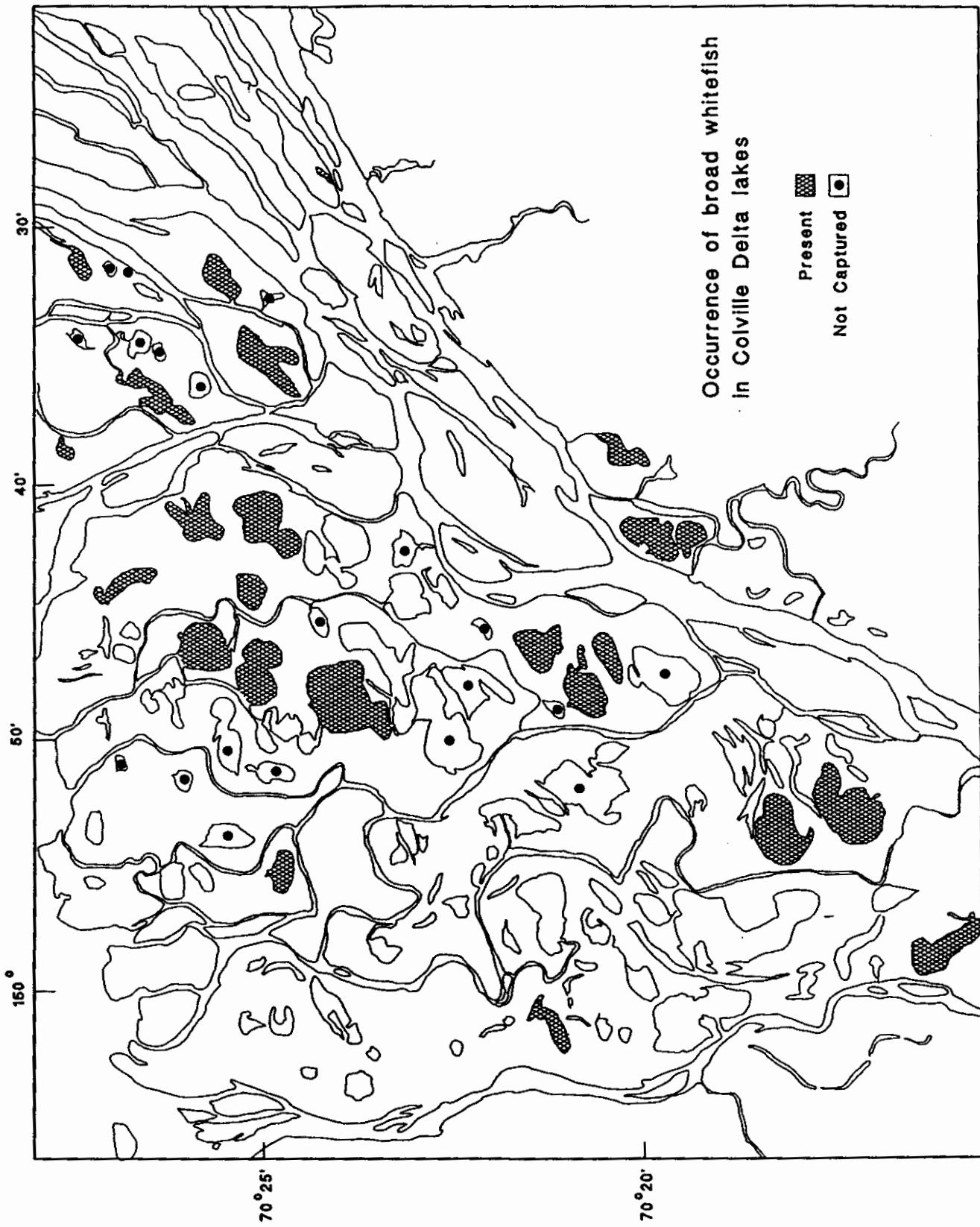
SPECIES DISTRIBUTION MAPS



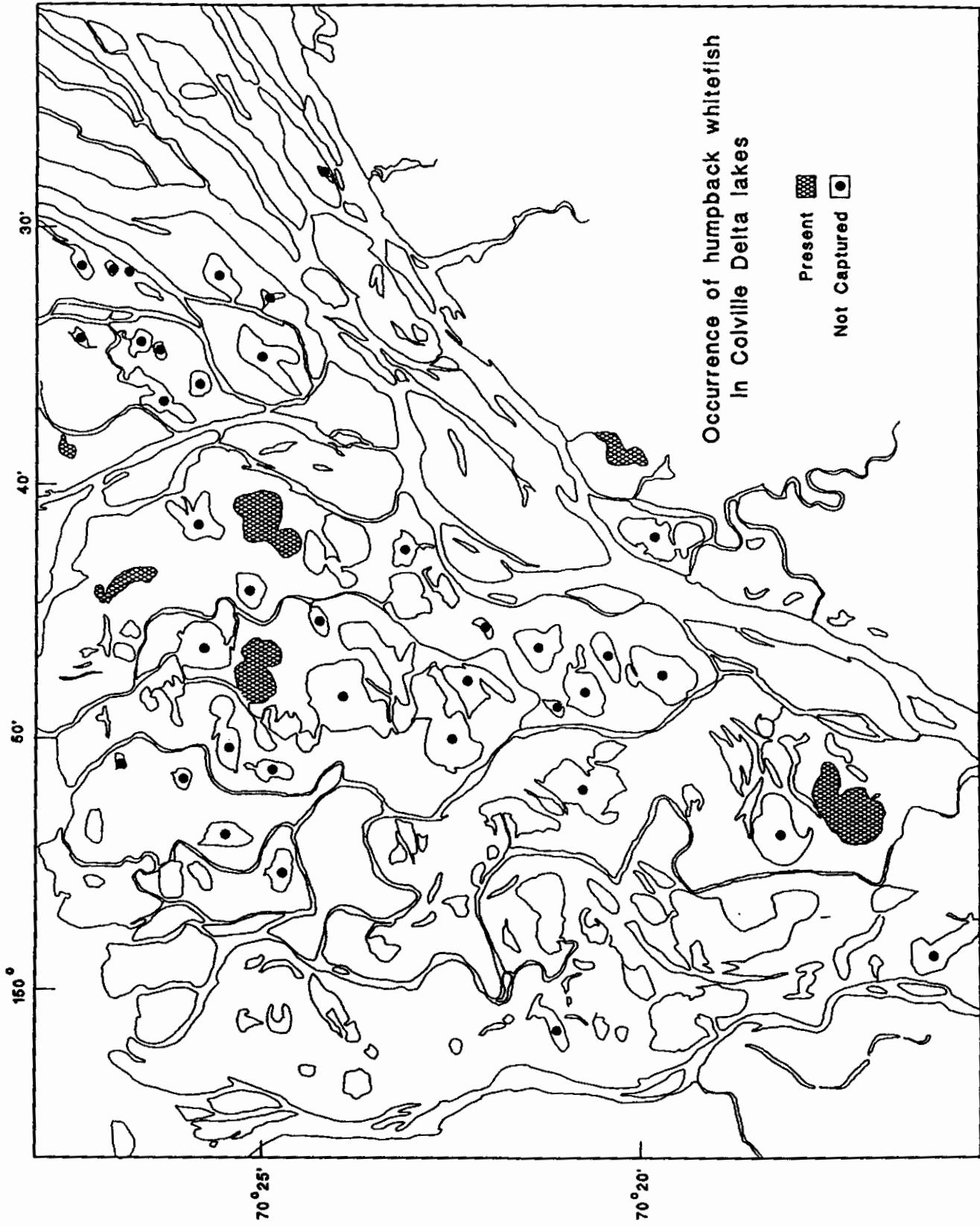
Occurrence of Arctic cisco
In Colville Delta lakes

Present 
Not Captured 



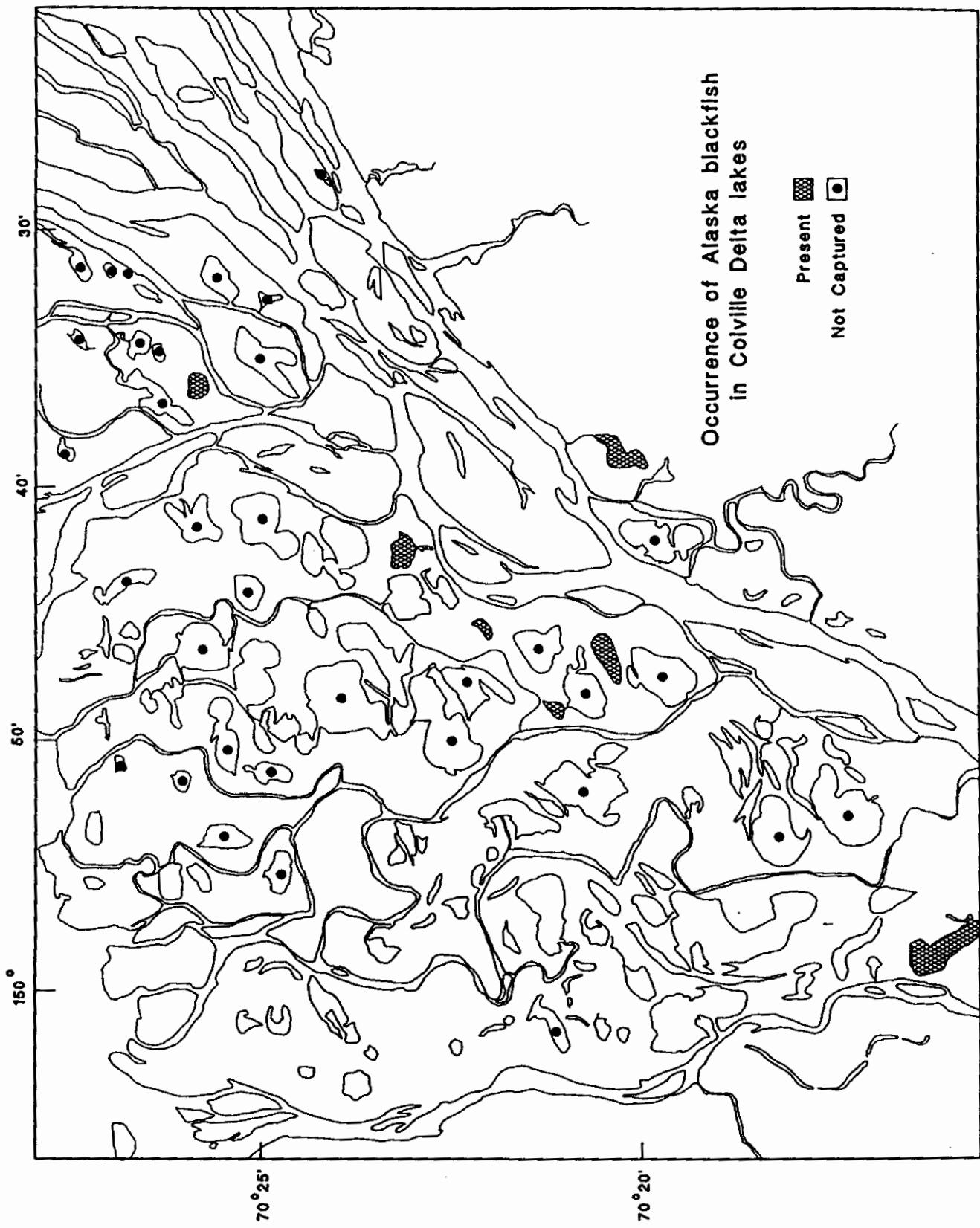


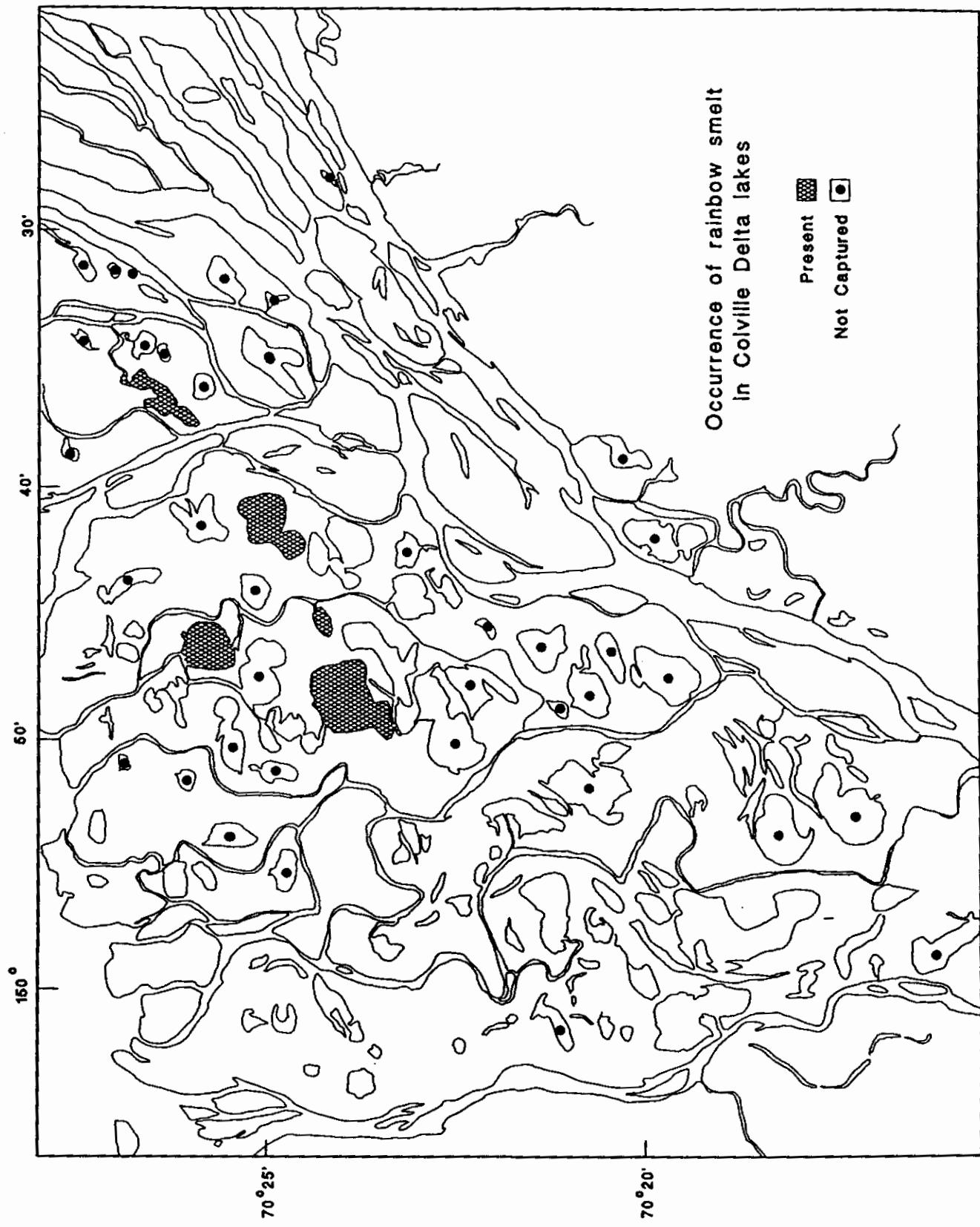


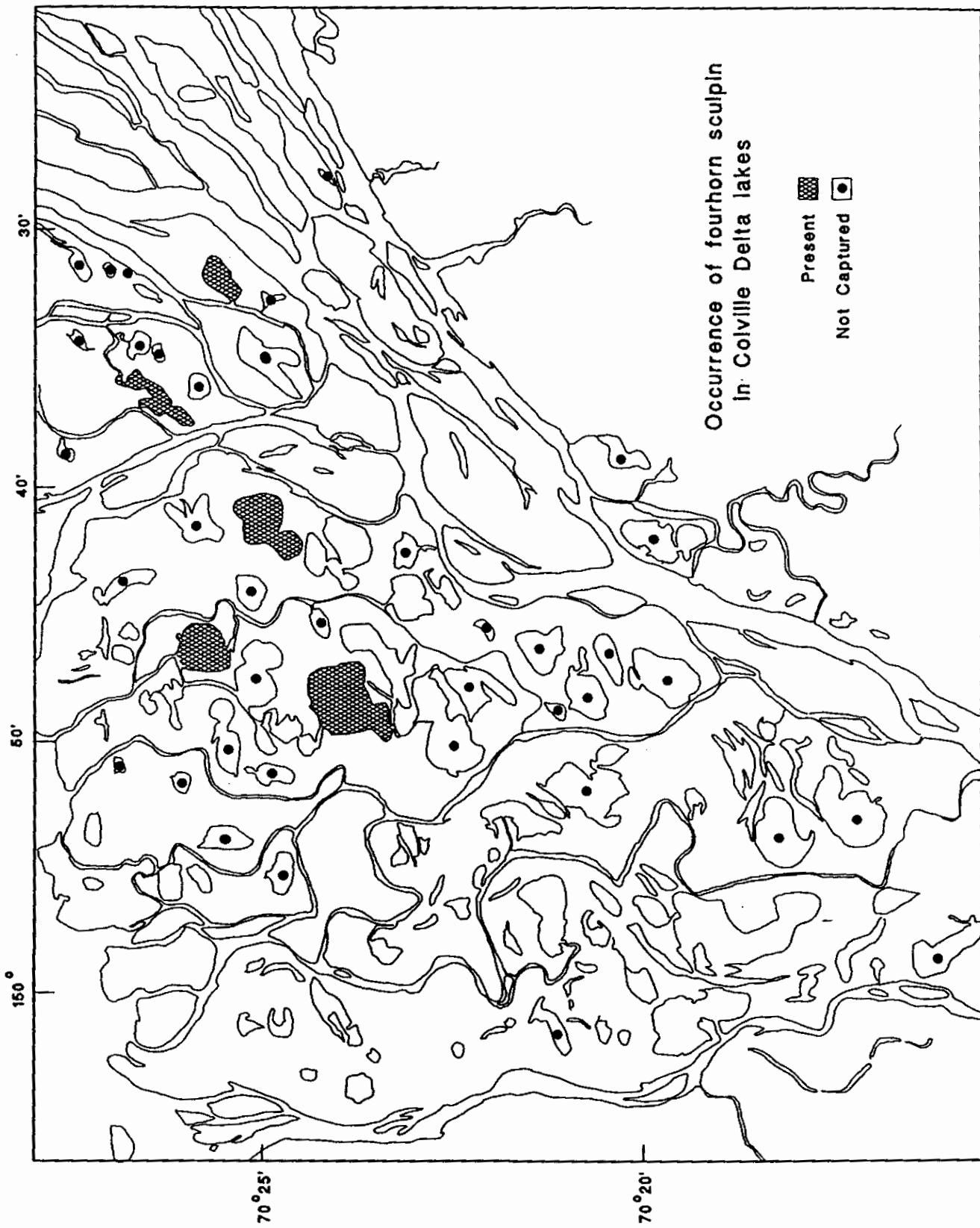


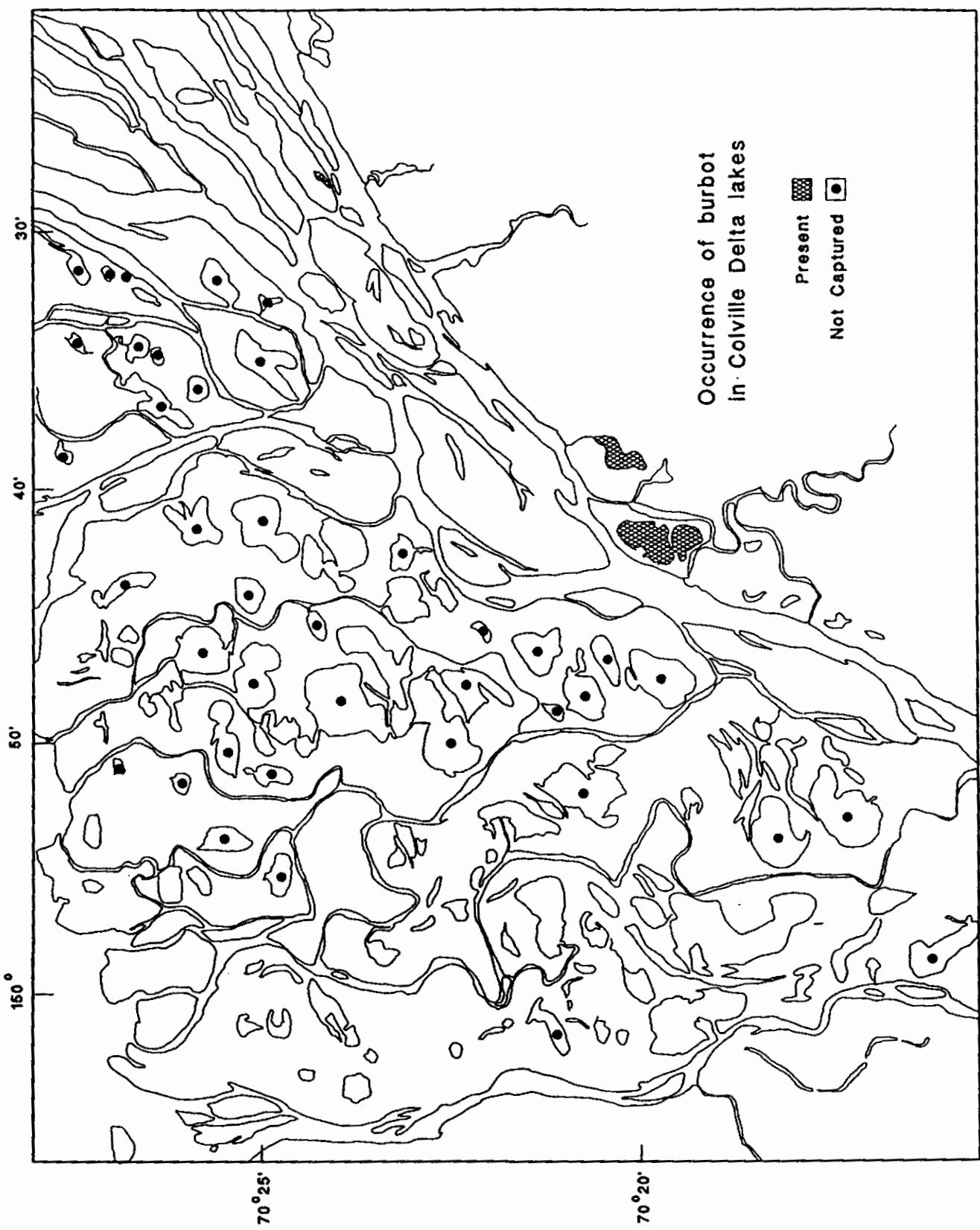
Occurrence of Alaska blackfish
in Colville Delta lakes

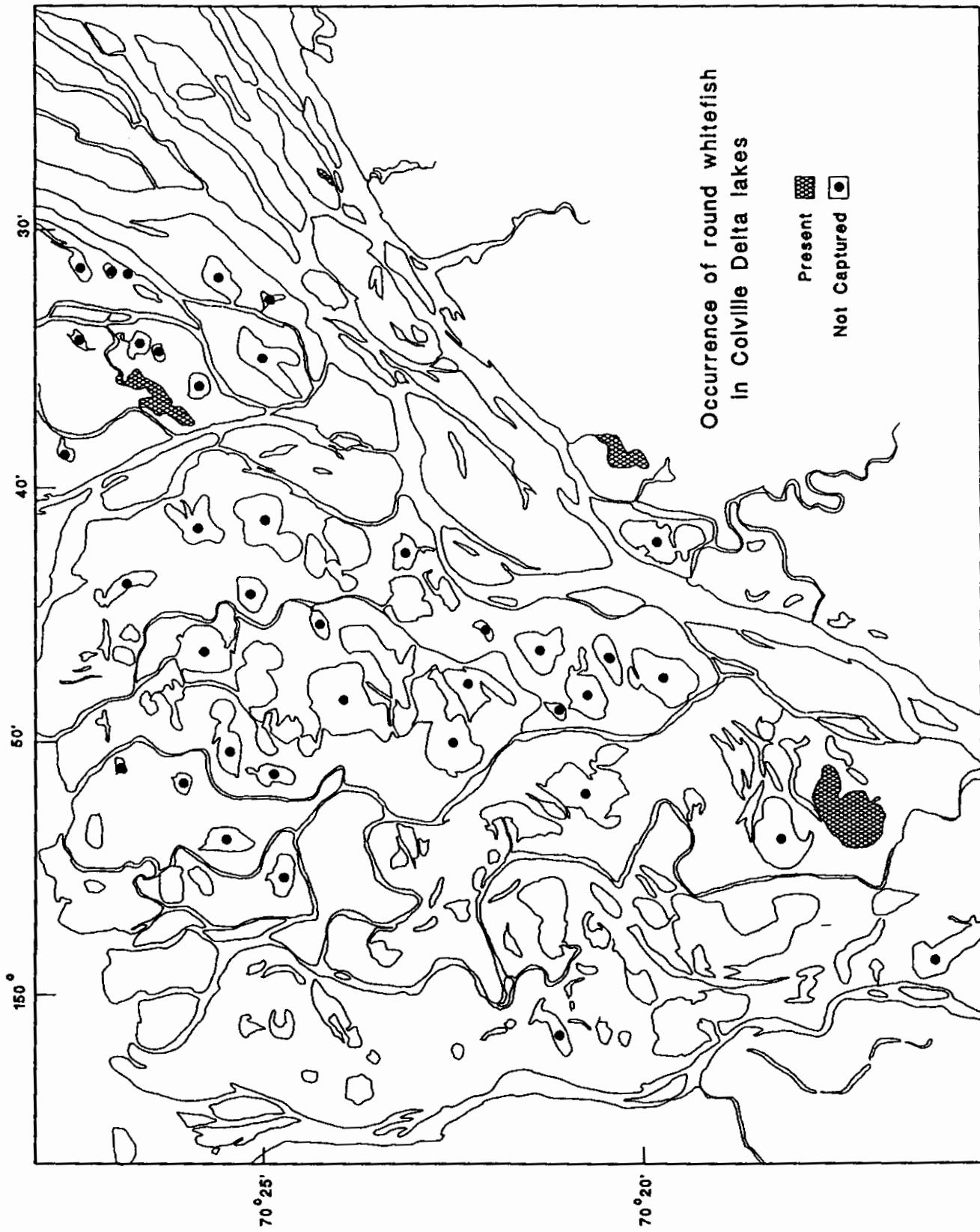
Present  Not Captured 











DATA APPENDIX

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Appendix Table 1. Total catch by station and date for fish captured during the Colville Delta Winter fish Habitat Study, 1991-1993, all meshes combined.

Appendix Table 1. Total catch by station and date for fish captured during the Colville Delta Winter fish Habitat Study, 1991-1993, all meshes combined.

Station	Habitat	Date	Depth (m)	Duration (hrs)	Mean Salinity (ppt)	Arctic cisco	Least cisco	Broad whitefish	Humpback whitefish	Round whitefish	Alaska Blackfish	Burbot	Rainbow smelt	Fourhorn sculpin	Total Catch
9203	IL	10/30/92	3.5	46.5	2.5	4	11	1	0	0	0	0	0	0	16
9204	IL	11/3/92	6.0	25.0	0.6	0	13	0	0	0	0	0	0	0	13
9205	IL	10/30/92	6.0	20.0	0.5	0	2	0	0	0	0	0	0	0	2
9206	IL	10/31/92	4.5	18.5	0.0	1	16	0	0	0	0	0	0	0	17
9207	IL	11/1/92	5.0	27.5	1.0	3	3	3	1	0	0	0	0	0	10
9208	IL	11/2/92	5.5	23.0	0.5	1	0	1	1	0	0	0	0	0	3
9209	IL	11/2/92	4.0	20.5	0.2	0	12	2	0	0	0	0	0	0	14
9210	IL	11/4/92	3.5	30.5	4.2	0	0	0	0	0	0	0	0	0	0
9211	IL	11/4/92	4.5	26.0	0.9	8	6	0	0	0	0	0	0	0	14
9212	IL	11/5/92	4.0	20.0	1.3	0	87	0	0	0	0	0	0	0	87
9213	IL	11/5/92	3.0	22.0	0.5	0	50	0	0	0	0	0	0	0	50
9301	IL	10/28/93	2.4	22.3	0.1	5	16	0	0	0	0	0	0	0	21
9302	TL	10/28/93	2.7	19.2	0.0	0	0	0	0	0	1	0	0	0	1
9303	IL	10/28/93	3.0	21.6	0.0	1	16	0	0	0	0	0	0	0	17
9304	IL	10/31/93	4.9	70.5	0.0	0	20	2	0	2	0	2	0	0	26
9305	IL	10/31/93	2.4	73.5	0.0	0	7	18	1	2	10	2	0	0	40
9306	IL	11/2/93	4.6	21.8	0.0	0	11	7	0	0	1	0	0	0	19

Appendix Table 1. Total catch by station and date for fish captured during the Colville Delta Winter fish Habitat Study, 1991-1993, all meshes combined.

Appendix Table 2. Total CPUE by station and date for fish captured during the Colville Delta Winter Fish Habitat Study, 1991-1993, all meshes combined (CPUE = fish per day for 120 ft of net).

Station	Habitat	Date	Depth (m)	Duration (hrs)	Mean Salinity (ppt)	Arctic cisco	Least cisco	Broad whitefish	Humpback whitefish	Round whitefish	Alaska Blackfish	Burbot	Rainbow smelt	Fourhorn sculpin	Total CPUE
9203	IL	10/30/92	3.5	46.5	2.5	2.1	5.7	0.5	0.0	0.0	0.0	0.0	0.0	0.0	8.3
9204	IL	11/3/92	6.0	25.0	0.6	0.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5
9205	IL	10/30/92	6.0	20.0	0.5	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4
9206	IL	10/31/92	4.5	18.5	0.0	1.3	20.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.1
9207	IL	11/1/92	5.0	27.5	1.0	2.6	2.6	2.6	0.9	0.0	0.0	0.0	0.0	0.0	8.7
9208	IL	11/2/92	5.5	23.0	0.5	1.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	3.1
9209	IL	11/2/92	4.0	20.5	0.2	0.0	14.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	16.4
9210	IL	11/4/92	3.5	30.5	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9211	IL	11/4/92	4.5	26.0	0.9	7.4	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.9
9212	IL	11/5/92	4.0	20.0	1.3	0.0	104.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	104.4
9213	IL	11/5/92	3.0	22.0	0.5	0.0	54.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	54.5
9301	IL	10/28/93	2.4	22.3	0.1	5.4	17.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.6
9302	TL	10/28/93	2.7	19.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3
9303	IL	10/28/93	3.0	21.6	0.0	1.1	17.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.9
9304	IL	10/31/93	4.9	70.5	0.0	0.0	6.8	0.7	0.0	0.7	0.0	0.7	0.0	0.0	8.9
9305	IL	10/31/93	2.4	73.5	0.0	0.0	2.3	5.9	0.3	0.7	3.3	0.7	0.0	0.0	13.1
9306	IL	11/2/93	4.6	21.8	0.0	0.0	12.1	7.7	0.0	0.0	1.1	0.0	0.0	0.0	21.0

Appendix Table 2. Total CPUE by station and date for fish captured during the Colville Delta Winter Fish Habitat Study, 1991-1993, all meshes combined (CPUE = fish per day for 120 ft of net).

Appendix Table 2. Total CPUE by station and date for fish captured during the Coirovile Delta Winter Fish Habitat Study, 1991-1993, all meshes combined (CPUE = fish per day for 120 ft of net).

Appendix Table 3. Catch by station, date and mesh size for fish captured during the 1991-1993 Colville Delta Winter Fish Habitat Study (gill net catches only, minnow trap catches not included).

Appendix Table 3. Catch by station, date and mesh size for fish captured during the 1991-1993 Colville Delta Winter Fish Habitat Study (gill net catches only, minnow trap catches not included).

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Appendix Table 3. Catch by station, date and mesh size for fish captured during the 1991-1993 Colville Delta Winter Fish Habitat Study (gill net catches only, minnow trap catches not included.

Station	Date	Depth (m)	Duration (hrs)	Mesh (mm)	Arctic cisco	Least cisco	Broad whitefish	Humpback whitefish	Round whitefish	Alaska Blackfish	Burbot	Rainbow smelt	Fourhorn sculpin	Total Mesh Catch
9204	11/2/92	6.4	25.0	25	0	0	0	0	0	0	0	0	0	0
				32	0	1	0	0	0	0	0	0	0	1
				41	0	0	0	0	0	0	0	0	0	0
				52	0	4	0	0	0	0	0	0	0	4
				70	0	8	0	0	0	0	0	0	0	8
				89	0	0	0	0	0	0	0	0	0	0
9205	10/30/92	8.5	22.0	25	0	0	0	0	0	0	0	0	0	0
				32	0	0	0	0	0	0	0	0	0	0
				41	0	0	0	0	0	0	0	0	0	1
				52	0	1	0	0	0	0	0	0	0	1
				70	0	1	0	0	0	0	0	0	0	1
				89	0	0	0	0	0	0	0	0	0	0
9206	10/30/92	4.6	18.5	25	0	0	0	0	0	0	0	0	0	0
				32	0	0	0	0	0	0	0	0	0	0
				41	0	0	0	0	0	0	0	0	0	0
				52	0	11	0	0	0	0	0	0	0	11
				70	1	5	0	0	0	0	0	0	0	6
				89	0	0	0	0	0	0	0	0	0	0
9207	10/31/92	5.2	27.5	25	0	0	0	0	0	0	1	0	0	0
				32	0	0	0	0	0	0	0	0	0	1
				41	0	0	0	0	0	0	0	0	0	0
				52	0	0	0	0	0	0	0	0	0	0
				70	2	3	2	0	0	0	0	0	0	7
				89	1	0	1	0	0	0	0	0	0	2

Appendix Table 3. Catch by station, date and mesh size for fish captured during the 1991-1993 Colville Delta Winter Fish Habitat Study (gill net catches only, minnow trap catches not included).

Station	Date	Depth (m)	Duration (hrs)	Mesh (mm)	Total								
					Arctic cisco	Least cisco	Broad whitefish	Humpback whitefish	Round whitefish	Alaska Blackfish	Burbot	Rainbow smelt	Fourhorn sculpin
9208	11/1/92	5.5	23.0	25	0	0	0	0	0	0	0	0	0
				32	1	0	0	0	0	0	0	0	0
				41	0	0	0	0	0	0	0	0	1
				52	0	0	0	0	0	0	0	0	0
				70	0	0	1	0	0	0	0	0	0
				89	0	0	0	1	0	0	0	0	1
9209	11/1/92	5.5	20.5	25	0	0	0	0	0	0	0	0	0
				32	0	0	0	0	0	0	0	0	0
				41	0	3	0	0	0	0	0	0	3
				52	0	5	0	0	0	0	0	0	5
				70	0	4	0	0	0	0	0	0	4
				89	0	0	2	0	0	0	0	0	2
9210	11/3/92	3.5	30.5	25	0	0	0	0	0	0	0	0	0
				32	0	0	0	0	0	0	0	0	0
				41	0	0	0	0	0	0	0	0	0
				52	0	0	0	0	0	0	0	0	0
				70	0	0	0	0	0	0	0	0	0
				89	0	0	0	0	0	0	0	0	0
9211	11/3/92	4.6	26.0	25	0	0	0	0	0	0	0	0	0
				32	0	0	0	0	0	0	0	0	0
				41	0	0	0	0	0	0	0	0	0
				52	0	0	0	0	0	0	0	0	0
				70	4	5	0	0	0	0	0	0	9
				89	4	1	0	0	0	0	0	0	5

Appendix Table 3. Catch by station, date and mesh size for fish captured during the 1991-1993 Colville Delta Winter Fish Habitat Study (gill net catches only, minnow trap catches not included).

Appendix Table 3. Catch by station, date and mesh size for fish captured during the 1991-1993 Colville Delta Winter Fish Habitat Study (gill net catches only, minnow trap catches not included).

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Appendix Table 3. Catch by station, date and mesh size for fish captured during the 1991-1993 Colville Delta Winter Fish Habitat Study (gill net catches only, minnow trap catches not included).

Station	Date	Water Depth (m)	Set Duration (hrs)	Mesh (mm)	Cisco	Arctic cisco	Least cisco	Broad whitefish	Humpback whitefish	Round whitefish	Alaska Blackfish	Burbot	Rainbow smelt	Fourhorn sculpin	Total Mesh Catch
9311	11/4/93	2.7	19.3	25	0	0	0	0	0	1	0	0	0	0	1
				32	1	0	0	0	0	0	0	0	0	0	1
				41	0	0	0	0	0	0	0	0	0	0	0
				52	0	0	0	0	0	0	0	0	0	0	0
				70	0	0	0	0	0	0	0	0	0	0	0
				89	0	0	0	0	0	0	0	0	0	0	0
9312	11/5/93	7.6	22.0	25	0	0	0	0	0	0	0	0	0	0	0
				32	0	0	0	0	0	0	0	0	0	0	0
				41	0	2	0	0	0	0	0	0	0	0	2
				52	0	2	0	0	0	0	0	0	0	0	2
				70	0	17	0	0	0	0	0	0	0	0	17
				89	0	0	0	0	0	0	0	0	0	0	0
9313	11/5/93	3.7	20.7	25	0	2	0	0	0	0	0	0	0	0	2
				32	0	0	0	0	0	0	0	0	0	0	0
				41	0	3	0	0	0	0	0	0	0	0	3
				52	0	36	0	0	0	0	0	0	0	0	36
				70	0	35	0	0	0	0	0	0	0	0	35
				89	0	3	0	0	0	0	0	0	0	0	3
Annual Total:				8	283	30	1	4	26	4	0	0	0	0	356
Study Total (1991-1993):				135	696	46	4	4	26	4	39	12	966		

Appendix Table 4. Catch rate by station, date and mesh size for fish captured during the 1991-1993 Colville Delta Winter Fish Habitat Study (expressed as fish per day).

Appendix Table 4. Catch rate by station, date and mesh size for fish captured during the 1991-1993 Colville Delta Winter Fish Habitat Study.

Station	Date	Water Depth (m)	Set Duration (hrs)	Mesh (mm)	Total Mesh CPUE						
					Arctic cisco	Least whitefish	Broad whitefish	Humpback whitefish	Round Whitefish	Alaska Blackfish	Burbot
9103	11/3/91	3.0	22.0	25	14.2	0.0	0.0	0.0	0.0	0.0	0.0
				32	1.1	2.2	0.0	0.0	0.0	0.0	0.0
				41	2.2	1.1	0.0	0.0	0.0	0.0	0.0
				52	2.2	1.1	0.0	0.0	0.0	0.0	0.0
				70	4.4	9.8	0.0	0.0	0.0	0.0	0.0
				89	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9104	11/5/91	9.0	48.0	25	1.0	0.0	0.0	0.0	0.0	0.0	0.0
				32	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				41	1.5	1.0	0.0	0.0	0.0	0.0	0.5
				52	1.5	0.5	0.0	0.0	0.0	0.0	0.0
				70	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				89	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9104	11/6/91	9.0	21.0	25	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				32	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				41	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				52	1.1	0.0	0.0	0.0	0.0	1.1	0.0
				70	2.3	0.0	0.0	0.0	0.0	0.0	0.0
				89	1.1	0.0	0.0	0.0	0.0	1.1	0.0
9104	11/7/91	9.0	23.0	25	1.0	1.0	0.0	0.0	0.0	0.0	0.0
				32	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				41	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				52	0.0	1.0	0.0	0.0	0.0	1.0	0.0
				70	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				89	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix Table 4. Catch rate by station, date and mesh size for fish captured during the 1991-1993 Colville Delta Winter Fish Habitat Study.

Appendix Table 4. Catch rate by station, date and mesh size for fish captured during the 1991-1993 Colville Delta Winter Fish Habitat Study..

Station	Date	Water Depth (m)	Set Duration (hrs)	Mesh (mm)	Total Mesh CPUE						
					Arctic cisco	Least cisco	Broad whitefish	Humpback whitefish	Round whitefish	Alaska Blackfish	Burbot
9107	11/6/91	2.5	21.0	25	2.3	1.1	0.0	0.0	0.0	0.0	0.0
				32	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				41	0.0	1.1	0.0	1.1	0.0	0.0	0.0
				52	1.1	4.6	0.0	0.0	0.0	0.0	0.0
				70	0.0	8.0	2.3	0.0	0.0	0.0	0.0
				89	0.0	0.0	2.3	0.0	0.0	0.0	0.0
9108	11/7/91	3.5	21.0	25	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				32	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				41	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				52	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				70	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				89	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9108	11/9/91	3.5	50.0	25	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				32	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				41	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				52	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				70	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				89	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9109	11/7/91	5.0	20.0	25	2.4	0.0	0.0	0.0	0.0	0.0	0.0
				32	0.0	2.4	0.0	0.0	0.0	0.0	0.0
				41	2.4	4.8	0.0	0.0	0.0	0.0	0.0
				52	2.4	0.0	0.0	0.0	0.0	3.6	1.2
				70	1.2	0.0	0.0	0.0	0.0	0.0	1.2
				89	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix Table 4. Catch rate by station, date and mesh size for fish captured during the 1991-1993 Colville Delta Winter Fish Habitat Study.

Appendix Table 4. Catch rate by station, date and mesh size for fish captured during the 1991-1993 Colville Delta Winter Fish Habitat Study.

Appendix Table 4. Catch rate by station, date and mesh size for fish captured during the 1991-1993 Colville Delta Winter Fish Habitat Study.

Station	Date	Water Depth (m)	Set Duration (hrs)	Mesh (mm)	Total Mesh CPUE								
					Arctic cisco	Least cisco	Broad whitefish	Humpback whitefish	Round Whitefish	Alaska Blackfish	Burbot	Rainbow smelt	Fourhorn sculpin
9204	11/2/92	6.4	25.0	25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				32	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
				41	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				52	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8
				70	0.0	7.7	0.0	0.0	0.0	0.0	0.0	0.0	7.7
				89	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9205	10/30/92	8.5	22.0	25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				41	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				52	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	1.1
				70	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	1.1
				89	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9206	10/30/92	4.6	18.5	25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				41	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				52	0.0	14.3	0.0	0.0	0.0	0.0	0.0	0.0	14.3
				70	1.3	6.5	0.0	0.0	0.0	0.0	0.0	0.0	7.8
				89	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9207	10/31/92	5.2	27.5	25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				32	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.9
				41	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				52	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				70	1.7	2.6	1.7	0.0	0.0	0.0	0.0	0.0	6.1
				89	0.9	0.0	0.9	0.0	0.0	0.0	0.0	0.0	1.7

Appendix Table 4. Catch rate by station, date and mesh size for fish captured during the 1991-1993 Colville Delta Winter Fish Habitat Study.

Table 4. Catch rate by station, date and mesh size for fish captured during the 1991-1993 Colville Delta Winter Fish Habitat Study.

Appendix Table 4. Catch rate by station, date and mesh size for fish captured during the 1991-1993 Colville Delta Winter Fish Habitat Study.

Station	Date	Water Depth (m)	Set Duration (hrs)	Mesh (mm)	Total							
					Cisco	Arctic cisco	Least cisco	Broad whitefish	Humpback whitefish	Round Whitefish	Alaska Blackfish	Burbot
9303	10/28/93	2.7	21.6	25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				32	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0
				41	0.0	10.0	0.0	0.0	0.0	0.0	0.0	10.0
				52	0.0	2.2	0.0	0.0	0.0	0.0	0.0	2.2
				70	0.0	4.4	0.0	0.0	0.0	0.0	0.0	4.4
				89	1.1	0.0	0.0	0.0	0.0	0.0	0.0	1.1
9304	10/31/93	2.4	70.5	25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				41	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				52	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.7
				70	0.0	5.8	0.3	0.0	0.7	0.0	0.3	7.1
				89	0.0	0.3	0.3	0.0	0.0	0.3	0.0	1.0
9305	10/31/93	4.9	73.5	25	0.0	0.3	1.3	0.0	0.7	2.6	0.0	0.0
				32	0.0	0.7	0.3	0.0	0.0	0.3	0.0	1.3
				41	0.0	0.0	2.0	0.0	0.0	0.3	0.0	2.3
				52	0.0	0.7	0.7	0.0	0.0	0.0	0.0	1.3
				70	0.0	0.7	0.3	0.0	0.0	0.0	0.0	1.0
				89	0.0	0.0	1.3	0.3	0.0	0.3	0.0	2.0
9306	11/2/93	4.6	21.8	25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				41	0.0	6.6	0.0	0.0	0.0	0.0	0.0	6.6
				52	0.0	4.4	0.0	0.0	0.0	0.0	1.1	5.5
				70	0.0	1.1	5.5	0.0	0.0	0.0	0.0	6.6
				89	0.0	0.0	2.2	0.0	0.0	0.0	0.0	2.2

Appendix Table 4. Catch rate by station, date and mesh size for fish captured during the 1991-1993 Colville Delta Winter Fish Habitat Study.

Appendix Table 4. Catch rate by station, date and mesh size for fish captured during the 1991-1993 Colville Delta Winter Fish Habitat Study.

Appendix Table 5. Length frequency distributions of Arctic cisco caught during the 1991 Colville Delta Winter Fish Habitat Study by station and mesh size.

Fork Length (mm)	9101					9102					9103					9104					9105					
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
100	1																									
110	10																									
120	7	2																								
130	3																									
140																										
150																										
160																										
170																										
180																										
190					1																					
200																										
210																					1					
220																					1					
230																					1					
240																					2					
250																					1					
260																					1					
270																					1					
280																					1					
290																					1					
300																					1					
310																					1					
320																					1					
330																					1					
340																					1					
350																					1					

Mesh 1 = 25 mm

Mesh 2 = 32 mm

Mesh 3 = 41 mm

Mesh 4 = 52 mm

Mesh 5 = 70 mm

Mesh 6 = 89 mm

Appendix Table 5. Length frequency distributions of Arctic cisco caught during the 1991 Colville Delta Winter Fish Habitat Study by station and mesh size.

Fork Length (mm)	9109					9110					1991 Total: All Stations						
	1	2	3	4	5	1	2	3	4	5	Panel Number	1	2	3	4	5	Total
100											1	1	1	1	1	1	
110	1										15	15	15	15	15	15	
120	1	2									18	4	22	22	22	22	
130											7	1	8	8	8	8	
140																0	
150																0	
160		1										1		1		1	1
170			2									4		4		4	4
180			2									5		5		5	5
190			1									3		3		3	3
200						1						1		1		1	1
210							1					1		1		1	1
220					1			2				3		3		3	3
230				1				1				2		2		2	2
240								2				6		6		6	7
250									1			3		3		3	5
260					2				1			4		4		4	4
270					1				2			1		1		1	1
280						1				1		1		1		1	1
290									1			2		2		2	4
300										1		2		2		2	2
310												1		1		1	1
320												1		1		1	1
330												0		0		0	0
340												0		0		0	0
350												1		1		1	1

Total: 108 *

Mesh 1 = 25 mm Mesh 4 = 52 mm
 Mesh 2 = 32 mm Mesh 5 = 70 mm
 Mesh 3 = 41 mm Mesh 6 = 89 mm

Appendix Table 6. Length frequency distributions of Arctic cisco caught during the 1992 Colville Delta Winter Fish Habitat Study by station and mesh size.

Fork Length (mm)	9201						9203						9206						9207						9208										
	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6					
100																																			
110																																			
120																																			
130																																			
140																																			
150																																			
160							1																												
170																																			
180																																			
190																																			
200																																			
210																																			
220																																			
230																																			
240																																			
250																																			
260																																			
270																																			
280																																			
290																																			
300																																			
310																																			
320																																			
330																																			
340																	1																		
350																		1																	
360																			1																
370																				1															
380																				1															
390																					1														
400																						1													
410																							1												
420																								1											
430																									1										
440																										1									
	0	0	1	0	0	1																													
	0	0	1	0	0	1																													
	0	0	0	0	1	0																													
	0	0	0	0	0	2																													
	0	0	0	0	0	0																													

Panel 1 = 25 mm
Panel 2 = 32

Panel 3 = 41
Panel 4 = 52

Panel 5 = 70
Panel 6 = 89

Appendix Table 6. Length frequency distributions of Arctic cisco caught during the 1992 Colville Delta Winter Fish Habitat Study by station and mesh size.

Fork Length (mm)	9211						1992 Total: All Stations						
	Panel Number 1	2	3	4	5	6	Panel Number 1	2	3	4	5	6	Total
100													0
110													0
120													0
130													0
140													0
150							1						1
160							1	1					2
170													0
180													0
190													0
200													0
210													0
220													0
230													0
240													0
250													0
260													0
270													0
280													0
290													0
300													0
310													0
320					1								1
330													0
340													2
350													1
360													1
370													1
380													2
390													2
400													1
410													1
420													2
430													1
440													0
	0	0	0	0	4	4		0	2	1	0	9	19

Appendix Table 7. Length frequency distributions of Arctic cisco caught during the 1993 Colville Delta Winter Fish Habitat Study by station and mesh size.

Fork Length (mm)	9301						9303						9310						9311						1993 Total: All Stations						
	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	Total
100																														0	
110																														0	
120																														1	
130																														0	
140																														0	
150																														1	
160																														0	
170																														0	
180																														0	
190																														0	
200																														0	
210																														0	
220																														0	
230																														0	
240																														0	
250																														0	
260																														0	
270																														0	
280																														0	
290																														0	
300																														0	
310																														1	
320																														0	
330																														0	
340																														0	
350																														0	
360																														1	
370																														0	
380																														1	
390																														1	
400																														0	
410																														0	
420																														0	
430																														0	
440																														0	
450																														0	
	0	0	0	0	4	1																									0
	1	0	0	0	0	0																									1
	1	1	0	0	0	0																									8

Panel 1 = 25 mm
Panel 2 = 32 mm
Panel 3 = 41 mm
Panel 4 = 52 mm
Panel 5 = 70 mm
Panel 6 = 89 mm

Appendix Table 8. Length frequency distributions of least cisco caught during the 1991 Colville Delta Winter Fish Habitat Study, by station and mesh size.

Fork Length (mm)	9101					9103					9104					9105					9106					9107					
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
100																															
110																															
120																															
130																															
140																															
150																															
160																															
170																															
180																															
190																															
200																															
210																															
220																															
230																															
240																															
250																															
260																															
270																															
280																															
290																															
300																															
310																															
320																															
330																															
340																															
350																															

Mesh 1 = 25 mm
 Mesh 2 = 32 mm
 Mesh 3 = 41 mm

Mesh 4 = 52 mm
 Mesh 5 = 70 mm
 Mesh 6 = 89 mm

Appendix Table 8. Length frequency distributions of least cisco caught during the 1991 Colville Delta Winter Fish Habitat Study, by station and mesh size.

Mesh 1 = 25 mm **Mesh 4 = 52 mm**
Mesh 2 = 32 mm **Mesh 5 = 70 mm**
Mesh 3 = 41 mm **Mesh 6 = 89 mm**

Appendix Table 9. Length frequency distributions of least cisco caught during the 1992 Colville Delta Winter Fish Habitat Study, by station and mesh size.

Fork Length (mm)	9203						9204						9205						9206						9207								
	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6			
100																																	
110																																	
120																																	
130																																	
140																																	
150		1																															
160																																	
170		1																															
180		1	1																														
190			2																														
200		1	2																														
210																																	
220																																	
230																																	
240			1																														
250																																	
260																																	
270																																	
280																																	
290																																	
300			1																														
310																																	
320																																	
330																																	
340																																	
350																																	
360																																	
370																																	
380																																	
390																																	
400																																	
410																																	
420																																	
430																																	
440																																	
450																																	
	0	4	6	1	0	0																											
	0	0	0	11	5	0																											
	0	0	0	1	1	0																											
	0	0	0	0	0	3	0																										

Panel 1 = 25 mm Panel 3 = 41 mm Panel 5 = 70 mm
 Panel 2 = 32 mm Panel 4 = 52 mm Panel 6 = 89 mm

Appendix Table 9. Length frequency distributions of least cisco caught during the 1992 Cohnville Delta Winter Fish Habitat Study, by station and mesh size.

Fork Length (mm)	9209						9211						9212						9213						1992 Total: All Stations									
	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	Total			
100																														0				
110																														0				
120																														1				
130																														0				
140																														0				
150																														2				
160																														0				
170																														1				
180																														4				
190																														2				
200																														6				
210																														3				
220																														7				
230																														1				
240																														1				
250																														1				
260																														1				
270																														1				
280																														1				
290																														1				
300																														1				
310																														1				
320																														1				
330																														1				
340																														1				
350																														1				
360																														2				
370																														2				
380																														2				
390																														0				
400																														1				
410																														0				
420																														0				
430																														0				
440																														0				
450																														0				
	0	0	3	3	4	0		0	0	0	5	1		1	2	5	5	24	0		0	2	8	34	6	0		1	9	22	111	36	1	200

Appendix Table 10. Length frequency distributions of least cisco caught during the 1993 Colville Delta Winter Fish Habitat Study, by station and mesh size.

Fork Length (mm)	9301						9303						9304						9305						9306							
	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6		
100																																
110																																
120																																
130																																
140																																
150																																
160																																
170																																
180																																
190																																
200																																
210																																
220																																
230																																
240																																
250																																
260																																
270																																
280																																
290																																
300																																
310																																
320																																
330																																
340																																
350																																
360																																
370																																
380																																
390																																
400																																
410																																
420																																
430																																
440																																
450	0	0	4	7	5	0																										
	0	0	2	4	0																											
	0	1	9	2	4	0																										
	0	0	2	16	1																											
	0	0	0	2	2	0																										
	1	2	0	2	2	0																										
	0	0	6	4	1	0																										

Panel 1 = 25 mm Panel 3 = 41 mm Panel 5 = 70 mm
 Panel 2 = 32 mm Panel 4 = 52 mm Panel 6 = 89 mm

Appendix Table 10. Length frequency distributions of least cisco caught during the 1993 Colville Delta Winter Fish Habitat Study, by station and mesh size.

Fork Length (mm)	9307						9308						9309						9312						9313								
	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6			
100																																	
110																																	
120																																	
130	1																																
140																																	
150																																	
160																																	
170																																	
180		1																															
190													1																				
200			2											1																			
210														3																			
220														6	4																		
230														4	2																		
240			2											1	2																		
250				2										1	1																		
260					2									2																			
270																																	
280						1	1							2	1																		
290														6	4																		
300								1						4	6																		
310														2	6																		
320									2	2				1	1																		
330										3				1																			
340											6			1																			
350											3																						
360											1	1																					
370											6	1																					
380											1	3	1																				
390											2																						
400											1																						
410											1																						
420											1																						
430											1																						
440											1																						
450											1																						
	<hr/>						<hr/>						<hr/>						<hr/>						<hr/>								
	1	0	7	7	28	6							1	0	16	25	21	1		0	0	0	1	0		0	0	2	17	0			
	<hr/>						<hr/>						<hr/>						<hr/>						<hr/>								
	2	0	3	36	35	3							2	0	2	2	17	0		0	0	0	1	0		0	0	2	17	0			

Appendix Table 10. Length frequency distributions of least cisco caught during the 1993 Colville Delta Winter Fish Habitat Study, by station and mesh size.

Fork Length (mm)	1993 Total: All Stations						Total
	Panel Number	1	2	3	4	5	6
100							0
110	2						2
120							0
130	2						2
140	1						1
150							0
160	1						1
170	1	2					3
180	4						4
190	7						7
200	5						5
210	4						4
220	9	7					16
230	10	6					16
240	3	4					7
250	2	7					9
260	1	6					7
270		2					2
280	9	5					14
290	9	6					15
300	1	12	11	24			
310		11	13	24			
320		7	17	24			
330		2	21	23			
340		1	17	1	19		
350		1	13	14			
360		1	9	1	11		
370		9	2	11			
380		1	5	3	9		
390			2		2		
400			2	1	3		
410			1		1		
420			1		1		
430			1		1		
440			0		0		
450			0		0		
	3	3	47	87	130	11	283

Appendix Table 11. Length frequency distributions of broad whitefish caught during the 1993 Colville Delta Fish Habitat Study, by station and mesh size.

Fork Length (mm)	9304						9305						9306								
	Panel Number						Panel Number						Panel Number								
	1	2	3	4	5	6		1	2	3	4	5	6		1	2	3	4	5	6	
90							1														
100							3														
110																					
120																					
130																					
140								1													
150									3												
160									2												
170																					
180																					
190																					
200									1												
210																					
220																					
230																					
240																					
250									1												
260																					
270																			1		
280																			1		
290																					
300																					
310																					
320																					
330																			1		
340					1																
350																					
360																					
370					1												1				
380																			1		
390																			1		
400																			1		
410																	1				
420																			1		
430																			1		
440																			1		
450																			1		
460														1					1		
470																			1		
480																					
490																					
500																					
510																	1				
	0	0	0	0	1	1		4	1	6	2	1	4	18		0	0	0	5	2	

Panel 1 = 25 mm
Panel 2 = 32

Panel 3 = 41
Panel 4 = 52

Panel 5 = 70
Panel = 89

Appendix Table 11. Length frequency distributions of broad whitefish caught during the 1993 Colville Delta Fish Habitat Study, by station and mesh size.

Appendix Table 12. Length frequency distributions of Alaska blackfish caught during the 1993 Colville Delta Winter Fish Survey, by station (gillnet and minnow trap catches combined).

Fork Length (mm)	Station Number						
	9302	9305	9307	9309	9310	9311	Total
50							0
55							0
60							0
65			2				2
70							0
75			1				1
80							0
85				1			1
90		3	1	2	6	1	13
95		2	1	1	5		9
100	1	1	1		1		4
105		1					1
110		1					1
115							0
120		1			1		2
125		1					1
130							0
135							0
140							0
145							0
150							0
	1	10	6	4	13	1	35

Appendix Table 13. Length frequency distributions of rainbow smelt caught during the 1993 Colville Delta Fish Habitat Study, by station and mesh size.

Fork Length (mm)	9101					9102					9104					9105				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
100																				
110																				
120																				
130																				
140																				
150																				
160																				
170																				
180																				
190																				
200																				
210																				
220																				
230																				
240																				
250																				
260																				
270																				
280																				
290																				
300																				
310																				
320																				
330																				
340																				
350																				

Mesh 1 = 25 mm
 Mesh 2 = 32 mm
 Mesh 3 = 41 mm
 Mesh 4 = 52 mm
 Mesh 5 = 70 mm
 Mesh 6 = 89 mm

Mesh 1 = 25 mm
 Mesh 2 = 32 mm
 Mesh 3 = 41 mm
 Mesh 4 = 52 mm
 Mesh 5 = 70 mm
 Mesh 6 = 89 mm

Appendix Table 13. Length frequency distributions of rainbow smelt caught during the 1993 Colville Delta Fish Habitat Study, by station and mesh size.

Fork Length (mm)	9109					9110					1991 Total: All Stations					
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	Total
100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
190	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
220	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
230	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
240	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
260	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
270	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
280	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
290	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
310	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
320	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
330	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
340	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
350	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Mesh 1 = 25 mm
Mesh 2 = 32 mm
Mesh 3 = 41 mm
Mesh 4 = 52 mm
Mesh 5 = 70 mm
Mesh 6 = 89 mm

Total: 38

Appendix Table 14. Mean length by age for least cisco from tapped lakes+river channel stations compared to selected isolated lake stations.

Age (years)	Anadromous*				Tapped Lakes+River Channel				Station 9111				Station 9203				Station 9204				Station 9206			
	Mean Length (mm)	Standard Deviation	Sample Size	Length (mm)	Mean Length (mm)	Standard Deviation	Sample Size	Length (mm)	Mean Length (mm)	Standard Deviation	Sample Size	Length (mm)	Mean Length (mm)	Standard Deviation	Sample Size	Length (mm)	Mean Length (mm)	Standard Deviation	Sample Size	Length (mm)	Mean Length (mm)	Standard Deviation	Sample Size	
0																								
1	74.3	8.2	19	108.0	1				1															
2	112.9	9.1	14	132.7	16.7	7	125.0	1	162.5	17.7	2													
3	154.3	15.8	14	171.6	5.5	5		8	192.8	11.0	4	195.7	7.5	3	188.0	1								
4	187.7	11.7	7	187.9	9.0	8		7	205.0	9.2	5	182.0	5.7	2										
5	218.0	20.0	4	220.1	19.2	7		5	202.0	11.3	2	198.0	5.7	2										
6	245.1	15.3	17	246.8	17.0	5		3	225.5	13.4	2	215.0	35.4	2										
7	263.8	9.8	5	246.3	24.6	3		6	235.0	7.8	4													
8	273.0	16.7	6	292.2	19.2	6		8	240.3	10.0	14													
9	313.0	14.0	11	277.1	17.7	8		6	243.4	3.7	7													
10	322.8	15.3	5	310.0	19.3	6		7	246.0	14.4	42													
11	328.0	5.7	2	284.6	8.9	7		5	259.0	21.7	21													
12	330.5	13.4	2	285.2	16.8	5		2	277.3	30.8	7													
13	318.8	12.5	4	318.0	18.4	2		2	287.0	58.0	2	303.0	1											
14	350.2	22.0	5	291.5	113.8	2		3																
15				333.7	17.2	3																		
16	357.0	5.3	3	370.0	1			1	248.0															
17	336.0	26.9	2					1	276.0															
18	343.0		1	304.0				1																
19																								
20					327.0			1																
21	352.0		1																					
22																								
23																								
24																								
25																								
Total:		122			78			113				?					11			13		16		
Growth Type				Normal			Stunted					?					Normal			Normal		Normal		

* anadromous least cisco caught during fyke net sampling in 1985 (Fawcett et al. 1986)

Appendix Table 14. Mean length by age for least cisco from tapped lakes+river channel stations compared to selected isolated lake stations.

Appendix Table 14. Mean length by age for least cisco from tapped lakes+river channel stations compared to selected isolated lake stations.

Age (years)	Station 9306			Station 9307			Station 9308			Station 9312			Station 9313		
	Mean Length (mm)	Standard Deviation	Sample Size												
0	132.0	1	1	113.0	1	1	189.5	2.1	2	138.0	1	1	227.0	12.7	2
1	2	2	2	199.7	10.2	3	220.0	7	1	250.0	1	1	222.0	12.7	1
2	202.3	22.2	4	263.0	20.9	7	222.2	13.4	12	226.0	7.2	8	230.3	9.3	3
3	231.8	4.9	4	301.7	27.1	3	228.0	7.2	4	320.3	12.0	2	284.5	48.8	2
4	252.0	2	2	338.0	2.8	2	249.5	29.0	11.3	295.0	21.2	2	280.8	25.9	5
5	341.0	19.5	6	356.8	19.8	9	259.0	17.6	5	332.8	8.2	4	293.1	13.7	9
6	369.6	17.6	5	386.5	6.4	2	295.0	4.2	2	347.6	31.2	5	299.0	17.1	4
7	404.0	13.1	3	400.0	38.2	2	309.0	304.7	1	337.8	19.7	4	309.4	15.2	10
8	402.5	38.9	2	340.0	1	1	297.2	303.7	9.9	325.9	10.7	12	329.0	23.5	6
9	370.0	14.1	2	310.5	300.3	1	308.0	303.7	5.8	345.6	28.0	7	322.3	13.5	6
10	340.0	1	1	303.7	14.1	9	303.7	303.7	6	339.7	9.9	6	362.7	11.2	3
11	344.0	1	1	344.0	11	1	344.0	344.0	4	361.5	7.8	2	383.0	1	1
12	321.0	1	1	321.0	20	1	321.0	321.0	1	367.0	406.0	1	406.0	62	Normal
13	288.0	?	?	288.0	21	?	288.0	288.0	?	339.7	9.9	6	339.7	9.9	6
14	288.0	22	22	288.0	23	23	288.0	288.0	25	362.7	11.2	3	362.7	11.2	3
15	288.0	24	24	288.0	25	25	288.0	288.0	26	383.0	383.0	1	383.0	383.0	1
16	288.0	25	25	288.0	26	26	288.0	288.0	27	367.0	406.0	1	406.0	406.0	1
17	288.0	26	26	288.0	27	27	288.0	288.0	28	339.7	9.9	6	339.7	9.9	6
18	288.0	27	27	288.0	28	28	288.0	288.0	29	362.7	11.2	3	362.7	11.2	3
19	288.0	28	28	288.0	29	29	288.0	288.0	30	383.0	383.0	1	383.0	383.0	1
20	288.0	29	29	288.0	30	30	288.0	288.0	31	367.0	406.0	1	406.0	406.0	1
21	288.0	30	30	288.0	31	31	288.0	288.0	32	339.7	9.9	6	339.7	9.9	6
22	288.0	31	31	288.0	32	32	288.0	288.0	33	362.7	11.2	3	362.7	11.2	3
23	288.0	32	32	288.0	33	33	288.0	288.0	34	383.0	383.0	1	383.0	383.0	1
24	288.0	33	33	288.0	34	34	288.0	288.0	35	367.0	406.0	1	406.0	406.0	1
25	288.0	34	34	288.0	35	35	288.0	288.0	36	339.7	9.9	6	339.7	9.9	6

Appendix Table 15. Date, location and size of humpback whitefish, round whitefish and burbot captured during 1993 Colville Delta Winter Fish Habitat Study.

Species	Station	Date	Panel No.	Stretched Mesh (mm)	Fork Length (mm)
Humpback Whitefish					
	9305	10/31/93	6	89	350
Round Whitefish					
	9305	10/31/93	1	25	121
	9305	10/31/93	1	25	123
	9304	10/31/93	5	70	346
	9304	10/31/93	5	70	344
Burbot					
	9305	10/31/93	Minnow Trap	--	56
	9305	10/31/93	6	89	379
	9304	10/31/93	6	89	500
	9304	10/31/93	5	70	400
	9306	11/2/93	4	52	647

Appendix Table 16. Catch data from 1991-1993 gillnet sampling in the Colville River Delta.

Sct No.	Method	Station	Habitat	Date Checked	Time Checked	Panel Number	Panel Length (ft)	Mesh (in)	Fishing		Number Caught	Number Sampled
									Duration (hours)	Species		
9101	Gillnet	9101	RC	11/2/91	1015	1	20	1.00	22	FHSC	1	0
9101	Gillnet	9101	RC	11/2/91	1015	1	20	1.00	22	ARCS	4	4
9101	Gillnet	9101	RC	11/2/91	1015	2	20	1.25	22	NONE	0	0
9101	Gillnet	9101	RC	11/2/91	1015	3	20	1.63	22	NONE	0	0
9101	Gillnet	9101	RC	11/2/91	1015	4	20	2.06	22	LSCS	1	1
9101	Gillnet	9101	RC	11/2/91	1015	4	20	2.06	22	ARCS	1	1
9101	Gillnet	9101	RC	11/2/91	1015	5	20	2.75	22	ARCS	1	1
9101	Gillnet	9101	RC	11/2/91	1015	5	20	2.75	22	LSCS	2	2
9101	Gillnet	9101	RC	11/2/91	1015	5	20	2.75	22	RBSM	1	1
9101	Gillnet	9101	RC	11/2/91	1015	6	20	3.50	22	NONE	0	0
9102	Gillnet	9101	RC	11/3/91	1000	1	20	1.00	24	ARCS	17	17
9102	Gillnet	9101	RC	11/3/91	1000	1	20	1.00	24	FHSC	1	0
9102	Gillnet	9101	RC	11/3/91	1000	2	20	1.25	24	ARCS	2	2
9102	Gillnet	9101	RC	11/3/91	1000	3	20	1.63	24	ARCS	1	1
9102	Gillnet	9101	RC	11/3/91	1000	3	20	1.63	24	FHSC	1	0
9102	Gillnet	9101	RC	11/3/91	1000	4	20	2.06	24	LSCS	4	4
9102	Gillnet	9101	RC	11/3/91	1000	4	20	2.06	24	ARCS	5	5
9102	Gillnet	9101	RC	11/3/91	1000	4	20	2.06	24	RBSM	1	1
9102	Gillnet	9101	RC	11/3/91	1000	4	20	2.06	24	FHSC	1	0
9102	Gillnet	9101	RC	11/3/91	1000	5	20	2.75	24	LSCS	1	1
9102	Gillnet	9101	RC	11/3/91	1000	6	20	3.50	24	NONE	0	0
9103	Gillnet	9102	TL	11/3/91	1000	1	20	1.00	23	NONE	0	0
9103	Gillnet	9102	TL	11/3/91	1000	2	20	1.25	23	NONE	0	0
9103	Gillnet	9102	TL	11/3/91	1000	3	20	1.63	23	NONE	0	0
9103	Gillnet	9102	TL	11/3/91	1000	4	20	2.06	23	RBSM	3	3
9103	Gillnet	9102	TL	11/3/91	1000	5	20	2.75	23	NONE	0	0
9103	Gillnet	9102	TL	11/3/91	1000	6	20	3.50	23	NONE	0	0
9104	Gillnet	9102	TL	11/3/91	1000	6	20	3.50	23	RBSM	3	3
9104	Gillnet	9103	RC	11/3/91	1115	1	20	1.00	22	ARCS	13	13
9104	Gillnet	9103	RC	11/3/91	1115	1	20	1.00	22	FHSC	1	0
9104	Gillnet	9103	RC	11/3/91	1115	2	20	1.25	22	LSCS	2	2
9104	Gillnet	9103	RC	11/3/91	1115	2	20	1.25	22	ARCS	1	1
9104	Gillnet	9103	RC	11/3/91	1115	3	20	1.63	22	LSCS	1	1
9104	Gillnet	9103	RC	11/3/91	1115	3	20	1.63	22	ARCS	2	2
9104	Gillnet	9103	RC	11/3/91	1115	4	20	2.06	22	ARCS	2	2
9104	Gillnet	9103	RC	11/3/91	1115	4	20	2.06	22	LSCS	1	1
9104	Gillnet	9103	RC	11/3/91	1115	5	20	2.75	22	ARCS	4	4
9104	Gillnet	9103	RC	11/3/91	1115	5	20	2.75	22	LSCS	9	9
9104	Gillnet	9103	RC	11/3/91	1115	5	20	2.75	22	FHSC	2	0
9104	Gillnet	9103	RC	11/3/91	1115	6	20	3.50	22	NONE	0	0
9105	Gillnet	9102	TL	11/5/91	1030	1	20	1.00	48	RBSM	2	2
9105	Gillnet	9102	TL	11/5/91	1030	2	20	1.25	48	RBSM	1	1
9105	Gillnet	9102	TL	11/5/91	1030	3	20	1.63	48	RBSM	1	1
9105	Gillnet	9102	TL	11/5/91	1030	4	20	2.06	48	RBSM	6	6
9105	Gillnet	9102	TL	11/5/91	1030	4	20	2.06	48	ARCS	2	2
9105	Gillnet	9102	TL	11/5/91	1030	5	20	2.75	48	NONE	0	0
9105	Gillnet	9102	TL	11/5/91	1030	6	20	3.50	48	NONE	0	0
9106	Gillnet	9104	RC	11/5/91	1400	1	20	1.00	48	ARCS	2	2
9106	Gillnet	9104	RC	11/5/91	1400	2	20	1.25	48	NONE	0	0
9106	Gillnet	9104	RC	11/5/91	1400	3	20	1.63	48	LSCS	2	2
9106	Gillnet	9104	RC	11/5/91	1400	3	20	1.63	48	ARCS	3	3
9106	Gillnet	9104	RC	11/5/91	1400	3	20	1.63	48	FHSC	1	0
9106	Gillnet	9104	RC	11/5/91	1400	4	20	2.06	48	ARCS	3	3
9106	Gillnet	9104	RC	11/5/91	1400	4	20	2.06	48	LSCS	1	1
9106	Gillnet	9104	RC	11/5/91	1400	5	20	2.75	48	NONE	0	0
9106	Gillnet	9104	RC	11/5/91	1400	6	20	3.50	48	NONE	0	0
9107	Gillnet	9105	TL	11/5/91	1500	1	20	1.00	48	NONE	0	0
9107	Gillnet	9105	TL	11/5/91	1500	2	20	1.25	48	NONE	0	0
9107	Gillnet	9105	TL	11/5/91	1500	3	20	1.63	48	NONE	0	0

Appendix Table 16. Catch data from 1991-1993 gillnet sampling in the Colville River Delta.

Set No.	Method	Station	Habitat	Date Checked	Time Checked	Panel Number	Panel Length (ft)	Mesh (in)	Fishing Duration (hours)		Species	Number Caught	Number Sampled
9107	Gillnet	9105	TL	11/5/91	1500	4	20	2.06	48	LSCS	3	3	
9107	Gillnet	9105	TL	11/5/91	1500	5	20	2.75	48	ARCS	2	2	
9107	Gillnet	9105	TL	11/5/91	1500	6	20	3.50	48	NONE	0	0	
9108	Gillnet	9106	TL	11/6/91	1000	1	20	1.00	22	LSCS	3	3	
9108	Gillnet	9106	TL	11/6/91	1000	2	20	1.25	22	NONE	0	0	
9108	Gillnet	9106	TL	11/6/91	1000	3	20	1.63	22	NONE	0	0	
9108	Gillnet	9106	TL	11/6/91	1000	4	20	2.06	22	LSCS	1	1	
9108	Gillnet	9106	TL	11/6/91	1000	5	20	2.75	22	LSCS	1	1	
9108	Gillnet	9106	TL	11/6/91	1000	5	20	2.75	22	BDWF	3	3	
9108	Gillnet	9106	TL	11/6/91	1000	6	20	3.50	22	BDWF	1	1	
9109	Gillnet	9107	TL	11/6/91	1040	1	20	1.00	21	ARCS	2	2	
9109	Gillnet	9107	TL	11/6/91	1040	1	20	1.00	21	LSCS	1	1	
9109	Gillnet	9107	TL	11/6/91	1040	2	20	1.25	21	NONE	0	0	
9109	Gillnet	9107	TL	11/6/91	1040	3	20	1.63	21	HBWF	1	1	
9109	Gillnet	9107	TL	11/6/91	1040	3	20	1.63	21	LSCS	1	1	
9109	Gillnet	9107	TL	11/6/91	1040	4	20	2.06	21	ARCS	1	1	
9109	Gillnet	9107	TL	11/6/91	1040	4	20	2.06	21	LSCS	4	4	
9109	Gillnet	9107	TL	11/6/91	1040	5	20	2.75	21	BDWF	2	2	
9109	Gillnet	9107	TL	11/6/91	1040	5	20	2.75	21	LSCS	7	7	
9109	Gillnet	9107	TL	11/6/91	1040	5	20	2.75	21	FHSC	1	0	
9109	Gillnet	9107	TL	11/6/91	1040	6	20	3.50	21	BDWF	2	2	
9110	Gillnet	9104	RC	11/6/91	1115	1	20	1.00	21	NONE	0	0	
9110	Gillnet	9104	RC	11/6/91	1115	2	20	1.25	21	NONE	0	0	
9110	Gillnet	9104	RC	11/6/91	1115	3	20	1.63	21	NONE	0	0	
9110	Gillnet	9104	RC	11/6/91	1115	4	20	2.06	21	RBSM	1	1	
9110	Gillnet	9104	RC	11/6/91	1115	4	20	2.06	21	ARCS	1	1	
9110	Gillnet	9104	RC	11/6/91	1115	5	20	2.75	21	ARCS	2	2	
9110	Gillnet	9104	RC	11/6/91	1115	6	20	3.50	21	RBSM	1	1	
9110	Gillnet	9104	RC	11/6/91	1115	6	20	3.50	21	ARCS	1	1	
9111	Gillnet	9105	TL	11/6/91	1145	1	20	1.00	20	NONE	0	0	
9111	Gillnet	9105	TL	11/6/91	1145	2	20	1.25	20	NONE	0	0	
9111	Gillnet	9105	TL	11/6/91	1145	3	20	1.63	20	RBSM	1	1	
9111	Gillnet	9105	TL	11/6/91	1145	4	20	2.06	20	ARCS	2	2	
9111	Gillnet	9105	TL	11/6/91	1145	4	20	2.06	20	RBSM	1	1	
9111	Gillnet	9105	TL	11/6/91	1145	5	20	2.75	20	LSCS	3	3	
9111	Gillnet	9105	TL	11/6/91	1145	6	20	3.50	20	NONE	0	0	
9112	Gillnet	9106	TL	11/7/91	1000	1	20	1.00	24	NONE	0	0	
9112	Gillnet	9106	TL	11/7/91	1000	2	20	1.25	24	NONE	0	0	
9112	Gillnet	9106	TL	11/7/91	1000	3	20	1.63	24	NONE	0	0	
9112	Gillnet	9106	TL	11/7/91	1000	4	20	2.06	24	NONE	0	0	
9112	Gillnet	9106	TL	11/7/91	1000	5	20	2.75	24	LSCS	2	2	
9112	Gillnet	9106	TL	11/7/91	1000	5	20	2.75	24	BDWF	1	1	
9112	Gillnet	9106	TL	11/7/91	1000	6	20	3.50	24	NONE	0	0	
9113	Gillnet	9104	RC	11/7/91	1020	1	20	1.00	23	ARCS	1	1	
9113	Gillnet	9104	RC	11/7/91	1020	1	20	1.00	23	LSCS	1	1	
9113	Gillnet	9104	RC	11/7/91	1020	2	20	1.25	23	NONE	0	0	
9113	Gillnet	9104	RC	11/7/91	1020	3	20	1.63	23	NONE	0	0	
9113	Gillnet	9104	RC	11/7/91	1020	4	20	2.06	23	LSCS	1	1	
9113	Gillnet	9104	RC	11/7/91	1020	4	20	2.06	23	RBSM	1	1	
9113	Gillnet	9104	RC	11/7/91	1020	5	20	2.75	23	NONE	0	0	
9113	Gillnet	9104	RC	11/7/91	1020	6	20	3.50	23	NONE	0	0	
9114	Gillnet	9105	TL	11/6/91	1430	1	20	1.00	2	NONE	0	0	
9114	Gillnet	9105	TL	11/6/91	1430	2	20	1.25	2	NONE	0	0	
9115	Gillnet	9108	RC	11/7/91	1045	1	20	1.00	21	NONE	0	0	
9115	Gillnet	9108	RC	11/7/91	1045	2	20	1.25	21	NONE	0	0	
9115	Gillnet	9108	RC	11/7/91	1045	3	20	1.63	21	NONE	0	0	
9115	Gillnet	9108	RC	11/7/91	1045	4	20	2.06	21	NONE	0	0	
9115	Gillnet	9108	RC	11/7/91	1045	5	20	2.75	21	NONE	0	0	

Appendix Table 16. Catch data from 1991-1993 gillnet sampling in the Colville River Delta.

Set No.	Method	Station	Habitat	Date Checked	Time Checked	Panel Number	Panel Length (ft)	Mesh (in)	Fishing Duration (hours)		Species	Number Caught	Number Sampled
9115	Gillnet	9108	RC	11/7/91	1045	6	20	3.50	21	NONE	0	0	0
9116	Gillnet	9109	RC	11/7/91	1115	1	20	1.00	20	ARCS	2	2	
9116	Gillnet	9109	RC	11/7/91	1115	2	20	1.25	20	LSCS	2	2	
9116	Gillnet	9109	RC	11/7/91	1115	3	20	1.63	20	ARCS	2	2	
9116	Gillnet	9109	RC	11/7/91	1115	3	20	1.63	20	LSCS	4	4	
9116	Gillnet	9109	RC	11/7/91	1115	4	20	2.06	20	RBSM	3	3	
9116	Gillnet	9109	RC	11/7/91	1115	4	20	2.06	20	ARCS	2	2	
9116	Gillnet	9109	RC	11/7/91	1115	4	20	2.06	20	FHSC	1	0	
9116	Gillnet	9109	RC	11/7/91	1115	5	20	2.75	20	ARCS	1	1	
9116	Gillnet	9109	RC	11/7/91	1115	6	20	3.50	20	NONE	0	0	
9117	Gillnet	9108	RC	11/9/91	1245	1	20	1.00	50	NONE	0	0	
9117	Gillnet	9108	RC	11/9/91	1245	2	20	1.25	50	NONE	0	0	
9117	Gillnet	9108	RC	11/9/91	1245	3	20	1.63	50	NONE	0	0	
9117	Gillnet	9108	RC	11/9/91	1245	4	20	2.06	50	NONE	0	0	
9117	Gillnet	9108	RC	11/9/91	1245	5	20	2.75	50	NONE	0	0	
9117	Gillnet	9108	RC	11/9/91	1245	6	20	3.50	50	NONE	0	0	
9118	Gillnet	9109	RC	11/9/91	1215	1	20	1.00	49	NONE	0	0	
9118	Gillnet	9109	RC	11/9/91	1215	2	20	1.25	49	ARCS	2	2	
9118	Gillnet	9109	RC	11/9/91	1215	3	20	1.63	49	ARCS	4	4	
9118	Gillnet	9109	RC	11/9/91	1215	3	20	1.63	49	LSCS	1	1	
9118	Gillnet	9109	RC	11/9/91	1215	3	20	1.63	49	RBSM	1	1	
9118	Gillnet	9109	RC	11/9/91	1215	4	20	2.06	49	ARCS	1	1	
9118	Gillnet	9109	RC	11/9/91	1215	4	20	2.06	49	LSCS	1	1	
9118	Gillnet	9109	RC	11/9/91	1215	4	20	2.06	49	RBSM	3	3	
9118	Gillnet	9109	RC	11/9/91	1215	5	20	2.75	49	ARCS	1	1	
9118	Gillnet	9109	RC	11/9/91	1215	5	20	2.75	49	FHSC	1	1	
9118	Gillnet	9109	RC	11/9/91	1215	5	20	2.75	49	LSCS	3	3	
9118	Gillnet	9109	RC	11/9/91	1215	6	20	3.50	49	NONE	0	0	
9119	Gillnet	9110	RC	11/9/91	1145	1	20	1.00	47	NONE	0	0	
9119	Gillnet	9110	RC	11/9/91	1145	2	20	1.25	47	RBSM	1	1	
9119	Gillnet	9110	RC	11/9/91	1145	3	20	1.63	47	RBSM	6	5	
9119	Gillnet	9110	RC	11/9/91	1145	4	20	2.06	47	ARCS	10	10	
9119	Gillnet	9110	RC	11/9/91	1145	4	20	2.06	47	RBSM	2	2	
9119	Gillnet	9110	RC	11/9/91	1145	5	20	2.75	47	ARCS	4	4	
9119	Gillnet	9110	RC	11/9/91	1145	6	20	3.50	47	NONE	0	0	
9120	Gillnet	9111	IL	11/9/91	1045	1	20	1.00	44	LSCS	2	2	
9120	Gillnet	9111	IL	11/9/91	1045	2	20	1.25	44	NONE	0	0	
9120	Gillnet	9111	IL	11/9/91	1045	3	20	1.63	44	LSCS	54	54	
9120	Gillnet	9111	IL	11/9/91	1045	4	20	2.06	44	LSCS	86	86	
9120	Gillnet	9111	IL	11/9/91	1045	5	20	2.75	44	LSCS	8	8	
9120	Gillnet	9111	IL	11/9/91	1045	6	20	3.50	44	NONE	0	0	
9121	Gillnet	9110	RC	11/10/91	1045	1	20	1.00	23	NONE	0	0	
9121	Gillnet	9110	RC	11/10/91	1045	2	20	1.25	23	RBSM	1	0	
9121	Gillnet	9110	RC	11/10/91	1045	3	20	1.63	23	ARCS	2	2	
9121	Gillnet	9110	RC	11/10/91	1045	4	20	2.06	23	ARCS	1	1	
9121	Gillnet	9110	RC	11/10/91	1045	4	20	2.06	23	RBSM	2	2	
9121	Gillnet	9110	RC	11/10/91	1045	5	20	2.75	23	NONE	0	0	
9121	Gillnet	9110	RC	11/10/91	1045	6	20	3.50	23	NONE	0	0	
9122	Gillnet	9109	RC	11/10/91	1030	1	20	1.00	22	NONE	0	0	
9122	Gillnet	9109	RC	11/10/91	1030	2	20	1.25	22	NONE	0	0	
9122	Gillnet	9109	RC	11/10/91	1030	3	20	1.63	22	ARCS	1	1	
9122	Gillnet	9109	RC	11/10/91	1030	4	20	2.06	22	FHSC	1	0	
9122	Gillnet	9109	RC	11/10/91	1030	5	20	2.75	22	NONE	0	0	
9122	Gillnet	9109	RC	11/10/91	1030	6	20	3.50	22	NONE	0	0	
9201	Gillnet	9203	IL	10/30/92	1030	1	20	1.00	46.5	NONE	0	0	
9201	Gillnet	9203	IL	10/30/92	1030	2	20	1.25	46.5	ARCS	1	1	
9201	Gillnet	9203	IL	10/30/92	1030	2	20	1.25	46.5	LSCS	4	4	
9201	Gillnet	9203	IL	10/30/92	1030	3	20	1.63	46.5	BDWF	1	1	

Appendix Table 16. Catch data from 1991-1993 gillnet sampling in the Colville River Delta.

Set No.	Method	Station	Habitat	Date Checked	Time Checked	Panel Number	Panel Length (ft)	Mesh (in)	Fishing Duration (hours)	Species	Number Caught	Number Sampled
9201	Gillnet	9203	IL	10/30/92	1030	3	20	1.63	46.5	LSCS	6	6
9201	Gillnet	9203	IL	10/30/92	1030	4	20	2.06	46.5	LSCS	1	1
9201	Gillnet	9203	IL	10/30/92	1030	5	20	2.75	46.5	ARCS	2	2
9201	Gillnet	9203	IL	10/30/92	1030	6	20	3.50	46.5	ARCS	1	1
9202	Gillnet	9202	IL	10/30/92	1000	1	20	1.00	43.8	NONE	0	0
9202	Gillnet	9202	IL	10/30/92	1000	2	20	1.25	43.8	NONE	0	0
9202	Gillnet	9202	IL	10/30/92	1000	3	20	1.63	43.8	NONE	0	0
9202	Gillnet	9202	IL	10/30/92	1000	4	20	2.06	43.8	NONE	0	0
9202	Gillnet	9202	IL	10/30/92	1000	5	20	2.75	43.8	NONE	0	0
9202	Gillnet	9202	IL	10/30/92	1000	6	20	3.50	43.8	NONE	0	0
9203	Gillnet	9205	IL	10/31/92	1030	1	20	1.00	22.0	NONE	0	0
9203	Gillnet	9205	IL	10/31/92	1030	2	20	1.25	22.0	NONE	0	0
9203	Gillnet	9205	IL	10/31/92	1030	3	20	1.63	22.0	NONE	0	0
9203	Gillnet	9205	IL	10/31/92	1030	4	20	2.06	22.0	LSCS	0	0
9203	Gillnet	9205	IL	10/31/92	1030	5	20	2.75	22.0	LSCS	1	1
9203	Gillnet	9205	IL	10/31/92	1030	6	20	3.50	22.0	NONE	0	0
9204	Gillnet	9206	IL	10/31/92	1050	1	20	1.00	18.5	NONE	0	0
9204	Gillnet	9206	IL	10/31/92	1050	2	20	1.25	18.5	NONE	0	0
9204	Gillnet	9206	IL	10/31/92	1050	3	20	1.63	18.5	NONE	0	0
9204	Gillnet	9206	IL	10/31/92	1050	4	20	2.06	18.5	LSCS	11	11
9204	Gillnet	9206	IL	10/31/92	1050	5	20	2.75	18.5	ARCS	1	1
9204	Gillnet	9206	IL	10/31/92	1050	5	20	2.75	18.5	LSCS	5	5
9204	Gillnet	9206	IL	10/31/92	1050	6	20	3.50	18.5	NONE	0	0
9205	Gillnet	9207	TL	11/1/92	1600	1	20	1.00	27.5	NONE	0	0
9205	Gillnet	9207	TL	11/1/92	1600	2	20	1.25	27.5	HBWF	1	1
9205	Gillnet	9207	TL	11/1/92	1600	3	20	1.63	27.5	NONE	0	0
9205	Gillnet	9207	TL	11/1/92	1600	4	20	2.06	27.5	NONE	0	0
9205	Gillnet	9207	TL	11/1/92	1600	5	20	2.75	27.5	LSCS	3	3
9205	Gillnet	9207	TL	11/1/92	1600	5	20	2.75	27.5	ARCS	2	2
9205	Gillnet	9207	TL	11/1/92	1600	6	20	2.75	27.5	BDWF	2	2
9205	Gillnet	9207	TL	11/1/92	1600	6	20	3.50	27.5	BDWF	1	1
9206	Gillnet	9208	IL	11/2/92	1100	1	20	1.00	23.0	ARCS	1	1
9206	Gillnet	9208	IL	11/2/92	1100	2	20	1.25	23.0	NONE	0	0
9206	Gillnet	9208	IL	11/2/92	1100	3	20	1.63	23.0	NONE	0	0
9206	Gillnet	9208	IL	11/2/92	1100	4	20	2.06	23.0	NONE	0	0
9206	Gillnet	9208	IL	11/2/92	1100	5	20	2.75	23.0	BDWF	1	1
9206	Gillnet	9208	IL	11/2/92	1100	6	20	3.50	23.0	HBWF	1	1
9207	Gillnet	9209	IL	11/2/92	1130	1	20	1.00	20.5	NONE	0	0
9207	Gillnet	9209	IL	11/2/92	1130	2	20	1.25	20.5	NONE	0	0
9207	Gillnet	9209	IL	11/2/92	1130	3	20	1.63	20.5	LSCS	3	3
9207	Gillnet	9209	IL	11/2/92	1130	4	20	2.06	20.5	LSCS	5	5
9207	Gillnet	9209	IL	11/2/92	1130	5	20	2.75	20.5	LSCS	4	4
9207	Gillnet	9209	IL	11/2/92	1130	6	20	3.50	20.5	BDWF	2	2
9208	Gillnet	9204	IL	11/3/92	1530	1	20	1.00	25.0	NONE	0	0
9208	Gillnet	9204	IL	11/3/92	1530	2	20	1.25	25.0	LSCS	1	1
9208	Gillnet	9204	IL	11/3/92	1530	3	20	1.63	25.0	NONE	0	0
9208	Gillnet	9204	IL	11/3/92	1530	4	20	2.06	25.0	LSCS	4	4
9208	Gillnet	9204	IL	11/3/92	1530	5	20	2.75	25.0	LSCS	8	8
9209	Gillnet	9210	IL	11/4/92	1700	1	20	1.00	30.5	NONE	0	0
9209	Gillnet	9210	IL	11/4/92	1700	2	20	1.25	30.5	NONE	0	0
9209	Gillnet	9210	IL	11/4/92	1700	3	20	1.63	30.5	NONE	0	0
9209	Gillnet	9210	IL	11/4/92	1700	4	20	2.06	30.5	NONE	0	0
9209	Gillnet	9210	IL	11/4/92	1700	5	20	2.75	30.5	NONE	0	0
9209	Gillnet	9210	IL	11/4/92	1700	6	20	3.50	30.5	NONE	0	0
9210	Gillnet	9211	IL	11/4/92	1630	1	20	1.00	26.0	NONE	0	0
9210	Gillnet	9211	IL	11/4/92	1630	2	20	1.25	26.0	NONE	0	0

Appendix Table 16. Catch data from 1991-1993 gillnet sampling in the Colville River Delta.

Set No.	Method	Station	Habitat	Date Checked	Time Checked	Panel Number	Panel Length (ft)	Mesh (in)	Fishing Duration (hours)	Species	Number Caught	Number Sampled
9210	Gillnet	9211	IL	11/4/92	1630	3	20	1.63	26.0	NONE	0	0
9210	Gillnet	9211	IL	11/4/92	1630	4	20	2.06	26.0	NONE	0	0
9210	Gillnet	9211	IL	11/4/92	1630	5	20	2.75	26.0	ARCS	4	4
9210	Gillnet	9211	IL	11/4/92	1630	5	20	2.75	26.0	LSCS	5	5
9210	Gillnet	9211	IL	11/4/92	1630	6	20	3.50	26.0	ARCS	4	4
9210	Gillnet	9211	IL	11/4/92	1630	6	20	3.50	26.0	LSCS	1	1
9211	Gillnet	9213	IL	11/5/92	1100	1	20	1.00	22.0	NONE	0	0
9211	Gillnet	9213	IL	11/5/92	1100	2	20	1.25	22.0	LSCS	2	2
9211	Gillnet	9213	IL	11/5/92	1100	3	20	1.63	22.0	LSCS	8	8
9211	Gillnet	9213	IL	11/5/92	1100	4	20	2.06	22.0	LSCS	34	34
9211	Gillnet	9213	IL	11/5/92	1100	5	20	2.75	22.0	LSCS	6	6
9211	Gillnet	9213	IL	11/5/92	1100	6	20	3.50	22.0	NONE	0	0
9212	Gillnet	9212	IL	11/5/92	1200	1	20	1.00	20.0	LSCS	1	1
9212	Gillnet	9212	IL	11/5/92	1200	2	20	1.25	20.0	LSCS	2	2
9212	Gillnet	9212	IL	11/5/92	1200	3	20	1.63	20.0	LSCS	5	5
9212	Gillnet	9212	IL	11/5/92	1200	4	20	2.06	20.0	LSCS	55	55
9212	Gillnet	9212	IL	11/5/92	1200	5	20	2.75	20.0	LSCS	24	24
9212	Gillnet	9212	IL	11/5/92	1200	6	20	3.50	20.0	NONE	0	0
9213	Gillnet	9201	TL	11/7/92	1130	1	20	1.00	23.0	NONE	0	0
9213	Gillnet	9201	TL	11/7/92	1130	2	20	1.25	23.0	NONE	0	0
9213	Gillnet	9201	TL	11/7/92	1130	3	20	1.63	23.0	ARCS	1	1
9213	Gillnet	9201	TL	11/7/92	1130	4	20	2.06	23.0	NONE	0	0
9213	Gillnet	9201	TL	11/7/92	1130	5	20	2.75	23.0	NONE	0	0
9213	Gillnet	9201	TL	11/7/92	1130	6	20	3.50	23.0	ARCS	1	1
9301	Gillnet	9301	IL	10/28/93	10:30	1	20	1.00	22.3	NONE	0	0
9301	Gillnet	9301	IL	10/28/93	10:30	2	20	1.25	22.3	NONE	0	0
9301	Gillnet	9301	IL	10/28/93	10:30	3	20	1.63	22.3	LSCS	4	4
9301	Gillnet	9301	IL	10/28/93	10:30	4	20	2.06	22.3	LSCS	7	7
9301	Gillnet	9301	IL	10/28/93	10:30	5	20	2.75	22.3	ARCS	4	4
9301	Gillnet	9301	IL	10/28/93	10:30	5	20	2.75	22.3	LSCS	5	5
9301	Gillnet	9301	IL	10/28/93	10:30	6	20	3.50	22.3	ARCS	1	1
9301	MinTrap	9301	IL	10/28/93	10:30				22.3	NONE	0	0
9302	Gillnet	9303	TL	10/28/93	11:45	1	20	1.00	21.6	NONE	0	0
9302	Gillnet	9303	TL	10/28/93	11:45	2	20	1.25	21.6	LSCS	1	1
9302	Gillnet	9303	TL	10/28/93	11:45	3	20	1.63	21.6	LSCS	9	9
9302	Gillnet	9303	TL	10/28/93	11:45	4	20	2.06	21.6	LSCS	2	2
9302	Gillnet	9303	TL	10/28/93	11:45	5	20	2.75	21.6	LSCS	4	4
9302	Gillnet	9303	TL	10/28/93	11:45	6	20	3.50	21.6	ARCS	1	1
9302	MinTrap	9303	TL	10/28/93	11:45				21.6	NONE	0	0
9303	Gillnet	9302	IL	10/28/93	11:00	1	20	1.00	19.2	BKFH	1	1
9303	Gillnet	9302	IL	10/28/93	11:00	2	20	1.25	19.2	NONE	0	0
9303	Gillnet	9302	IL	10/28/93	11:00	3	20	1.63	19.2	NONE	0	0
9303	Gillnet	9302	IL	10/28/93	11:00	4	20	2.06	19.2	NONE	0	0
9303	Gillnet	9302	IL	10/28/93	11:00	5	20	2.75	19.2	NONE	0	0
9303	Gillnet	9302	IL	10/28/93	11:00	6	20	3.50	19.2	NONE	0	0
9304	Gillnet	9305	IL	10/31/93	15:30	1	20	1.00	73.5	BKFH	8	8
9304	Gillnet	9305	IL	10/31/93	15:30	1	20	1.00	73.5	LSCS	1	1
9304	Gillnet	9305	IL	10/31/93	15:30	1	20	1.00	73.5	RDWF	2	2
9304	Gillnet	9305	IL	10/31/93	15:30	1	20	1.00	73.5	BDWF	4	4
9304	Gillnet	9305	IL	10/31/93	15:30	2	20	1.25	73.5	BKFH	1	1
9304	Gillnet	9305	IL	10/31/93	15:30	2	20	1.25	73.5	LSCS	2	2
9304	Gillnet	9305	IL	10/31/93	15:30	2	20	1.25	73.5	BDWF	1	1
9304	Gillnet	9305	IL	10/31/93	15:30	3	20	1.63	73.5	BDWF	6	6
9304	Gillnet	9305	IL	10/31/93	15:30	4	20	2.06	73.5	LSCS	2	2
9304	Gillnet	9305	IL	10/31/93	15:30	4	20	2.06	73.5	BDWF	2	2
9304	Gillnet	9305	IL	10/31/93	15:30	5	20	2.75	73.5	LSCS	2	2
9304	Gillnet	9305	IL	10/31/93	15:30	5	20	2.75	73.5	BDWF	1	1

Appendix Table 16. Catch data from 1991-1993 gillnet sampling in the Colville River Delta.

Set No.	Method	Station	Habitat	Date Checked	Time Checked	Panel Number	Length (ft)	Mesh (in)	Fishing Duration		Species	Number Caught	Number Sampled
									hours				
9304	Gillnet	9305	IL	10/31/93	15:30	6	20	3.50	73.5		BDWF	4	4
9304	Gillnet	9305	IL	10/31/93	15:30	6	20	3.50	73.5		HBWF	1	1
9304	Gillnet	9305	IL	10/31/93	15:30	6	20	3.50	73.5		BRBT	1	1
9304	MinTrap	9305	IL	10/31/93	15:30				73.5		BRBT	1	1
9305	Gillnet	9304	IL	10/31/93	14:15	1	20	1.00	70.5		NONE	0	0
9305	Gillnet	9304	IL	10/31/93	14:15	2	20	1.25	70.5		NONE	0	0
9305	Gillnet	9304	IL	10/31/93	14:15	3	20	1.63	70.5		NONE	0	0
9305	Gillnet	9304	IL	10/31/93	14:15	4	20	2.06	70.5		LSCS	2	2
9305	Gillnet	9304	IL	10/31/93	14:15	5	20	2.75	70.5		LSCS	17	17
9305	Gillnet	9304	IL	10/31/93	14:15	5	20	2.75	70.5		BDWF	1	1
9305	Gillnet	9304	IL	10/31/93	14:15	5	20	2.75	70.5		RDWF	2	2
9305	Gillnet	9304	IL	10/31/93	14:15	5	20	2.75	70.5		BRBT	1	1
9305	Gillnet	9304	IL	10/31/93	14:15	6	20	3.50	70.5		BRBT	1	1
9305	Gillnet	9304	IL	10/31/93	14:15	6	20	3.50	70.5		BDWF	1	1
9305	Gillnet	9304	IL	10/31/93	14:15	6	20	3.50	70.5		LSCS	1	1
9305	MinTrap	9304	IL	10/31/93	14:15				70.5		NONE	0	0
9306	Gillnet	9306	IL	11/2/93	10:15	1	20	1.00	21.8		NONE	0	0
9306	Gillnet	9306	IL	11/2/93	10:15	2	20	1.25	21.8		NONE	0	0
9306	Gillnet	9306	IL	11/2/93	10:15	3	20	1.63	21.8		LSCS	6	6
9306	Gillnet	9306	IL	11/2/93	10:15	4	20	2.06	21.8		LSCS	4	4
9306	Gillnet	9306	IL	11/2/93	10:15	4	20	2.06	21.8		BRBT	1	1
9306	Gillnet	9306	IL	11/2/93	10:15	5	20	2.75	21.8		LSCS	1	1
9306	Gillnet	9306	IL	11/2/93	10:15	5	20	2.75	21.8		BDWF	5	5
9306	Gillnet	9306	IL	11/2/93	10:15	6	20	3.50	21.8		BDWF	2	2
9306	MinTrap	9306	IL	11/2/93	10:15				21.8		NONE	0	0
9307	Gillnet	9307	IL	11/2/93	11:00	1	20	1.00	20.5		LSCS	1	1
9307	Gillnet	9307	IL	11/2/93	11:00	1	20	1.00	20.5		BKFH	1	1
9307	Gillnet	9307	IL	11/2/93	11:00	2	20	1.25	20.5		NONE	0	0
9307	Gillnet	9307	IL	11/2/93	11:00	3	20	1.63	20.5		LSCS	7	7
9307	Gillnet	9307	IL	11/2/93	11:00	4	20	2.06	20.5		LSCS	7	7
9307	Gillnet	9307	IL	11/2/93	11:00	5	20	2.75	20.5		LSCS	28	28
9307	Gillnet	9307	IL	11/2/93	11:00	6	20	3.50	20.5		LSCS	5	5
9307	Gillnet	9307	IL	11/2/93	11:00	6	20	3.50	20.5		BDWF	1	1
9307	MinTrap	9307	IL	11/2/93	11:00				20.5		BKFH	5	5
9308	Gillnet	9309	IL	11/3/93	11:15	1	20	1.00	22.5		BKFH	1	1
9308	Gillnet	9309	IL	11/3/93	11:15	2	20	1.25	22.5		NONE	0	0
9308	Gillnet	9309	IL	11/3/93	11:15	3	20	1.63	22.5		NONE	0	0
9308	Gillnet	9309	IL	11/3/93	11:15	4	20	2.06	22.5		NONE	0	0
9308	Gillnet	9309	IL	11/3/93	11:15	5	20	2.75	22.5		LSCS	1	1
9308	Gillnet	9309	IL	11/3/93	11:15	6	20	3.50	22.5		NONE	0	0
9308	MinTrap	9309	IL	11/3/93	11:15				22.5		BKFH	3	3
9309	Gillnet	9308	IL	11/3/93	10:30	1	20	1.00	20.3		LSCS	1	1
9309	Gillnet	9308	IL	11/3/93	10:30	2	20	1.25	20.3		NONE	0	0
9309	Gillnet	9308	IL	11/3/93	10:30	3	20	1.63	20.3		LSCS	16	16
9309	Gillnet	9308	IL	11/3/93	10:30	4	20	2.06	20.3		LSCS	25	25
9309	Gillnet	9308	IL	11/3/93	10:30	5	20	2.75	20.3		LSCS	21	21
9309	Gillnet	9308	IL	11/3/93	10:30	6	20	3.50	20.3		LSCS	1	1
9309	Gillnet	9308	IL	11/3/93	10:30	6	20	3.50	20.3		BDWF	2	2
9309	MinTrap	9308	IL	11/3/93	10:30				20.3		NONE	0	0
9310	Gillnet	9310	IL	11/4/93	10:40	1	20	1.00	21.7		BKFH	11	11
9310	Gillnet	9310	IL	11/4/93	10:40	1	20	1.00	21.7		ARCS	1	1
9310	Gillnet	9310	IL	11/4/93	10:40	2	20	1.25	21.7		BKFH	1	1
9310	Gillnet	9310	IL	11/4/93	10:40	3	20	1.63	21.7		NONE	0	0
9310	Gillnet	9310	IL	11/4/93	10:40	4	20	2.06	21.7		NONE	0	0
9310	Gillnet	9310	IL	11/4/93	10:40	5	20	2.75	21.7		NONE	0	0
9310	Gillnet	9310	IL	11/4/93	10:40	6	20	3.50	21.7		NONE	0	0
9310	MinTrap	9310	IL	11/4/93	10:40				21.7		BKFH	1	1
9311	Gillnet	9311	TL	11/4/93	10:10	1	20	1.00	19.3		BKFH	1	1

Appendix Table 16. Catch data from 1991-1993 gillnet sampling in the Colville River Delta.

Set No.	Method	Station	Habitat	Date Checked	Time Checked	Panel Number	Panel Length (ft)		Fishing Duration (hours)	Species	Number Caught	Number Sampled
							Mesh (in)	(ft)				
9311	Gillnet	9311	TL	11/4/93	10:10	2	20	1.25	19.3	ARCS	1	1
9311	Gillnet	9311	TL	11/4/93	10:10	3	20	1.63	19.3	NONE	0	0
9311	Gillnet	9311	TL	11/4/93	10:10	4	20	2.06	19.3	NONE	0	0
9311	Gillnet	9311	TL	11/4/93	10:10	5	20	2.75	19.3	NONE	0	0
9311	Gillnet	9311	TL	11/4/93	10:10	6	20	3.50	19.3	NONE	0	0
9311	MinTrap	9311	TL	11/4/93	10:10				19.3	NONE	0	0
9312	Gillnet	9312	IL	11/5/93	10:10	1	20	1.00	22.0	NONE	0	0
9312	Gillnet	9312	IL	11/5/93	10:10	2	20	1.25	22.0	NONE	0	0
9312	Gillnet	9312	IL	11/5/93	10:10	3	20	1.63	22.0	LSCS	2	2
9312	Gillnet	9312	IL	11/5/93	10:10	4	20	2.06	22.0	LSCS	2	2
9312	Gillnet	9312	IL	11/5/93	10:10	5	20	2.75	22.0	LSCS	17	17
9312	Gillnet	9312	IL	11/5/93	10:10	6	20	3.50	22.0	NONE	0	0
9312	MinTrap	9312	IL	11/5/93	10:10				22.0	NONE	0	0
9313	Gillnet	9313	IL	11/5/93	10:40	1	20	1.00	20.7	LSCS	2	2
9313	Gillnet	9313	IL	11/5/93	10:40	2	20	1.25	20.7	NONE	0	0
9313	Gillnet	9313	IL	11/5/93	10:40	3	20	1.63	20.7	LSCS	3	3
9313	Gillnet	9313	IL	11/5/93	10:40	4	20	2.06	20.7	LSCS	36	36
9313	Gillnet	9313	IL	11/5/93	10:40	5	20	2.75	20.7	LSCS	35	35
9313	Gillnet	9313	IL	11/5/93	10:40	6	20	3.50	20.7	LSCS	3	3
9313	MinTrap	9313	IL	11/5/93	10:40				20.7	NONE	0	0

Species:
 ARCS = Arctic cisco
 LSCS = least cisco
 BDWF = broad whitefish
 HBWF = humpback whitefish
 RDWF = round whitefish
 BKFH = Alaska blackfish
 BRBT = burbot
 RBSM = rainbow smelt
 FHSC = fourhorn sculpin

Method: Gillnet = variable mesh gillnet
 MinTrap = minnow trap
 Habitat: RC = river channel
 TL = lake connected to a river channel
 IL = lake not connected to a river channel

Appendix Table 17. Biological data obtained from fish collected during 1991-1993 gillnet sampling in the Colville River delta.

Set Number	Method	Station	Habitat	Date Checked	Time Checked	Panel Number	Fish Number	Species	Fork Length (mm)				Weight (gm)	Sex	Maturity	Age
9101	Gillnet	9101	RC	11/2/91	1015	1	1	ARCS	129							
9101	Gillnet	9101	RC	11/2/91	1015	1	2	ARCS	134							
9101	Gillnet	9101	RC	11/2/91	1015	1	3	ARCS	130							
9101	Gillnet	9101	RC	11/2/91	1015	1	4	ARCS	110							
9101	Gillnet	9101	RC	11/2/91	1015	4	5	ARCS	274							
9101	Gillnet	9101	RC	11/2/91	1015	4	6	LSCS	262							
9101	Gillnet	9101	RC	11/2/91	1015	5	7	RBSM	279							
9101	Gillnet	9101	RC	11/2/91	1015	5	8	ARCS	288							
9101	Gillnet	9101	RC	11/2/91	1015	5	9	LSCS	250							
9101	Gillnet	9101	RC	11/2/91	1015	5	10	LSCS	261							
9102	Gillnet	9101	RC	11/3/91	1030	3	1	ARCS	190							3
9102	Gillnet	9101	RC	11/3/91	1030	2	2	ARCS	125							1
9102	Gillnet	9101	RC	11/3/91	1030	2	3	ARCS	124							1
9102	Gillnet	9101	RC	11/3/91	1030	1	4	ARCS	119							1
9102	Gillnet	9101	RC	11/3/91	1030	1	5	ARCS	123							1
9102	Gillnet	9101	RC	11/3/91	1030	1	6	ARCS	124							1
9102	Gillnet	9101	RC	11/3/91	1030	1	7	ARCS	116							1
9102	Gillnet	9101	RC	11/3/91	1030	1	8	ARCS	111							1
9102	Gillnet	9101	RC	11/3/91	1030	1	9	ARCS	121							1
9102	Gillnet	9101	RC	11/3/91	1030	1	10	ARCS	116							1
9102	Gillnet	9101	RC	11/3/91	1030	1	11	ARCS	112							1
9102	Gillnet	9101	RC	11/3/91	1030	1	12	ARCS	118							1
9102	Gillnet	9101	RC	11/3/91	1030	1	13	ARCS	120							1
9102	Gillnet	9101	RC	11/3/91	1030	1	14	ARCS	104							1
9102	Gillnet	9101	RC	11/3/91	1030	1	15	ARCS	121							1
9102	Gillnet	9101	RC	11/3/91	1030	1	16	ARCS	116							1
9102	Gillnet	9101	RC	11/3/91	1030	1	17	ARCS	122							1
9102	Gillnet	9101	RC	11/3/91	1030	1	18	ARCS	131							1
9102	Gillnet	9101	RC	11/3/91	1030	1	19	ARCS	112							1
9102	Gillnet	9101	RC	11/3/91	1030	1	20	ARCS	111							1
9102	Gillnet	9101	RC	11/3/91	1030	5	21	LSCS	285							11
9102	Gillnet	9101	RC	11/3/91	1030	5	22	LSCS	240							6
9102	Gillnet	9101	RC	11/3/91	1030	5	23	LSCS	241							6
9102	Gillnet	9101	RC	11/3/91	1030	5	24	LSCS	244							7
9102	Gillnet	9101	RC	11/3/91	1030	5	25	LSCS	245							6
9102	Gillnet	9101	RC	11/3/91	1030	5	26	ARCS	272							5
9102	Gillnet	9101	RC	11/3/91	1030	5	27	ARCS	251							5
9102	Gillnet	9101	RC	11/3/91	1030	5	28	ARCS	287							5
9102	Gillnet	9101	RC	11/3/91	1030	5	29	ARCS	251							4
9102	Gillnet	9101	RC	11/3/91	1030	5	30	ARCS	246							4
9102	Gillnet	9101	RC	11/3/91	1030	5	31	RBSM	282							
9103	Gillnet	9102	TL	11/3/91	1030	4	1	RBSM	264							
9103	Gillnet	9102	TL	11/3/91	1030	4	2	RBSM	272							
9103	Gillnet	9102	TL	11/3/91	1030	4	3	RBSM	265							
9104	Gillnet	9103	RC	11/3/91	1115	1	1	ARCS	132							1
9104	Gillnet	9103	RC	11/3/91	1115	1	2	ARCS	121							1
9104	Gillnet	9103	RC	11/3/91	1115	1	3	ARCS	125							1
9104	Gillnet	9103	RC	11/3/91	1115	1	4	ARCS	123							1

Appendix Table 17. Biological data obtained from fish collected during 1991-1993 gillnet sampling in the Colville River delta.

Set Number	Method	Station	Habitat	Date Checked	Time Checked	Panel Number	Fish Number	Species	Fork Length (mm)		Weight (gm)	Sex	Maturity	Age
				11/3/91	1115	1	5		132	1				
9104	Gillnet	9103	RC	11/3/91	1115	1	6	ARCS	126		1			
9104	Gillnet	9103	RC	11/3/91	1115	1	7	ARCS	127		1			
9104	Gillnet	9103	RC	11/3/91	1115	1	8	ARCS	114		1			
9104	Gillnet	9103	RC	11/3/91	1115	1	9	ARCS	132		1			
9104	Gillnet	9103	RC	11/3/91	1115	1	10	ARCS	123		1			
9104	Gillnet	9103	RC	11/3/91	1115	1	11	ARCS	121		1			
9104	Gillnet	9103	RC	11/3/91	1115	1	12	ARCS	122		1			
9104	Gillnet	9103	RC	11/3/91	1115	1	13	ARCS	111		1			
9104	Gillnet	9103	RC	11/3/91	1115	2	14	ARCS	134		1			
9104	Gillnet	9103	RC	11/3/91	1115	2	15	LSCS	142		2			
9104	Gillnet	9103	RC	11/3/91	1115	2	16	LSCS	141		2			
9104	Gillnet	9103	RC	11/3/91	1115	3	17	LSCS	164		3			
9104	Gillnet	9103	RC	11/3/91	1115	3	18	ARCS	182		3			
9104	Gillnet	9103	RC	11/3/91	1115	3	19	ARCS	171		3			
9104	Gillnet	9103	RC	11/3/91	1115	4	20	ARCS	222		4			
9104	Gillnet	9103	RC	11/3/91	1115	4	21	ARCS	250		4			
9104	Gillnet	9103	RC	11/3/91	1115	4	22	LSCS	283		10			
9104	Gillnet	9103	RC	11/3/91	1115	5	23	ARCS	292		5			
9104	Gillnet	9103	RC	11/3/91	1115	5	24	ARCS	286		5			
9104	Gillnet	9103	RC	11/3/91	1115	5	25	ARCS	307		5			
9104	Gillnet	9103	RC	11/3/91	1115	5	26	ARCS	272		5			
9104	Gillnet	9103	RC	11/3/91	1115	5	27	LSCS	278		9			
9104	Gillnet	9103	RC	11/3/91	1115	5	28	LSCS	310		10			
9104	Gillnet	9103	RC	11/3/91	1115	5	29	LSCS	289		9			
9104	Gillnet	9103	RC	11/3/91	1115	5	30	LSCS	292		8			
9104	Gillnet	9103	RC	11/3/91	1115	5	31	LSCS	304		12			
9104	Gillnet	9103	RC	11/3/91	1115	5	32	LSCS	285		12			
9104	Gillnet	9103	RC	11/3/91	1115	5	33	LSCS	310		8			
9104	Gillnet	9103	RC	11/3/91	1115	5	34	LSCS	297		10			
9104	Gillnet	9103	RC	11/3/91	1115	5	35	LSCS	315		12			
9105	Gillnet	9102	TL	11/5/91	1030	1	1	RBSM	137					
9105	Gillnet	9102	TL	11/5/91	1030	1	2	RBSM	204					
9105	Gillnet	9102	TL	11/5/91	1030	3	3	RBSM	231					
9105	Gillnet	9102	TL	11/5/91	1030	2	4	RBSM	223					
9105	Gillnet	9102	TL	11/5/91	1030	4	5	RBSM	267					
9105	Gillnet	9102	TL	11/5/91	1030	4	6	RBSM	274					
9105	Gillnet	9102	TL	11/5/91	1030	4	7	RBSM	278					
9105	Gillnet	9102	TL	11/5/91	1030	4	8	RBSM	253					
9105	Gillnet	9102	TL	11/5/91	1030	4	9	RBSM	274					
9105	Gillnet	9102	TL	11/5/91	1030	4	10	RBSM	274					
9105	Gillnet	9102	TL	11/5/91	1030	4	11	ARCS	252		4			
9105	Gillnet	9102	TL	11/5/91	1030	4	12	ARCS	241		4			
9106	Gillnet	9104	RC	11/5/91	1400	1	1	ARCS	135		1			
9106	Gillnet	9104	RC	11/5/91	1400	1	2	ARCS	116		1			
9106	Gillnet	9104	RC	11/5/91	1400	3	3	ARCS	178		3			
9106	Gillnet	9104	RC	11/5/91	1400	3	4	ARCS	182		3			
9106	Gillnet	9104	RC	11/5/91	1400	3	5	ARCS	180		3			

Appendix Table 17. Biological data obtained from fish collected during 1991-1993 gillnet sampling in the Colville River delta.

Set Number	Method	Station	Habitat	Date Checked	Time Checked	Panel	Fish Number	Fork				Sex	Maturity	Age
										Length (mm)	Weight (gm)			
9106	Gillnet	9104	RC	11/5/91	1400	3	6	LSCS	170					3
9106	Gillnet	9104	RC	11/5/91	1400	3	7	LSCS	220					5
9106	Gillnet	9104	RC	11/5/91	1400	4	8	LSCS	271					8
9106	Gillnet	9104	RC	11/5/91	1400	4	9	ARCS	268					5
9106	Gillnet	9104	RC	11/5/91	1400	4	10	ARCS	275					5
9106	Gillnet	9104	RC	11/5/91	1400	4	11	ARCS	211					3
9107	Gillnet	9105	TL	11/5/91	1500	4	1	LSCS	305					13
9107	Gillnet	9105	TL	11/5/91	1500	4	2	LSCS	266					9
9107	Gillnet	9105	TL	11/5/91	1500	4	3	LSCS	302					11
9107	Gillnet	9105	TL	11/5/91	1500	5	4	ARCS	304					6
9107	Gillnet	9105	TL	11/5/91	1500	5	5	ARCS	282					5
9108	Gillnet	9106	TL	11/6/91	1000	1	1	LSCS	126					2
9108	Gillnet	9106	TL	11/6/91	1000	1	2	LSCS	117					2
9108	Gillnet	9106	TL	11/6/91	1000	1	3	LSCS	106					2
9108	Gillnet	9106	TL	11/6/91	1000	5	4	BDWF	313					13
9108	Gillnet	9106	TL	11/6/91	1000	5	5	BDWF	335					11
9108	Gillnet	9106	TL	11/6/91	1000	5	6	BDWF	312					10
9108	Gillnet	9106	TL	11/6/91	1000	5	6	LSCS	327					20
9108	Gillnet	9106	TL	11/6/91	1000	6	8	BDWF	453					17
9108	Gillnet	9106	TL	11/6/91	1000	4	9	LSCS	300					12
9109	Gillnet	9107	TL	11/6/91	1040	3	1	LSCS	220					5
9109	Gillnet	9107	TL	11/6/91	1040	3	2	HBWF	164					2
9109	Gillnet	9107	TL	11/6/91	1040	1	3	LSCS	151					2
9109	Gillnet	9107	TL	11/6/91	1040	1	4	ARCS	114					1
9109	Gillnet	9107	TL	11/6/91	1040	1	5	ARCS	124					1
9109	Gillnet	9107	TL	11/6/91	1040	5	6	BDWF	350					9
9109	Gillnet	9107	TL	11/6/91	1040	5	7	BDWF	343					9
9109	Gillnet	9107	TL	11/6/91	1040	5	8	LSCS	304					18
9109	Gillnet	9107	TL	11/6/91	1040	5	9	LSCS	276					6
9109	Gillnet	9107	TL	11/6/91	1040	5	10	LSCS	335					10
9109	Gillnet	9107	TL	11/6/91	1040	5	11	LSCS	292					9
9109	Gillnet	9107	TL	11/6/91	1040	5	12	LSCS	320					15
9109	Gillnet	9107	TL	11/6/91	1040	5	13	LSCS	310					11
9109	Gillnet	9107	TL	11/6/91	1040	5	14	LSCS	319					8
9109	Gillnet	9107	TL	11/6/91	1040	6	15	BDWF	370					11
9109	Gillnet	9107	TL	11/6/91	1040	6	16	BDWF	368					13
9109	Gillnet	9107	TL	11/6/91	1040	4	17	LSCS	286					11
9109	Gillnet	9107	TL	11/6/91	1040	4	18	LSCS	272					7
9109	Gillnet	9107	TL	11/6/91	1040	4	19	LSCS	238					9
9109	Gillnet	9107	TL	11/6/91	1040	4	20	LSCS	211					14
9109	Gillnet	9107	TL	11/6/91	1040	4	21	ARCS	245					5
9110	Gillnet	9104	RC	11/6/91	1115	6	1	ARCS	350					8
9110	Gillnet	9104	RC	11/6/91	1115	6	2	RBSM	251					
9110	Gillnet	9104	RC	11/6/91	1115	4	3	RBSM	260					
9110	Gillnet	9104	RC	11/6/91	1115	4	4	ARCS	245					4
9110	Gillnet	9104	RC	11/6/91	1115	5	5	ARCS	315					5
9110	Gillnet	9104	RC	11/6/91	1115	5	6	ARCS	276					5
9111	Gillnet	9105	TL	11/6/91	1145	3	1	RBSM	265					

Appendix Table 17. Biological data obtained from fish collected during 1991-1993 gillnet sampling in the Colville River delta.

Set Number	Method	Station	Habitat	Date Checked	Time Checked	Panel Number	Fish Number	Species	Fork Length (mm)			Weight (gm)	Sex	Maturity	Age
				11/6/91	11/6/91	11/6/91	11/6/91		11/6/91	11/6/91	11/6/91				
9111	Gillnet	9105	TL	11/6/91	1145	4	2	RBSM	264						
9111	Gillnet	9105	TL	11/6/91	1145	4	3	ARCS	244						4
9111	Gillnet	9105	TL	11/6/91	1145	4	4	ARCS	297						5
9111	Gillnet	9105	TL	11/6/91	1145	5	5	LSCS	285						9
9111	Gillnet	9105	TL	11/6/91	1145	5	6	LSCS	294						11
9111	Gillnet	9105	TL	11/6/91	1145	5	7	LSCS	274						8
9112	Gillnet	9106	TL	11/7/91	1000	5	1	LSCS	328						10
9112	Gillnet	9106	TL	11/7/91	1000	5	2	LSCS	328						15
9112	Gillnet	9106	TL	11/7/91	1000	5	3	BDWF	310						7
9113	Gillnet	9104	RC	11/7/91	1020	1	1	ARCS	123						1
9113	Gillnet	9104	RC	11/7/91	1020	1	2	LSCS	108						1
9113	Gillnet	9104	RC	11/7/91	1020	4	3	RBSM	252						
9113	Gillnet	9104	RC	11/7/91	1020	4	4	LSCS	253						5
9116	Gillnet	9109	RC	11/7/91	1115	5	1	ARCS	286						5
9116	Gillnet	9109	RC	11/7/91	1115	4	2	RBSM	268						
9116	Gillnet	9109	RC	11/7/91	1115	4	3	RBSM	260						
9116	Gillnet	9109	RC	11/7/91	1115	4	4	RBSM	291						
9116	Gillnet	9109	RC	11/7/91	1115	4	5	ARCS	264						4
9116	Gillnet	9109	RC	11/7/91	1115	4	6	ARCS	232						5
9116	Gillnet	9109	RC	11/7/91	1115	3	7	LSCS	211						5
9116	Gillnet	9109	RC	11/7/91	1115	3	8	LSCS	216						5
9116	Gillnet	9109	RC	11/7/91	1115	3	9	LSCS	174						3
9116	Gillnet	9109	RC	11/7/91	1115	3	10	LSCS	179						3
9116	Gillnet	9109	RC	11/7/91	1115	3	11	ARCS	191						3
9116	Gillnet	9109	RC	11/7/91	1115	3	12	ARCS	163						2
9116	Gillnet	9109	RC	11/7/91	1115	2	13	LSCS	171						3
9116	Gillnet	9109	RC	11/7/91	1115	2	14	LSCS	146						2
9116	Gillnet	9109	RC	11/7/91	1115	1	15	ARCS	117						1
9116	Gillnet	9109	RC	11/7/91	1115	1	16	ARCS	121						1
9118	Gillnet	9109	RC	11/9/91	1215	3	1	RBSM	231						
9118	Gillnet	9109	RC	11/9/91	1215	3	2	LSCS	272						12
9118	Gillnet	9109	RC	11/9/91	1215	3	3	ARCS	270						4
9118	Gillnet	9109	RC	11/9/91	1215	3	4	ARCS	182						3
9118	Gillnet	9109	RC	11/9/91	1215	3	5	ARCS	172						2
9118	Gillnet	9109	RC	11/9/91	1215	3	6	ARCS	180						3
9118	Gillnet	9109	RC	11/9/91	1215	4	7	RBSM	274						
9118	Gillnet	9109	RC	11/9/91	1215	4	8	RBSM	268						
9118	Gillnet	9109	RC	11/9/91	1215	4	9	RBSM	270						
9118	Gillnet	9109	RC	11/9/91	1215	4	10	LSCS	232						6
9118	Gillnet	9109	RC	11/9/91	1215	4	11	ARCS	262						4
9118	Gillnet	9109	RC	11/9/91	1215	5	12	ARCS	227						6
9118	Gillnet	9109	RC	11/9/91	1215	5	13	LSCS	294						11
9118	Gillnet	9109	RC	11/9/91	1215	5	14	LSCS	287						8
9118	Gillnet	9109	RC	11/9/91	1215	5	15	LSCS	291						11
9118	Gillnet	9109	RC	11/9/91	1215	2	16	ARCS	122						1
9118	Gillnet	9109	RC	11/9/91	1215	2	17	ARCS	126						1
9119	Gillnet	9110	RC	11/9/91	1145	2	1	RBSM	152						
9119	Gillnet	9110	RC	11/9/91	1145	4	2	RBSM	264						

Appendix Table 17. Biological data obtained from fish collected during 1991-1993 gillnet sampling in the Colville River delta.

Set Number	Method	Station	Habitat	Date Checked	Time Checked	Panel Number	Fish Number	Species	Fork				
									Length (mm)	Weight (gm)	Sex	Maturity	Age
9119	Gillnet	9110	RC	11/9/91	1145	4	3	RBSM	266				
9119	Gillnet	9110	RC	11/9/91	1145	4	4	ARCS	271				4
9119	Gillnet	9110	RC	11/9/91	1145	4	5	ARCS	280				4
9119	Gillnet	9110	RC	11/9/91	1145	4	6	ARCS	264				5
9119	Gillnet	9110	RC	11/9/91	1145	4	7	ARCS	279				5
9119	Gillnet	9110	RC	11/9/91	1145	4	8	ARCS	228				4
9119	Gillnet	9110	RC	11/9/91	1145	4	9	ARCS	223				4
9119	Gillnet	9110	RC	11/9/91	1145	4	10	ARCS	246				4
9119	Gillnet	9110	RC	11/9/91	1145	4	11	ARCS	237				4
9119	Gillnet	9110	RC	11/9/91	1145	4	12	ARCS	255				4
9119	Gillnet	9110	RC	11/9/91	1145	4	13	ARCS	244				5
9119	Gillnet	9110	RC	11/9/91	1145	3	14	RBSM	215				
9119	Gillnet	9110	RC	11/9/91	1145	3	15	RBSM	235				
9119	Gillnet	9110	RC	11/9/91	1145	3	16	RBSM	226				
9119	Gillnet	9110	RC	11/9/91	1145	3	17	RBSM	207				
9119	Gillnet	9110	RC	11/9/91	1145	3	18	RBSM	250				
9119	Gillnet	9110	RC	11/9/91	1145	5	19	ARCS	283				4
9119	Gillnet	9110	RC	11/9/91	1145	5	20	ARCS	321				6
9119	Gillnet	9110	RC	11/9/91	1145	5	21	ARCS	311				6
9119	Gillnet	9110	RC	11/9/91	1145	5	22	ARCS	296				5
9120	Gillnet	9111	IL	11/9/91	1045	3	1	LSCS	229				9
9120	Gillnet	9111	IL	11/9/91	1045	3	2	LSCS	255				11
9120	Gillnet	9111	IL	11/9/91	1045	3	3	LSCS	246				10
9120	Gillnet	9111	IL	11/9/91	1045	3	4	LSCS	236	M	1		9
9120	Gillnet	9111	IL	11/9/91	1045	3	5	LSCS	240	F	5		9
9120	Gillnet	9111	IL	11/9/91	1045	3	6	LSCS	213				5
9120	Gillnet	9111	IL	11/9/91	1045	3	7	LSCS	248	M			16
9120	Gillnet	9111	IL	11/9/91	1045	3	8	LSCS	242	F			10
9120	Gillnet	9111	IL	11/9/91	1045	3	9	LSCS	234	F			8
9120	Gillnet	9111	IL	11/9/91	1045	3	10	LSCS	250	F			11
9120	Gillnet	9111	IL	11/9/91	1045	3	11	LSCS	250	M			9
9120	Gillnet	9111	IL	11/9/91	1045	3	12	LSCS	226	-	F	1	8
9120	Gillnet	9111	IL	11/9/91	1045	3	13	LSCS	224	M	1		12
9120	Gillnet	9111	IL	11/9/91	1045	3	14	LSCS	235	M			8
9120	Gillnet	9111	IL	11/9/91	1045	3	15	LSCS	246	F	2		11
9120	Gillnet	9111	IL	11/9/91	1045	3	16	LSCS	247	M	2		11
9120	Gillnet	9111	IL	11/9/91	1045	3	17	LSCS	248	M	2		12
9120	Gillnet	9111	IL	11/9/91	1045	3	18	LSCS	240	M	2		11
9120	Gillnet	9111	IL	11/9/91	1045	3	19	LSCS	240	F	5		10
9120	Gillnet	9111	IL	11/9/91	1045	3	20	LSCS	250	F	5		10
9120	Gillnet	9111	IL	11/9/91	1045	3	21	LSCS	221	M	1		9
9120	Gillnet	9111	IL	11/9/91	1045	3	22	LSCS	236	F	2		9
9120	Gillnet	9111	IL	11/9/91	1045	3	23	LSCS	245	M	2		8
9120	Gillnet	9111	IL	11/9/91	1045	3	24	LSCS	232	F	1		11
9120	Gillnet	9111	IL	11/9/91	1045	3	25	LSCS	194	J	1		5
9120	Gillnet	9111	IL	11/9/91	1045	3	26	LSCS	210	F	1		5
9120	Gillnet	9111	IL	11/9/91	1045	3	27	LSCS	248	F	2		11
9120	Gillnet	9111	IL	11/9/91	1045	3	28	LSCS	194	J	1		6

Appendix Table 17. Biological data obtained from fish collected during 1991-1993 gillnet sampling in the Colville River delta.

Set Number	Method	Station	Habitat	Date Checked	Time Checked	Panel Number	Fish Number	Species	Fork Length	Weight (gm)	Sex	Maturity	Age
									(mm)				
9120	Gillnet	9111	IL	11/9/91	1045	3	29	LSCS	236		M	1	9
9120	Gillnet	9111	IL	11/9/91	1045	3	30	LSCS	251		F	2	11
9120	Gillnet	9111	IL	11/9/91	1045	3	31	LSCS	216		M	1	7
9120	Gillnet	9111	IL	11/9/91	1045	3	32	LSCS	242		F	3	11
9120	Gillnet	9111	IL	11/9/91	1045	3	33	LSCS	242		F	3	12
9120	Gillnet	9111	IL	11/9/91	1045	3	34	LSCS	263		F	5	13
9120	Gillnet	9111	IL	11/9/91	1045	3	35	LSCS	245		M	2	10
9120	Gillnet	9111	IL	11/9/91	1045	3	36	LSCS	246		M	2	9
9120	Gillnet	9111	IL	11/9/91	1045	3	37	LSCS	193		J	1	4
9120	Gillnet	9111	IL	11/9/91	1045	3	38	LSCS	193		M	1	4
9120	Gillnet	9111	IL	11/9/91	1045	3	39	LSCS	212		F	1	5
9120	Gillnet	9111	IL	11/9/91	1045	3	40	LSCS	196		J	1	5
9120	Gillnet	9111	IL	11/9/91	1045	3	41	LSCS	179		J	1	4
9120	Gillnet	9111	IL	11/9/91	1045	3	42	LSCS	252		F	2	9
9120	Gillnet	9111	IL	11/9/91	1045	3	43	LSCS	245		F	2	11
9120	Gillnet	9111	IL	11/9/91	1045	3	44	LSCS	206		F	1	4
9120	Gillnet	9111	IL	11/9/91	1045	3	45	LSCS	240		F	3	11
9120	Gillnet	9111	IL	11/9/91	1045	3	46	LSCS	242		F	3	
9120	Gillnet	9111	IL	11/9/91	1045	3	47	LSCS	246		F	3	12
9120	Gillnet	9111	IL	11/9/91	1045	3	48	LSCS	251		M	2	13
9120	Gillnet	9111	IL	11/9/91	1045	3	49	LSCS	232		M	2	12
9120	Gillnet	9111	IL	11/9/91	1045	3	50	LSCS	246		M	2	11
9120	Gillnet	9111	IL	11/9/91	1045	3	51	LSCS	237		M	2	9
9120	Gillnet	9111	IL	11/9/91	1045	3	52	LSCS	242		F	1	9
9120	Gillnet	9111	IL	11/9/91	1045	3	53	LSCS	210		J	1	6
9120	Gillnet	9111	IL	11/9/91	1045	3	54	LSCS	241		F	3	11
9120	Gillnet	9111	IL	11/9/91	1045	1	55	LSCS	145		J	1	
9120	Gillnet	9111	IL	11/9/91	1045	1	56	LSCS	125		J	1	2
9120	Gillnet	9111	IL	11/9/91	1045	5	57	LSCS	340		F	5	13
9120	Gillnet	9111	IL	11/9/91	1045	5	58	LSCS	276		F	3	11
9120	Gillnet	9111	IL	11/9/91	1045	5	59	LSCS	328		F	3	14
9120	Gillnet	9111	IL	11/9/91	1045	5	60	LSCS	276		M	2	17
9120	Gillnet	9111	IL	11/9/91	1045	5	61	LSCS	280		M	2	12
9120	Gillnet	9111	IL	11/9/91	1045	5	62	LSCS	296		F	3	
9120	Gillnet	9111	IL	11/9/91	1045	5	63	LSCS	316		M	2	12
9120	Gillnet	9111	IL	11/9/91	1045	5	64	LSCS	325		M	3	11
9120	Gillnet	9111	IL	11/9/91	1045	4	65	LSCS	260		F	2	9
9120	Gillnet	9111	IL	11/9/91	1045	4	66	LSCS	241		F	3	11
9120	Gillnet	9111	IL	11/9/91	1045	4	67	LSCS	236		F	1	11
9120	Gillnet	9111	IL	11/9/91	1045	4	68	LSCS	240		M	2	11
9120	Gillnet	9111	IL	11/9/91	1045	4	69	LSCS	236		F	3	11
9120	Gillnet	9111	IL	11/9/91	1045	4	70	LSCS	260		M	3	12
9120	Gillnet	9111	IL	11/9/91	1045	4	71	LSCS	245		F	2	11
9120	Gillnet	9111	IL	11/9/91	1045	4	72	LSCS	291		M	2	13
9120	Gillnet	9111	IL	11/9/91	1045	4	73	LSCS	240		F	2	10
9120	Gillnet	9111	IL	11/9/91	1045	4	74	LSCS	296		M	2	12
9120	Gillnet	9111	IL	11/9/91	1045	4	75	LSCS	248		M	2	11
9120	Gillnet	9111	IL	11/9/91	1045	4	76	LSCS	233		F	3	9

Appendix Table 17. Biological data obtained from fish collected during 1991-1993 gillnet sampling in the Colville River delta.

Set Number	Method	Station	Habitat	Date Checked	Time Checked	Panel Number	Fish Number	Species	Fork Length (mm)		Weight (gm)	Sex	Maturity	Age
				11/9/91	1045	4	77		244	252				
9120	Gillnet	9111	IL	11/9/91	1045	4	78	LSCS	246	256	241	M	2	11
9120	Gillnet	9111	IL	11/9/91	1045	4	79	LSCS	246	256	249	M	2	11
9120	Gillnet	9111	IL	11/9/91	1045	4	80	LSCS	246	256	244	F	3	11
9120	Gillnet	9111	IL	11/9/91	1045	4	81	LSCS	246	256	244	F	3	10
9120	Gillnet	9111	IL	11/9/91	1045	4	82	LSCS	246	256	244	F	5	11
9120	Gillnet	9111	IL	11/9/91	1045	4	83	LSCS	246	256	244	F	2	11
9120	Gillnet	9111	IL	11/9/91	1045	4	84	LSCS	246	256	244	F	2	11
9120	Gillnet	9111	IL	11/9/91	1045	4	85	LSCS	246	256	243	F	3	12
9120	Gillnet	9111	IL	11/9/91	1045	4	86	LSCS	246	256	244	F	1	11
9120	Gillnet	9111	IL	11/9/91	1045	4	87	LSCS	246	256	261	F	1	12
9120	Gillnet	9111	IL	11/9/91	1045	4	88	LSCS	246	256	242	M	3	11
9120	Gillnet	9111	IL	11/9/91	1045	4	89	LSCS	246	256	275	M	2	13
9120	Gillnet	9111	IL	11/9/91	1045	4	90	LSCS	246	256	266	F	2	12
9120	Gillnet	9111	IL	11/9/91	1045	4	91	LSCS	246	256	242	F	3	11
9120	Gillnet	9111	IL	11/9/91	1045	4	92	LSCS	246	256	291	M	2	12
9120	Gillnet	9111	IL	11/9/91	1045	4	93	LSCS	246	256	245	F	2	12
9120	Gillnet	9111	IL	11/9/91	1045	4	94	LSCS	246	256	233	M	2	11
9120	Gillnet	9111	IL	11/9/91	1045	4	95	LSCS	246	256	242	F	2	11
9120	Gillnet	9111	IL	11/9/91	1045	4	96	LSCS	246	256	250	M	1	12
9120	Gillnet	9111	IL	11/9/91	1045	4	97	LSCS	246	256	260	M	2	12
9120	Gillnet	9111	IL	11/9/91	1045	4	98	LSCS	246	256	251	M	3	11
9120	Gillnet	9111	IL	11/9/91	1045	4	99	LSCS	246	256	264	F	3	12
9120	Gillnet	9111	IL	11/9/91	1045	4	100	LSCS	246	256	235	M	3	7
9120	Gillnet	9111	IL	11/9/91	1045	4	101	LSCS	246	256	268	F	3	13
9120	Gillnet	9111	IL	11/9/91	1045	4	102	LSCS	246	256	245	F	2	11
9120	Gillnet	9111	IL	11/9/91	1045	4	103	LSCS	246	256	236	M	2	11
9120	Gillnet	9111	IL	11/9/91	1045	4	104	LSCS	246	256	253	F	2	13
9120	Gillnet	9111	IL	11/9/91	1045	4	105	LSCS	246	256	258	M	2	12
9120	Gillnet	9111	IL	11/9/91	1045	4	106	LSCS	246	256	276	F	3	
9120	Gillnet	9111	IL	11/9/91	1045	4	107	LSCS	246	256	261	F	3	11
9120	Gillnet	9111	IL	11/9/91	1045	4	108	LSCS	246	256	255	F	3	12
9120	Gillnet	9111	IL	11/9/91	1045	4	109	LSCS	246	256	246	M	2	14
9120	Gillnet	9111	IL	11/9/91	1045	4	110	LSCS	246	256	246	M	2	9
9120	Gillnet	9111	IL	11/9/91	1045	4	111	LSCS	246	256	246	F	2	11
9120	Gillnet	9111	IL	11/9/91	1045	4	112	LSCS	246	256	250	F	3	11
9120	Gillnet	9111	IL	11/9/91	1045	4	113	LSCS	246	256	254	M	2	12
9120	Gillnet	9111	IL	11/9/91	1045	4	114	LSCS	246	256	251	M	2	11
9120	Gillnet	9111	IL	11/9/91	1045	4	115	LSCS	246	256	249	F	2	11
9120	Gillnet	9111	IL	11/9/91	1045	4	116	LSCS	246	256	251	F	3	11
9120	Gillnet	9111	IL	11/9/91	1045	4	117	LSCS	246	256	248	F	2	12
9120	Gillnet	9111	IL	11/9/91	1045	4	118	LSCS	246	256	245	F	2	
9120	Gillnet	9111	IL	11/9/91	1045	4	119	LSCS	246	256	243	F	3	
9120	Gillnet	9111	IL	11/9/91	1045	4	120	LSCS	246	256	252	M	5	
9120	Gillnet	9111	IL	11/9/91	1045	4	121	LSCS	246	256	256	F	5	
9120	Gillnet	9111	IL	11/9/91	1045	4	122	LSCS	246	256	241	M	2	
9120	Gillnet	9111	IL	11/9/91	1045	4	123	LSCS	246	256	243	M	2	
9120	Gillnet	9111	IL	11/9/91	1045	4	124	LSCS	246	256	254	M	2	

Appendix Table 17. Biological data obtained from fish collected during 1991-1993 gillnet sampling in the Colville River delta.

Set Number	Method	Station	Habitat	Date Checked	Time Checked	Panel Number	Fish Number	Species	Fork Length (mm)		Weight (gm)		Sex	Maturity	Age
9120	Gillnet	9111	IL	11/9/91	1045	4	125	LSCS	244		M	2			
9120	Gillnet	9111	IL	11/9/91	1045	4	126	LSCS	246		M	2			
9120	Gillnet	9111	IL	11/9/91	1045	4	127	LSCS	260		M	2			
9120	Gillnet	9111	IL	11/9/91	1045	4	128	LSCS	244		M	2			
9120	Gillnet	9111	IL	11/9/91	1045	4	129	LSCS	233		M	2			
9120	Gillnet	9111	IL	11/9/91	1045	4	130	LSCS	244		M	2			
9120	Gillnet	9111	IL	11/9/91	1045	4	131	LSCS	229		F	1			
9120	Gillnet	9111	IL	11/9/91	1045	4	132	LSCS	251		M	1			
9120	Gillnet	9111	IL	11/9/91	1045	4	133	LSCS	234		M	2			
9120	Gillnet	9111	IL	11/9/91	1045	4	134	LSCS	237		M	2			
9120	Gillnet	9111	IL	11/9/91	1045	4	135	LSCS	262		M	2			
9120	Gillnet	9111	IL	11/9/91	1045	4	136	LSCS	234		F	1			
9120	Gillnet	9111	IL	11/9/91	1045	4	137	LSCS	249		M	2			
9120	Gillnet	9111	IL	11/9/91	1045	4	138	LSCS	250		F	3			
9120	Gillnet	9111	IL	11/9/91	1045	4	139	LSCS	243		M	2			
9120	Gillnet	9111	IL	11/9/91	1045	4	140	LSCS	241						
9120	Gillnet	9111	IL	11/9/91	1045	4	141	LSCS	258		M	2			
9120	Gillnet	9111	IL	11/9/91	1045	4	142	LSCS	252		M	2			
9120	Gillnet	9111	IL	11/9/91	1045	4	143	LSCS	235		M	3			
9120	Gillnet	9111	IL	11/9/91	1045	4	144	LSCS	244		F	5			
9120	Gillnet	9111	IL	11/9/91	1045	4	145	LSCS	256		F	3			
9120	Gillnet	9111	IL	11/9/91	1045	4	146	LSCS	239		F	3			
9120	Gillnet	9111	IL	11/9/91	1045	4	147	LSCS	246		F	2			
9120	Gillnet	9111	IL	11/9/91	1045	4	148	LSCS	261		F	2			
9120	Gillnet	9111	IL	11/9/91	1045	4	149	LSCS	254		F	2			
9120	Gillnet	9111	IL	11/9/91	1045	4	150	LSCS	234		F	5			
9121	Gillnet	9110	RC	11/10/91	1045	2	1	RBSM	184						
9121	Gillnet	9110	RC	11/10/91	1045	3	2	ARCS	206						
9121	Gillnet	9110	RC	11/10/91	1045	3	3	ARCS	192						
9121	Gillnet	9110	RC	11/10/91	1045	4	4	ARCS	291						
9121	Gillnet	9110	RC	11/10/91	1045	4	5	RBSM	260						
9121	Gillnet	9110	RC	11/10/91	1045	4	6	RBSM	285						
9122	Gillnet	9109	RC	11/10/91	1030	3	1	ARCS	176		-				
9201	Gillnet	9203	IL	10/30/92	1030	2	1	ARCS	160		I	1	3		
9201	Gillnet	9203	IL	10/30/92	1030	2	2	LSCS	187		M	1	4		
9201	Gillnet	9203	IL	10/30/92	1030	2	3	LSCS	200		F	1	4		
9201	Gillnet	9203	IL	10/30/92	1030	2	4	LSCS	175		F	1	3		
9201	Gillnet	9203	IL	10/30/92	1030	2	5	LSCS	150		M	1	3		
9201	Gillnet	9203	IL	10/30/92	1030	3	6	BDWF	183		F	1	3		
9201	Gillnet	9203	IL	10/30/92	1030	3	7	LSCS	240		F	2	7		
9201	Gillnet	9203	IL	10/30/92	1030	3	8	LSCS	200		F	2	4		
9201	Gillnet	9203	IL	10/30/92	1030	3	9	LSCS	202		F	1	6		
9201	Gillnet	9203	IL	10/30/92	1030	3	10	LSCS	194		M	1	6		
9201	Gillnet	9203	IL	10/30/92	1030	3	11	LSCS	190		M	2	7		
9201	Gillnet	9203	IL	10/30/92	1030	3	12	LSCS	182		M	2	5		
9201	Gillnet	9203	IL	10/30/92	1030	4	13	LSCS	303		F	5	14		
9201	Gillnet	9203	IL	10/30/92	1030	5	14	ARCS	343		M	5	15		
9201	Gillnet	9203	IL	10/30/92	1030	5	15	ARCS	357		F	5	10		

Appendix Table 17. Biological data obtained from fish collected during 1991-1993 gillnet sampling in the Colville River delta.

Set Number	Method	Station	Habitat	Date Checked	Time Checked	Panel Number	Fish Number	Species	Fork Length (mm)			Weight (gm)	Sex	Maturity	Age
9201	Gillnet	9203	IL	10/30/92	1030	6	16	ARCS	363			M	5	14	
9203	Gillnet	9205	IL	10/31/92	1030	4	1	LSCS	280			F	4	13	
9203	Gillnet	9205	IL	10/31/92	1030	5	2	LSCS	290			M	5	12	
9204	Gillnet	9206	IL	10/31/92	1050	5	1	ARCS	380			F	4	12	
9204	Gillnet	9206	IL	10/31/92	1050	5	2	LSCS	294			F	5	13	
9204	Gillnet	9206	IL	10/31/92	1050	5	3	LSCS	249			F	4	11	
9204	Gillnet	9206	IL	10/31/92	1050	5	4	LSCS	303			F	4	11	
9204	Gillnet	9206	IL	10/31/92	1050	5	5	LSCS	301			F	4	13	
9204	Gillnet	9206	IL	10/31/92	1050	5	6	LSCS	289			M	5	13	
9204	Gillnet	9206	IL	10/31/92	1050	4	7	LSCS	298			M	5	12	
9204	Gillnet	9206	IL	10/31/92	1050	4	8	LSCS	284			M	5	9	
9204	Gillnet	9206	IL	10/31/92	1050	4	9	LSCS	290			M	5	13	
9204	Gillnet	9206	IL	10/31/92	1050	4	10	LSCS	276			M	5	8	
9204	Gillnet	9206	IL	10/31/92	1050	4	11	LSCS	270			F	5	8	
9204	Gillnet	9206	IL	10/31/92	1050	4	12	LSCS	281			M	5	12	
9204	Gillnet	9206	IL	10/31/92	1050	4	13	LSCS	287			M	5	12	
9204	Gillnet	9206	IL	10/31/92	1050	4	14	LSCS	290			M	5	8	
9204	Gillnet	9206	IL	10/31/92	1050	4	15	LSCS	275			M	5	8	
9204	Gillnet	9206	IL	10/31/92	1050	4	16	LSCS	272			M	5	10	
9204	Gillnet	9206	IL	10/31/92	1050	4	17	LSCS	282					8	
9205	Gillnet	9207	TL	11/1/92	1600	6	1	BDWF	505			M	2	13	
9205	Gillnet	9207	TL	11/1/92	1600	6	2	ARCS	429			F	5	12	
9205	Gillnet	9207	TL	11/1/92	1600	2	3	HBWF	168			I	1	3	
9205	Gillnet	9207	TL	11/1/92	1600	5	4	LSCS	331			M	4	13	
9205	Gillnet	9207	TL	11/1/92	1600	5	5	LSCS	353			F	5	15	
9205	Gillnet	9207	TL	11/1/92	1600	5	6	LSCS	303			M	4		
9205	Gillnet	9207	TL	11/1/92	1600	5	7	ARCS	385			M	5	9	
9205	Gillnet	9207	TL	11/1/92	1600	5	8	ARCS	372			F	5	13	
9205	Gillnet	9207	TL	11/1/92	1600	5	9	BDWF	398			M	2	6	
9205	Gillnet	9207	TL	11/1/92	1600	5	10	BDWF	475			F	5	12	
9206	Gillnet	9208	IL	11/2/92	1100	2	1	ARCS	157			I	1	2	
9206	Gillnet	9208	IL	11/2/92	1100	5	2	BDWF	354			F	2	12	
9206	Gillnet	9208	IL	11/2/92	1100	5	3	HBWF	420			F	5	19	
9207	Gillnet	9209	IL	11/2/92	1130	3	1	LSCS	224			M	2	5	
9207	Gillnet	9209	IL	11/2/92	1130	3	2	LSCS	199			F	2	6	
9207	Gillnet	9209	IL	11/2/92	1130	3	3	LSCS	207			M	2	6	
9207	Gillnet	9209	IL	11/2/92	1130	4	4	LSCS	282			F	5	12	
9207	Gillnet	9209	IL	11/2/92	1130	4	5	LSCS	273			M	5	10	
9207	Gillnet	9209	IL	11/2/92	1130	4	6	LSCS	283			F	5	12	
9207	Gillnet	9209	IL	11/2/92	1130	4	7	LSCS	260			M	2	6	
9207	Gillnet	9209	IL	11/2/92	1130	4	8	LSCS	253			M	5	12	
9207	Gillnet	9209	IL	11/2/92	1130	5	9	LSCS	326			F	4	17	
9207	Gillnet	9209	IL	11/2/92	1130	5	10	LSCS	300			M	4	12	
9207	Gillnet	9209	IL	11/2/92	1130	5	11	LSCS	281			M	5	11	
9207	Gillnet	9209	IL	11/2/92	1130	5	12	LSCS	306			M	5	12	
9207	Gillnet	9209	IL	11/2/92	1130	6	13	BDWF	497			M	5	20	
9207	Gillnet	9209	IL	11/2/92	1130	6	14	BDWF	415			M	2	14	
9208	Gillnet	9204	IL	11/3/92	1530	2	1	LSCS	188			M	1	4	

Appendix Table 17. Biological data obtained from fish collected during 1991-1993 gillnet sampling in the Colville River delta.

Set Number	Method	Station	Habitat	Date Checked	Time Checked	Panel Number	Fish Number	Species	Fork Length (mm)	Weight (gm)	Fork		
											Sex	Maturity	Age
9208	Gillnet	9204	IL	11/3/92	1530	4	2	LSCS	274		F	5	13
9208	Gillnet	9204	IL	11/3/92	1530	4	3	LSCS	285		F	5	13
9208	Gillnet	9204	IL	11/3/92	1530	4	4	LSCS	293		F	4	12
9208	Gillnet	9204	IL	11/3/92	1530	4	5	LSCS	275		M	4	12
9208	Gillnet	9204	IL	11/3/92	1530	5	6	LSCS	349		F	5	11
9208	Gillnet	9204	IL	11/3/92	1530	5	7	LSCS	280		M	5	13
9208	Gillnet	9204	IL	11/3/92	1530	5	8	LSCS	280		M	5	13
9208	Gillnet	9204	IL	11/3/92	1530	5	9	LSCS	298		F	5	12
9208	Gillnet	9204	IL	11/3/92	1530	5	10	LSCS	273		M	5	9
9208	Gillnet	9204	IL	11/3/92	1530	5	11	LSCS	296		F	5	12
9208	Gillnet	9204	IL	11/3/92	1530	5	12	LSCS	268		M	5	13
9208	Gillnet	9204	IL	11/3/92	1530	5	13	LSCS	291		F	5	11
9210	Gillnet	9211	IL	11/4/92	1630	6	1	ARCS	430		F	2	18
9210	Gillnet	9211	IL	11/4/92	1630	6	2	ARCS	422		M	2	15
9210	Gillnet	9211	IL	11/4/92	1630	6	3	LSCS	403		F	4	16
9210	Gillnet	9211	IL	11/4/92	1630	6	4	ARCS	414		M	2	15
9210	Gillnet	9211	IL	11/4/92	1630	6	5	ARCS	396		M	2	16
9210	Gillnet	9211	IL	11/4/92	1630	5	6	ARCS	320		M	3	8
9210	Gillnet	9211	IL	11/4/92	1630	5	7	ARCS	415		M	2	16
9210	Gillnet	9211	IL	11/4/92	1630	5	8	ARCS	408		M	2	17
9210	Gillnet	9211	IL	11/4/92	1630	5	9	ARCS	390		M	2	18
9210	Gillnet	9211	IL	11/4/92	1630	5	10	LSCS	375		M	4	14
9210	Gillnet	9211	IL	11/4/92	1630	5	11	LSCS	374		M	5	20
9210	Gillnet	9211	IL	11/4/92	1630	5	12	LSCS	367		M	4	15
9210	Gillnet	9211	IL	11/4/92	1630	5	13	LSCS	325		M	4	17
9210	Gillnet	9211	IL	11/4/92	1630	5	14	LSCS	275		M	2	6
9211	Gillnet	9213	IL	11/5/92	1100	2	1	LSCS	254		M	2	10
9211	Gillnet	9213	IL	11/5/92	1100	2	2	LSCS	186		F	2	4
9211	Gillnet	9213	IL	11/5/92	1100	3	3	LSCS	258		M	2	12
9211	Gillnet	9213	IL	11/5/92	1100	3	4	LSCS	206		F	2	5
9211	Gillnet	9213	IL	11/5/92	1100	3	5	LSCS	261		M	5	13
9211	Gillnet	9213	IL	11/5/92	1100	3	6	LSCS	262		F	2	11
9211	Gillnet	9213	IL	11/5/92	1100	3	7	LSCS	250		M	2	12
9211	Gillnet	9213	IL	11/5/92	1100	3	8	LSCS	187		F	2	5
9211	Gillnet	9213	IL	11/5/92	1100	3	9	LSCS	255		M	2	11
9211	Gillnet	9213	IL	11/5/92	1100	3	10	LSCS	254		F	2	11
9211	Gillnet	9213	IL	11/5/92	1100	5	11	LSCS	337		F	4	15
9211	Gillnet	9213	IL	11/5/92	1100	5	12	LSCS	310		M	4	17
9211	Gillnet	9213	IL	11/5/92	1100	5	13	LSCS	310		F	4	19
9211	Gillnet	9213	IL	11/5/92	1100	5	14	LSCS	301		M	4	18
9211	Gillnet	9213	IL	11/5/92	1100	5	15	LSCS	302		M	5	19
9211	Gillnet	9213	IL	11/5/92	1100	5	16	LSCS	287		M	4	20
9211	Gillnet	9213	IL	11/5/92	1100	4	17	LSCS	300		M	5	17
9211	Gillnet	9213	IL	11/5/92	1100	4	18	LSCS	277		M	2	12
9211	Gillnet	9213	IL	11/5/92	1100	4	19	LSCS	291		M	4	15
9211	Gillnet	9213	IL	11/5/92	1100	4	20	LSCS	268		F	2	12
9211	Gillnet	9213	IL	11/5/92	1100	4	21	LSCS	269		F	2	13
9211	Gillnet	9213	IL	11/5/92	1100	4	22	LSCS	261		F	2	11

Appendix Table 17. Biological data obtained from fish collected during 1991-1993 gillnet sampling in the Colville River delta.

Set Number	Method	Station	Habitat	Date Checked	Time Checked	Panel Number	Fish Number	Species	Fork Length (mm)				Weight (gm)	Sex	Maturity	Age
9211	Gillnet	9213	IL	11/5/92	1100	4	23	LSCS	267				F	2	11	
9211	Gillnet	9213	IL	11/5/92	1100	4	24	LSCS	263				M	2	11	
9211	Gillnet	9213	IL	11/5/92	1100	4	25	LSCS	264				M	2	11	
9211	Gillnet	9213	IL	11/5/92	1100	4	26	LSCS	258				M	5	12	
9211	Gillnet	9213	IL	11/5/92	1100	4	27	LSCS	275				F	2	13	
9211	Gillnet	9213	IL	11/5/92	1100	4	28	LSCS	258				F	2	11	
9211	Gillnet	9213	IL	11/5/92	1100	4	29	LSCS	268				M	5	12	
9211	Gillnet	9213	IL	11/5/92	1100	4	30	LSCS	280				F	5	13	
9211	Gillnet	9213	IL	11/5/92	1100	4	31	LSCS	271				M	5	14	
9211	Gillnet	9213	IL	11/5/92	1100	4	32	LSCS	263				F	5	11	
9211	Gillnet	9213	IL	11/5/92	1100	4	33	LSCS	281				M	5	14	
9211	Gillnet	9213	IL	11/5/92	1100	4	34	LSCS	283				F	2	12	
9211	Gillnet	9213	IL	11/5/92	1100	4	35	LSCS	319				M	5	19	
9211	Gillnet	9213	IL	11/5/92	1100	4	36	LSCS	285				M	4	11	
9211	Gillnet	9213	IL	11/5/92	1100	4	37	LSCS	288				F	4	12	
9211	Gillnet	9213	IL	11/5/92	1100	4	38	LSCS	259				F	2	12	
9211	Gillnet	9213	IL	11/5/92	1100	4	39	LSCS	269				F	2	12	
9211	Gillnet	9213	IL	11/5/92	1100	4	40	LSCS	260				M	2	11	
9211	Gillnet	9213	IL	11/5/92	1100	4	41	LSCS	257				F	5	11	
9211	Gillnet	9213	IL	11/5/92	1100	4	42	LSCS	263				M	5	13	
9211	Gillnet	9213	IL	11/5/92	1100	4	43	LSCS	262				F	5	10	
9211	Gillnet	9213	IL	11/5/92	1100	4	44	LSCS	260				M	2	13	
9211	Gillnet	9213	IL	11/5/92	1100	4	45	LSCS	259				F	5	12	
9211	Gillnet	9213	IL	11/5/92	1100	4	46	LSCS	361				F	5	12	
9211	Gillnet	9213	IL	11/5/92	1100	4	47	LSCS	251				M	2	12	
9211	Gillnet	9213	IL	11/5/92	1100	4	48	LSCS	253				M	5	11	
9211	Gillnet	9213	IL	11/5/92	1100	4	49	LSCS	250				M	5	11	
9211	Gillnet	9213	IL	11/5/92	1100	4	50	LSCS	250				M	4	13	
9212	Gillnet	9212	IL	11/5/92	1200	4	1	LSCS	265				M	5	11	
9212	Gillnet	9212	IL	11/5/92	1200	4	2	LSCS	272				M	4	11	
9212	Gillnet	9212	IL	11/5/92	1200	4	3	LSCS	283				M	4	12	
9212	Gillnet	9212	IL	11/5/92	1200	4	4	LSCS	277				M	5	11	
9212	Gillnet	9212	IL	11/5/92	1200	4	5	LSCS	246				M	4	15	
9212	Gillnet	9212	IL	11/5/92	1200	4	6	LSCS	310				M	4	13	
9212	Gillnet	9212	IL	11/5/92	1200	4	7	LSCS	266				M	4	14	
9212	Gillnet	9212	IL	11/5/92	1200	4	8	LSCS	250				M	5	11	
9212	Gillnet	9212	IL	11/5/92	1200	4	9	LSCS	280				M	4	13	
9212	Gillnet	9212	IL	11/5/92	1200	4	10	LSCS	255				M	5	11	
9212	Gillnet	9212	IL	11/5/92	1200	4	11	LSCS	257				F	5	11	
9212	Gillnet	9212	IL	11/5/92	1200	4	12	LSCS	240				M	2	11	
9212	Gillnet	9212	IL	11/5/92	1200	4	13	LSCS	269				M	2	11	
9212	Gillnet	9212	IL	11/5/92	1200	4	14	LSCS	275				F	4	12	
9212	Gillnet	9212	IL	11/5/92	1200	4	15	LSCS	259				F	4	10	
9212	Gillnet	9212	IL	11/5/92	1200	4	16	LSCS	260				M	5	11	
9212	Gillnet	9212	IL	11/5/92	1200	4	17	LSCS	275				F	5	10	
9212	Gillnet	9212	IL	11/5/92	1200	4	18	LSCS	245				M	5	12	
9212	Gillnet	9212	IL	11/5/92	1200	4	19	LSCS	240				M	5	13	
9212	Gillnet	9212	IL	11/5/92	1200	4	20	LSCS	255				M	4	12	

Appendix Table 17. Biological data obtained from fish collected during 1991-1993 gillnet sampling in the Colville River delta.

Set Number	Method	Station	Habitat	Date Checked	Time Checked	Panel Number	Fish Number	Species	Fork Length (mm)	Weight (gm)	Fork		
											Sex	Maturity	Age
9212	Gillnet	9212	IL	11/5/92	1200	4	21	LSCS	355		M	4	16
9212	Gillnet	9212	IL	11/5/92	1200	4	22	LSCS	260		M	4	12
9212	Gillnet	9212	IL	11/5/92	1200	4	23	LSCS	277		F	5	11
9212	Gillnet	9212	IL	11/5/92	1200	4	24	LSCS	267		M	5	10
9212	Gillnet	9212	IL	11/5/92	1200	4	25	LSCS	295		M	5	19
9212	Gillnet	9212	IL	11/5/92	1200	4	26	LSCS	268		M	5	12
9212	Gillnet	9212	IL	11/5/92	1200	4	27	LSCS	263		M	5	13
9212	Gillnet	9212	IL	11/5/92	1200	4	28	LSCS	261		M	5	12
9212	Gillnet	9212	IL	11/5/92	1200	4	29	LSCS	275		M	5	11
9212	Gillnet	9212	IL	11/5/92	1200	4	30	LSCS	295		M	4	16
9212	Gillnet	9212	IL	11/5/92	1200	4	31	LSCS	257		M	5	10
9212	Gillnet	9212	IL	11/5/92	1200	4	32	LSCS	271		F	4	13
9212	Gillnet	9212	IL	11/5/92	1200	4	33	LSCS	261		M	5	12
9212	Gillnet	9212	IL	11/5/92	1200	4	34	LSCS	250		M	5	13
9212	Gillnet	9212	IL	11/5/92	1200	4	35	LSCS	255		M	4	13
9212	Gillnet	9212	IL	11/5/92	1200	4	36	LSCS	249		M	5	11
9212	Gillnet	9212	IL	11/5/92	1200	4	37	LSCS	274		M	4	12
9212	Gillnet	9212	IL	11/5/92	1200	4	38	LSCS	243		M	5	11
9212	Gillnet	9212	IL	11/5/92	1200	4	39	LSCS	255		M	4	13
9212	Gillnet	9212	IL	11/5/92	1200	4	40	LSCS	254		M	5	12
9212	Gillnet	9212	IL	11/5/92	1200	4	41	LSCS	263		F	5	13
9212	Gillnet	9212	IL	11/5/92	1200	4	42	LSCS	271		M	5	13
9212	Gillnet	9212	IL	11/5/92	1200	4	43	LSCS	255		F	5	11
9212	Gillnet	9212	IL	11/5/92	1200	4	44	LSCS	255		M	5	12
9212	Gillnet	9212	IL	11/5/92	1200	4	45	LSCS	261		M	5	13
9212	Gillnet	9212	IL	11/5/92	1200	4	46	LSCS	247		M	5	13
9212	Gillnet	9212	IL	11/5/92	1200	4	47	LSCS	234		M	5	13
9212	Gillnet	9212	IL	11/5/92	1200	4	48	LSCS	265		M	5	12
9212	Gillnet	9212	IL	11/5/92	1200	4	49	LSCS	256		F	2	12
9212	Gillnet	9212	IL	11/5/92	1200	4	50	LSCS	245		M	5	10
9212	Gillnet	9212	IL	11/5/92	1200	4	51	LSCS	252		M	5	12
9212	Gillnet	9212	IL	11/5/92	1200	4	52	LSCS	276		F	5	12
9212	Gillnet	9212	IL	11/5/92	1200	4	53	LSCS	250		F	5	9
9212	Gillnet	9212	IL	11/5/92	1200	4	54	LSCS	264		M	4	12
9212	Gillnet	9212	IL	11/5/92	1200	4	55	LSCS	255		M	5	12
9212	Gillnet	9212	IL	11/5/92	1200	1	56	LSCS	119		I	1	2
9212	Gillnet	9212	IL	11/5/92	1200	3	57	LSCS	279		M	4	12
9212	Gillnet	9212	IL	11/5/92	1200	3	58	LSCS	249		M	5	14
9212	Gillnet	9212	IL	11/5/92	1200	3	59	LSCS	212		M	2	5
9212	Gillnet	9212	IL	11/5/92	1200	3	60	LSCS	209		M	5	5
9212	Gillnet	9212	IL	11/5/92	1200	3	61	LSCS	206		M	2	5
9212	Gillnet	9212	IL	11/5/92	1200	2	62	LSCS	159		F	1	3
9212	Gillnet	9212	IL	11/5/92	1200	2	63	LSCS	180		F	1	4
9212	Gillnet	9212	IL	11/5/92	1200	5	64	LSCS	294		M	5	16
9212	Gillnet	9212	IL	11/5/92	1200	5	65	LSCS	347		M	5	16
9212	Gillnet	9212	IL	11/5/92	1200	5	66	LSCS	272		M	5	13
9212	Gillnet	9212	IL	11/5/92	1200	5	67	LSCS	301		F	4	20
9212	Gillnet	9212	IL	11/5/92	1200	5	68	LSCS	301		F	4	

Appendix Table 17. Biological data obtained from fish collected during 1991-1993 gillnet sampling in the Colville River delta.

Set Number	Method	Station	Habitat	Date Checked	Time Checked	Panel Number	Fish Number	Species	Fork Length (mm)		Weight (gm)	Sex	Maturity	Age
9212	Gillnet	9212	IL	11/5/92	1200	5	69	LSCS	299		M	5	13	
9212	Gillnet	9212	IL	11/5/92	1200	5	70	LSCS	305		M	5	11	
9212	Gillnet	9212	IL	11/5/92	1200	5	71	LSCS	280		M	5	14	
9212	Gillnet	9212	IL	11/5/92	1200	5	72	LSCS	281		M	4	14	
9212	Gillnet	9212	IL	11/5/92	1200	5	73	LSCS	295		M	4	10	
9212	Gillnet	9212	IL	11/5/92	1200	5	74	LSCS	296		M	5	16	
9212	Gillnet	9212	IL	11/5/92	1200	5	75	LSCS	291		M	5	13	
9212	Gillnet	9212	IL	11/5/92	1200	5	76	LSCS	292		M	4	15	
9212	Gillnet	9212	IL	11/5/92	1200	5	77	LSCS	289		F	5	12	
9212	Gillnet	9212	IL	11/5/92	1200	5	78	LSCS	298		M	5	11	
9212	Gillnet	9212	IL	11/5/92	1200	5	79	LSCS	292		M	4	15	
9212	Gillnet	9212	IL	11/5/92	1200	5	80	LSCS	294		M	5	13	
9212	Gillnet	9212	IL	11/5/92	1200	5	81	LSCS	307		M	4		
9212	Gillnet	9212	IL	11/5/92	1200	5	82	LSCS	302		M	5	16	
9212	Gillnet	9212	IL	11/5/92	1200	5	83	LSCS	326		F	4	16	
9212	Gillnet	9212	IL	11/5/92	1200	5	84	LSCS	309		F	5	12	
9212	Gillnet	9212	IL	11/5/92	1200	5	85	LSCS	290		M	5	12	
9212	Gillnet	9212	IL	11/5/92	1200	5	86	LSCS	303		F	4	14	
9212	Gillnet	9212	IL	11/5/92	1200	5	87	LSCS	287		M	4	15	
9213	Gillnet	9201	TL	11/7/92	1130	3	1	ARCS	161		I	1	2	
9213	Gillnet	9201	TL	11/7/92	1130	6	2	ARCS	343		M	2	7	
9301	Gillnet	9301	IL	10/28/93	10:30	6	1	ARCS	386	617	M	2	9	
9301	Gillnet	9301	IL	10/28/93	10:30	5	2	LSCS	337	347	F	4	14	
9301	Gillnet	9301	IL	10/28/93	10:30	5	3	LSCS	350	361	M	4	25	
9301	Gillnet	9301	IL	10/28/93	10:30	5	4	ARCS	370	580	F	2	7	
9301	Gillnet	9301	IL	10/28/93	10:30	5	5	ARCS	367	575	M	2	11	
9301	Gillnet	9301	IL	10/28/93	10:30	5	6	LSCS	296	287	M	5	11	
9301	Gillnet	9301	IL	10/28/93	10:30	5	7	ARCS	318	332	M	2	6	
9301	Gillnet	9301	IL	10/28/93	10:30	5	8	LSCS	330	358	M	5	11	
9301	Gillnet	9301	IL	10/28/93	10:30	5	9	ARCS	394	743	F	3	10	
9301	Gillnet	9301	IL	10/28/93	10:30	5	10	LSCS	331	359	M	5	13	
9301	Gillnet	9301	IL	10/28/93	10:30	4	11	LSCS	245	144	F	2	5	
9301	Gillnet	9301	IL	10/28/93	10:30	4	12	LSCS	218	100	M	2	4	
9301	Gillnet	9301	IL	10/28/93	10:30	4	13	LSCS	255	148	F	2	6	
9301	Gillnet	9301	IL	10/28/93	10:30	4	14	LSCS	234	135	M	5	4	
9301	Gillnet	9301	IL	10/28/93	10:30	4	15	LSCS	226	114	M	2	4	
9301	Gillnet	9301	IL	10/28/93	10:30	4	16	LSCS	255	169	M	5	4	
9301	Gillnet	9301	IL	10/28/93	10:30	4	17	LSCS	239	128	M	2	4	
9301	Gillnet	9301	IL	10/28/93	10:30	3	18	LSCS	227	118	M	2	5	
9301	Gillnet	9301	IL	10/28/93	10:30	3	19	LSCS	266	217	F	4	5	
9301	Gillnet	9301	IL	10/28/93	10:30	3	20	LSCS	235		F	2	4	
9301	Gillnet	9301	IL	10/28/93	10:30	3	21	LSCS	233	112	F	1	5	
9302	Gillnet	9303	TL	10/28/93	11:45	3	1	LSCS	182	59	F	1	4	
9302	Gillnet	9303	TL	10/28/93	11:45	3	2	LSCS	190	68	F	2	5	
9302	Gillnet	9303	TL	10/28/93	11:45	3	3	LSCS	223	115	M	2	7	
9302	Gillnet	9303	TL	10/28/93	11:45	3	4	LSCS	186	61	M	1	4	
9302	Gillnet	9303	TL	10/28/93	11:45	3	5	LSCS	191	69	M	1	4	
9302	Gillnet	9303	TL	10/28/93	11:45	3	6	LSCS	176	47	M	1	4	

Appendix Table 17. Biological data obtained from fish collected during 1991-1993 gillnet sampling in the Colville River delta.

Set Number	Method	Station	Habitat	Date Checked	Time Checked	Panel Number	Fish Number	Species	Fork Length (mm)				Weight (gm)		Maturity	Age
9302	Gillnet	9303	TL	10/28/93	11:45	3	7	LSCS	198	72	F	1	4			
9302	Gillnet	9303	TL	10/28/93	11:45	3	8	LSCS	195	68	M	1	4			
9302	Gillnet	9303	TL	10/28/93	11:45	3	9	LSCS	198	76	M	2	4			
9302	Gillnet	9303	TL	10/28/93	11:45	2	10	LSCS	177	50	F	1	4			
9302	Gillnet	9303	TL	10/28/93	11:45	4	11	LSCS	231	138	F	1	5			
9302	Gillnet	9303	TL	10/28/93	11:45	4	12	LSCS	287	239	F	2	9			
9302	Gillnet	9303	TL	10/28/93	11:45	5	13	LSCS	372	395	M	5	14			
9302	Gillnet	9303	TL	10/28/93	11:45	5	14	LSCS	370	541	M	5	16			
9302	Gillnet	9303	TL	10/28/93	11:45	5	15	LSCS	282	232	M	5	9			
9302	Gillnet	9303	TL	10/28/93	11:45	5	16	LSCS	307	279	F	5	10			
9302	Gillnet	9303	TL	10/28/93	11:45	6	17	ARCS	390	713	M	2	13			
9303	Gillnet	9302	IL	10/28/93	11:00	1	1	BKFH	100							
9304	Gillnet	9305	IL	10/31/93	15:30	1	1	BKFH	107	13						
9304	Gillnet	9305	IL	10/31/93	15:30	1	2	BKFH	94	11						
9304	Gillnet	9305	IL	10/31/93	15:30	1	3	BKFH	90	9						
9304	Gillnet	9305	IL	10/31/93	15:30	1	4	BKFH	97	12						
9304	Gillnet	9305	IL	10/31/93	15:30	1	5	BKFH	101	11						
9304	Gillnet	9305	IL	10/31/93	15:30	1	6	BKFH	111	14						
9304	Gillnet	9305	IL	10/31/93	15:30	1	7	BKFH	95	11						
9304	Gillnet	9305	IL	10/31/93	15:30	1	8	BKFH	93	9						
9304	Gillnet	9305	IL	10/31/93	15:30	1	9	LSCS	111	12	I	1	1			
9304	Gillnet	9305	IL	10/31/93	15:30	1	10	RDWF	121	15	F					
9304	Gillnet	9305	IL	10/31/93	15:30	1	11	RDWF	123	17	M					
9304	Gillnet	9305	IL	10/31/93	15:30	1	12	BDWF	95	9	I	1	0			
9304	Gillnet	9305	IL	10/31/93	15:30	1	13	BDWF	101	12	I	1	0			
9304	Gillnet	9305	IL	10/31/93	15:30	1	14	BDWF	100	12	I	1	0			
9304	Gillnet	9305	IL	10/31/93	15:30	1	15	BDWF	100	12	I	1	0			
9304	Gillnet	9305	IL	10/31/93	15:30	2	16	BKFH	125	26						
9304	Gillnet	9305	IL	10/31/93	15:30	2	17	LSCS	147	33	F	1	1			
9304	Gillnet	9305	IL	10/31/93	15:30	2	18	LSCS	160	40	F	1	2			
9304	Gillnet	9305	IL	10/31/93	15:30	2	19	BDWF	145	35	M	1	1			
9304	Gillnet	9305	IL	10/31/93	15:30	3	20	BKFH	122	23						
9304	Gillnet	9305	IL	10/31/93	15:30	3	21	BDWF	152	40	F	1	1			
9304	Gillnet	9305	IL	10/31/93	15:30	3	22	BDWF	162	53	M	1	1			
9304	Gillnet	9305	IL	10/31/93	15:30	3	23	BDWF	166	58	F	1	1			
9304	Gillnet	9305	IL	10/31/93	15:30	3	24	BDWF	152	46	M	1	1			
9304	Gillnet	9305	IL	10/31/93	15:30	3	25	BDWF	462	1456	M	1	10			
9304	Gillnet	9305	IL	10/31/93	15:30	3	26	BDWF	157	43	M	1	1			
9304	Gillnet	9305	IL	10/31/93	15:30	4	27	LSCS	234	157	M	1	4			
9304	Gillnet	9305	IL	10/31/93	15:30	4	28	LSCS	317	444	F	3	8			
9304	Gillnet	9305	IL	10/31/93	15:30	4	29	BDWF	204	105	M	1	2			
9304	Gillnet	9305	IL	10/31/93	15:30	4	30	BDWF	251	213	F	1	4			
9304	Gillnet	9305	IL	10/31/93	15:30	5	31	BDWF	341	589	M	1	7			
9304	Gillnet	9305	IL	10/31/93	15:30	5	32	LSCS	317	398	F	2	5			
9304	Gillnet	9305	IL	10/31/93	15:30	5	33	LSCS	321	345	F	5	13			
9304	Gillnet	9305	IL	10/31/93	15:30	6	34	BDWF	513	2123	M	2	23			
9304	Gillnet	9305	IL	10/31/93	15:30	6	35	BDWF	477	1634	M	1	14			
9304	Gillnet	9305	IL	10/31/93	15:30	6	36	BDWF	411	1048	F	1	9			

Appendix Table 17. Biological data obtained from fish collected during 1991-1993 gillnet sampling in the Colville River delta.

Set Number	Method	Station	Habitat	Date Checked	Time Checked	Panel Number	Fish Number	Species	Fork Length (mm)		Weight (gm)		
									(mm)	(gm)	Sex	Maturity	Age
9304	Gillnet	9305	IL	10/31/93	15:30	6	37	HBWF	350	664	F	2	10
9304	Gillnet	9305	IL	10/31/93	15:30	6	38	BDWF	372	735	M	1	7
9304	Gillnet	9305	IL	10/31/93	15:30	6	39	BRBT	379	310	F	1	4
9304	MinTrap	9305	IL	10/31/93	15:30	M	40	BRBT	56	2	I	1	0
9305	Gillnet	9304	IL	10/31/93	14:15	4	1	LSCS	338	283	F	2	16
9305	Gillnet	9304	IL	10/31/93	14:15	4	2	LSCS	267	169	M	2	5
9305	Gillnet	9304	IL	10/31/93	14:15	6	3	BRBT	500	742	F	1	7
9305	Gillnet	9304	IL	10/31/93	14:15	6	4	BDWF	377	726	M	1	6
9305	Gillnet	9304	IL	10/31/93	14:15	6	5	LSCS	373	583	M	5	14
9305	Gillnet	9304	IL	10/31/93	14:15	5	6	LSCS	326	359	F	3	14
9305	Gillnet	9304	IL	10/31/93	14:15	5	7	LSCS	368	504	F	2	13
9305	Gillnet	9304	IL	10/31/93	14:15	5	8	LSCS	380	447	M	5	12
9305	Gillnet	9304	IL	10/31/93	14:15	5	9	LSCS	354	414	M	5	9
9305	Gillnet	9304	IL	10/31/93	14:15	5	10	LSCS	353	352	M	5	20
9305	Gillnet	9304	IL	10/31/93	14:15	5	11	LSCS	357	460	M	5	14
9305	Gillnet	9304	IL	10/31/93	14:15	5	12	LSCS	334	380	M	5	13
9305	Gillnet	9304	IL	10/31/93	14:15	5	13	LSCS	353	463	M	5	12
9305	Gillnet	9304	IL	10/31/93	14:15	5	14	LSCS	348	391	M	5	15
9305	Gillnet	9304	IL	10/31/93	14:15	5	15	LSCS	331	346	F	2	11
9305	Gillnet	9304	IL	10/31/93	14:15	5	16	LSCS	343	397	M	2	12
9305	Gillnet	9304	IL	10/31/93	14:15	5	17	LSCS	335	363	F	3	12
9305	Gillnet	9304	IL	10/31/93	14:15	5	18	LSCS	330	352	M	2	12
9305	Gillnet	9304	IL	10/31/93	14:15	5	19	LSCS	323	352	M	2	14
9305	Gillnet	9304	IL	10/31/93	14:15	5	20	LSCS	343	415	M	5	14
9305	Gillnet	9304	IL	10/31/93	14:15	5	21	LSCS	361	404	M	2	12
9305	Gillnet	9304	IL	10/31/93	14:15	5	22	RDWF	346	425	F	2	7
9305	Gillnet	9304	IL	10/31/93	14:15	5	23	RDWF	344	463	M	1	7
9305	Gillnet	9304	IL	10/31/93	14:15	5	24	BDWF	343	524	M	1	5
9305	Gillnet	9304	IL	10/31/93	14:15	5	25	BRBT	400	358	M	1	6
9306	Gillnet	9306	IL	11/2/93	10:15	3	1	LSCS	204	85	M	1	3
9306	Gillnet	9306	IL	11/2/93	10:15	3	2	LSCS	231	117	F	1	4
9306	Gillnet	9306	IL	11/2/93	10:15	3	3	LSCS	238	125	M	1	4
9306	Gillnet	9306	IL	11/2/93	10:15	3	4	LSCS	232	121	F	1	4
9306	Gillnet	9306	IL	11/2/93	10:15	3	5	LSCS	205	78	M	1	3
9306	Gillnet	9306	IL	11/2/93	10:15	3	6	LSCS	173	51	M	1	3
9306	Gillnet	9306	IL	11/2/93	10:15	4	7	LSCS	227	107	M	1	3
9306	Gillnet	9306	IL	11/2/93	10:15	4	8	LSCS	226	117	F	1	4
9306	Gillnet	9306	IL	11/2/93	10:15	4	9	LSCS	252	158	M	2	6
9306	Gillnet	9306	IL	11/2/93	10:15	4	10	LSCS	252	147	F	1	6
9306	Gillnet	9306	IL	11/2/93	10:15	5	11	LSCS	288	246	M	2	13
9306	Gillnet	9306	IL	11/2/93	10:15	5	12	BDWF	280	296	F	1	5
9306	Gillnet	9306	IL	11/2/93	10:15	5	13	BDWF	335	480	F	1	8
9306	Gillnet	9306	IL	11/2/93	10:15	5	14	BDWF	273	261	M	1	5
9306	Gillnet	9306	IL	11/2/93	10:15	5	15	BDWF	406	852	M	1	12
9306	Gillnet	9306	IL	11/2/93	10:15	5	16	BDWF	388	727	F	1	14
9306	Gillnet	9306	IL	11/2/93	10:15	6	17	BDWF	445	1250	F	2	13
9306	Gillnet	9306	IL	11/2/93	10:15	6	18	BDWF	420	801	M	1	12
9306	Gillnet	9306	IL	11/2/93	10:15	4	19	BRBT	647	1495	F	2	17

Appendix Table 17. Biological data obtained from fish collected during 1991-1993 gillnet sampling in the Colville River delta.

Set Number	Method	Station	Habitat	Date Checked	Time Checked	Panel Number	Fish Number	Species	Fork Length (mm)		Weight (gm)	Sex	Maturity	Age
9307	Gillnet	9307	IL	11/2/93	11:00	5	1	LSCS	402	851	F	3	11	
9307	Gillnet	9307	IL	11/2/93	11:00	5	2	LSCS	385	618	F	2	9	
9307	Gillnet	9307	IL	11/2/93	11:00	5	3	LSCS	372	681	F	4	8	
9307	Gillnet	9307	IL	11/2/93	11:00	5	4	LSCS	373	797	F	4	12	
9307	Gillnet	9307	IL	11/2/93	11:00	5	5	LSCS	370	518	M	5	7	
9307	Gillnet	9307	IL	11/2/93	11:00	5	6	LSCS	345	469	M	5	8	
9307	Gillnet	9307	IL	11/2/93	11:00	5	7	LSCS	354	496	M	5	8	
9307	Gillnet	9307	IL	11/2/93	11:00	5	8	LSCS	340	403	M	5	14	
9307	Gillnet	9307	IL	11/2/93	11:00	5	9	LSCS	336	426	M	5	8	
9307	Gillnet	9307	IL	11/2/93	11:00	5	10	LSCS	340	418	F	2	6	
9307	Gillnet	9307	IL	11/2/93	11:00	5	11	LSCS	336	381	F	2	6	
9307	Gillnet	9307	IL	11/2/93	11:00	5	12	LSCS	325	348	F	1	7	
9307	Gillnet	9307	IL	11/2/93	11:00	5	13	LSCS	286	235	M	1	5	
9307	Gillnet	9307	IL	11/2/93	11:00	5	14	LSCS	382	700	M	5	10	
9307	Gillnet	9307	IL	11/2/93	11:00	5	15	LSCS	392	758	M	5	11	
9307	Gillnet	9307	IL	11/2/93	11:00	5	16	LSCS	375	624	F	4	9	
9307	Gillnet	9307	IL	11/2/93	11:00	5	17	LSCS	378	706	M	4	8	
9307	Gillnet	9307	IL	11/2/93	11:00	5	18	LSCS	391	695	F	4	10	
9307	Gillnet	9307	IL	11/2/93	11:00	5	19	LSCS	386	665	M	4	9	
9307	Gillnet	9307	IL	11/2/93	11:00	5	20	LSCS	375	578	M	4	13	
9307	Gillnet	9307	IL	11/2/93	11:00	5	21	LSCS	360	533	M	4	15	
9307	Gillnet	9307	IL	11/2/93	11:00	5	22	LSCS	342	473	M	5	8	
9307	Gillnet	9307	IL	11/2/93	11:00	5	23	LSCS	343	531	F	4	7	
9307	Gillnet	9307	IL	11/2/93	11:00	5	24	LSCS	354	490	F	2	9	
9307	Gillnet	9307	IL	11/2/93	11:00	5	25	LSCS	358	452	M	5	7	
9307	Gillnet	9307	IL	11/2/93	11:00	5	26	LSCS	348	449			9	
9307	Gillnet	9307	IL	11/2/93	11:00	5	27	LSCS	329	388			8	
9307	Gillnet	9307	IL	11/2/93	11:00	5	28	LSCS	333	406			5	
9307	Gillnet	9307	IL	11/2/93	11:00	6	29	LSCS	430	1099			13	
9307	Gillnet	9307	IL	11/2/93	11:00	6	30	LSCS	427	883			12	
9307	Gillnet	9307	IL	11/2/93	11:00	6	31	LSCS	418	844			11	
9307	Gillnet	9307	IL	11/2/93	11:00	6	32	LSCS	374	681			8	
9307	Gillnet	9307	IL	11/2/93	11:00	6	33	LSCS	368	572				
9307	Gillnet	9307	IL	11/2/93	11:00	6	34	LSCS	380	687			15	
9307	Gillnet	9307	IL	11/2/93	11:00	6	35	BDWF	370	711			5	
9307	Gillnet	9307	IL	11/2/93	11:00	4	36	LSCS	381	609			8	
9307	Gillnet	9307	IL	11/2/93	11:00	4	37	LSCS	325	397			7	
9307	Gillnet	9307	IL	11/2/93	11:00	4	38	LSCS	325	301			7	
9307	Gillnet	9307	IL	11/2/93	11:00	4	39	LSCS	267	205			4	
9307	Gillnet	9307	IL	11/2/93	11:00	4	40	LSCS	286	252			5	
9307	Gillnet	9307	IL	11/2/93	11:00	4	41	LSCS	307	287			4	
9307	Gillnet	9307	IL	11/2/93	11:00	4	42	LSCS	263	174			4	
9307	Gillnet	9307	IL	11/2/93	11:00	3	43	LSCS	256	171			4	
9307	Gillnet	9307	IL	11/2/93	11:00	3	44	LSCS	248	167			4	
9307	Gillnet	9307	IL	11/2/93	11:00	3	45	LSCS	255	178			4	
9307	Gillnet	9307	IL	11/2/93	11:00	3	46	LSCS	188	75			3	
9307	Gillnet	9307	IL	11/2/93	11:00	3	47	LSCS	204	85			3	
9307	Gillnet	9307	IL	11/2/93	11:00	3	48	LSCS	245	149			4	

Appendix Table 17. Biological data obtained from fish collected during 1991-1993 gillnet sampling in the Colville River delta.

Set Number	Method	Station	Habitat	Date Checked	Time Checked	Panel Number	Fish Number	Species	Fork				
									Length (mm)	Weight (gm)	Sex	Maturity	Age
9307	Gillnet	9307	IL	11/2/93	11:00	3	49	LSCS	207	92			3
9307	Gillnet	9307	IL	11/2/93	11:00	1	50	LSCS	132	26			1
9307	Gillnet	9307	IL	11/2/93	11:00	1	51	BKFH	99	14			
9307	MinTrap	9307	IL	11/2/93	11:00	M	52	BKFH	67	5			
9307	MinTrap	9307	IL	11/2/93	11:00	M	53	BKFH	100	13			
9307	MinTrap	9307	IL	11/2/93	11:00	M	54	BKFH	94	10			
9307	MinTrap	9307	IL	11/2/93	11:00	M	55	BKFH	76	6			
9307	MinTrap	9307	IL	11/2/93	11:00	M	56	BKFH	67	4			
9308	Gillnet	9309	IL	11/3/93	10:30	1	1	BKFH	97	12			
9308	Gillnet	9309	IL	11/3/93	10:30	5	2	LSCS	326	390	F	3	11
9308	MinTrap	9309	IL	11/3/93	10:30	M	3	BKFH	87	7			
9308	MinTrap	9309	IL	11/3/93	10:30	M	4	BKFH	94	10			
9308	MinTrap	9309	IL	11/3/93	10:30	M	5	BKFH	91	9			
9309	Gillnet	9308	IL	11/3/93	11:15	3	1	LSCS	233	122	F	1	6
9309	Gillnet	9308	IL	11/3/93	11:15	3	2	LSCS	220	103	F	1	4
9309	Gillnet	9308	IL	11/3/93	11:15	3	3	LSCS	240	147	M	2	7
9309	Gillnet	9308	IL	11/3/93	11:15	3	4	LSCS	220	109	M	1	5
9309	Gillnet	9308	IL	11/3/93	11:15	3	5	LSCS	233	132	F	1	5
9309	Gillnet	9308	IL	11/3/93	11:15	3	6	LSCS	208	92	M	1	5
9309	Gillnet	9308	IL	11/3/93	11:15	3	7	LSCS	229	114	F	2	5
9309	Gillnet	9308	IL	11/3/93	11:15	3	8	LSCS	219	109	F	1	5
9309	Gillnet	9308	IL	11/3/93	11:15	3	9	LSCS	220	110	F	1	6
9309	Gillnet	9308	IL	11/3/93	11:15	3	10	LSCS	210	96	M	1	5
9309	Gillnet	9308	IL	11/3/93	11:15	3	11	LSCS	237	139	M	2	5
9309	Gillnet	9308	IL	11/3/93	11:15	3	12	LSCS	235	138	M	2	5
9309	Gillnet	9308	IL	11/3/93	11:15	3	13	LSCS	214	113	M	1	6
9309	Gillnet	9308	IL	11/3/93	11:15	3	14	LSCS	193	70	M	1	5
9309	Gillnet	9308	IL	11/3/93	11:15	3	15	LSCS	225	123	M	2	6
9309	Gillnet	9308	IL	11/3/93	11:15	3	16	LSCS	221	114	M	1	5
9309	Gillnet	9308	IL	11/3/93	11:15	1	17	LSCS	113	14	M	1	1
9309	Gillnet	9308	IL	11/3/93	11:15	4	18	LSCS	312	283	M	5	17
9309	Gillnet	9308	IL	11/3/93	11:15	4	19	LSCS	298	273	F	3	10
9309	Gillnet	9308	IL	11/3/93	11:15	4	20	LSCS	267	187	F	1	8
9309	Gillnet	9308	IL	11/3/93	11:15	4	21	LSCS	291	226	M	3	14
9309	Gillnet	9308	IL	11/3/93	11:15	4	22	LSCS	283	221	M	3	17
9309	Gillnet	9308	IL	11/3/93	11:15	4	23	LSCS	300	252	M	3	12
9309	Gillnet	9308	IL	11/3/93	11:15	4	24	LSCS	295	238	M	2	14
9309	Gillnet	9308	IL	11/3/93	11:15	4	25	LSCS	296	352	M	3	14
9309	Gillnet	9308	IL	11/3/93	11:15	4	26	LSCS	301	251	M	3	14
9309	Gillnet	9308	IL	11/3/93	11:15	4	27	LSCS	310	274	F	5	12
9309	Gillnet	9308	IL	11/3/93	11:15	4	28	LSCS	301	270	M	5	12
9309	Gillnet	9308	IL	11/3/93	11:15	4	29	LSCS	224	119	F	1	5
9309	Gillnet	9308	IL	11/3/93	11:15	4	30	LSCS	292	273	F	3	10
9309	Gillnet	9308	IL	11/3/93	11:15	4	31	LSCS	228	124	F	1	6
9309	Gillnet	9308	IL	11/3/93	11:15	4	32	LSCS	267	196	M	5	7
9309	Gillnet	9308	IL	11/3/93	11:15	4	33	LSCS	288	234	M	2	12
9309	Gillnet	9308	IL	11/3/93	11:15	4	34	LSCS	245	151	F	1	7
9309	Gillnet	9308	IL	11/3/93	11:15	4	35	LSCS	246	155	M	1	7

Appendix Table 17. Biological data obtained from fish collected during 1991-1993 gillnet sampling in the Colville River delta.

Set Number	Method	Station	Habitat	Date Checked	Time Checked	Panel Number	Fish Number	Species	Fork Length (mm)	Weight (gm)	Sex	Maturity	Age
9309	Gillnet	9308	IL	11/3/93	11:15	4	36	LSCS	251	167	M	2	8
9309	Gillnet	9308	IL	11/3/93	11:15	4	37	LSCS	237	140	M	2	6
9309	Gillnet	9308	IL	11/3/93	11:15	4	38	LSCS	224	117	F	1	6
9309	Gillnet	9308	IL	11/3/93	11:15	4	39	LSCS	302	270	F	2	14
9309	Gillnet	9308	IL	11/3/93	11:15	4	40	LSCS	295	255	M	3	13
9309	Gillnet	9308	IL	11/3/93	11:15	4	41	LSCS	227	129	M	1	6
9309	Gillnet	9308	IL	11/3/93	11:15	4	42	LSCS	237	131	F	1	5
9309	Gillnet	9308	IL	11/3/93	11:15	5	43	LSCS	307	299	M	5	15
9309	Gillnet	9308	IL	11/3/93	11:15	5	44	LSCS	312	300	M	3	3
9309	Gillnet	9308	IL	11/3/93	11:15	5	45	LSCS	334	359	F	2	14
9309	Gillnet	9308	IL	11/3/93	11:15	5	46	LSCS	314	326	M	3	15
9309	Gillnet	9308	IL	11/3/93	11:15	5	47	LSCS	314	289	M	2	14
9309	Gillnet	9308	IL	11/3/93	11:15	5	48	LSCS	298	252	M	3	17
9309	Gillnet	9308	IL	11/3/93	11:15	5	49	LSCS	344	429	M	3	19
9309	Gillnet	9308	IL	11/3/93	11:15	5	50	LSCS	290	258	M	2	13
9309	Gillnet	9308	IL	11/3/93	11:15	5	51	LSCS	296	303	M	3	13
9309	Gillnet	9308	IL	11/3/93	11:15	5	52	LSCS	311	304	M	2	14
9309	Gillnet	9308	IL	11/3/93	11:15	5	53	LSCS	317	319	M	3	12
9309	Gillnet	9308	IL	11/3/93	11:15	5	54	LSCS	314	309	M	2	12
9309	Gillnet	9308	IL	11/3/93	11:15	5	55	LSCS	309	331	M	5	11
9309	Gillnet	9308	IL	11/3/93	11:15	5	56	LSCS	307	282	M	3	13
9309	Gillnet	9308	IL	11/3/93	11:15	5	57	LSCS	295	277	M	3	13
9309	Gillnet	9308	IL	11/3/93	11:15	5	58	LSCS	300	257	M	2	13
9309	Gillnet	9308	IL	11/3/93	11:15	5	59	LSCS	303	298	F	2	12
9309	Gillnet	9308	IL	11/3/93	11:15	5	60	LSCS	308	281	M	2	17
9309	Gillnet	9308	IL	11/3/93	11:15	5	61	LSCS	289	266	F	2	14
9309	Gillnet	9308	IL	11/3/93	11:15	5	62	LSCS	321	335	M	3	24
9309	Gillnet	9308	IL	11/3/93	11:15	5	63	LSCS	366	644	F	4	16
9309	Gillnet	9308	IL	11/3/93	11:15	6	64	LSCS	380	631	F	5	31
9309	Gillnet	9308	IL	11/3/93	11:15	6	65	BDWF	390	776	M	1	9
9309	Gillnet	9308	IL	11/3/93	11:15	6	66	BDWF	430	1119	M	1	14
9310	Gillnet	9310	IL	11/4/93	10:40	2	1	BKFH	122	28	-	-	-
9310	Gillnet	9310	IL	11/4/93	10:40	M	2	BKFH	93	9	-	-	-
9310	Gillnet	9310	IL	11/4/93	10:40	1	3	ARCS	122	18	M	1	1
9310	Gillnet	9310	IL	11/4/93	10:40	1	4	BKFH	91	10	-	-	-
9310	Gillnet	9310	IL	11/4/93	10:40	1	5	BKFH	98	12	-	-	-
9310	Gillnet	9310	IL	11/4/93	10:40	1	6	BKFH	95	10	-	-	-
9310	Gillnet	9310	IL	11/4/93	10:40	1	7	BKFH	93	9	-	-	-
9310	Gillnet	9310	IL	11/4/93	10:40	1	8	BKFH	101	14	-	-	-
9310	Gillnet	9310	IL	11/4/93	10:40	1	9	BKFH	96	11	-	-	-
9310	Gillnet	9310	IL	11/4/93	10:40	1	10	BKFH	98	11	-	-	-
9310	Gillnet	9310	IL	11/4/93	10:40	1	11	BKFH	90	9	-	-	-
9310	Gillnet	9310	IL	11/4/93	10:40	1	12	BKFH	95	11	-	-	-
9310	Gillnet	9310	IL	11/4/93	10:40	1	13	BKFH	91	10	-	-	-
9310	Gillnet	9310	IL	11/4/93	10:40	1	14	BKFH	94	11	-	-	-
9311	Gillnet	9311	TL	11/4/93	10:10	2	1	ARCS	154	42	M	1	1
9311	Gillnet	9311	TL	11/4/93	10:10	1	2	BKFH	92	11	-	-	-
9312	Gillnet	9312	IL	11/5/93	10:10	3	1	LSCS	191	65	F	1	3

Appendix Table 17. Biological data obtained from fish collected during 1991-1993 gillnet sampling in the Colville River delta.

Set Number	Method	Station	Habitat	Date Checked	Time Checked	Panel Number	Fish Number	Species	Fork Length (mm)		Weight (gm)		Sex	Maturity	Age
									Length (mm)	Weight (gm)					
9312	Gillnet	9312	IL	11/5/93	10:10	3	2	LSCS	188	54	F	1	3		
9312	Gillnet	9312	IL	11/5/93	10:10	4	3	LSCS	250	160	M	1	4		
9312	Gillnet	9312	IL	11/5/93	10:10	4	4	LSCS	312	328	M	4	11		
9312	Gillnet	9312	IL	11/5/93	10:10	5	5	LSCS	400	696	F	5	10		
9312	Gillnet	9312	IL	11/5/93	10:10	5	6	LSCS	323	362	M	5	7		
9312	Gillnet	9312	IL	11/5/93	10:10	5	7	LSCS	280	244	M	2	8		
9312	Gillnet	9312	IL	11/5/93	10:10	5	8	LSCS	316	327	M	2	10		
9312	Gillnet	9312	IL	11/5/93	10:10	5	9	LSCS	342	379	F	2	9		
9312	Gillnet	9312	IL	11/5/93	10:10	5	10	LSCS	340	397	F	4	10		
9312	Gillnet	9312	IL	11/5/93	10:10	5	11	LSCS	360	479	F	2	11		
9312	Gillnet	9312	IL	11/5/93	10:10	5	12	LSCS	343	417	F	5	10		
9312	Gillnet	9312	IL	11/5/93	10:10	5	13	LSCS	337	354	F	5	9		
9312	Gillnet	9312	IL	11/5/93	10:10	5	14	LSCS	340	414	M	5	11		
9312	Gillnet	9312	IL	11/5/93	10:10	5	15	LSCS	339	382	M	5	11		
9312	Gillnet	9312	IL	11/5/93	10:10	5	16	LSCS	339	480	F	4	10		
9312	Gillnet	9312	IL	11/5/93	10:10	5	17	LSCS	310	319	M	2	8		
9312	Gillnet	9312	IL	11/5/93	10:10	5	18	LSCS	328	344	F	5	7		
9312	Gillnet	9312	IL	11/5/93	10:10	5	19	LSCS	324	335	F	3	9		
9312	Gillnet	9312	IL	11/5/93	10:10	5	20	LSCS	328	402	F	4	9		
9312	Gillnet	9312	IL	11/5/93	10:10	5	21	LSCS	310	338	F	2	7		
9313	Gillnet	9313	IL	11/5/93	10:40	1	1	LSCS	138	20	M	1	3		
9313	Gillnet	9313	IL	11/5/93	10:40	1	2	LSCS	303	282	F	4	11		
9313	Gillnet	9313	IL	11/5/93	10:40	3	3	LSCS	218	96	M	1	5		
9313	Gillnet	9313	IL	11/5/93	10:40	3	4	LSCS	222	93	F	1	6		
9313	Gillnet	9313	IL	11/5/93	10:40	3	5	LSCS	236	112	F	1	5		
9313	Gillnet	9313	IL	11/5/93	10:40	6	6	LSCS	343	751	F	4	16		
9313	Gillnet	9313	IL	11/5/93	10:40	6	7	LSCS	386	618	F	5	14		
9313	Gillnet	9313	IL	11/5/93	10:40	6	8	LSCS	406	625	F	5	23		
9313	Gillnet	9313	IL	11/5/93	10:40	4	9	LSCS	309	246	M	5	15		
9313	Gillnet	9313	IL	11/5/93	10:40	4	10	LSCS	301	233	M	4	13		
9313	Gillnet	9313	IL	11/5/93	10:40	4	11	LSCS	363	478	F	4	13		
9313	Gillnet	9313	IL	11/5/93	10:40	4	12	LSCS	320	294	M	4	12		
9313	Gillnet	9313	IL	11/5/93	10:40	4	13	LSCS	310	265	F	4	11		
9313	Gillnet	9313	IL	11/5/93	10:40	4	14	LSCS	312	286	M	4	9		
9313	Gillnet	9313	IL	11/5/93	10:40	4	15	LSCS	338	356	F	4	11		
9313	Gillnet	9313	IL	11/5/93	10:40	4	16	LSCS	275	162	F	2	9		
9313	Gillnet	9313	IL	11/5/93	10:40	4	17	LSCS	313	256	F	1	8		
9313	Gillnet	9313	IL	11/5/93	10:40	4	18	LSCS	304	257	M	2	15		
9313	Gillnet	9313	IL	11/5/93	10:40	4	19	LSCS	282	155	M	2	8		
9313	Gillnet	9313	IL	11/5/93	10:40	4	20	LSCS	294	221	M	5	9		
9313	Gillnet	9313	IL	11/5/93	10:40	4	21	LSCS	326	356	F	2	15		
9313	Gillnet	9313	IL	11/5/93	10:40	4	22	LSCS	343	351	M	5	12		
9313	Gillnet	9313	IL	11/5/93	10:40	4	23	LSCS	301	226	M	5	11		
9313	Gillnet	9313	IL	11/5/93	10:40	4	24	LSCS	288	208	F	4	11		
9313	Gillnet	9313	IL	11/5/93	10:40	4	25	LSCS	328	357	F	4	13		
9313	Gillnet	9313	IL	11/5/93	10:40	4	26	LSCS	351	359	F	5	14		
9313	Gillnet	9313	IL	11/5/93	10:40	4	27	LSCS	301	267	M	5	9		
9313	Gillnet	9313	IL	11/5/93	10:40	4	28	LSCS	318	289	F	2	12		

Appendix Table 17. Biological data obtained from fish collected during 1991-1993 gillnet sampling in the Colville River delta.

Set Number	Method	Station	Habitat	Date Checked	Time Checked	Panel	Fish Number	Species	Fork Length (mm)		Weight (gm)		Sex	Maturity	Age
9313	Gillnet	9313	IL	11/5/93	10:40	4	29	LSCS	292	240	M	2	9		
9313	Gillnet	9313	IL	11/5/93	10:40	4	30	LSCS	268	164	M	2	8		
9313	Gillnet	9313	IL	11/5/93	10:40	4	31	LSCS	305	223	F	1	11		
9313	Gillnet	9313	IL	11/5/93	10:40	4	32	LSCS	315	303	M	5	11		
9313	Gillnet	9313	IL	11/5/93	10:40	4	33	LSCS	319	290	M	5	7		
9313	Gillnet	9313	IL	11/5/93	10:40	4	34	LSCS	281	196	M	4	9		
9313	Gillnet	9313	IL	11/5/93	10:40	4	35	LSCS	310	288	F	2	14		
9313	Gillnet	9313	IL	11/5/93	10:40	4	36	LSCS	300	252	M	2	9		
9313	Gillnet	9313	IL	11/5/93	10:40	4	37	LSCS	275	160	M	1	9		
9313	Gillnet	9313	IL	11/5/93	10:40	4	38	LSCS	285	210	M	2	10		
9313	Gillnet	9313	IL	11/5/93	10:40	4	39	LSCS	284	190	F	5	10		
9313	Gillnet	9313	IL	11/5/93	10:40	4	40	LSCS	326	325	M	4	12		
9313	Gillnet	9313	IL	11/5/93	10:40	4	41	LSCS	291	192	F	1	11		
9313	Gillnet	9313	IL	11/5/93	10:40	4	42	LSCS	245	129	F	1	8		
9313	Gillnet	9313	IL	11/5/93	10:40	4	43	LSCS	250	132	F	1	7		
9313	Gillnet	9313	IL	11/5/93	10:40	4	44	LSCS	320	267	F	2	13		
9313	Gillnet	9313	IL	11/5/93	10:40	5	45	LSCS	367	524	M	5	19		
9313	Gillnet	9313	IL	11/5/93	10:40	5	46	LSCS	318	342	F	4	10		
9313	Gillnet	9313	IL	11/5/93	10:40	5	47	LSCS	323	316	M	1	11		
9313	Gillnet	9313	IL	11/5/93	10:40	5	48	LSCS	367	441	F	5	22		
9313	Gillnet	9313	IL	11/5/93	10:40	5	49	LSCS	356	446	F	5	19		
9313	Gillnet	9313	IL	11/5/93	10:40	5	50	LSCS	325	313	M	5	16		
9313	Gillnet	9313	IL	11/5/93	10:40	5	51	LSCS	312	289	F	2	13		
9313	Gillnet	9313	IL	11/5/93	10:40	5	52	LSCS	335	348	F	5	12		
9313	Gillnet	9313	IL	11/5/93	10:40	5	53	LSCS	326	298	M	4	12		
9313	Gillnet	9313	IL	11/5/93	10:40	5	54	LSCS	315	310	M	2	12		
9313	Gillnet	9313	IL	11/5/93	10:40	5	55	LSCS	383	597	M	5	21		
9313	Gillnet	9313	IL	11/5/93	10:40	5	56	LSCS	351	454	F	4	14		
9313	Gillnet	9313	IL	11/5/93	10:40	5	57	LSCS	295	269	M	5	8		
9313	Gillnet	9313	IL	11/5/93	10:40	5	58	LSCS	308	269	M	5	9		
9313	Gillnet	9313	IL	11/5/93	10:40	5	59	LSCS	334	361	M	4	16		
9313	Gillnet	9313	IL	11/5/93	10:40	5	60	LSCS	330	369	F	4	12		
9313	Gillnet	9313	IL	11/5/93	10:40	5	61	LSCS	346	412	F	5	14		
9313	Gillnet	9313	IL	11/5/93	10:40	5	62	LSCS	330	304	F	1	12		
9313	Gillnet	9313	IL	11/5/93	10:40	5	63	LSCS	351	378	F	5	16		
9313	Gillnet	9313	IL	11/5/93	10:40	5	64	LSCS	349	459	F	4	16		
9313	Gillnet	9313	IL	11/5/93	10:40	5	65	LSCS	304	266	M	5	12		
9313	Gillnet	9313	IL	11/5/93	10:40	5	66	LSCS	330	342	M	2	15		
9313	Gillnet	9313	IL	11/5/93	10:40	5	67	LSCS	350	413	M	4	13		
9313	Gillnet	9313	IL	11/5/93	10:40	5	68	LSCS	366	513	M	5	14		
9313	Gillnet	9313	IL	11/5/93	10:40	5	69	LSCS	309	263	M	5	14		
9313	Gillnet	9313	IL	11/5/93	10:40	5	70	LSCS	320	342	M	4	11		
9313	Gillnet	9313	IL	11/5/93	10:40	5	71	LSCS	338	415	F	4	12		
9313	Gillnet	9313	IL	11/5/93	10:40	5	72	LSCS	367	514	M	5	17		
9313	Gillnet	9313	IL	11/5/93	10:40	5	73	LSCS	325	357	M	5	15		
9313	Gillnet	9313	IL	11/5/93	10:40	5	74	LSCS	350	365	F	5	17		
9313	Gillnet	9313	IL	11/5/93	10:40	5	75	LSCS	336	448	M	5	16		
9313	Gillnet	9313	IL	11/5/93	10:40	5	76	LSCS	326	331	M	5	12		

Appendix Table 17. Biological data obtained from fish collected during 1991-1993 gillnet sampling in the Colville River delta.

Set Number	Method	Station	Habitat	Date Checked	Time Checked	Panel Number	Fish Number	Species	Fork Length (mm)				Weight (gm)	Sex	Maturity	Age
9313	Gillnet	9313	IL	11/5/93	10:40	5	77	LSCS	309	282	F	4	10			
9313	Gillnet	9313	IL	11/5/93	10:40	5	78	LSCS	340	412	F	4	15			
9313	Gillnet	9313	IL	11/5/93	10:40	5	79	LSCS	371	555	M	5	17			

Species: ARCS = Arctic cisco

Panel 1 = 1.00 in (25 mm) mesh

LSCS = least cisco

Panel 2 = 1.25 in (32 mm)

BDWF = broad whitefish

Panel 3 = 1.63 in (41 mm)

HBWF = humpback whitefish

Panel 4 = 2.06 in (52 mm)

RDWF = round whitefish

Panel 5 = 2.75 in (70 mm)

BKFH = Alaska blackfish

Panel 6 = 3.50 in (89 mm)

BRBT = burbot

RBSM = rainbow smelt

FHSC = fourhorn sculpin

Method: Gillnet = variable mesh gillnet

Habitat: RC = river channel

MinTrap = minnow trap

TL = lake connected to a river channel

IL = lake not connected to a river channel