



Arctic Development
Library

***Data From Test Fisheries Conducted In The
Baffin And Central Arctic Regions,
Northwest Territories, 1980-84***

Type of Study: Exploration / Stock Assess.

Date of Report: 1985

Author: McGowan, D K

Catalogue Number: 3-3-4

FISHERIES

3-3-4

**Data from Test Fisheries
Conducted in the Baffin and
Central Arctic Regions,
Northwest Territories, 1980-84**

D.K. McGowan

Western Region
Department of Fisheries and Oceans
Winnipeg, Manitoba R3T 2N6

September 1985

**Canadian Data Report of
Fisheries and Aquatic Sciences
No. 531**

Canadian Data Report of
Fisheries and Aquatic Sciences 531

September 1985

DATA FROM TEST FISHERIES CONDUCTED IN THE
BAFFIN AND CENTRAL ARCTIC REGIONS,
NORTHWEST TERRITORIES, 1980-84

by

D. K. McGowan

Western Region

Department of Fisheries and Oceans

Winnipeg, Manitoba R3T 2N6

This is the 76th Data Report
from the Western Region, Winnipeg

TABLE OF CONTENTS

	Page
ABSTRACT	V
INTRODUCTION	1
TEST FISHERY PROGRAM	1
MATERIALS AND METHODS	1
Test fishing	1
Data analyses	1
ACKNOWLEDGMENTS	1
REFERENCES	1

LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
1 Map of the Northwest Territories showing locations where test fisheries took place, 1980-84	3

LIST OF TABLES

<u>Table</u>	<u>Page</u>
1 Summary of test fisheries conducted in the Northwest Territories, 1980-84	4
Arctic charr from Magda River (Arctic Bay area), 20 April 1980	
2 Test fishery results	6
3 Biological data by age group	7
4 Biological data by length interval	7
Arctic charr from an unnamed lake (71-12 N, 87-22 W) (Arctic Bay area), 11 April 1980	
5 Test fishery results	8
6 Biological data by age group	9
7 Biological data by length interval	9
Arctic charr from an unnamed lake (72-29 N, 84-35 W) (Arctic Bay area), 16-18 December 1984	
8 Test fishery results	10
9 Biological data by age group	11
10 Biological data by length interval	11
Arctic charr from Jungersen River (Arctic Bay area), 10-26 November 1984	
11 Test fishery results	12
12 Biological data by age group	13
13 Biological data by length interval	13
Arctic charr from an unnamed lake (Read Island) (Cambridge Bay area), 10-16 October 1983	
14 Test fishery results	14
15 Biological data by age group	15
16 Biological data by length interval	15

TablePage

Arctic charr from an unnamed lake (Kangi-shuajuak) (Cape Dorset area), 13 October 1980	
17 Test fishery results	16
18 Biological data by age group	17
19 Biological data by length interval	17
Arctic charr from Anadjuak Lake (Frobisher Bay area), 11 August to 3 September 1980	
20 Test fishery results	18
21 Biological data by age group	19
22 Biological data by length interval	19
Arctic charr from Qamanirjuaq Lake (Frobisher Bay area), 21 April to 27 May 1981	
23 Test fishery results	20
24 Biological data by age group	21
25 Biological data by length interval	21
Arctic charr from Hayes River (Gjoa Haven area), 28 August to 11 September 1982	
26 Test-fishery results	22
27 Biological data by age group	23
28 Biological data by length interval	23
Arctic charr from Prince Albert Sound (Holman area), 24-25 August 1982	
29 Test fishery results	24
30 Biological data by age group	25
31 Biological data by length interval	25
Arctic charr from Prince Albert Sound (Holman area), 23-25 August 1983	
32 Test fishery results	26
33 Biological data by age group	27
34 Biological data by length interval	27
Arctic charr from Navarana Lake (Igloodik area), March 1983	
35 Test fishery results	28
36 Biological data by age group	29
37 Biological data by length interval	29
Arctic charr from Ajaqutalik River (Igloodik area), 25-28 August 1984	
38 Test fishery results	30
39 Biological data by age group	31
40 Biological data by length interval	31
Arctic charr from an unnamed lake (Wigh Inlet) (Lake Harbour area), 10-13 January 1985	
41 Test fishery results	32
42 Biological data by age group	33
43 Biological data by length interval	33
Arctic charr from Ikaluit Lake (Pangnirtung area), 14 March 1980	
44 Test fishery results	34
45 Biological data by age group	35
46 Biological data by length interval	35
Arctic charr from Opingivik Lake (Pangnirtung area), 15 April 1980	
47 Test fishery results	36
48 Biological data by age group	37
49 Biological data by length interval	37

<u>Table</u>	<u>Page</u>	<u>Table</u>	<u>Page</u>
Arctic charr from an unnamed lake (Iyara- vung) (Pangnirtung area), 28 February 1980		Lake trout from Netsilik Lake (Spence Bay area), 24-29 August 1984	
50 Test fishery results	38	80 Test fishery results	58
51 Biological data by age group	39	81 Biological data by age group	59
52 Biological data by length interval	39	82 Biological data by length interval	60
Arctic charr from an unnamed lake (Iyara- vung) (Pangnirtung area), 17 February 1981		Whitefish from Netsilik Lake (Spence Bay area), 24-29 August 1984	
53 Test fishery results	40	83 Test fishery results	61
54 Biological data by age group	41	84 Biological data by age group	62
55 Biological data by length interval	41	85 Biological data by length interval	63
Arctic charr from an unnamed lake (Ikpit Bay) (Pangnirtung area), 28 March 1984		Arctic charr from Netsilik River (Spence Bay area), 31 August to 7 September 1983	
56 Test fishery results	42	86 Test fishery results	64
57 Biological data by age group	43	87 Biological data by age group	65
58 Biological data by length interval	43	88 Biological data by length interval	65
Arctic charr from an unnamed lake (65-17 N, 64-05 W) (Pangnirtung area), 8 March 1985		Arctic charr and least cisco from Crooked Lake (Spence Bay area), 24-27 April 1982	
59 Test fishery results	44	89 Test fishery results for Arctic charr	66
60 Biological data by age group	45	90 Test fishery results for least cisco	67
61 Biological data by length interval	45	91 Biological data by length interval for Arctic charr	68
Arctic charr from an unnamed lake (Ptar- migan Fiord) (Pangnirtung area), 16 March 1982		92 Biological data by length interval for least cisco	68
62 Test fishery results	46		
63 Biological data by age group	47		
64 Biological data by length interval	47		
Arctic charr from an unnamed lake (Ptar- migan Fiord) (Pangnirtung area), 12 March 1984			
65 Test fishery results	48		
66 Biological data by age group	49		
67 Biological data by length interval	49		
Arctic charr from an unnamed lake (65-05 N, 63-42 W) (Pangnirtung area), 25 March 1985			
68 Test fishery results	50		
69 Biological data by age group	51		
70 Biological data by length interval	51		
Arctic charr from an unnamed lake (Beta River) (Pond Inlet area), 1-2 June 1982			
71 Test fishery results	52		
72 Biological data by age group	53		
73 Biological data by length interval	53		
Arctic charr from Keel River (Cambri dge Fiord) (Pond Inlet area), 19-26 May 1982			
74 Test fishery results	54		
75 Biological data by age group	55		
76 Biological data by length interval	55		
Arctic charr from an unnamed lake (Tay Sound) (Pond Inlet area), 26-28 November 1981			
77 Test fishery results	56		
78 Biological data by age group	51		
79 Biological data by length interval	57		

ABSTRACT

McGowan, D.K. 1985. Data from test fisheries conducted in the Baffin and Central Arctic Regions, Northwest Territories, 1980-84. Can. Data Rep. Fish. Aquat. Sci. 531: v + 68 p.

A test fishery program was started in 1973 by the Fishery Management Division, of what is now the Department of Fisheries and Oceans, in co-operation with the Wildlife Service, Government of the Northwest Territories, to facilitate the development of new commercial fisheries in the N.W.T. Since then most test fisheries have been conducted by Wildlife Service personnel with analysis by the Department of Fisheries and Oceans. This report summarizes the results of test fisheries, primarily for Arctic charr, conducted in the Baffin and Central Arctic Regions, Northwest Territories, 1980-84.

Key words: experimental fishing; commercial fishing; gillnets; fishery management; size distributions; age composition; charr, Arctic; Salvelinus alpinus; trout, lake; Salvelinus namaycush; whitefish, lake; Coregonus clupeaformis.

RESUME

McGowan, D.K. 1985. Data from test fisheries conducted in the Baffin and Central Arctic Regions, Northwest Territories, 1980-84. Can. Data Rep. Fish. Aquat. Sci. 531: v + 68 p.

Un programme expérimental sur les pêches a été mis sur pied en 1973 par la Division de la gestion des pêches de ce qui est maintenant le ministère des Pêches et Océans, en collaboration avec le Service de la faune du gouvernement des Territoires du Nord-Ouest, afin d'encourager l'établissement de nouvelles installations commerciales de pêche dans les Territoires du Nord-Ouest. Depuis, la plupart des expériences ont été faites par le personnel du Service canadien de la faune, tandis que l'analyse a été effectuée par le ministère des Pêches et Océans. Le rapport résume les résultats de la pêche expérimentale portant principalement sur l'omble chevalier et qui s'est déroulée dans les régions de Baffin et du centre de l'Arctique, et dans les Territoires du Nord-Ouest, au cours de la période 1980 à 1984.

Mots-clés: pêche expérimentale; pêche commerciale; filets maillants; gestion des pêches; distribution des tailles; composition de l'âge; omble de chevalier; Salvelinus alpinus; touladi; Salvelinus namaycush; grand corégone; Coregonus clupeaformis.

INTRODUCTION

The Department of Fisheries and Oceans (DFO) initiated a test fishery program in 1973 in the Northwest Territories (Kristofferson and McGowan 1981). The program facilitates the development of new commercial fisheries for new markets within and between communities. The information collected from the test fishery program helps determine the commercial feasibility and initial quota allocations on new fishing areas requested by community groups. The test fisheries are conducted mainly by Resource Development Officers of the Wildlife Service, Government of the Northwest Territories (GNWT). This report summarizes the results of these test fisheries conducted in the Northwest Territories during 1980-84.

TEST FISHERY PROGRAM

A detailed description of the test fishery program is provided by Kristofferson and McGowan (1981). The objective of a test fishery is to determine whether the resource is present in sufficient quantity to maintain a viable commercial fishery and to determine the status of the fish stock. Information can also be collected on other factors important to the long-term survival of the fishery. These factors include the timing of the fishery, transportation, storage and handling and markets.

Most test fisheries are ongoing for at least two or three years, with the permit being renewed annually. Once problems are solved and stock assessment has been undertaken the body of water is identified as having commercial potential and is submitted as a commercial fishery to be listed in Schedule V of the Northwest Territories Fishery Regulations. As with other commercial fisheries, the water body is then opened upon annual request through a Variation Notice for a specified time and quota.

MATERIALS AND METHODS

TEST FISHING

The test fishery procedure is described in Kristofferson and McGowan (1981). Requests were usually received through a Resource Development Officer from interested community groups. The requests were reviewed and approved by the Director of Arctic Operations, Western Region, Winnipeg, Manitoba. A permit was then issued specifying a provisional quota and the type of fishing gear to be used.

Data collected by the officer in charge included fork length, round weight (when possible) and sex. Sagittal otoliths were removed for age determination. Catch and effort data were also recorded.

DATA ANALYSES

Data were analyzed using computer facilities (Amdahl 58-50) based at the University of Manitoba with a terminal at the Freshwater Institute. Programmable calculators (Hewlett-Packard 9810-A and Texas Instrument 58C) were also used.

A complete data analyses description is given by Kristofferson and McGowan (1981). Results, interpretations and recommendations on the test fishery were returned to the officer in charge.

Table 1 provides a summary of the test fisheries conducted between 1980-84. Only test fisheries that were actually attempted are listed. A harvest of zero kilograms indicates the water body was tested without success. The results from Mangles Bay, Tern Lake, Kingark River and Sports River can be found in Kristofferson et al. (1982).

ACKNOWLEDGMENTS

The author wishes to thank Mr. R.8. Tinling, Supervisor, Resource Development, Department of Renewable Resources, Government of the Northwest Territories, all Renewable Resource Officers and all others who participate in these test fisheries.

The interpretations and recommendations on all the test fisheries were provided by A.H. Kristofferson.

Mr. G.W. Carder determined the ages of fish examined. Drafting was provided by the Graphics Section, Freshwater Institute and typing by S. Ahlgren, C. Catt and B. Cohen. A.H. Kristofferson reviewed the report and provided useful suggestions.

REFERENCES

- KRISTOFFERSON, A. H., and D. K. MCGOWAN. 1981. Data on Arctic charr, *Salvelinus alpinus* (Linnaeus), collected from test fisheries in the Baffin Region, Northwest Territories, 1975-79. Can. Data Rep. Fish. Aquat. Sci. 255: vi + 43 p.
- KRISTOFFERSON, A. H., D. R. LEROUX, and J. R. ORR. 1982. A biological assessment of Arctic charr, *Salvelinus alpinus* (L.), stocks in the Gjoa Haven - Pelly Bay area of the Northwest Territories, 1979-80. Can. Manuscr. Rep. Fish. Aquat. Sci. 1591: vi + 51 p.

KEY TO WATER BODIES SHOWN ON FIGURE 1

<u>Waterbody</u>	<u>Coordinates</u>
1. Magda River	71-39 N, 84-37 W
2. Unnamed Lake	71-12 N, 87-22 W
3. Unnamed Lake	72-29 N, 84-35 W
4. Unnamed Lake	72-05 N, 84-40 W
5. Jungersen River	71-23 N, 84-37 W
6. Unnamed Lake (Read Island)	69-12 N, 112-55 W
7. Unnamed Lake (Kangishuajuak)	64-38 N, 73-05 W
8. Cox Lake	67-50 N, 115-05 W
9. Amadjuak Lake	65-00 N, 71-00 W
10. Qamanirjuaq Lake	63-15 N, 64-33 W
11. Deerpass Bay	66-56 N, 112-25 W
12. Russell Bay	65-28 N, 122-52 W
13. Manitou Bay	65-00 N, 122-09 W
14. Cloud Bay	65-04 N, 121-40 W
15. Jupiter Bay	65-19 N, 121-33 W
16. Mangles Bay	67-28 N, 95-25 W
17. Tern Lake	67-48 N, 97-02 W
18. Hayes River	67-18 N, 95-02 W
19. Kingark River	68-01 N, 94-50 W
20. Prince Albert Sound	70-37 N, 117-09 W
21. Ajaqutalik Lake	68-23 N, 82-33 W
22. Unnamed Lake (Wight Inlet)	62-22 N, 68-23 W
23. Sports River (Tourist)	68-40 N, 90-30 W
24. Ikaluit Lake	65-02 N, 67-07 W
25. Opingivik Lake	65-14 N, 67-22 W
26. Unnamed Lake (Iyaravung)	66-43 N, 67-48 W
27. Unnamed Lake (Ikpit)	65-26 N, 67-38 W
28. Unnamed Lake	65-17 N, 64-05 W
29. Unnamed Lake (Ptarmigan Fiord)	64-35 N, 66-22 W
30. Okalik Bay	64-02 N, 65-15 W
31. Unnamed Fiord (Cumberland Sound Area)	65-43 N, 64-51 W
32. Unnamed Lake (Kangerk Fiord)	66-27 N, 67-27 W
33. Unnamed Lake (Kekertelung Island)	66-19 N, 66-41 W
34. Unnamed Lake	66-43 N, 67-54 W
35. Unnamed Lake	65-05 N, 63-42 W
36. Unnamed Lake	65-13 N, 64-02 W
37. Unnamed Lakes (Beta River)	72-17 N, 81-27 W
38. Keel River	71-12 N, 75-07 W
39. Unnamed Lake (Tay Sound)	71-47 N, 78-42 W
40. Unnamed Lake	71-57 N, 80-27 W
41. Netsilik Lake	69-15 N, 93-05 W
42. Netsilik River	69-22 N, 93-20 W
43. Crooked Lake (Prince of Wales Island)	72-40 N, 98-50 W

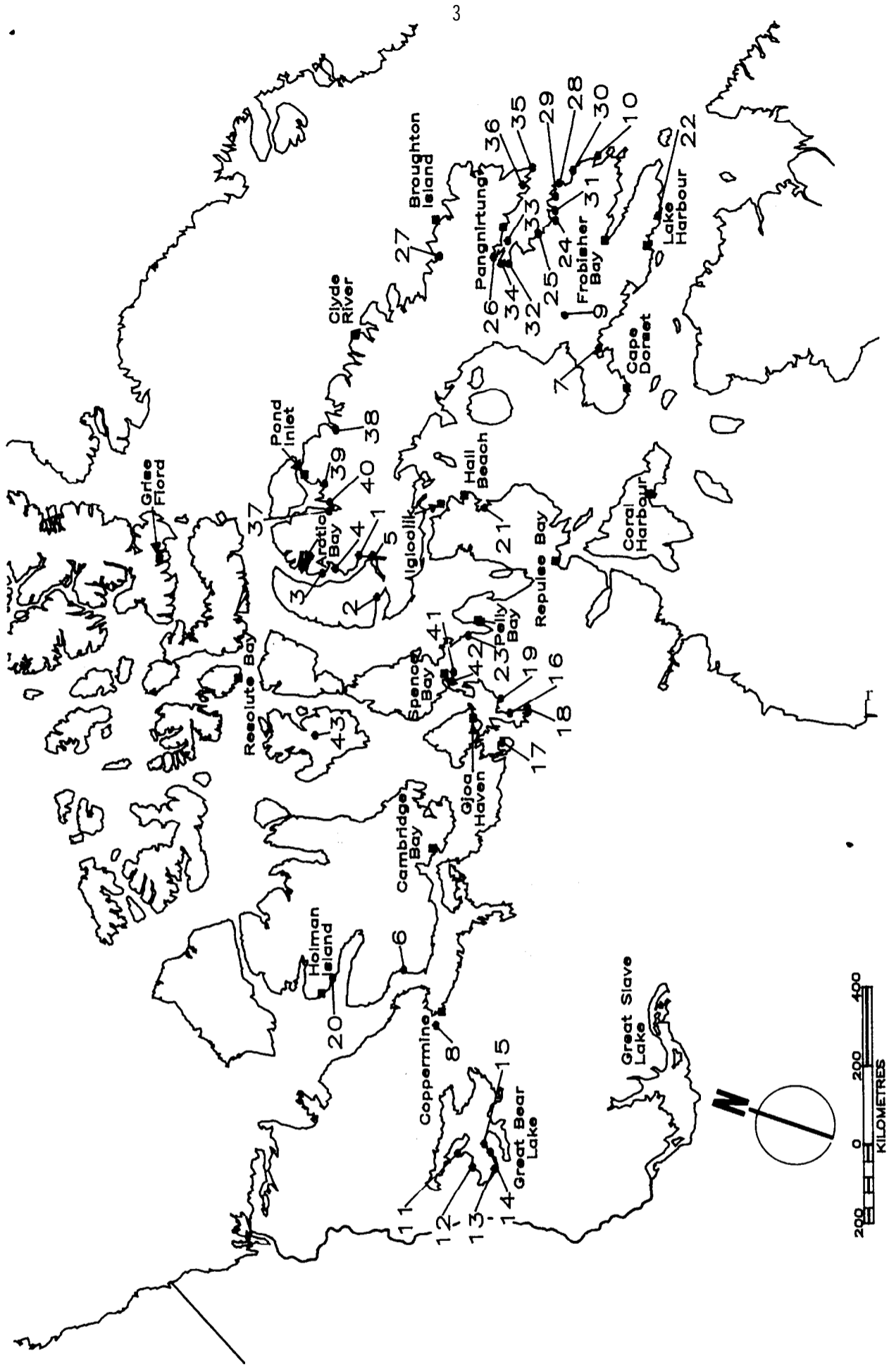


Fig. 1. Map of the Northwest Territories showing locations where test fisheries took place, 1980-84.

Table 1. Summary of test fisheries conducted in the Northwest Territories, 1980-84.

Water Body	Geographic Coordinates	Year	Permittee	Quota (kg)	Harvest (kg)	Number Sampled	Species
AREA: ARCTIC BAY							
Magda River	71-39N84-37W	1980	R. Letkeman, RRO, Arctic Bay	1814	791	99	Arctic charr
Magda River	71-39N84-37W	1981	F. Elias, RRO, Arctic Bay	1814	4598		Arctic charr
Unnamed Lake	71-12N87-22W	1979	R. Letkeman, RRO, Arctic Bay	0	307	100	Arctic charr
Unnamed Lake	71-12N87-22W	1980	R. Letkeman, RRO, Arctic Bay	680	609	100	Arctic charr
Unnamed Lake	71-12N87-22W	1984	G. Williams, RRO, Arctic Bay	680	540	99	Arctic charr
Unnamed Lake	72-29N84-35W	1982	F. Elias, RRO, Arctic Bay	900	0	0	Arctic charr
Unnamed Lake	72-05N84-40W	1982	F. Elias, RRO, Arctic Bay	900	0	0	Arctic charr
Jungersen River	71-23N84-37W	1984	G. Williams, RRO, Arctic Bay	680	470	99	Arctic charr
AREA: CAMBRIDGE BAY							
Unnamed Lake (Read Island)	69-12N112-55W	1983	F. Elias, RRO, Coppermine	1000	421	111	Arctic charr
AREA: CAPE DORSET							
Unnamed Lake (Kangishuajuak)	64-38N73-05W	1980	P. Kraft, RRO, Cape Dorset	2268	101	54	Arctic charr
AREA: COPPERMINE							
Cox Lake	67-50N 15-05W	1983	C. Adjun, RRO, Coppermine	50	50		Broad whitefish
Cox Lake	67-50N 15-05W	1984	C. Adjun, RRO, Coppermine	60	33		Broad whitefish
Cox Lake	67-50N 15-05W	1984	C. Adjun, RRO, Coppermine	60	7		Burbot
Cox Lake	67-50N 15-05W	1984	C. Adjun, RRO, Coppermine	60	43		Lake trout
AREA: FROBISHER BAY							
Amadjuak Lake	65-00N71-00W	1978	R. Hunter, RRO, Frobisher Bay	9072	2878	157	Arctic charr
Amadjuak Lake	65-00N71-00W	1980	E. Hall, RRO, Frobisher Bay	2268	075	405	Arctic charr
Qamanirjuaq Lake	63-15N64-33W	1981	S. Akeeagok, FO, Frobisher Bay	1000	150	78	Arctic charr
AREA: GREAT BEAR LAKE							
Deerpass Bay	66-56N122-25W	1982	W. Bayha, RRO, Fort Franklin	2300	0		Trout, Whitefish
Russel Bay	65-28N122-52W	1982	W. Bayha, RRO, Fort Franklin	2300	0		Trout, Whitefish
Manitou Bay	65-00N122-09W	1982	W. Bayha, RRO, Fort Franklin	2300	0		Trout, Whitefish
Cloud Bay	65-04N121-40W	1982	W. Bayha, RRO, Fort Franklin	2300	0		Trout, Whitefish
Jupiter Bay	65-19N121-33W	1982	W. Bayha, RRO, Fort Franklin	2300	0		Trout, Whitefish
AREA: GJOA HAVEN							
Mangles Bay	67-28N95-25W	1980	Joint Study, DFO, DEDT	2948	1095	116	Arctic charr
Tern Lake	67-48N97-02W	1980	Joint Study, DFO, DEDT	2948	600	140	Arctic charr
Hayes River	67-18N95-02W	1982	Joint Study, DFO, DEDT	3000	2470	202	Arctic charr
Kingark River	68-01N94-50W	1980	Joint Study, DFO, DEDT	2948	38a	63	Arctic charr
AREA: HOLMAN ISLAND							
Prince Albert Sound	70-37N117-09W	1982	N. Cournoyer, IDC, Inuvik	1350	1350	131	Arctic charr
Prince Albert Sound	70-37N117-09W	1983	I. Aleekuk, HTA, Holman Island	1350	896	137	Arctic charr

Table 1. (cont'd).

Water Body	Geographic Coordinates	Year	Permittee	Quota (kg)	Harvest (kg)	Number Sampled	Species
AREA: IGLOOLIK							
Ajaqutalik Lake	68-23N82-33W	1984	J. Stevenson, RRO, Igloolik	454	261	60	Arctic charr
AREA: LAKE HARBOUR							
Unnamed Lake (Wight Inlet)	62-22N68-23W	1985	J. Noble, RRO, Frobisher Bay	1000	1000	100	Arctic charr
AREA: PELLV BAV							
Sports River "Tourist"	68-40N90-30W	1980	Joint Study, DFO, DEDT	2948	285	60	Arctic charr
AREA: PANGNIRTUNG							
Ikaluit Lake	65-02N67-07W	1979	J. Noble, RRO, Pangnirtung	908	797	100	Arctic charr
Ikaluit Lake	65-02N67-07W	1982	J. Noble, RRO, Pangnirtung	500	1500		Arctic charr
Opingivik Lake	65-14N67-22W	1979	J. Noble, RRO, Pangnirtung	361	628	100	Arctic charr
Opingivik Lake	65-14N67-22W	1981	J. Noble, RRO, Pangnirtung	907	628		Arctic charr
Unnamed Lake (Iyaravung)	66-43N67-48W	1980	J. Noble, RRO, Pangnirtung	363	1327	100	Arctic charr
Unnamed Lake (Iyaravung)	66-43N67-48W	1979	J. Noble, RRO, Pangnirtung	1363	1327	100	Arctic charr
Unnamed Lake (Iyaravung)	66-43N67-48W	1981	J. Noble, RRO, Pangnirtung	907	1268	100	Arctic charr
Unnamed Lake (Iyaravung)	66-43N67-48W	1982	J. Noble, RRO, Pangnirtung	2000	1268		Arctic charr
Unnamed Lake (Iyaravung)	66-43N67-48W	1984	W. Filatre, RRO, Pangnirtung	1360	1350		Arctic charr
Unnamed Lake (Ikpit)	65-26N67-38W	1984	W. Filatre, RRO, Pangnirtung	500	215	74	Arctic charr
Unnamed Lake	65-17N64-05W	1985	W. Filatre, RRO, Pangnirtung	900	476	100	Arctic charr
Unnamed Lake (Ptarmigan F oral)	64-35N66-22W	1982	B. Kovc, RRO, Pangnirtung	454	908	92	Arctic charr
Unnamed Lake (Ptarmigan F oral)	64-35N66-22W	1983	J. Noble, RRO, Pangnirtung	1000	1088	100	Arctic charr
Okalik Bay	64-02N65-15W	1983	J. Noble, RRO, Pangnirtung	250	84		Arctic charr
Unnamed Fiord (Cumber and Sound Area)	65-43N64-51W	1983	J. Noble, RRO, Pangnirtung	250	109		Arctic charr
Unnamed Lake (Kangerk Fiord)	66-27N67-27W	1984	W. Filatre, RRO, Pangnirtung	500	0	0	Arctic charr
Unnamed Lake (Kekerteung Island)	66-19N66-41W	1984	W. Filatre, RRO, Pangnirtung	500	2	1	Arctic charr
Unnamed Lake	66-43N67-54W	1985	W. Filatre, RRO, Pangnirtung	454	0	0	Arctic charr
Unnamed Lake	65-05N63-42W	1985	W. Filatre, RRO, Pangnirtung	900	275	100	Arctic charr
Unnamed Lake	65-13N64-02W	1985	W. Filatre, RRO, Pangnirtung	900	0	0	Arctic charr
AREA: POND INLET							
Unnamed Lakes (Beta River)	72-17N81-27W	1982	W. Spencer, RRO, Pond Inlet	454	51	19	Arctic charr
Keel River	71-12N75-07W	1982	W. Spencer, RRO, Pond Inlet	1000	308	112	Arctic charr
Unnamed Lake (Tay Sound)	71-47N78-42W	1981	W. Spencer, RRO, Pond Inlet	454	156	82	Arctic charr
Unnamed Lake	71-57N80-27W	1983	S. Ageeagok, OFO, Pond Inlet	500	0	0	Arctic charr
AREA: SPENCE BAY							
Netsilik Lake	69-15N93-05W	1984	L. Jones, RRO, Spence Bay	750	3	5	Arctic charr
Netsilik River	69-22N93-20W	1983	J. Bailey, RRO, Spence Bay	1360	1399	299	Arctic charr
Crooked Lake (Prince of Wales Island)	72-40N98-50W	1982	J.C. Stevenson, RRO, Resolute	454	22	13	Arctic charr
Crooked Lake (Prince of Wales Island)	72-40N98-50W	1982	J.C. Stevenson, RRO, Resolute	454	11	32	Least cisco
Netsilik Lake	69-15N93-05W	1984	L. Jones, RRO, Spence Bay	750	718	302	Lake trout
Netsilik Lake	69-15N93-05W	1984	L. Jones, RRO, Spence Bay	750	967	488	Lake whitefish
Crooked Lake (Prince of Wales Island)	72-40N98-50W	1982	J.C. Stevenson, RRO, Resolute	454	20	13	Least cisco

RRO = Renewable Resource Officers, Dept. of Renewable Resources, GNWT

FO = Fishery Officers, DFO

HTA = Hunters and Trappers Association

IOC = Inuvialuit Development Corporation

TO = Tourism Officer, Dept. of Economic Development and Tourism, GNWT

DEDT = Dept. of Economic Development and Tourism, GNWT

Table 2. Test fishery results for Arctic charr from Magda River (Arctic Bay area), 20 April 1980.

<u>Quota</u>	<u>PRODUCTION</u>	<u>Harvest</u>
1 814 kg		791 kg

<u>CATCH-EFFORT</u>					
<u>Total Number Of Fish</u>	<u>Mesh Size (mm)</u>	<u>Net Depth (Meshes)</u>	<u>Hours Set Per 100 (m)</u>	<u>CPE¹</u>	<u>CPE²</u>
N/A	139	25	75.9	N/A	551.21

LENGTH-WEIGHT RELATIONSHIP $\log_{10}W = a + b (\log_{10}L)$

<u>Sex</u>	<u>N</u>	<u>Y-Intercept (a)</u>	<u>Slope (b)</u>	<u>95% C.I. of b</u>	<u>r</u>
Male	41	-4.2873	2.7408	2.4698-3.0118	0.89
Female	58	-5.3561	2.1211	1.7371-2.5051	0.98
Total	99	-4.7196	2.8941	2.6667-3.1215	0.92

MORTALITY

<u>Age-Classes Used</u>	<u>N</u>	<u>Instantaneous Total Mortality (Z) (Catch Curve)</u>	<u>r</u>	<u>Annual Mortality (A)</u>	<u>Annual Survival (S)</u>
-------------------------	----------	--	----------	-----------------------------	----------------------------

Table 3. Biological data by age group for Arctic charr taken from Magda River (Arctic Bay area) 20 April, 1980.

AGE (YR)	MALES								FEMALES						COMBINED								
	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	% FEMALE	
			MEAN	SD	MEAN	SD				MEAN	SD	MEAN	SD				MEAN	SD	MEAN	SD			
9	1	3	533		1500		0.99	1	2	539		1450		0.93	2	2	536	4.2	1475	35	0.96	50	
10	2	5	545	36.8	1625	247	1.00								2	2	545	36.8	1625	247	1.00		
11	5	13	572	34.3	1900	386	1.00	2	4	611	29.0	2250	354	0.98	7	8	583	35.7	2000	386	1.00	29	
12	5	13	596	73.0	2280	928	1.03	8	16	592	59.1	2138	587	1.01	13	15	594	61.8	2192	702	1.02	62	
13	9	13	634	62.5	2667	813	1.02	6	12	610	42.7	2283	623	0.99	15	17	624	55.1	2513	744	1.01	40	
14	7	18	633	66.5	2579	884	0.99	12	24	636	28.4	2517	542	0.97	19	22	635	44.4	2539	664	0.98	63	
15	3	8	709	35.4	3083	486	0.86	5	10	612	36.8	2320	311	1.01	8	9	648	60.5	2606	528	0.95	63	
16								3	6	641	29.7	2600	522	0.98	3	3	641	29.7	2600	522	0.98		
17	3	8	699	85.6	3450	1250	0.98	5	10	690	49.3	3110	728	0.94	8	9	693	59.2	3238	883	0.95	63	
18	1	3	625		2150		0.88	4	El	606	63.0	2188	1077	0.93	5	6	610	55.2	2180	933	0.92	80	
19	1	3	601		1950		0.90	1	2	578		1600		0.83	2	2	590	16.3	1775	247	0.86	50	
20	1	3	713		3500		0.97	2	4	620	59.4	2125	742	0.87	3	3	651	68.2	2583	952	0.90	67	
24	1	3	757		3150		0.73								1	1	757		3150		0.73		
TOTAL	39							49							88								
MEAN			629	73.5	2514	860	0.98			622	50.1	2378	648	0.97			625	61.3	2438	748	0.97	56	
MEAN AGE		14.2																					

Table 4. Biological data by length interval for Arctic charr taken from Magda River (Arctic Bay area) 20 April, 1980.

LENGTH INTERVAL (MM)	MALES						FEMALES						COMBINED										
	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	% FEMALE	
			MEAN	SD	MEAN	SD				MEAN	SD	MEAN	SD				MEAN	SD	MEAN	SD			
450	-	-						1	2	492		1150		0.97	1	1	492		1150		0.97	-	
500	7	17	532		1500	96	0.99	2	3	537		1475	35	0.95	9	9	533		1494	85	0.99	22	
550	7	17	571		1907	197	1.02	15	26	581		1900	300	0.97	22	22	578		1902	267	0.98	68	
600	9	22	616		2317	277	0.99	23	40	625		2330	305	0.95	32	32	622		2327	293	0.96	72	
650	8	20	665		2731	352	0.93	14	24	671		2975	421	0.98	22	22	669		2886	407	0.96	64	
700	8	20	720		3644	310	0.98	2	3	711		3400	566	0.95	10	10	718		3595	348	0.97	20	
750	2	5	768		3925	1096	0.86	1	2	751		4300		1.02	3	3	762		4050	005	0.91	33	
TOTAL	41							58							99								
MEAN			631		2526	842	0.98			624		2396	639	0.97			627		2449	729	0.97	59	

Table 5. Test fishery results for Arctic charr from an unnamed lake (71-12 N, 87-22 W) (Arctic Bay area), 11 April 1980.

<u>Quota</u>		<u>PRODUCTI ON</u>				<u>Harvest</u>
680 kg						609 kg
<u>CATCH-EFFORT</u>						
<u>Total Number Of Fish</u>	<u>Mesh Size (mm)</u>	<u>Net Depth (Meshes)</u>	<u>Hours Set Per 100 (m)</u>	<u>CPE¹</u>	<u>CPE²</u>	
N/A	139	25	67.2	N/A	217.8	
<u>LENGTH-WEIGHT RELATIONSHIP</u> $\log_{10}W = a + b (\log_{10}L)$						
<u>Sex</u>	<u>N</u>	<u>Y-Intercept (a)</u>	<u>Slope (b)</u>	<u>95% C.I. of b</u>	<u>r</u>	
Male	60	-5.1445	3.0470	2.7686-3.3254	0.94	
Female	40	-4.8564	2.9357	2.2611-3.6103	0.82	
Total	100	-5.5188	3.1747	2.9183-3.4311	0.93	
<u>MORTALITY</u>						
<u>Age-Classes Used</u>	<u>N</u>	<u>Instantaneous Total Mortality (Z) (Catch Curve)</u>	<u>r</u>	<u>Annual Mortality (A)</u>	<u>Annual Survival (S)</u>	
18-24	51	0.49	0.97	0.39	0.61	

¹CPE = No. fish/100 m/24 h.

²CPE = kg rd wt/100 m/24 h.

Table 6. Biological data by age group for Arctic charr taken from an unnamed lake (71-12N, 87-22W) (Arctic Bay area), 11 April, 1980.

AGE (vR)	MALES							FEMALES					COMBINED					% FEMALE				
	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	
			MEAN	SD	MEAN	SD				MEAN	SO	MEAN	SD				MEAN		SO	MEAN		SD
13	4	7	642	38.7	2625	413	0.99	-	-	-	-	-	-	4	5	642	38.7	2625	413	0.99	-	
14	2	4	683	7.8	3075	177	0.97	1	3	699	-	3700	1.08	3	3	688	11.0	3283	382	1.01	33	
15	5	9	711	52.8	3580	1112	0.97	1	3	636	-	2600	1.01	6	7	698	56.2	3417	1072	0.98	17	
16	7	13	717	79.4	3707	1127	0.97	4	12	669	49.1	2675	681	0.88	11	13	700	71.5	3332	1083	0.94	36
17	6	11	719	75.3	3817	1144	1.01	6	18	642	51.5	2625	550	0.98	12	14	681	73.5	3221	1058	0.99	50
18	10	18	755	30.0	4300	593	1.01	9	27	668	33.6	2728	466	0.91	19	22	714	54.2	3555	961	0.96	47
19	10	18	730	44.7	3800	864	0.96	6	18	684	57.1	2883	652	0.89	16	18	713	53.0	3456	894	0.94	38
20	5	9	775	80.2	4810	1638	1.00	1	3	717	-	4150	1.13	6	7	765	75.6	4700	1489	1.02	17	
21	4	7	757	64.7	4438	820	1.02	2	6	723	44.5	3875	813	1.02	6	7	746	56.8	4250	787	1.02	33
22	2	-	-	-	-	-	-	1	3	671	-	2200	0.73	1	1	671	-	2200	-	0.73	-	
23	-	-	-	-	-	-	-	1	3	648	-	2250	0.83	1	1	648	-	2250	-	0.83	-	
24	1	2	792	-	3800	-	0.76	1	3	6131	-	2300	0.73	2	2	737	78.5	3050	1061	0.75	50	
27	1	2	724	-	3650	-	0.96	-	-	-	-	-	-	1	1	724	-	3650	-	0.96	-	
TOTAL	55							33						88								
MEAN			729	62.2	3885	1037	0.98			671	44.7	2826	653	0.92			707	62.7	3488	1044	0.96	38
MEAN AGE		17.9																				

Table 7. Biological data by length interval for Arctic charr taken from an unnamed lake (71-12N, 87-22W) (Arctic Bay area), 11 April, 1980.

LENGTH INTERVAL (MM)	MALES							FEMALES					COMBINED					% FEMALE				
	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	
			MEAN	SD	MEAN	SD				MEAN	SO	MEAN	SO				MEAN		SO			
500	1	2	544	-	1600	-	0.99	-	-	-	-	-	-	1	1	544	-	1600	-	0.99	-	
550	1	2	598	-	2350	-	1.10	2	5	-	-	-	-	3	3	578	-	1983	321	1.02	67	
600	4	7	623	-	2375	275	0.98	11	28	636	2373	282	0.92	15	15	633	2373	270	0.94	73		
650	14	23	677	294	2946	294	0.95	18	45	678	2817	459	0.90	32	32	678	2873	395	0.92	56		
700	11	18	730	369	3764	369	0.97	8	20	722	3544	420	0.94	19	19	726	3671	406	0.96	42		
750	25	42	770	431	4550	431	1.00	1	3	754	4450	-	1.04	26	26	770	4546	423	1.00	4		
800	3	5	till	-	5333	161	1.00	-	-	-	-	-	-	3	3	811	5333	161	1.00	-		
850	1	2	886	-	7050	-	1.01	-	-	-	-	-	-	1	1	886	7050	-	1.01	-		
TOTAL	60							40						100								
MEAN			729		3882	1041	0.98			672	2830	655	0.92			706	3461	1041	0.96		40	

Table 8. Test fishery results for Arctic charr from an unnamed lake (72-29 N, 84-35 W) (Arctic Bay area), 16-18 December 1984.

<u>Quota</u>		<u>PRODUCTION</u>				<u>Harvest</u>
680 kg						540 kg
<u>CATCH-EFFORT</u>						
<u>Total Number Of Fish</u>	<u>Mesh Size (mm)</u>	<u>Net Depth (Meshes)</u>	<u>Hours Set Per 100 (m)</u>	<u>CPE¹</u>	<u>CPE²</u>	
145	139	25	34.5	101	374	
<u>LENGTH-WEIGHT RELATIONSHIP</u> $\log_{10}W = a + b(\log_{10}L)$						
<u>Sex</u>	<u>N</u>	<u>Y-Intercept (a)</u>	<u>Slope (b)</u>	<u>95% C.I. of b</u>	<u>r</u>	
Male	60	-4.6599	2.8957	2.6554-3.1360	0.95	
Female	39	-3.9679	2.6444	2.1554-3.1334	0.87	
Total	99	-4.9052	2.9804	2.8290-3.1318	0.97	
<u>MORTALITY</u>						
<u>Age-Classes Used</u>	<u>N</u>	<u>Instantaneous Mortality (Z) (Catch Curve)</u>	<u>r</u>	<u>Annual Mortality (A)</u>	<u>Annual Survival (S)</u>	
15-19	51	0.53	0.99	0.41	0.59	

¹CPE = No. fish/100 m/24 h.

²CPE = kg rd wt/100 m/24 h.

Note: Harvest calculated by multiplying total no. of charr caught by mean round weight per charr (145 x 3.7).

Table 9. Biological data by age group for Arctic charr taken from an unnamed lake (72-29N,84-35W) (Arctic Bay area), 16-18 December, 1984.

AGE (YR)	MALES							FEMALES							COMBINED								
	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	FEMALE %	
			MEAN	SD	MEAN	SD				MEAN	SD	MEAN	SD				MEAN	SD					
1	0	-	-	-	-	-	1	3	590	-	2100	-	1.02	1	1	590	-	2100	-	1.02	-	-	
1	1	-	-	-	-	-	3	-	623	15.3	2617	284	1.08	3	3	623	15.3	2617	284	1.08	-	-	
12	2	4	730	99.0	4350	1909	1.08	6	19	608	24.8	2433	172	1.09	8	9	639	70.8	2913	1153	1.08	75	
13	2	4	730	42.4	3975	247	1.03	7	22	626	22.3	2671	316	1.09	9	10	649	52.1	2961	643	1.07	78	
14	16	29	709	36.9	3953	636	1.10	5	16	668	14.8	3400	322	1.14	21	24	699	37.1	3821	618	1.11	24	
15	15	27	731	32.7	4323	612	1.10	5	16	672	29.5	3210	175	1.07	20	23	717	40.8	4045	726	1.09	25	
16	11	20	722	38.4	4200	697	1.11	2	6	640	14.1	2850	283	1.09	13	15	709	46.8	3992	818	1.11	15	
17	2	4	770	84.9	5000	1485	1.08	2	6	645	7.1	3025	318	1.13	4	5	708	87.3	4013	1438	1.10	50	
18	4	7	720	45.5	4088	853	1.08	1	3	650	-	2850	-	1.04	5	6	706	50.3	3840	923	1.07	20	
19	2	4	685	63.6	3850	849	1.19	-	-	-	-	-	-	-	-	2	2	685	63.6	3850	849	1.19	-
20	1	2	840	-	6600	-	1.11	-	-	-	-	-	-	-	-	1	1	840	-	6600	-	1.11	-
TOTAL	55							32						87									
MEAN			724	44.0	4211	790	1.10			638	31.6	2841	434	1.09			692	57.5	3707	949	1.10	37	
MEAN AGE		14.6																					

Table 10. Biological data by length interval for Arctic charr taken from an unnamed lake (72-29N,84-35W) (Arctic Bay area), 16-18 December, 1984.

LENGTH INTERVAL (MM)	MALES							FEMALES							COMBINED								
	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	FEMALE %	
			MEAN	SD	MEAN	SD				MEAN	SD	MEAN	SD										
550	-	-	-	-	-	-	5	13	582	-	2190	74	1.11	5	5	582	-	2190	74	1.11	-	-	
600	3	5	640	-	3083	176	1.18	19	49	625	-	2621	200	1.07	22	22	627	-	2684	252	1.09	86	
650	10	17	680	-	3520	449	1.12	14	36	664	-	3257	253	1.11	24	24	670	-	3367	364	1.12	58	
700	30	50	719	-	4082	358	1.10	1	3	710	-	3050	-	0.85	31	31	718	-	4048	398	1.09	3	
750	12	20	765	-	4871	373	1.09	-	-	-	-	-	-	12	12	765	-	4871	373	1.09	-		
800	4	7	818	-	6000	438	1.10	-	-	-	-	-	-	4	4	818	-	6000	438	1.10	-		
850	1	2	890	-	7800	-	1.11	-	-	-	-	-	-	1	1	890	-	7800	-	1.11	-		
TOTAL	60							39						99									
MEAN			727		4286	896	1.10			635		2805	430	1.09			691		3703	1041	1.10	39	

Table 11. Test fishery results for Arctic charr from Jungersen River (Arctic Bay area), 10-26 November 1984.

<u>Quota</u>		<u>PRODUCTION</u>				<u>Harvest</u>
680 kg						470 kg
<u>Total Number Of Fish</u>		<u>Mesh Size (mm)</u>	<u>Net Depth (Meshes)</u>	<u>Hours Set Per 100 (m)</u>	<u>CPE¹</u>	<u>CPE²</u>
121		139	25	71.1	41	160
<u>LENGTH-WEIGHT RELATIONSHIP</u> $\log_{10}W = a + b (\log_{10}L)$						
<u>Sex</u>	<u>N</u>	<u>Y-Intercept (a)</u>	<u>Slope (b)</u>	<u>95% C.I. of b</u>	<u>r</u>	
Male	53	-5.9459	3.3400	2.8900-3.7899	0.90	
Female	46	-4.2759	2.7513	2.4061-3.0965	0.92	
Total	99	-5.1577	3.0657	2.8693-3.2621	0.95	
<u>MORTALITY</u>						
<u>Age-Classes Used</u>	<u>N</u>	<u>Instantaneous Total Mortality (Z) (Catch Curve)</u>	<u>r</u>	<u>Annual Mortality (A)</u>	<u>Annual Survival (S)</u>	
14-17	28	0.60	0.95	0.45	0.55	

¹ CPE = No. fish/100 m/24 h.

² CPE = kg rd wt/100 m/24 h.

Note: Harvest calculated by multiplying total no. of charr caught by mean round weight per charr (121 x 3.9).

Table 12. Biological data by age group for Arctic charr taken from Jungersen River (Arctic Bay area), 10-26 November, 1984.

AGE (YR)	MALES							FEMALES					COMBINED					% FEMALE					
	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K		
			MEAN	SD	MEAN	SD				MEAN	SD	MEAN	SD				MEAN		SD	MEAN		SD	
7	-	-						1	3	560	-	2100	-	1.20	1	1	560	-	2100	-	1.20		
9	-	-						1	3	565	-	2000	-	1.11	1	1	565	-	2000	-	1.11		
10	-	-						7	21	606	27.9	2371	278	1.06	7	10	606	27.9	2371	270	1.06		
11	-	-						3	9	605	42.7	2333	161	1.07	3	4	605	42.7	2333	161	.07		
12	5	15	726	51.3	4120	1071	1.06	6	18	615	36.1	2617	528	1.11	11	16	665	71.1	3300	1102	.09	55	
13	3	9	718	34.0	3867	945	1.03	6	18	665	43.2	3242	575	1.09	9	13	683	46.6	3450	726	.07	67	
14	11	33	765	47.2	5082	1030	1.12	4	12	646	22.9	2725	357	1.01	15	22	733	68.3	4453	1396	.09	27	
15	7	21	795	24.0	5400	987	1.07	3	9	683	40.7	3867	679	1.20	10	15	762	60.5	4940	1140	.11	30	
16	5	15	751	71.2	4900	1588	1.12	3	9	657	37.9	3133	839	1.09	8	12	716	75.4	4238	1574	.11	38	
17	1	3	725		3800		1.00	-	-	-					1	1	725		3800		1.00		
23	1	3	825		6900		1.23	-	-	-					1	1	825		6900		1.23		
TOTAL	33							34							67								
MEAN			760	51.4	4882	1205	1.09			631	45.1	2787	662	1.09			695	80.4	3819	1427	1.09	51	
MEAN AGE		13.4																					

Table 13. Biological data by length interval for Arctic charr taken from Jungersen River (Arctic Bay area), 10-26 November, 1984.

LENGTH INTERVAL (MM)	MALES							FEMALES					COMBINED					% FEMALE					
	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K		
			MEAN	SD	MEAN	SD				MEAN	SD	MEAN	SD				MEAN		SD				
550	-	-						8	17	570		2094	140	1.13	8	8	570		2094	140	1.13	-	
600	-	-						15	33	624		2557	284	1.05	15	15	624		2557	284	1.05	-	
650	9	17	668		3061	2913	1.03	14	30	668		3114	396	1.04	23	23	668		3093	354	1.04	61	
700	10	19	728		4285	498	1.11	7	15	718		3936	445	1.07	17	17	724		4141	495	1.09	41	
750	23	43	777		5046	699	1.07	2	4	768		4725	530	1.04	25	25	776		5020	684	1.07	8	
800	11	21	817		6200	700	1.13	-	-						11	11	817		6200	700	1.13	-	
TOTAL	53							46							99								
MEAN			758		4805	1172	1.08			648		2950	767	1.06			707		3943	1365	1.08	46	

Table 14. Test fishery results for Arctic charr from an unnamed lake (Read Island) (Cambridge Bay area), 10-16 October 1983.

<u>Quota</u>	<u>PRODUCTION</u>	<u>Harvest</u>
1 000 kg		421 kg

<u>Total Number Of Fish</u>	<u>CATCH-EFFORT</u>				
	<u>Mesh Size (mm)</u>	<u>Net Depth (Meshes)</u>	<u>Hours Set Per 100 (m)</u>	<u>CPE¹</u>	<u>CPE²</u>
666	139		460.9	34.7	131.6

LENGTH-WEIGHT RELATIONSHIP $\log_{10}W = a + b(\log_{10}L)$

<u>Sex</u>	<u>N</u>	<u>Y-Intercept (a)</u>	<u>Slope (b)</u>	<u>95% C.I. of b</u>	<u>r</u>
Male	65	-3.4546	2.4730	1.9486-2.9974	0.77
Female	46	-1.7011	1.8413	1.3195-2.3631	0.73
Total	111	-3.3850	2.4436	2.0985-2.7887	0.80

<u>Age-Classes Used</u>	<u>MORTALITY</u>				
	<u>N</u>	<u>Instantaneous Total Mortality (Z) (Catch Curve)</u>	<u>r</u>	<u>Annual Mortality (A)</u>	<u>Annual Survival (S)</u>
14-17	25	0.65	0.99	0.48	0.52

Table 15. Biological data by age group for Arctic char taken from an unnamed lake (Read Island) (Cambridge Bay area), 10-16 October, 1983.

AGE (YR)	MALES							FEMALES					COMBINED					% FEMALE				
	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	
			MEAN	SD	MEAN	SD				MEAN	SD	MEAN	SD				MEAN		SD	MEAN		SD
9	-	-	-	-	-	-	1	3	740	-	2900	-	0.72	1	1	740	-	2900	-	0.72		
10	3	6	677	20.8	3400	436	1.09	6	15	625	18.7	2667	446	1.09	9	10	642	31.5	2911	553	1.09	6.7
11	3	6	723	51.3	4433	723	1.18	9	23	660	64.0	2967	482	1.04	12	13	676	65.4	3333	839	1.07	7.5
12	16	31	703	37.7	3994	880	1.14	6	15	670	51.0	3133	659	1.04	22	24	694	43.2	3759	900	1.11	2.7
13	13	25	728	26.5	4085	467	1.06	9	23	684	44.2	3400	430	1.07	22	24	710	40.2	3805	560	1.07	4.1
14	6	12	757	22.5	4633	582	1.07	6	15	690	25.3	3717	605	1.13	12	13	723	41.6	4175	741	1.10	5.0
15	4	13	718	26.3	4200	469	1.14	2	5	745	49.5	3650	212	0.90	6	7	727	33.3	4017	471	1.06	3.3
16	4	8	735	30.0	4450	656	1.13	1	3	750	-	4200	-	1.00	5	5	738	26.8	4400	579	1.10	2.0
17	1	2	680	-	2700	-	0.86	-	-	-	-	-	-	-	1	1	680	-	2700	-	0.86	
18	1	2	850	-	5900	-	0.96	-	-	-	-	-	-	1	1	850	-	5900	-	0.96		
TOTAL	51							40						91								
MEAN			721	40.4	4147	756	1.10			675	52.6	3220	600	1.05			701	51.4	3740	829	1.08	4.4
MEAN AGE		12.7																				

Table 16. Biological data by length interval for Arctic char taken from an unnamed lake (Read Island) (Cambridge Bay area), 10-16 October, 1983.

LENGTH INTERVAL (MM)	MALES							FEMALES					COMBINED					% FEMALE				
	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	
			MEAN	SD	MEAN	SD				MEAN	SD	MEAN	SD				MEAN		SD			
600	2	3	635		3000	707	1.18	15	33	621		2633	261	1.10	17	15	622		2676	325	1.11	88
650	13	20	676		3438	355	1.11	15	33	675		3487	292	1.14	28	25	675		3464	318	1.12	54
700	32	49	717		4119	478	1.12	11	24	715		3673	580	1.01	43	39	717		4005	536	1.09	26
750	17	26	766		4806	696	1.07	5	11	766		3720	432	0.83	22	20	766		4559	788	1.02	23
850	1	2	850		5900	-	0.96	-	-	-		-	-	-	1	1	850		5900	-	0.96	-
TOTAL	65							46						111								
MEAN			721		4155	755	1.10			677		3278	593	1.06			703		3792	815	1.09	41

Table 17. Test fishery results for Arctic charr from an unnamed lake (Kangishuaajuak) (Cape Dorset area), 13 October, 1980.

<u>Quota</u>	<u>PRODUCTION</u>	<u>Harvest</u>
2 268 kg		101 kg

<u>Total Number Of Fish</u>	<u>CATCH-EFFORT</u>				
	<u>Mesh Size (mm)</u>	<u>Net Depth (Meshes)</u>	<u>Hours Set Per 100 (m)</u>	<u>CPE¹</u>	<u>CPE²</u>
55	139	35	12.2	3.59	6.57

LENGTH-WEIGHT RELATIONSHIP $\log_{10}W = a + b(\log_{10}L)$

<u>Sex</u>	<u>N</u>	<u>Y-Intercept (a)</u>	<u>Slope (b)</u>	<u>95% C.I. of b</u>	<u>r</u>
Male	33	-3.4157	2.4400	1.9434-2.9366	0.87
Female	19	-3.6601	2.5318	2.2005-2.8631	0.97
Total	54	-3.4878	2.4666	2.1650-2.7682	0.92

MORTALITY

<u>Age-Classes Used</u>	<u>N</u>	<u>Instantaneous Total Mortality (Z) (Catch Curve)</u>	<u>r</u>	<u>Annual Mortality (A)</u>	<u>Annual Survival (S)</u>
13-14	25	0.42	1.0	0.34	0.66

Table 18. Biological data by age group for Arctic Charr taken from an unnamed lake (Kangishuajuak) (Cape Dorset area), 13 October, 1980.

AGE (YR)	MALES							FEMALES					COMBINED										
	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	% FEMALE	
			MEAN	SD	MEAN	SD				MEAN	SD	MEAN	SD				MEAN	SD	MEAN	SD			
9	-	-	-	-	-	-	-	2	12	440	42.4	1075	318	1.24	2	4	440	42.4	1075	318	1.24		
10	1	4	570	-	2100	-	1.13	1	6	450	-	1050	-	1.15	2	4	510	84.9	1575	742	1.14	50	
11	8	29	534	30.2	1794	299	1.17	1	6	540	-	1750	-	1.11	9	19	534	28.3	1789	280	1.17	11	
12	6	21	532	31.3	1783	151	1.21	-	-	-	-	-	-	-	7	15	533	28.7	1764	146	1.19		
13	9	32	554	30.5	1872	243	1.10	6	35	542	17.2	1817	194	1.14	16	34	549	25.2	1841	215	1.11	40	
14	4	14	576	43.5	2113	572	1.08	5	29	536	28.8	1830	192	1.19	9	19	554	40.0	1956	404	1.14	56	
1	5	-	-	-	-	-	-	2	12	610	56.6	2425	318	1.08	2	4	610	56.6	2425	318	1.08		
TOTAL	28							17							47								
MEAN			548	34.4	1873	309	1.14			531	53.8	1756	426	1.16			541	42.0	1822	351	1.14	38	
MEAN AGE		12.4																					

Table 19. Biological data by length interval for Arctic Charr taken from an unnamed lake (Kangishuajuak) (Cape Dorset area), 13 October, 1980.

LENGTH INTERVAL (MM)	MALES							FEMALES					COMBINED										
	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	% FEMALE	
			MEAN	SD	MEAN	SD				MEAN	SD	MEAN	SD				MEAN	SD	MEAN	SD			
400	-	-	-	-	-	-	-	1	5	410	-	850	-	1.23	1	2	410	-	850	-	1.23	-	
450	2	6	480	-	1275	247	1.15	2	11	460	-	1175	177	1.20	4	7	470	-	1225	185	1.18	50	
500	14	42	525	-	1686	173	1.17	7	37	523	-	1729	163	1.21	22	41	525	-	1698	163	1.18	33	
550	13	39	565	-	1977	190	1.09	7	37	559	-	1986	135	1.14	21	39	562	-	1967	176	1.10	35	
600	3	9	617	-	2617	382	1.11	1	5	600	-	2250	-	1.04	4	7	613	-	2525	362	1.10	25	
650	-	-	-	-	-	-	-	1	5	650	-	2650	-	0.96	1	2	650	-	2650	-	0.96	-	
700	1	3	730	-	3800	-	0.98	-	-	-	-	-	-	-	1	2	730	-	3800	-	0.98	-	
TOTAL	33							19							54								
MEAN			553		1924	494	1.13			534		1795	421	1.16			546		1869	461	1.14	37	

Table 20. Test fishery results for Arctic charr from Amadjuak Lake (Frobisher Bay area), 11 August to 3 September 1980.

<u>Quota</u>	<u>PRODUCTION</u>	<u>Harvest</u>
2 268 kg		875 kg

<u>CATCH-EFFORT</u>					
<u>Total Number Of Fish</u>	<u>Mesh Size (mm)</u>	<u>Net Depth (Meshes)</u>	<u>Hours Set Per 100 (m)</u>	<u>CPE¹</u>	<u>CPE²</u>
453	139	35	54.3	0.28	0.55

<u>LENGTH-WEIGHT RELATIONSHIP</u> $\log_{10}W = a + b (\log_{10}L)$					
<u>Sex</u>	<u>N</u>	<u>Y-Intercept (a)</u>	<u>Slope (b)</u>	<u>95% C.I. of b</u>	<u>r</u>
Male	190	-5.3521	3.1412	2.9925-3.2899	0.95
Female	92	-5.4390	3.1769	2.9884-3.3654	0.96
Total	405	-5.4008	3.1594	3.0549-3.2639	0.95

Note: 123 sex not recorded.

<u>MORTALITY</u>					
<u>Age-Classes Used</u>	<u>N</u>	<u>Instantaneous Total Mortality (Z) (Catch Curve)</u>	<u>r</u>	<u>Annual Mortality (A)</u>	<u>Annual Survival (S)</u>
16-25	92	0.29	0.99	0.25	0.75

¹ CPE = No. fish/100 m/24 h.

² CPE = kg rd wt/100 m/24 h.

Table 21. Biological data by age group for Arctic char taken from Amadjuak Lake (Frobisher Bay area), 1 August to 3 September, 1980.

AGE (YR)	MALES							FEMALES							COMBINED							
	LENGTH(MM)			WEIGHT(G)		K	MAT	LENGTH(MM)			WEIGHT(G)		K	MAT	LENGTH(MM)			WEIGHT(G)		K	MAT	
	N	MEAN	SD	MEAN	SD			N	MEAN	SD	MEAN	SD			N	MEAN	SD	MEAN	SD			
7								1	340	-	400	1.02	100	1	340		400	1.02	100			
8								1	370	-	450	0.89	100	1	370		450	0.89	100			
9	1	410	-	700		1.02	0	1	390	-	700	1.18	100	2	400	14.1	700	0	1.10	50		
10	1	470	-	550		0.53	0	1	390	-	700	1.18	0	2	430	56.6	625	106	0.85	0		
11	7	430	86.8	907	598	1.04	71	3	417	58.6	783	2.47	1.07	67	10	426	76.3	870	505	1.05	70	
12	8	424	126.8	1113	1326	1.10	75	3	383	37.9	600	1.32	1.06	67	11	413	09.1	973	1137	1.09	73	
13	8	378	78.5	606	396	1.01	75	10	398	75.5	810	628	1.13	80	17	393	75.6	750	533	1.11	76	
14	17	511	141.3	1918	1513	1.23	65	3	423	23.1	733	104	0.96	67	20	498	33.8	1740	1455	1.19	65	
15	14	560	45.3	2589	1904	1.22	57	7	440	109.0	1021	863	0.99	86	21	520	43.9	2067	1776	1.14	67	
16	19	506	36.3	1787	1797	1.04	58	11	503	133.1	1823	1547	1.12	73	27	496	129.3	1674	1628	1.05	59	
17	14	529	31.6	2018	1654	1.10	71	7	466	110.3	1436	1179	1.16	100	20	515	125.6	1883	1523	1.12	80	
18	7	507	16.6	1650	1119	1.08	71	2	435	21.2	700	0	0.86	50	9	491	106.1	1439	1056	1.03	67	
19	11	595	43.1	2895	1872	1.14	73	4	628	20.6	3350	705	1.34	75	14	603	126.8	3032	1697	1.19	79	
20	4	560	92.0	2513	2238	1.06	75	4	580	172.6	2600	1667	1.11	100	7	544	165.2	2293	1802	1.09	86	
21	2	650	55.6	4500	1909	1.67	100	1	730	-	4850		1.25	100	3	677	119.3	4617	1365	1.53	100	
22	1	530	-	1350		0.91	0	2	470	113.1	1350	919	1.19	100	3	490	87.2	1350	650	1.10	67	
23	3	687	222.8	4583	3450	1.08	67	2	595	176.8	3200	3465	1.12	50	5	650	187.5	4030	3087	1.09	60	
24	2	610	212.1	3350	3041	1.24	100	1	690	-	3400		1.03	100	3	637	157.0	3367	2150	1.17	100	
25	1	750	-	6000		1.42	100								1	750	-	6000		1.42	100	
27	1	670	-	3550		1.18	100								1	670	-	3550		1.18	100	
28	1	500	-	1300		1.04	100								1	500	-	1300		1.04	100	
TOTAL	122							64							179							
MEAN		518	145	2029	1803	1.12			473	123.7	1508	1385	1.10			501	137.9	1828	1678	1.12		
MEAN AGE	15.9																					

19

Table 22. Biological data by length interval for Arctic char taken from Amadjuak Lake (Frobisher Bay area), 11 August to 3 September, 1980.

LENGTH INTERVAL (MM)	MALES							FEMALES							COMBINED							
	LENGTH(MM)			WEIGHT(G)		K	MAT	LENGTH(MM)			WEIGHT(G)		K	MAT	LENGTH(MM)			WEIGHT(G)		K	MAT	
	N	MEAN	SD	MEAN	SD			N	MEAN	SD	MEAN	SD			N	MEAN	SD	MEAN	SD			
300	14	321		443	242	1.38	86	5	334		360	96	0.95	100	27	325		493	495	1.45	59	
350	26	373		550	111	1.06	54	26	375		571	102	1.08	135	78	375		559	97	1.06	45	
400	34	419		778	272	1.06	53	22	415		736	118	1.03	64	80	418		742	200	1.02	39	
450	25	463		958	353	0.97	52	7	464		10136	446	1.06	71	48	464		985	317	0.99	36	
500	12	521		1417	572	.00	67	1	540		2000		.27	100	18	521		1356	570	0.96	50	
550	18	574		2033	575	.07	61	9	570		2117	285	.14	67	35	573		2120	466	1.12	49	
600	18	621		2814	484	.17	83	14	617		2950	452	.25	93	47	620		2805	489	1.18	57	
650	15	670		3657	601	.22	93	7	664		3179	1199	.08	71	28	669		3654	967	1.22	68	
700	12	719		4846	1008	.30	75	3	727		5100	477	.33	67	17	720		4900	950	1.31	59	
750	12	767		5329	691	.18	92	2	755		4950	778	.15	50	16	764		5344	643	1.20	69	
800	9	810		6294	1315	.18	100	-							10	809		6315	1242	1.19	90	
850	-														1	850		8000		1.30	0	
TOTAL	195							96							405							
MEAN		528		2096	1863	1.12			484		1565	1349	1.10			505		1818	1603	1.11		

Table 23. Test fishery results for Arctic charr from Qamanirjuaq Lake (Frobisher Bay area), 20 April to 27 May 1981.

<u>Quota</u>		<u>PRODUCTION</u>				<u>Harvest</u>
Nil						150 kg

<u>CATCH-EFFORT</u>					
<u>Total Number Of Fish</u>	<u>Mesh Size (mm)</u>	<u>Net Depth (Meshes)</u>	<u>Hours Set Per 100 (m)</u>	<u>CPE¹</u>	<u>CPE²</u>
78	139	25	213.97	8.75	16.45

<u>LENGTH-WEIGHT RELATIONSHIP</u> $\log_{10}W = a + b (\log_{10}L)$					
<u>Sex</u>	<u>N</u>	<u>Y-Intercept (a)</u>	<u>Slope (b)</u>	<u>95% C.I. of b</u>	<u>r</u>
Male	64	-5.0178	3.0052	2.6988-3.3116	0.93
Female	14	-5.9018	3.3279	2.5897-5.0661	0.75
Total	78	-5.1623	3.0574	2.7419-3.3729	0.91

<u>MORTALITY</u>					
<u>Age-Classes Used</u>	<u>N</u>	<u>Instantaneous Total Mortality (Z) (Catch Curve)</u>	<u>r</u>	<u>Annual Mortality (A)</u>	<u>Annual Survival (S)</u>
11-13	40	0.43	0.98	0.35	0.65

¹ CPE = No. fish/100 m/24 h.

² CPE = kg rd wt/100 m/24 h.

Table 24. Biological data by age group for Arctic charr taken from Qamanirjuaq Lake (Frobisher Bay area), 20 April to 27 May, 1981.

AGE (YR)	MALES							FEMALES							COMBINED						
	N	LENGTH(MM)		WEIGHT(G)		K	% MAT	N	LENGTH(MM)		WEIGHT(G)		K	% MAT	N	LENGTH(MM)		WEIGHT(G)		K	% MAT
		MEAN	SD	MEAN	SD				MEAN	SD	MEAN	SD				MEAN	SD	MEAN	SD		
8	1	520		1200		0.85	0							1	520		1200		0.85	0	
9	2	553	10.6	1600	141	0.95	0							2	553	10.6	1600	141	0.95	0	
10	7	546	62.1	1729	547	1.03	0	2	550	14.1	1900	141	1.14	0	9	547	54.1	1767	482	1.05	0
11	18	597	36.1	2022	359	0.94	0	6	523	25.0	1450	138	1.01	0	24	578	46.4	1879	404	0.96	0
12	12	575	34.0	1975	391	1.03	0							12	575	34.0	1975	391	1.03	0	
13	3	585	31.2	1967	252	0.98	0	1	535		2000	-	1.31	0	4	573	35.7	1975	206	1.06	0
15	4	578	39.7	1875	250	0.97	0							4	578	39.7	1875	250	0.97	0	
TOTAL	47							9						56							
MEAN		570	43	1915	396	0.98			531	23.5	1611	271	1.07		570	43.6	1066	393	1.00		
MEAN AGE	11.4																				

Table 25. Biological data by length interval for Arctic charr taken from Qamanirjuaq Lake (Frobisher Bay area), 20 April to 27 May, 1981.

LENGTH INTERVAL (MM)	MALES							FEMALES							COMBINED						
	N	LENGTH(MM)		WEIGHT(G)		K	% MAT	N	LENGTH(MM)		WEIGHT(G)		K	% MAT	N	LENGTH(MM)		WEIGHT(G)		K	% MAT
		MEAN	SD	MEAN	SD				MEAN	SD	MEAN	SD				MEAN	SD	MEAN	SD		
400	1	425		700		0.91	0	-						1	425		700		0.91	0	
450	1	495		1400		1.15	0	2	480		1100	141	0.99	0	3	485		1200	200	1.05	0
500	10	531		1480	132	0.99	0	8	530		1488	348	0.99	0	18	530		1483	243	0.99	0
550	30	578		1930	186	1.00	0	3	565		1867	231	1.03	0	33	577		1924	187	1.00	0
600	21	617		2338	285	0.99	0	-						21	617		2338	285	0.99	0	
650	2	670		2950	919	0.97	0	-						2	670		2950	919	0.97	0	
TOTAL	65							13						78							
MEAN		583		1997	446	0.99			530		1515	376	1.00		574		1917	469	1.00		

from Hayes River (Gjoa Haven

Table 26. Test fishery results for Arctic charr
 (area), 28 August to 11 September 1982.

	<u>PRODUCTION</u>	<u>Harvest</u>
<u>Quota</u>		2 470 kg
3 000 kg		

<u>Total Number Of Fish</u>	<u>Mesh Size (mm)</u>	<u>CATCH-EFFORT</u>			
		<u>Net Depth (Meshes)</u>	<u>Hours Set Per 100 (m)</u>	<u>CPE¹</u>	<u>CPE²</u>
N/A	139		N/A	N/A	33.1

$$\log_{10}W = a + b (\log_{10}L)$$

<u>LENGTH-WEIGHT RELATIONSHIP</u>		<u>Y-Intercept</u>	<u>slope (b)</u>	<u>95% C.I.</u>	<u>of $\frac{r}{b}$</u>
<u>Sex</u>	<u>N</u>	- - @ - - - -			
Male	101	-5.3341	3.1527	2.8240-3.4814	0.89
Female	100	-4.3352	2.7978	2.5182-3.0774	0.89
Total	202	-4.8466	2.9806	2.7812-3.1799	0.90

MORTALITY

<u>Age-Classes Used</u>	<u>N</u>	<u>Instantaneous Total Mortality (Z) (Catch Curve)</u>	<u>r</u>	<u>Annual Mortality (A)</u>	<u>Annual Survival (S)</u>
13-18	54	0.39	0.91	0.32	0.68

Table 27. Biological data by age group for Arctic charr taken from Hayes River (Gjoa Haven area), 28 August to 1 September, 1982.

AGE (YR)	MALES						FEMALES						COMBINED								
	LENGTH(MM)			WEIGHT(G)			LENGTH(MM)			WEIGHT(G)			LENGTH(MM)			WEIGHT(G)					
	N	MEAN	SD	MEAN	SD	K	MAT	N	MEAN	SD	MEAN	SD	K	MAT	N	MEAN	SD	MEAN	SD	K	MAT
10	2	614	55.9	2730	580	1.18	100	5	585	21.6	2586	295	1.29	100	7	593	32.0	2627	345	1.26	100
11	20	635	45.4	3288	936	1.25	100	26	592	33.7	2662	510	1.27	100	47	611	43.9	2932	774	1.26	100
12	30	643	50.5	3463	882	1.28	100	25	601	37.8	2819	628	1.28	100	55	624	49.6	3170	835	1.28	100
13	13	675	45.8	4191	955	1.34	100	10	616	46.7	3055	727	1.28	100	23	649	54.2	3697	1022	1.32	100
14	9	686	36.6	4113	850	1.26	100	2	632	16.3	3055	233	.21	100	1	676	39.7	3921	876	1.25	100
15	2	741	1.4	5700	1400	1.40	100	3	708	16.5	5003	839	.40	100	5	721	21.4	5282	994	1.40	100
16	6	718	48.1	4312	1822	1.14	100	3	661	29.6	3560	764	.22	100	9	699	49.7	4061	1537	1.17	100
17	1	752	-	5810	-	1.37	100	2	708	73.5	4590	382	.32	100	3	723	57.9	4997	754	1.33	100
18	2	713	40.3	4450	1344	1.21	100	1	745	-	4920	-	.19	100	3	723	34.1	4607	988	1.20	100
19	1	690	-	3060	-	0.93	100							1	690	-	3060	-	0.93	100	
21	1	830	-	5900	-	1.03	100							1	830	-	5900	-	1.03	100	
25	1	718	-	3940	-	1.06	100							1	718	-	3940	-	1.06	100	
TOTAL	88							77						166							
MEAN		663	57	3767	1119	1.26			611	48.8	2975	813	1.28			639	59.0	3394	1060	1.27	
MEAN AGE	12.6																				

Table 28. Biological data by length interval for Arctic charr taken from Hayes River (Gjoa Haven area), 28 August to 1 September, 1982.

LENGTH INTERVAL (MM)	MALES						FEMALES						COMBINED								
	LENGTH(MM)			WEIGHT(G)			LENGTH(MM)			WEIGHT(G)			LENGTH(MM)			WEIGHT(G)					
	N	MEAN	SD	MEAN	SD	K	MAT	N	MEAN	SD	MEAN	SD	K	MAT	N	MEAN	SD	MEAN	SD	K	MAT
500	1	505	-	1210	-	0.94	100	5	544	-	1984	179	1.23	100	6	538	-	1855	354	1.18	100
550	15	581	-	2377	283	1.21	100	36	575	-	2441	277	1.28	100	52	577	-	2431	281	1.26	98
600	22	628	-	3185	357	1.28	100	31	619	-	3018	390	1.27	100	53	623	-	3087	382	1.28	100
650	34	676	-	3876	690	1.26	100	19	667	-	3908	633	1.31	100	53	672	-	3888	664	1.28	100
700	20	723	-	4978	571	1.32	100	6	721	-	4557	899	1.21	100	26	722	-	4881	665	1.29	100
750	4	762	-	5458	862	1.23	100	3	764	-	4463	678	1.01	100	7	763	-	5031	899	1.14	100
800	5	821	-	6966	1371	1.26	100							5	821	-	6966	1371	1.26	100	
TOTAL	101							100						202							
MEAN		669		3910	1299	1.26			619		3064	854	1.27			644		3486	1175	1.27	

Table 29. Test fishery results for Arctic charr from Prince Albert Sound
(Holman area), 24-25 August 1982.

		<u>PRODUCTION</u>		<u>Harvest</u>	
<u>Quota</u>				N/A	
1 350 kg					
<u>CATCH-EFFORT</u>					
<u>Total Number Of Fish</u>	<u>Mesh Size (mm)</u>	<u>Net Depth (Meshes)</u>	<u>Hours Set Per 100 (m)</u>	<u>CPE¹</u>	<u>CPE²</u>
168	139		19.7	201.6	N/A
<u>LENGTH-WEIGHT RELATIONSHIP</u> $\log_{10}W = a + b (\log_{10}L)$					
<u>Sex</u>	<u>N</u>	<u>y-Intercept - @ l - -</u>	<u>Slope .121-</u>	<u>95% C.I. of b</u>	<u>r_s</u>
Male	57	-6.5111	3.5798	3.0501-4.1095	0.88
Female	73	-3.1475	2.3752	1.9764-2.7740	0.82
Total	131	-4.1939	2.7521	2.4373-3.0669	0.84
<u>MORTALITY</u>					
<u>Age-Classes Used</u>	<u>N</u>	<u>Instantaneous Total Mortality (Z) (Catch Curve)</u>	<u>r</u>	<u>Annual Mortality (A)</u>	<u>Annual Survival (S)</u>
12-15	107	0.83	0.99	0.56	0.44

Table 30. Biological data by age group for Arctic Charr taken from Prince Albert Sound (Holman area) ,24-25 August ,1982.

AGE (YR)	MALES						FEMALES						COMBINED						% FEMALE			
	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)			WEIGHT(G)		K
			MEAN	SD	MEAN	SD				MEAN	SD	MEAN	SD				MEAN	SD		MEAN	SD	
8	-	-	-	-	-	-	1	2	520	-	1500	-	1.07	1	1	520	-	1500	-	1.07	-	
10	6	11	613	28.0	3058	665	1.31	3	5	590	10.0	2533	252	1.23	9	8	606	25.5	2883	601	1.28	33
11	18	34	637	25.4	3417	699	1.30	17	26	592	31.7	2632	721	1.25	35	29	615	36.2	3036	805	1.28	49
12	16	30	645	47.0	3891	1553	1.42	21	32	614	71.0	3105	935	1.35	37	31	628	63.0	3445	1283	1.38	57
13	11	21	666	36.4	3910	849	1.31	16	25	646	32.0	3728	943	1.37	27	23	654	34.8	3806	894	1.34	59
14	1	2	590	-	2300	-	1.12	5	8	654	38.5	3310	625	1.17	6	5	643	43.2	3142	695	1.16	03
15	1	2	810	-	6500	-	1.22	1	2	680	-	3600	-	1.14	2	2	745	91.9	5050	2051	1.18	50
17	-	-	-	-	-	-	-	1	2	700	-	3500	-	1.02	2	2	735	49.5	3825	460	0.96	-
TOTAL	53							65						119								
MEAN			645	44.7	3660	1149	1.33			619	54.7	3113	927	1.30			632	53.2	3366	1062	1.31	55
MEAN AGE	12.0																					

Table 31. Biological data by length interval Arctic Charr taken from Prince Albert Sound (Holman area) ,24-25 August ,1982.

LENGTH INTERVAL (MM)	MALES						FEMALES						COMBINED						% FEMALE			
	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)			WEIGHT(G)		K
			MEAN	SD	MEAN	SD				MEAN	SD	MEAN	SD				MEAN	SD		MEAN	SD	
300	-	-	-	-	-	-	1	1	340	1200	-	3.05	1	1	340	1200	-	3.05	-	-	-	
500	2	4	520		1550	71	1.11	4	6	523	1925	597	1.35	6	5	522	1800	502	1.27	67		
550	4	7	580		2288	307	1.17	11	15	584	2427	211	1.22	15	11	583	2390	237	1.21	73		
600	26	46	626		3344	1104	1.35	36	50	619	2903	490	1.26	62	47	622	3135	818	1.30	58		
650	17	30	671		4068	418	1.35	16	22	667	4119	694	1.39	34	26	660	4084	554	1.37	48		
700	6	11	710		4950	415	1.38	4	6	713	4450	1019	1.22	10	8	711	4750	713	1.32	40		
750	1	2	760		6100	-	1.39	-	-	-	-	-	-	2	2	765	5125	1379	1.155	-		
800	1	2	810		6500	-	1.22	-	-	-	-	-	-	1	1	810	6500	-	1.22	-		
TOTAL	57							72						131								
MEAN			647		3696	1197	1.33			620	3149	908	1.31			633	3399	1071	1.32	56		

Table 32. Test fishery results for Arctic charr from Prince Albert Sound (Holman area), 23-25 August 1983.

<u>Quota</u>		<u>PRODUCTION</u>			<u>Harvest</u>
1 350 kg					896 kg
<u>CATCH-EFFORT</u>					
<u>Total Number Of Fish</u>	<u>Mesh Size (mm)</u>	<u>Net Depth (Meshes)</u>	<u>Hours Set Per 100 (m)</u>	<u>CPE¹</u>	<u>CPE²</u>
Not available					
<u>LENGTH-WEIGHT RELATIONSHIP $\log_{10}W = a + b(\log_{10}L)$</u>					
<u>Sex</u>	<u>N</u>	<u>Y-Intercept (a)</u>	<u>Slope (b)</u>	<u>95% C.I. of b</u>	<u>r</u>
Male					
Female					
Total	137	-5.9872	3.3835	3.2447-3.5223	0.97
<u>MORTALITY</u>					
<u>Age-Classes Used</u>	<u>N</u>	<u>Instantaneous Total Mortality (Z) (Catch Curve)</u>	<u>r</u>	<u>Annual Mortality (A)</u>	<u>Annual Survival (S)</u>
13-17	55	0.74	0.98	0.53	0.48

¹ CPE = No. fish/100 m/24 h.

² CPE = kg rd wt/100 m/24 h.

Table 33. Biological data by age group for Arctic **charr** taken from Prince Albert Sound (**Holman** area), 23-25 August 1983.

AGE (YR)	NO.	PERCENT	FORK LENGTH (MM)		ROUND WEIGHT(G)	
			MEAN	SD	MEAN	SD
9	3	3	472	27.1	1133	189
10	4	4	536	85.2	1888	769
11	21	19	590	51.1	2483	892
12	30	27	622	45.0	3053	776
13	29	26	648	41.0	3407	771
14	17	15	648	47.1	3538	954
15	4	4	678	52.7	4113	1211
16	3	3	636	55.2	3033	764
17	1	1	815	-	6900	-
20	1	1	862	-	7350	-
TOTAL	113					
MEAN			626	65.9	3128	1118
MEAN AGE"	12.5					

Table 34. Biological data by length interval for Arctic **charr** taken from Prince **Albert** Sound (**Holman** area), 23-25 August 1983.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH(MM)	ROUND WEIGHT(G)	
				MEAN	SD
400	2	1	428	900	141
450	3	2	476	1133	104
500	11	8	527	1673	268
550	19	14	581	2284	242
600	55	40	627	3025	393
650	29	21	672	3895	488
700	16	12	716	4713	632
800	1	1	815	6900	-
850	1	1	862	7350	-
TOTAL	137				
MEAN			629	3182	1121

Table 35. Test fishery results for Arctic charr from Navarana Lake (Igloodik area), March 1983.

<u>Quota</u>		<u>PRODUCTION</u>			<u>Harvest</u>
Ni 1					N/A
<u>CATCH-EFFORT</u>					
<u>Total Number Of Fish</u>	<u>Mesh Size (mm)</u>	<u>Net Depth (Meshes)</u>	<u>Hours Set Per 100 (m)</u>	<u>CPE¹</u>	<u>CPE²</u>
160	139				
<u>LENGTH-WEIGHT RELATIONSHIP</u> $\log_{10}W = a + b(\log_{10}L)$					
<u>Sex</u>	<u>N</u>	<u>Y-Intercept (a)</u>	<u>Slope (b)</u>	<u>95% C.I. of b</u>	<u>r</u>
Male					
Female					
Total	110	-4.2473	2.7387	2.3449-3.1325	.97
<u>MORTALITY</u>					
<u>Age-Classes Used</u>	<u>N</u>	<u>Instantaneous Total Mortality (Z) (Catch Curve)</u>	<u>r</u>	<u>Annual Mortality (A)</u>	<u>Annual Survival (S)</u>
15-18	44	0.43	0.98	0.35	0.65

¹ CPE = No. fish/100 m/24 h.

² CPE = kg rd wt/100 m/24 h.

Table 36. Biological data by age group for Arctic charr taken from Navarana Lake (Igloolik area), March, 1983.

AGE (YR)	NO.	PERCENT	FORK LENGTH (MM)		ROUND WEIGHT (G)	
			MEAN	SD	MEAN	SD
11	1	1	610	-	2250	
12	4	4	605	10.0	2431	512
13	14	15	629	53.1	2730	677
14	20	22	633	39.7	2879	712
15	13	14	642	56.4	2981	613
16	15	16	634	45.5	2797	631
17	10	11	616	95.2	2245	913
18	3	3	620	45.8	2575	566
19	3	3	643	49.3	2800	260
20	4	4	668	69.5	2719	494
21	4	4	645	34.2	2613	836
TOTAL	91					
MEAN			632	53.4	2729	683
MEAN AGE	15.4					

Table 37. Biological data by length interval for Arctic charr taken from Navarana Lake (Igloolik area), March, 1983.

LENGTH INTERVAL (MM)	NO.	PERCENT	MEAN FORK LENGTH (MM)	ROUND WEIGHT (G)	
				MEAN	SD
450	2	2	460	1025	177
500	2	2	510	1025	177
550	12	11	558	1983	475
600	51	46	617	2600	402
650	31	28	664	3000	534
700	9	8	713	3894	634
750	3	3	767	3475	130
TOTAL	110				
MEAN			631	2718	728

Table 38. Test fishery results for Arcticcharr from Ajaqatalik River (Igloolik area), 25-28 August 1984.

<u>Quota</u>		<u>PRODUCTION</u>			<u>Harvest</u>
454 kg					261 kg
<u>CATCH-EFFORT</u>					
<u>Total Number Of Fish</u>	<u>Mesh Size (mm)</u>	<u>Net Depth - (! @! @ -</u>	<u>Hours Set Per 100 (m)</u>	<u>CPE¹</u>	<u>CPE²</u>
60	139	25	78.2	18.4	80.0
<u>LENGTH-WEIGHT RELATIONSHIP</u> $\log_{10}W = a + b(\log_{10}L)$					
<u>Sex</u>	<u>N</u>	<u>Y-Intercept (a)</u>	<u>Slope (b)</u>	<u>95% C.I. of b</u>	<u>r</u>
Male	36	-4.8114	2.9842	2.8325-3.1159	0.99
Female	24	-4.1820	2.7490	2.3885-3.1095	0.96
Total	60	-4.6930	2.9385	2.7880-3.0890	0.98
<u>MORTALITY</u>					
<u>Age-Classes Used</u>	<u>N</u>	<u>Instantaneous Total Mortality (Z) (Catch Curve)</u>	<u>r</u>	<u>Annual Mortality (A)</u>	<u>Annual Survival (S)</u>
15-17	21	0.56	0.99	0.43	0.57

¹ CPE = No. fish/100 m/24 h.

² CPE = kg rd wt/100 m/24 h.

Table 39. Biological data by age group for Arctic charr taken from Ajaqutalik River (Igloodik area), 25-28 August, 1984.

AGE (YR)	MALES							FEMALES							COMBINED							
	N	LENGTH(MM)		WEIGHT(G)		K	MAT	N	LENGTH(MM)		WEIGHT(G)		K	MAT	N	LENGTH(MM)		WEIGHT(G)		K	MAT	
		MEAN	SD	MEAN	SD				MEAN	SD	MEAN	SD				MEAN	SD	MEAN	SD			MEAN
7	1	400	-	750	-	1.17	100															
8	-	-	-	-	-	-	-	1	320	-	450	-	1.37	0	1	400	-	750	-	1.17	100	
9	3	413	76.4	167	611	1.52	67	1	525	-	2200	-	1.52	100	4	441	83.7	1425	718	1.52	75	
10								2	580	148.5	2450	1061	1.29	100	2	580	148.5	2450	1061	1.29	100	
12	2	453	109.6	475	1167	1.39	50	1	440	-	1150	-	1.35	100	3	448	77.8	1367	846	1.38	67	
13	2	680	14.1	350	71	1.39	100	2	570	7.1	2800	566	1.51	100	4	625	64.2	3575	954	1.45	100	
14	4	745	71.9	800	1523	1.38	100	7	704	55.1	4657	1409	1.31	100	11	719	61.7	5073	1490	1.34	100	
15	4	770	62.8	6600	1679	1.42	100	4	670	24.2	3863	067	1.27	100	8	720	69.3	5231	1916	1.34	100	
16	10	726	56.1	5420	1069	1.41	100							10	726	56.1	5420	1069	1.41	100		
17	3	798	47.5	7100	1217	1.39	100							3	798	47.5	7100	1217	1.39	100		
21	1	855	-	7600	-	1.22	100							1	855	-	7600	-	1.22	100		
TOTAL	3							18						48								
MEAN		682	146	4953	2298	1.40			622	118.9	3464	1630	1.34		660	138.7	4395	2179	1.38			
MEAN AGE		13.9																				

Table 40. Biological data by length interval for Arctic charr taken from Ajaqutalik River (Igloodik area), 25-28 August, 1984.

LENGTH INTERVAL (MM)	MALES						FEMALES						COMBINED									
	N	LENGTH(MM)		WEIGHT(G)		K	MAT	N	LENGTH(MM)		WEIGHT(G)		K	MAT	N	LENGTH(MM)		WEIGHT(G)		K	MAT	
		MEAN	SD	MEAN	SD				MEAN	SD	MEAN	SD				MEAN	SD	MEAN	SD			
300	1	330	-	500	-	1.39	0	1	320	-	450	-	1.37	0	2	325	-	475	-	35	1.38	0
350	1	375	-	650	-	1.23	0	-	-	-	-	-	-	1	375	-	650	-	-	1.23	0	
400	2	415	-	1025	389	1.40	100	1	440	-	1150	-	1.35	100	3	423	-	1067	284	1.39	100	
450	1	480	-	1700	-	1.54	100	2	468	-	1675	35	1.64	100	3	472	-	1683	29	1.61	100	
500	1	530	-	2300	-	1.54	100	1	525	-	2200	-	1.52	100	2	528	-	2250	71	1.53	100	
550	-	-	-	-	-	-	-	3	568	-	2567	569	1.39	100	3	568	-	2567	569	1.39	100	
600	3	622	-	3500	700	1.45	100	5	619	-	2970	694	1.25	100	8	620	-	3169	700	1.33	100	
650	6	678	-	4500	283	1.44	100	6	683	-	4200	636	1.32	100	12	680	-	4350	495	1.38	100	
700	7	727	-	5257	513	1.37	100	3	717	-	4400	1039	1.19	100	10	724	-	5000	766	1.31	100	
750	6	767	-	6200	482	1.37	100	2	773	-	6100	1556	1.31	100	8	768	-	6175	717	1.36	100	
800	7	823	-	7786	339	1.40	100	-	-	-	-	-	-	7	823	-	7786	339	1.40	100		
850	1	855	-	7600	-	1.22	100	-	-	-	-	-	-	1	855	-	7600	-	1.22	100		
TOTAL	36							24						60								
MEAN		688		5022	2219	1.40			617		3346	1542	1.34		660		4352	2129	1.37			

Table 41. Test fishery results for Arcticcharr from an unnamed lake (Wigh Inlet) (Lake Harbour area), 10-13 January 1985.

<u>Quota</u>		<u>PRODUCTION</u>				<u>Harvest</u>
1 000 kg						281 kg

<u>CATCH-EFFORT</u>					
<u>Total Number Of Fish</u>	<u>Mesh Size (mm)</u>	<u>Net Depth (Meshes)</u>	<u>Hours Set Per 100 (m)</u>	<u>CPE¹</u>	<u>CPE²</u>
100	139		136.25	18	50.6

LENGTH-WEIGHT RELATIONSHIP $\log_{10}W = a + b (\log_{10}L)$

<u>Sex</u>	<u>N</u>	<u>Y-Intercept (a)</u>	<u>Slope (b)</u>	<u>95% C.I. of b</u>	<u>r</u>
Male	57	-2.9057	2.2781	2.0932-2.4630	0.96
Female	43	-2.5430	2.1445	1.8472-2.4418	0.92
Total	100	-2.8616	2.2612	2.1128-2.4096	0.95

MORTALITY

<u>Age-Classes Used</u>	<u>N</u>	<u>Instantaneous Total Mortality (Z) (Catch Curve)</u>	<u>r</u>	<u>Annual Mortality (A)</u>	<u>Annual Survival (S)</u>
14-17	36	0.65	0.99	0.48	0.52

¹ CPE = No. fish/100 m/24 h.

² CPE = kg rd wt/100 m/24 h.

Table 42. Biological data by age group for Arctic charr taken from an unnamed lake (Wigh Inlet) (Lake Harbour area), 10-13 January, 1985.

AGE (YR)	MALES							FEMALES							COMBINED					% FEMALE			
	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K		
			MEAN	SD	MEAN	SD				MEAN	SD	MEAN	SD				MEAN	SD	MEAN			SD	
7	1	2	360	-	900	-	1.93	-	-	-	-	-	-	1	1		360		900	-	1.93		
9	1	2	440	-	1000	-	1.17	-	-	-	-	-	-	1	1		440		1000	-	1.17		
10	1	2	465	-	1700	-	1.69	2	6	450	70.7	1375	318	1.54	3	4	455	50.7	1483	293	1.59	67	
11	3	7	618	55.8	2883	553	1.22	6	19	574	41.1	2392	453	1.26	9	12	589	48.1	2556	515	1.24	67	
12	6	14	584	75.1	2708	797	1.34	3	10	592	14.4	2567	231	1.24	9	12	587	59.9	2661	644	.31	33	
13	8	18	633	26.9	3056	495	1.20	8	26	590	4(1.4)	2594	500	1.26	16	21	611	39.7	2825	537	.23	50	
14	10	23	644	34.4	3075	472	1.15	6	19	553	37.8	2283	458	1.34	16	21	610	56.7	2778	600	.22	38	
15	7	16	672	34.6	3643	573	1.19	6	19	603	53.5	2658	832	1.18	13	17	640	55.6	3188	845	.19	46	
16	3	7	700	40.0	3567	861	1.03	-	-	-	-	-	-	-	-	3	4	700	40.0	3567	861	.03	
17	3	7	658	29.3	3367	301	1.18	-	-	-	-	-	-	-	-	3	4	658	29.3	3367	301	.18	
18	1	2	755	-	4450	-	1.03	-	-	-	-	-	-	-	-	1	1	755	-	4450	-	.03	
TOTAL	44							31						75									
MEAN			629	77.5	3056	808	1.22			573	54.1	2426	590	1.27			606	73.7	2795	716	1.24	41	
MEAN AGE		13.3																					

Table 43. Biological data by length interval for Arctic charr taken from an unnamed lake (Wigh Inlet) (Lake Harbour area), 10-13 January, 1985.

LENGTH INTERVAL (MM)	MALES							FEMALES							COMBINED					% FEMALE			
	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K		
			MEAN	SD	MEAN	SD				MEAN	SD	MEAN	SD				MEAN	SD					
350	1	2	360	-	900	-	1.93	-	-	-	-	-	-	1	1		360		900	-	1.93	-	
400	1	2	440	-	1000	-	1.17	1	2	400		1150		.80	2	2	420		1075	106	1.49	50	
450	2	4	473		1750	71	1.66	1	2	490		1700		.44	3	3	478		1733	58	1.59	33	
500	2	4	518		1750	71	1.26	7	16	528		1893	172	.29	9	9	526		1861	164	1.28	78	
550	4	7	574		2500	163	1.33	15	35	573		2380	276	.26	19	19	573		2405	257	1.28	79	
600	20	35	630		2973	352	1.19	16	37	617		2828	293	.21	36	36	624		2908	331	1.20	44	
650	18	32	662		3319	252	1.14	2	5	685		3400	778	.06	20	20	664		3328	299	1.14	10	
700	8	14	715		3956	469	1.08	1	2	710		3300		0.92	9	9	714		3883	490	1.06	11	
750	1	2	755		4450		1.03	-	-	-		-		-	-	1	1	755		4450		1.03	-
TOTAL	57							43						100									
MEAN			633		3056	754	1.20			584		2492	543	1.24			612		2814	725	1.22	43	

Table 44. Test fishery results for Arctic charr from Ikaluit Lake (Pangnirtung area), 14 March 1980.

<u>PRODUCTION</u>					
<u>Quota</u>					<u>Harvest</u>
907 kg					797 kg

<u>CATCH-EFFORT</u>					
<u>Total Number Of Fish</u>	<u>Mesh Size (mm)</u>	<u>Net Depth (Meshes)</u>	<u>Hours Set Per 100 (m)</u>	<u>CPE¹</u>	<u>CPE²</u>
100	139	25	54.4	44.1	114.1

LENGTH-WEIGHT RELATIONSHIP $\log_{10}W = a + b(\log_{10}L)$

<u>Sex</u>	<u>N</u>	<u>Y-Intercept (a)</u>	<u>Slope (b)</u>	<u>95% C.I. of b</u>	<u>r</u>
Male	64	-3.7768	2.5727	2.1581-2.9873	0.96
Female	36	-3.3948	2.4352	2.0119-2.8585	0.90
Total	100	-3.6885	2.5413	2.3677-2.7149	0.95

<u>MORTALITY</u>					
<u>Age-Classes Used</u>	<u>N</u>	<u>instantaneous Mortality (Z) (Catch Curve)</u>	<u>r</u>	<u>Annual Mortality (A)</u>	<u>Annual Survival (S)</u>
14-17	48	0.24	0.93	0.21	0.79

Table 45. Biological data by age group for Arctic charr taken from Ikaluit Lake (Pangnirtung area), 14 March, 1980.

AGE (YR)	MALES							FEMALES						COMBINED					% FEMALE				
	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)			WEIGHT(G)		K	
			MEAN	SD	MEAN	SD				MEAN	SD	MEAN	SD				MEAN	SD					
8	1	2	350	-	600	-	1.40	1	4	390	-	800	-	1.35	2	2	370	28.3	700	141	1.37	50	
10	2	4	508	130.8	1600	1061	1.14	-	-	-	-	-	-	-	2	2	508	130.8	1600	1061	1.14	-	
11	7	13	531	78.6	1764	752	1.12	2	-7	538	81.3	2125	884	1.33	9	11	533	73.9	1844	740	1.17	22	
12	6	11	578	88.9	2233	838	1.11	4	15	563	84.2	1938	750	1.05	10	12	572	82.6	2115	775	1.09	40	
13	2	4	633	10.6	2600	71	1.03	5	19	566	12.9	2020	241	1.11	7	9	585	34.4	2186	346	1.09	71	
14	11	20	635	69.6	2827	793	1.08	6	22	563	33.1	2033	273	1.14	17	21	610	613.1	2547	755	1.10	35	
15	12	22	65(J)	79.3	3200	876	1.18	4	15	615	5.8	2475	290	1.06	16	20	641	69.7	3019	828	1.15	25	
16	3	5	668	10.4	3017	275	1.01	3	11	582	46.5	2567	580	1.31	6	7	625	56.2	2792	475	1.16	50	
17	8	15	687	59.6	3294	977	1.00	1	4	710	-	3480	-	0.96	9	11	689	56.3	3311	915	0.99	11	
18	3	5	705	37.7	3683	1255	1.03	1	4	640	-	2280	-	0.86	4	5	689	44.8	3325	1251	0.98	25	
TOTAL	55							27							82								
MEAN			622	94.3	2740	1021	1.10			573	63.9	2163	582	1.13			606	88.2	2550	936	1.11	33	
MEAN AGE		14.0																					

Table 4b. Biological data by length interval for Arctic charr taken from Ikaluit Lake (Pangnirtung area), 14 March, 1980.

LENGTH INTERVAL (MM)	MALES							FEMALES						COMBINED					% FEMALE				
	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)			WEIGHT(G)		K	
			MEAN	SD	MEAN	SD				MEAN	SD	MEAN	SD				MEAN	SD					
350	1	2	350	-	600	-	1.40	1	3	390	-	800	-	1.35	2	2	370	-	700	141	1.37	50	
400	3	5	422	-	867	29	1.16	1	3	445	-	1000	-	1.13	4	4	428	-	900	71	1.15	25	
450	3	5	477	-	1583	666	1.46	1	3	480	-	1500	-	1.36	4	4	478	-	1563	545	.43	25	
500	2	3	533	-	1750	71	1.16	2	6	518	-	1725	35	1.25	4	4	525	-	1738	48	.20	50	
550	0	16	576	-	2075	134	1.09	17	47	569	-	2106	354	1.14	27	27	571	-	2094	289	1.12	63	
600	4	22	619	-	2571	317	1.08	11	31	622	-	2532	323	1.05	25	25	620	-	2554	314	.07	44	
650	7	27	671	-	3032	347	1.00	2	6	660	-	3075	1167	1.08	19	19	670	-	3037	427	.01	11	
700	8	13	723	-	4006	342	1.06	1	3	710	-	3450	-	0.96	9	9	722	-	3944	369	.05	11	
750	6	9	763	-	4483	579	1.01	-	-	-	-	-	-	-	6	6	763	-	4483	579	.01	-	
TOTAL	64							36							100								
MEAN			630		2792	1016	1.08			580		2222	614	1.12			612		2587	930	1.10	36	

Table 47. Test fishery results for Arcticcharr from Opingivik Lake (Pangnirtung area), 15 April 1980.

<u>Quota</u>		<u>PRODUCTION</u>			<u>Harvest</u>
907 kg					628 kg
<u>CATCH-EFFORT</u>					
<u>Total Number Of Fish</u>	<u>Mesh Size (mm)</u>	<u>Net Depth (Meshes)</u>	<u>Hours Set Per 100 (m)</u>	<u>CPE¹</u>	<u>CPE²</u>
100	139	25	57.8	41.5	105.9
<u>LENGTH-WEIGHT RELATIONSHIP $\log_{10}W = a + b(\log_{10}L)$</u>					
<u>Sex</u>	<u>N</u>	<u>Y-Intercept (a)</u>	<u>Slope (b)</u>	<u>95% C.I. of b</u>	<u>r</u>
Male	58	-5.1948	3.0716	2.8778-3.2654	0.97
Female	41	-4.2133	2.7172	2.3952-3.0392	0.94
Total	100	-4.9382	2.9797	2.8248-3.1346	0.97
<u>MORTALITY</u>					
<u>Age-Classes Used</u>	<u>N</u>	<u>Instantaneous Total Mortality (Z) (Catch Curve)</u>	<u>r</u>	<u>Annual Mortality (A)</u>	<u>Annual Survival (S)</u>
15-18	36	0.19	0.89	0.17	0.83

¹ CPE = No. fish/100 m/24 h.

² CPE = kg rd wt/100 m/24 h.

Table 48. Biological data by age group for Arctic charr taken from

AGE (YR)	MALES						FEMALE			
	N	LENGTH(MM)		WEIGHT(G)		K	MAT	N	LENGTH(MM)	
		MEAN	SD	MEAN	SD				MEAN	SD
10										
11	3	552	97.0	1767	797	0.99	100	1	475	-
12	5	553	66.2	1650	588	0.94	80	3	538	59.7
13	4	623	102.7	2913	542	1.14	100	7	566	109.3
14	8	568	73.0	2025	920	1.05	57	7	575	98.2
15	4	530	123.7	1638	093	0.97	33	3	583	5.8
16	8	679	56.7	3381	946	1.05	100	5	610	26.2
17	4	740	26.8	4338	999	1.07	100	4	645	40.8
18	7	729	30.7	3964	781	1.01	100	1	540	-
20	2	738	10.6	4425	177	1.10	100	1	655	-
TOTAL	45							32		
MEAN		634	102	2866	1341	1.03			583	78.4
MEAN AGE	14.8									

Table 49. Biological data by length interval for Arctic charr taken

LENGTH INTERVAL (MM)	MALES						FEMALE			
	N	LENGTH(MM)		WEIGHT(G)		K	MAT	N	LENGTH(MM)	
		MEAN	SD	MEAN	SD				MEAN	SD
350	1	385		500		0.88	0	1	375	
400	2	440		900	71	1.06	0			
450	3	473		1100	250	1.02	33	4	468	1
500	5	523		1420	214	0.99	20	7	518	2
550	6	560		1767	268	1.01	67	0	578	2
600	12	613		2342	344	1.01	75	7	616	2
650	7	684		3314	485	1.04	86	2	669	2
700	16	726		3937	601	1.03	100			
750	5	768		4930	409	1.09	80			
850	1	850		5250		0.85	100			
TOTAL	58							41		
MEAN		640		2888	1324	1.02			585	2

Table 50. Test fishery results for Arctic charr from an unnamed lake (Iyaravung)(Pangnirtung area), 28 February 1980.

<u>Quota</u>		<u>PRODUCTION</u>				<u>Harvest</u>
1 361 kg						1 327 kg
<u>CATCH-EFFORT</u>						
<u>Total Number Of Fish</u>	<u>Mesh Size (mm)</u>	<u>Net Depth (Meshes)</u>	<u>Hours Set Per 100 (m)</u>	<u>CPE¹</u>	<u>CPE²</u>	
100	139	60	41.7	57.6	119.4	
<u>LENGTH-WEIGHT RELATIONSHIP</u> $\log_{10}W = a + b (\log_{10}L)$						
<u>Sex</u>	<u>N</u>	<u>Y-Intercept (a)</u>	<u>Slope (b)</u>	<u>95% C.I. of b</u>	<u>r</u>	
Male	65	-3.6890	2.5400	2.3030-2.7770	0.94	
Female	35	-4.0571	2.6799	2.1953-3.1645	0.89	
Total	100	-3.5497	2.4911	2.2937-2.6885	0.93	
<u>MORTALITY</u>						
<u>Age-Classes Used</u>	<u>N</u>	<u>Instantaneous Total Mortality (Z) (Catch Curve)</u>	<u>r</u>	<u>Annual Mortality (A)</u>	<u>Annual Survival (S)</u>	
15-18	25	0.46	0.98	0.37	0.63	

¹ CPE = No. fish/100 m/24 h.

² CPE = kg rd wt/100 m/24 h.

Table 51. Biological data by age group for Arctic charr taken from 28 February, 1980.

AGE (YR)	MALES							FEMALE			
	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)	
			MEAN	SD	MEAN	SD				MEAN	SD
10	1	2	580	-	2250	-	1.15	-	-	-	-
11	6	13	546	45.8	1800	381	1.10	3	14	475	80.5
12	3	13	543	35.2	1900	392	1.17	4	18	536	27.5
13	3	7	568	7.6	2100	173	1.14	1	5	525	-
14	11	24	581	30.8	2255	433	1.14	6	27	543	27.5
15	6	13	586	45.8	2217	422	1.10	2	9	560	28.3
16	5	11	586	29.9	2060	288	1.02	4	18	549	16.5
17	3	7	652	55.3	2867	679	1.02	1	5	530	-
18	3	7	650	26.5	2667	289	0.97	1	5	540	-
19	1	2	660	-	3000	-	1.04	-	-	-	-
TOTAL	45							22			
MEAN			583	47.6	2194	477	1.10			533	40.2
MEAN AGE		14.1									

Table 52. Biological data by length interval for Arctic charr taken 28 February, 1980.

LENGTH INTERVAL (M M)	MALES							FEMALE		
	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)
			MEAN	SD	MEAN	SD				MEAN
350	-	-						1	3	385
450	1	2	480		1250		1.13	1	3	495
500	13	20	533		1714	179	1.13	19	54	526
550	28	43	572		2089	152	1.12	13	37	561
600	19	29	622		2542	224	1.05	1	3	600
650	3	5	663		3083	144	1.06	-	-	
700	1	2	710		3500		0.98	-	-	
TOTAL	65							35		
MEAN			584		2201	442	1.10			536

Table 53. Test fishery results for Arcticcharr from an unnamed lake (Iyaravung)(Pangnirtung area), 17 February 1981.

<u>Quota</u>		<u>PRODUCTION</u>				<u>Harvest</u>
907 kg						1 268 kg
<u>CATCH-EFFORT</u>						
<u>Total Number Of Fish</u>	<u>Mesh Size (mm)</u>	<u>Net Depth (Meshes)</u>	<u>Hours Set Per 100 (m)</u>	<u>CPE¹</u>	<u>CPE²</u>	
112	139	32	128.0	21.0	96.9	
<u>LENGTH-WEIGHT RELATIONSHIP</u> $\log_{10}W = a + b (\log_{10}L)$						
<u>Sex</u>	<u>N</u>	<u>Y-Intercept (a)</u>	<u>Slope (b)</u>	<u>95% C.I. of b</u>	<u>r</u>	
Male	66	-4.8480	2.9509	2.6719-3.2299	0.94	
Female	34	-5.4970	3.1940	2.6288-3.7592	0.90	
Total	100	-4.8770	.29642	2.7181-3.2103	0.92	
<u>MORTALITY</u>						
<u>Age-Classes Used</u>	<u>N</u>	<u>Instantaneous Total Mortality (Z) (Catch Curve)</u>	<u>r</u>	<u>Annual Mortality (A)</u>	<u>Annual Survival (S)</u>	
14-18	35	0.31	0.98	0.27	0.73	

¹ CPE = No. fish/100 m/24 h.

² CPE = kg rd wt/100 m/24 h.

Table 54. Biological data by age group for Arctic Char taken from an unnamed lake (Iyaravung) (Pangnirtung area), 17 February, 1981.

AGE (YR)	MALES							FEMALES							COMBINED						
	LENGTH(MM)			WEIGHT(G)		K	% MAT	LENGTH(MM)			WEIGHT(G)		K	% MAT	LENGTH(MM)			WEIGHT(G)		K	% MAT
	N	MEAN	SD	MEAN	SD			N	MEAN	SD	MEAN	SD			N	MEAN	SD	MEAN	SD		
6								1	430	-	830	-	1.04	0	1	430	-	830	-	1.04	0
8	1	430	-	800	-	.01	0								1	430	-	800	-	1.01	0
10	2	451	32.5	950	141	.04	50	3	450	47.7	1037	358	1.11	67	5	450	37.4	1002	267	1.08	60
11								1	574	-	2000	-	1.06	100	1	574	-	2000	-	1.06	100
12	8	589	73.4	2190	794	.03	88	4	582	7.7	2055	372	1.04	75	12	587	58.8	2145	666	1.03	83
13	8	597	55.2	2403	606	.11	88	5	548	20.5	1688	670	1.00	100	13	578	50.2	2128	704	1.06	92
14	5	614	21.8	2724	159	.18	100	5	577	17.3	2200	183	1.14	100	10	596	26.8	2462	320	1.16	100
15	8	612	28.1	2451	419	.06	100	2	564	23.3	1990	156	1.11	100	10	602	33.1	2359	421	1.07	100
16	5	607	16.8	2234	152	1.00	100								5	607	16.8	2234	152	1.00	100
17	7	618	33.4	2603	530	1.09	100	1	587	-	2330	-	1.15	100	8	614	32.9	2569	500	1.10	100
18	1	667	-	2350	-	0.79	100	1	578	-	2150	-	1.11	100	2	623	62.9	2250	141	0.95	100
19	2	648	13.4	2635	940	0.96	100								2	648	13.4	2635	940	0.96	100
TOTAL	47							23							70						
MEAN		598	60	2334	643	1.06			548	53.7	1829	561	1.08			582	62.0	2168	658	1.07	
MEAN AGE	13.8																				

Table 55. Biological data by length interval for Arctic Char taken from an unnamed lake (Iyaravung) (Pangnirtung area), 17 February, 1981.

LENGTH INTERVAL (MM)	MALES							FEMALES							COMBINED						
	LENGTH(MM)			WEIGHT(G)		K	% MAT	LENGTH(MM)			WEIGHT(G)		K	% MAT	LENGTH(MM)			WEIGHT(G)		K	% MAT
	N	MEAN	SD	MEAN	SD			N	MEAN	SD	MEAN	SD			N	MEAN	SD	MEAN	SD		
400	2	429		825	35	1.05	0	3	425		830	0	1.08	33	5	427		828	18	1.07	20
450	3	466		1020	147	1.00	67								3	466		1020	147	1.00	67
500	2	519		1315	35	0.95	0	7	533		1553	398	1.02	100	9	530		1500	361	1.01	78
550	16	582		2139	190	1.09	100	20	578		2160	250	1.12	95	36	580		2151	223	1.10	97
600	33	622		2541	320	1.06	100	4	622		2775	367	1.15	100	37	622		2566	328	1.07	100
650	10	673		3029	398	0.99	100								10	673		3029	398	0.99	100
TOTAL	66							34							100						
MEAN		604		2359	606	1.05			561		1990	576	1.10			589		2234	619	1.07	

Table 56. Test fishery results for Arctic charr from an unnamed lake (Ikpit Bay) (Pangnirtung area), 28 March 1984.

<u>Quota</u>		<u>PRODUCTION</u>				<u>Harvest</u>
500 kg						215 kg
<u>Total Number Of Fish</u>		<u>Mesh Size (mm)</u>	<u>Net Depth (Meshes)</u>	<u>Hours Set Per 100 (m)</u>	<u>CPE¹</u>	<u>CPE²</u>
74		139	50	120	14.8	43.0
<u>LENGTH-WEIGHT RELATIONSHIP</u> $\log_{10}W = a + b(\log_{10}L)$						
<u>Sex</u>	<u>N</u>	<u>Y-Intercept (a)</u>	<u>Slope (b)</u>	<u>95% C.I. of b</u>	<u>r</u>	
Male	63	-3.3934	2.4363	2.0699-2.8027	0.86	
Female	11	-4.4605	2.8007	0.8486-4.7528	0.73	
Total	74	-3.8225	2.5864	2.1611-3.0117	0.82	
<u>MORTALITY</u>						
<u>Age-Classes Used</u>	<u>N</u>	<u>Instantaneous Total Mortality (Z) (Catch Curve)</u>	<u>r</u>	<u>Annual Mortality (A)</u>	<u>Annual Survival (S)</u>	
15-18	18	0.58	0.98	0.43	0.57	

¹ CPE = No. fish/100 m/24 h.

² CPE = kg rd wt/100 m/24 h.

Table 57. Biological data by age group for Arctic charr taken from :

AGE (YR)	MALES							FEMALES				
	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		M
			MEAN	SD	MEAN	SD				MEAN	SD	
12	2	5	640	42.4	2600	707	0.98	-	-	-	-	-
13	5	12	618	34.9	2640	434	1.11	1	20	660	-	1
14	17	40	646	26.4	2929	528	1.08	3	60	620	40.0	2
15	10	24	656	33.4	3080	421	1.09	-	-	-	-	-
16	4	10	670	27.1	2975	618	0.98	-	-	-	-	-
17	2	5	650	42.4	3000	707	1.08	-	-	-	-	-
18	-	-	-	-	-	-	-	1	20	560	-	2
19	1	2	710	-	3800	-	1.06	-	-	-	-	-
21	1	2	770	-	4500	-	0.99	-	-	-	-	-
TOTAL	42							5				
MEAN			652	37.4	2981	562	1.07			616	45.6	2
MEAN AGE		14.6										

Table 58. Biological data by length interval for Arctic charr taken 28 March, 1984.

LENGTH INTERVAL (M M)	MALES							FEMALES	
	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%
			MEAN	SD	MEAN	SD			
500	1	2	540		1900		1.21	-	-
550	3	5	580		2200	100	1.13	3	27
600	24	38	625		2604	311	1.06	2	18
650	25	40	671		3179	280	1.05	4	36
700	8	13	710		3538	457	0.93	2	18
750	2	3	765		4300	283	0.96	-	-
TOTAL	63							11	
MEAN			655		2971	556	1.05		

Table 59. Test fishery results for Arctic charr from an unnamed lake (65-17 N, 64-05 W) (Pangnirtung area), 8 March 1985.

<u>Quota</u>		<u>PRODUCTION</u>				<u>Harvest</u>
900 kg						476 kg
<u>CATCH-EFFORT</u>						
<u>Total Number Of Fish</u>	<u>Mesh Size (mm)</u>	<u>Net Depth (Meshes)</u>	<u>Hours Set Per 100 (m)</u>	<u>CPE¹</u>	<u>CPE²</u>	
128	139	N/A	22.8	129	477	
<u>LENGTH-WEIGHT RELATIONSHIP</u> $\log_{10}W = a + b(\log_{10}L)$						
<u>Sex</u>	<u>N</u>	<u>Y-Intercept (a)</u>	<u>Slope (b)</u>	<u>95% C.I. of b</u>	<u>r</u>	
Male	69	-4.0860	2.6719	2.4641-2.8797	0.95	
Female	31	-2.4796	2.0862	1.5275-2.6449	0.82	
Total	100	-4.1905	2.7018	2.4778-2.9258	0.92	
<u>MORTALITY</u>						
<u>Age-Classes Used</u>	<u>N</u>	<u>Instantaneous Total Mortality (Z) (Catch Curve)</u>	<u>r</u>	<u>Annual Mortality (A)</u>	<u>Annual Survival (S)</u>	
17-23	33	0.22	0.85	0.20	0.80	

¹ CPE = No. fish/100 m/24 h.

²CPE = kg rd wt/100 m/24 h.

Table 60. Biological data by age group for Arctic charr taken from an unnamed lake (65- 17N,64-05W)(Pangnirtung area), 8 March, 1985.

AGE (YR)	MALES							FEMALES						COMBINED						% FEMALE		
	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	
			MEAN	SD	MEAN	SD				MEAN	SD	MEAN	SO				MEAN	SO				
10	1	2	430	-	700	-	0.88	-	-	-	-	-	-	1	2	430	-	700	-	0.88	-	
11	-	-	-	-	-	-	-	1	7	615	-	2200	-	0.95	1	2	615	-	2200	-	0.95	
13	1	2	520	-	1400	-	1.00	1	7	570	-	2000	-	1.013	2	3	545	35.4	1700	424	1.04	50
14	4	9	648	45.9	3125	608	1.16	1	7	610	-	2300	-	1.01	5	8	640	43.2	2960	643	1.13	20
15	6	13	711	44.0	3467	476	0.97	1	7	700	-	3200	-	0.93	7	12	708	40.4	3429	446	0.96	14
16	7	16	669	51.2	2957	608	0.98	1	7	715	-	3200	-	0.88	8	14	674	50.2	2988	569	0.97	13
17	4	9	720	31.9	3675	613	0.98	3	21	673	65.6	2800	700	0.91	7	12	700	50.7	3300	755	0.95	43
18	2	4	748	3.5	3650	354	0.87	1	7	704	-	2400	-	0.69	3	5	733	25.2	3233	764	0.81	33
19	5	11	770	57.8	4520	1213	0.97	1	7	680	-	2300	-	0.73	6	10	755	63.4	4150	1414	0.93	17
20	8	18	810	61.4	4975	922	0.93	2	14	773	24.0	3650	495	0.79	10	17	803	57.0	4710	1000	0.90	20
21	3	7	822	37.5	4833	603	0.87	1	7	710	-	3200	-	0.89	4	7	794	63.7	4425	954	0.88	25
22	1	2	860	-	5500	-	0.86	-	-	-	-	-	-	-	1	2	860	-	5500	-	0.86	-
23	2	4	815	35.4	4200	424	0.79	1	7	730	-	3100	-	0.80	3	5	787	55.1	3833	702	0.79	33
24	1	2	820	-	5500	-	1.00	-	-	-	-	-	-	-	1	2	820	-	5500	-	1.00	-
TOTAL	45	-	-	-	-	-	-	14	-	-	-	-	-	59	-	-	-	-	-	-	-	-
MEAN	-	-	732	94.6	3876	1207	0.96	-	-	686	63.8	2829	613	0.88	-	-	721	90.0	3627	1179	0.94	24
MEAN AGE	-	17.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 61. Biological data by length interval for Arctic charr taken from an unnamed lake (65-17N,64-05W)(Pangnirtung area), 8 March, 1985.

LENGTH INTERVAL (MM)	MALES							FEMALES						COMBINED						% FEMALE		
	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	
			MEAN	MEAN	SO	MEAN				MEAN	SO	MEAN	MEAN				SD					
400	1	1	430	700	-	0.88	-	-	-	-	-	-	-	1	1	430	700	-	0.88	-		
500	1	1	520	1400	-	1.00	-	-	-	-	-	-	-	1	1	520	1400	-	1.00	-		
550	-	-	-	-	-	-	1	3	570	2000	-	1.08	1	1	570	2000	-	1.08	-			
600	6	9	622	2700	502	1.13	4	13	616	2175	96	0.93	10	10	620	2490	465	1.05	40			
650	13	19	672	2923	239	0.96	6	19	673	2700	237	0.89	19	19	672	2853	255	0.94	32			
700	11	16	731	3655	233	0.93	13	42	720	3015	506	0.81	24	24	725	3308	514	0.86	54			
750	10	14	771	4210	273	0.92	6	19	765	3383	387	0.75	16	16	769	3900	515	0.86	38			
800	20	29	818	5095	709	0.93	1	3	830	4900	-	0.86	21	21	819	5086	692	0.93	5			
850	6	9	871	5567	273	0.84	-	-	-	-	-	-	-	6	6	871	5567	273	0.84	-		
900	1	1	905	6600	-	0.89	-	-	-	-	-	-	-	1	1	905	6600	-	0.89	-		
TOTAL	69	-	-	-	-	-	31	-	-	-	-	-	-	100	-	-	-	-	-	-	-	
MEAN	-	-	749	4065	1230	0.94	-	-	705	2945	653	0.84	-	-	735	3718	1200	0.91	31	-		

Table 62. Test fishery results for Arcticcharr from an unnamed lake (Ptarmigan Fiord)(Pangnirtung area), 16 March, 1982.

<u>Quota</u>		<u>PRODUCTION</u>				<u>Harvest</u>
454 kg						908 kg

<u>CATCH-EFFORT</u>					
<u>Total Number Of Fish</u>	<u>Mesh Size (mm)</u>	<u>Net Depth (Meshes)</u>	<u>Hours Set Per 100 (m)</u>	<u>CPE¹</u>	<u>CPE²</u>
528	139		48	258.7	444.9

LENGTH-WEIGHT RELATIONSHIP $\log_{10}W = a + b(\log_{10}L)$

<u>Sex</u>	<u>N</u>	<u>Y-Intercept (a)</u>	<u>Slope (b)</u>	<u>95% C.I. of b</u>	<u>r</u>
Male	62	-3.7775	2.5632	2.2568-2.8696	0.91
Female	28	-4.4729	2.8105	2.3551-3.2659	0.93
Total	92	-4.2830	2.7420	2.5486-3.9354	0.95

MORTALITY

<u>Age-Classes Used</u>	<u>N</u>	<u>Instantaneous Total Mortality (Z) (Catch Curve)</u>	<u>r</u>	<u>Annual Mortality (A)</u>	<u>Annual Survival (S)</u>
13-16	42	0.50	0.97	0.39	0.61

¹ CPE = No. fish/100 m/24 h.

² CPE = kg rd wt/100 m/24 h.

Table 63. Biological data by age group for Arctic charr taken from an unnamed lake (Ptarmigan Fiord) (Pangnirtung area), 16 March, 1982.

AGE (YR)	MALES							FEMALES					COMBINED										
	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	% FEMALE	
			MEAN	SD	MEAN	SD				MEAN	SD	MEAN	SD				MEAN	SD					
8							1	5	540	-	1500	-	0.95	1	1	540	-	1500	-	0.95			
9							2	9	445	7.1	950	212	1.07	2	3	445	7.1	950	212	1.07			
10	2	4	525	35.4	1600	141	1.11	4	18	525	12.9	1450	265	1.01	6	8	525	18.7	1500	228	1.05	67	
11	4	8	610	53.5	2325	419	1.03	3	14	533	55.1	1633	404	1.07	7	10	577	64.2	2029	528	1.05	43	
12	8	16	641	23.0	2663	292	1.01	3	14	593	70.2	2067	651	0.97	13	18	624	40.7	2415	478	0.98	27	
13	22	45	625	35.6	2450	476	0.99	1	5	540	-	1500	-	0.95	23	32	621	39.0	2409	505	0.99	4	
14	5	10	676	40.4	2800	458	0.90	3	14	600	79.4	2100	755	0.94	8	11	648	65.4	2538	644	0.92	38	
15	5	10	652	63.8	2820	779	1.00	4	18	558	44.3	1925	532	1.09	9	12	610	72.5	2422	795	1.04	44	
16	1	2	700	-	3500	-	1.02	1	5	570	-	1800	-	0.97	2	3	635	91.9	2650	1202	1.00	50	
18	2	4	705	21.2	3600	424	1.04	-	-	-	-	-	-	-	2	3	705	21.2	3600	424	1.04		
TOTAL	49							22						73									
MEAN			635	49.2	2582	567	1.00			548	59.4	1709	534	1.02			608	65.3	2301	679	1.00	31	
MEAN AGE		12.8																					

Table 64. Biological data by length interval for Arctic charr taken from an unnamed lake (Ptarmigan Fiord) (Pangnirtung area), 16 March, 1982.

LENGTH INTERVAL (M M)	MALES						FEMALES					COMBINED											
	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		K	% FEMALE	
			MEAN	SD	MEAN	SD				MEAN	SD	MEAN	SD				MEAN	SD					
400	-	-					1	4	440		800	-	0.94	1	1	44(1)		800	-	0.94	-		
450							2	7	460		1150	71	1.18	2	2	460		1150	71	1.18	-		
500	2	3	515		1500	0	1.10	13	46	525		1446	185	1.00	15	16	523		1453	173	1.02	87	
550	7	11	571		1929	198	1.03	5	18	568		1940	195	1.06	12	13	570		1933	187	1.05	42	
600	27	44	626		2504	290	1.02	4	14	613		2325	206	1.01	33	36	622		2448	304	1.01	13	
650	16	26	663		2838	429	0.97	3	11	657		2833	153	1.00	19	21	662		2837	395	0.97	16	
700	9	15	711		3344	279	0.93	-	-					9	10	711		3344	279	0.93	-		
750	1	2	760		4500		1.03	-	-					1	1	760		4500		1.03	-		
TOTAL	62							28						92									
MEAN			640		2647	587	1.00			551		1764	564	1.03			612		2363	703	1.00	31	

Table 65. Test fishery results for Arctic charr from an unnamed lake (Ptarmigan Fiord) (Pangnirtung area), 12 March 1984.

<u>Quota</u>		<u>PRODUCTION</u>				<u>Harvest</u>
1 000 kg						1 088 kg
<u>CATCH-EFFORT</u>						
<u>Total Number Of Fish</u>	<u>Mesh Size (mm)</u>	<u>Net Depth (Meshes)</u>	<u>Hours Set Per 100 (m)</u>	<u>CPE¹</u>	<u>CPE²</u>	
395	139	24	16.0	592.5	1631.7	
<u>LENGTH-WEIGHT RELATIONSHIP</u> $\log_{10}W = a + b (\log_{10}L)$						
<u>Sex</u>	<u>N</u>	<u>Y-Intercept (a)</u>	<u>Slope (b)</u>	<u>95% C.I. of b</u>	<u>r</u>	
Male	78	-3.1171	2.3284	1.8670-2.7898	0.75	
Female	22	-4.2024	2.7315	2.3120-3.1510	0.95	
Total	100	-3.1870	2.3557	2.0864-2.6250	0.87	
<u>MORTALITY</u>						
<u>Age-Classes Used</u>	<u>N</u>	<u>Instantaneous Total Mortality (Z) (Catch Curve)</u>	<u>r</u>	<u>Annual Mortality (A)</u>	<u>Annual Survival (S)</u>	
15-17	53	1.11	0.99	0.67	0.33	

¹ CPE = No. fish/100 m/24 h.

² CPE = kg rdwt/100 m/24 h.

Table 66. Biological data by age group for Arctic charr taken from a
12 March, 1984.

AGE (YR)	MALES							FEMALES				
	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		M
			MEAN	SD	MEAN	SD				MEAN	SD	
9	-	-	-	-	-	-	-	1	5	360	-	5
10	-	-	-	-	-	-	-	1	5	530	-	16
12	1	1	680	-	3400	-	1.08	3	16	610	26.5	2
13	5	7	612	52.2	2380	614	1.04	-	-	-	-	-
14	13	19	666	33.1	2992	395	1.01	8	42	636	56.8	2
15	34	51	662	38.5	2791	460	0.96	4	21	605	52.6	2
16	12	18	657	40.5	2950	571	1.03	2	11	555	49.5	2
17	1	1	680	-	3100	-	0.99	-	-	-	-	-
18	1	1	720	-	3600	-	0.96	-	-	-	-	-
TOTAL	67							19				
MEAN			660	40.4	2854	500	0.99			597	78.9	2
MEAN AGE		14.6										

Table 67. Biological data by length interval for Arctic charr taken
12 March, 1984.

LENGTH INTERVAL (MM)	MALES							FEMALES		
	N	%	LENGTH (MM)		WEIGHT (G)		K	N	%	LENGTH (MM)
			MEAN	SD	MEAN	SD				MEAN
350	-	-	-	-	-	-	-	1	5	360
500	-	-	-	-	-	-	-	3	14	530
550	4	5	560	-	1800	2513	0.99	7	32	577
600	22	28	625	-	2500	324	1.02	6	27	617
650	37	47	670	-	3011	361	1.00	4	18	660
700	15	19	712	-	3193	359	0.89	1	5	740
TOTAL	78							22		
MEAN			660		2840	493	0.98			594

Table 68. Test fishery results for Arctic charr from an unnamed lake (65-05 N, 63-42 W) (Pangnirtung area), 25 March 1985.

<u>Quota</u>		<u>PRODUCTION</u>				<u>Harvest</u>
900 kg						275 kg
<u>CATCH-EFFORT</u>						
<u>Total Number Of Fish</u>	<u>Mesh Size (mm)</u>	<u>Net Depth (Meshes)</u>	<u>Hours Set Per 100 (m)</u>	<u>CPE¹</u>	<u>CPE²</u>	
108	139	N/A	25	104	265	
<u>LENGTH-WEIGHT RELATIONSHIP</u> $\log_{10}W = a + b (\log_{10}L)$						
<u>Sex</u>	<u>N</u>	<u>Y-Intercept (a)</u>	<u>Slope (b)</u>	<u>95% C.I. of b</u>	<u>r</u>	
Male	67	-3.8475	2.5773	2.3405-2.8141	0.94	
Female	33	-3.4637	2.4354	2.0799-2.7909	0.93	
Total	100	-3.8634	2.5815	2.3934-2.7696	0.94	
<u>MORTALITY</u>						
<u>Age-Classes Used</u>	<u>N</u>	<u>Instantaneous Total Mortality (Z) (Catch Curve)</u>	<u>r</u>	<u>Annual Mortality (A)</u>	<u>Annual Survival (S)</u>	
18-20	37	0.46	0.94	0.37	0.63	

¹CPE = No. fish/100 m/24 h.

²CPE = kg rd wt/100 m/24 h.

Table 69. Biological data by age group for Arctic charr taken from an unnamed lake (65-135 N, 63-42W) (Pangnirtung area), 25 March, 1985.

AGE (YR)	MALES							FEMALES							COMB IN ELI					% FEMALE		
	N	%	LENGTH (MM)		WEIGHT (G)		K	N	%	LENGTH (MM)		WEIGHT (G)		K	N	%	LENGTH (MM)		WEIGHT (G)		K	
			MEAN	SD	MEAN	SD				MEAN	SD	MEAN	SD				MEAN	SD				
12	1	2	554	-	1500	-	0.88	-	-	-	-	-	-	1	1	554	-	1500	-	0.88	-	
13	5	9	560	56.6	1800	620	0.99	2	8	570	28.3	1850	71	1.00	7	9	563	47.9	1814	508	0.99	29
14	4	7	619	52.7	2325	538	0.97	3	12	623	47.5	2267	231	0.94	7	9	621	46.3	2300	404	0.96	43
15	3	5	635	12.9	2367	58	0.93	2	8	625	7.1	2250	71	0.92	5	6	631	11.1	2320	84	0.93	40
16	7	12	665	61.0	2757	711	0.92	2	8	603	3.5	2100	0	0.96	7	11	651	59.5	2611	681	0.93	22
17	7	12	682	80.2	2814	780	0.88	6	24	607	53.3	2183	538	0.96	3	16	648	77.0	2523	729	0.91	46
18	13	23	684	72.0	3008	809	0.93	6	24	630	57.3	2317	542	0.92	9	23	667	70.8	2789	792	0.93	32
19	8	14	671	53.3	2825	547	0.93	3	12	658	26.4	2367	115	0.83	1	13	668	46.5	2700	508	0.90	27
20	7	12	658	51.8	2614	669	0.90	1	4	625	-	2300	-	0.94	8	10	654	49.3	2575	630	0.91	13
21	2	4	710	14.1	3700	283	1.04	-	-	-	-	-	-	2	2	710	14.1	3700	283	1.04	-	
TOTAL	57							25						82								
MEAN			657	69.0	2689	753	0.93			620	45.2	2224	382	0.93			645	64.8	2548	694	0.93	30
MEAN AGE	17.0																					

Table 70. Biological data by length interval for Arctic charr taken from an unnamed lake (65-05N, 63-42W) (Pangnirtung area), 25 March, 1985.

LENGTH IN INTERVAL (MM)	MALES							FEMALES							COMBINED					% FEMALE		
	N	%	LENGTH (MM)		WEIGHT (G)		K	N	%	LENGTH (MM)		WEIGHT (G)		K	N	%	LENGTH (MM)		WEIGHT (G)		K	
			MEAN	SD	MEAN	SD				MEAN	SD	MEAN	SD				MEAN	SD				
500	4	6	524	-	1350	208	0.94	2	6	518	-	1150	71	0.83	6	6	522	-	1283	194	0.90	33
550	5	7	559	-	1640	114	0.94	6	18	573	-	1867	151	1.00	11	11	566	-	1764	175	0.97	55
600	23	34	631	-	2365	177	0.94	16	48	621	-	2256	155	0.94	39	39	626	-	2321	175	0.94	41
650	15	22	670	-	2780	251	0.93	6	18	668	-	2517	172	0.84	21	21	669	-	2705	258	0.90	29
700	13	19	713	-	3408	236	0.94	2	6	704	-	2900	141	0.83	15	15	712	-	3340	285	0.93	13
750	4	6	779	-	3875	741	0.82	1	3	760	-	3100	-	0.71	5	5	775	-	3720	729	0.80	20
800	2	3	805	-	3700	990	0.71	-	-	-	-	-	-	-	2	2	805	-	3700	990	0.71	-
1350	1	1	855	-	4400	-	0.70	-	-	-	-	-	-	1	1	855	-	4400	-	0.70	-	
TOTAL	67							33						100								
MEAN			661		2706	754	0.92			623		2230	430	0.91			649		2549	700	0.92	33

Table 71. Test fishery results for Arctic charr from an unnamed lake (Beta River) (Pond Inlet area), 1-2 June 1982.

<u>Quota</u>		<u>PRODUCTION</u>				<u>Harvest</u>
454 kg						51 kg
<u>CATCH-EFFORT</u>						
<u>Total Number Of Fish</u>	<u>Mesh Size (mm)</u>	<u>Net Depth (Meshes)</u>	<u>Hours Set Per 100 (m)</u>	<u>CPE¹</u>	<u>CPE²</u>	
19	139	30	25.6	17.9	48.2	
<u>LENGTH-WEIGHT RELATIONSHIP</u> $\log_{10}W = a + b(\log_{10}L)$						
<u>Sex</u>	<u>N</u>	<u>Y-Intercept (a)</u>	<u>Slope (b)</u>	<u>95% C.I. of b</u>	<u>r</u>	
Male	11	-4.4346	2.8054	2.0784-3.5324	0.95	
Female	8	-4.2997	2.7518	1.3700-4.1336	0.89	
Total	19	-4.4518	2.8092	2.2150-3.4034	0.92	
<u>MORTALITY</u>						
<u>Age-Classes Used</u>	<u>N</u>	<u>Instantaneous Total Mortality (Z) (Catch Curve)</u>	<u>r</u>	<u>Annual Mortality (A)</u>	<u>Annual Survival (S)</u>	
insufficient data						

¹ CPE = No. fish/100 m/24 h.² CPE = kg rd wt/100 m/24 h.

Table 72. Biological data by agegroup for Arctic charr taken from 1-2 June, 1982.

AGE (YR)	MALES							FEMALES			
	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)	
			MEAN	SD	MEAN	SD				MEAN	SD
12	2	22	600	14.1	2300	424	1.06	-	-	-	-
13	1	11	590	-	2100	-	1.02	-	-	-	-
15	3	33	650	0.0	2933	208	1.07	-	-	-	-
16								1	2.5	600	-
17								1	2.5	670	-
18	1	11	630	-	2500	-	1.00	-	-	-	-
19								1	2.5	600	-
21	1	11	700	-	3700	-	1.08	-	-	-	-
22	1	11	710	-	3400	-	0.95	-	-	-	-
24								1	2.5	680	-
TOTAL	9							4			
MEAN			642	42.9	2789	567	1.04			638	43.5
MEAN AGE		16.8									

Table 73. Biological data by length interval for Arctic charr taken from 1-2 June, 1982.

LENGTH INTERVAL (M M)	MALES							FEMALES		
	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)
			MEAN	SD	MEAN	SD				MEAN
550	3	27	590		2133	153	1.04	1	13	580
600	2	18	620		2550	71	1.07	3	38	613
650	4	36	655		2975	189	1.06	4	50	663
700	2	18	705		3550	212	1.01	-	-	-
TOTAL	11							8		
MEAN			640		2773	539	1.05			634

Table 74. Test fishery results for Arctic char from Keel River (Cambridge Fiord) (Pond Inlet area), 19-26 May, 1982.

<u>Quota</u>	<u>PRODUCTION</u>	<u>Harvest</u>
1 000 kg		308 kg

<u>CATCH-EFFORT</u>					
<u>Total Number Of Fish</u>	<u>Mesh Size (mm)</u>	<u>Net Depth (Meshes)</u>	<u>Hours Set Per 100 (m)</u>	<u>CPE¹</u>	<u>CPE²</u>
115	139		224.0	12.3	32.9

LENGTH-WEIGHT RELATIONSHIP $\log_{10}W = a + b(\log_{10}L)$

<u>Sex</u>	<u>N</u>	<u>Y-Intercept (a)</u>	<u>Slope (b)</u>	<u>95% C.I. of b</u>	<u>r</u>
Male	69	-3.6723	2.5261	2.1823-2.8699	0.87
Female	44	-3.7760	2.5671	2.1744-2.9598	0.89
Total	139	-3.6184	2.5084	2.2561-2.7607	0.88

MORTALITY

<u>Age-Classes Used</u>	<u>N</u>	<u>Instantaneous Total Mortality (Z) (Catch Curve)</u>	<u>r</u>	<u>Annual Mortality (A)</u>	<u>Annual Survival (S)</u>
14-16	23	0.55	0.99	0.42	0.58
19-21	16	0.65	1.00	0.48	0.52

¹ CPE = No. fish/100 m/24 h.

² CPE = kg rd wt/100 m/24 h.

Table 75. Biological data by age group for Arctic charr taken from Keel River (Pond Inlet area), 19-26 May, 1982.

AGE (YR)	MALES							FEMALES					COMBINED									
	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		N	%	LENGTH(MM)		WEIGHT(G)		K	% FEMALE	
			MEAN	SD	MEAN	SD				MEAN	SD	MEAN	SD			MEAN	SD	MEAN	SD			
12	5	9	594	20.7	2140	207	1.02	3	13	543	64.3	1800	608	1.09	8	10	575	46.0	2013	402	1.04	38
13	15	27	616	45.8	2293	246	0.99	6	26	608	34.9	2350	423	1.03	21	27	614	42.3	2310	296	1.01	29
14	8	15	615	22.7	2313	387	0.99	2	9	610	84.9	2500	990	1.07	10	13	614	34.7	2350	481	1.01	20
15	5	9	624	42.8	2440	422	1.00	4	17	610	47.6	2675	732	1.16	9	12	618	42.7	2544	553	1.07	44
16	3	5	6911	60.8	3233	651	0.98	1	4	620	-	2600	-	1.09	4	5	673	60.8	3075	618	1.01	25
17	2	4	635	35.4	2350	212	0.92	-	-	-	-	-	-	-	2	3	635	35.4	2350	212	0.92	-
18	6	11	692	56.0	3367	804	1.00	1	4	670	-	3200	-	1.06	7	9	689	51.8	3343	737	1.01	14
19	5	9	706	53.2	3500	903	0.98	2	9	650	0.0	2850	71	1.04	7	9	690	51.3	3314	803	1.00	29
20	4	7	727	45.0	3525	822	0.93	4	17	633	35.0	2500	365	0.99	11	10	680	62.8	3013	804	0.96	50
21	1	2	680	-	2500	-	0.80	-	-	-	-	-	-	-	1	1	680	-	2500	-	0.80	-
22	1	2	690	-	3500	-	1.07	-	-	-	-	-	-	-	1	1	690	-	3500	-	1.07	-
TOTAL	55							23							78							
MEAN			646	58.8	2691	722	0.99			611	49.7	2465	567	1.06			636	58.2	2624	684	1.01	29
MEAN AGE		15.4																				

Table 76. Biological data by length interval for Arctic charr taken from Keel River (Pond Inlet area), 19-26 May, 1982.

LENGTH INTERVAL (MM)	MALES						FEMALES				COMBINED											
	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)		WEIGHT(G)		N	%	LENGTH(MM)		WEIGHT(G)		K	% FEMALE	
			MEAN	SD	MEAN	SD				MEAN	SD	MEAN	SD			MEAN	SD	MEAN	SD			
450	-	-	-	-	-	-	1	2	470	-	1100	-	1.06	1	1	470	-	1100	-	1.06	-	
550	14	20	585	-	2050	161	1.03	9	20	578	-	2056	133	1.07	23	20	582	-	2052	147	1.04	39
600	24	35	619	-	2404	233	1.01	16	36	621	-	2556	237	1.07	40	35	620	-	2465	243	1.03	40
650	13	19	669	-	2923	332	0.97	16	36	661	-	2900	348	1.00	29	26	665	-	2910	335	0.99	55
700	10	14	717	-	3850	782	1.04	2	5	720	-	3450	919	0.92	12	11	717	-	3783	776	1.02	17
750	8	12	768	-	3925	798	0.87	-	-	-	-	-	-	-	8	7	768	-	3925	798	0.87	-
TOTAL	69							44							113							
MEAN			653		2816	821	1.00			628		2586	517	1.04			643		2727	724	1.01	39

Table 77. Test fishery results for Arcticcharr from an unnamed lake (Tay Sound) (Pond Inlet area), 26-28 November 1981.

<u>Quota</u>		<u>PRODUCTION</u>				<u>Harvest</u>
454 kg						156 kg
<u>CATCH-EFFORT</u>						
<u>Total Number Of Fish</u>	<u>Mesh Size (mm)</u>	<u>Net Depth (Meshes)</u>	<u>Hours Set Per 100 (m)</u>	<u>CPE¹</u>	<u>CPE²</u>	
82	139	30	64	33.6	63.9	
<u>LENGTH-WEIGHT RELATIONSHIP</u> $\log_{10}W = a + b (\log_{10}L)$						
<u>Sex</u>	<u>N</u>	<u>Y-Intercept (a)</u>	<u>Slope (b)</u>	<u>95% C.I. of b</u>	<u>r</u>	
Male	48	-4.2909	2.7388	2.4671-3.0105	0.95	
Female	34	-2.9955	2.2691	1.6408-2.8974	0.79	
Total	82	-3.8885	2.5932	2.3161-2.8703	0.90	
<u>MORTALITY</u>						
<u>Age-Classes Used</u>	<u>N</u>	<u>Instantaneous Total Mortality (Z) (Catch Curve)</u>	<u>r</u>	<u>Annual Mortality (A)</u>	<u>Annual Survival (S)</u>	
14-20	25	0.27	0.99	0.24	0.76	

¹ CPE = No. fish/100 m/24 h.

² CPE = kg rd wt/100 m/24 h.

Table 78. Biological data by age group for Arctic char taken from an 26-28 November, 1981

AGE (YR)	MALES							FEMALES			
	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)	
			MEAN	SD	MEAN	SD				MEAN	SD
10	2	6	450	84.9	900	566	0.91	-	-	-	-
11	3	10	503	15.3	1233	153	0.97	3	12	503	47.3
12	6	19	550	81.0	1683	719	0.98	2	8	540	42.4
13	8	26	581	53.1	2013	405	1.03	6	24	538	71.9
14	3	10	585	95.3	2100	781	1.04	1	4	550	-
15	3	10	683	11.5	3167	351	0.99	5	20	588	27.7
16	4	13	655	52.0	2475	597	0.87	2	8	580	70.7
17	1	3	650	-	3100	-	1.13	2	8	610	42.4
18	1	B	-	-	-	-	-	2	8	635	63.6
20	1	3	580	-	2300	-	1.18	1	4	560	-
21	-	-	-	-	-	-	-	1	4	600	-
TOTAL	31							25			
MEAN			581	82.3	2026	769	0.99			565	58.2
MEAN AGE		14.0									

Table 79. Biological data by length interval for Arctic char taken from 26-28 November, 1981.

LENGTH INTERVAL (MM)	MALES							FEMALES		
	N	%	LENGTH(MM)		WEIGHT(G)		K	N	%	LENGTH(MM)
			MEAN	SD	MEAN	SD				MEAN
350	1	2	390		500		0.84	-	-	
450	3	6	487		1133	58	0.98	5	15	466
500	17	35	524		1506	219	1.04	6	18	530
550	12	25	569		1808	297	0.98	11	32	573
600	2	4	625		2550	495	1.04	11	32	615
650	11	23	675		2827	341	0.99	11	3	680
700	2	4	710		2950	212	0.88	2	-	-
TOTAL	48							34		
MEAN			577		1944	685	0.98			566

Table 80. Test fishery results for lake trout from Netsilik Lake (Spence Bay area), 24-29 August 1984.

<u>Quota</u>		<u>PRODUCTION</u>			<u>Harvest</u>	
Ni1					718 kg	
<u>CATCH-EFFORT</u>						
<u>Total Number Of Fish</u>	<u>Mesh</u>	<u>Net Depth (Meshes)</u>	<u>Hours Set Per 100 (m)</u>	<u>CPE¹</u>	<u>CPE²</u>	
303	139	24	144.5	51.7	122	
<u>LENGTH-WEIGHT RELATIONSHIP</u> $\log_{10}W = a + b(\log_{10}L)$						
<u>Sex</u>	<u>N</u>	<u>y-Intercept</u>	<u>Slope (b)</u>	<u>95% C.I. of b</u>	<u>r</u>	
Male	177	-4.9363	2.9921	2.8593-3.1249	0.96	
Female	124	-4.6806	2.8994	2.7275-2.9399	0.98	
Total	303	-4.7944	2.9399	2.8642-3.0156	0.97	
<u>MORTALITY</u>						
<u>Age-Classes Used</u>	<u>N</u>	<u>Instantaneous Total Mortality (Z) (Catch Curve)</u>	<u>r</u>	<u>Annual Mortality (A)</u>	<u>Annual Survival (S)</u>	
20-40	134	0.14	0.96	0.13	0.87	

¹CPE = no. fish/100 m/24 h.

²CPE = kg rd wt/100 m/24 h.

Table 83. Test fishery results for lake whitefish from Netsilik Lake (Spence Bay area), 24-29 August 1984.

<u>Quota</u>		<u>PRODUCTION</u>				<u>Harvest</u>
750 kg						967 kg
<u>CATCH-EFFORT</u>						
<u>Total Number Of Fish</u>	<u>Mesh Size (mm)</u>	<u>Net Depth (Meshes)</u>	<u>Hours Set Per 100 (m)</u>	<u>CPE¹</u>	<u>CPE²</u>	
487	139	24	144.5	82.9	164.4	
<u>LENGTH-WEIGHT RELATIONSHIP</u> $\log_{10}W = a + b(\log_{10}L)$						
<u>Sex</u>	<u>N</u>	<u>Y-Intercept (a)</u>	<u>Slope (b)</u>	<u>95% C.I. of b</u>	<u>r</u>	
Male	330	-6.3661	3.5798	3.4087-3.7509	0.91	
Female	150	-6.5629	3.6582	3.3893-3.9271	0.91	
Total	487	-6.6248	3.6776	3.5369-3.8183	0.92	
<u>MORTALITY</u>						
<u>Age-Classes Used</u>	<u>N</u>	<u>Instantaneous Total Mortality (Z) (Catch Curve)</u>	<u>r</u>	<u>Annual Mortality (A)</u>	<u>Annual Survival (S)</u>	
16-20	104	0.66	0.99	0.48	0.52	

¹ CPE = No. fish/100 m/24 h.² CPE = kg rd wt/100 m/24 h.

Table 85. Biological data by length interval for lake whitefish taken from Netsilik Lake (Spence Bay area), 24-29 August, 1984.

LENGTH INTERVAL (MM)	MALES					FEMALES					COMBINED							
	N	LENGTH(MM)	WEIGHT(G)		K	%	N	LENGTH(MM)	WEIGHT(G)		K	%	N	LENGTH(MM)	WEIGHT(G)		K	%
		MEAN	MEAN	SD				MEAN	MEAN	SO				MEAN	MEAN	SD		
270						1	277	150		0.71	100	1	277	150		0.71	100	
300	1	306	250		0.87	100							1	306	250		0.87	100
310	1	318	300		0.93	100							2	316	275	35	0.87	50
330	3	333	383	29	1.04	100							3	333	383	29	1.04	100
340	3	345	433	58	1.06	67	1	343	500		1.24	100	4	345	450	58	1.10	75
370	1	371	600		1.17	100							1	371	600		1.17	100
400	1	405	2000		3.01	100							1	405	2000		3.01	100
420	1	425	1400		1.82	100	1	425	1700		2.21	100	2	425	1550	212	2.02	100
430	2	434	1300	0	1.60	100	3	433	1250	87	1.54	100	5	433	1270	67	1.56	100
440	6	443	1475	230	1.69	100	1	447	1400		1.57	100	7	444	1464	212	1.68	100
450	11	455	1491	130	.59	91	5	454	1320	205	1.41	100	17	454	1459	187	1.56	88
460	18	464	1650	297	.65	100	3	462	1700	173	1.73	100	21	464	1657	280	1.66	100
470	31	474	1687	173	.58	100	7	474	1814	180	1.70	100	38	474	1711	179	1.61	100
480	48	484	1778	210	.57	100	12	485	2042	200	1.79	100	61	484	1840	241	1.62	98
490	50	494	1884	162	.56	100	11	492	1927	214	1.61	100	61	494	1892	171	1.57	100
500	63	503	2038	191	.60	100	23	504	2150	239	1.68	100	89	503	2066	210	1.62	97
510	43	514	2181	212	.61	100	35	513	2253	218	1.67	100	78	514	2213	216	1.63	100
520	28	523	2218	194	.55	100	20	523	2298	325	.61	100	48	523	2251	257	1.57	100
530	11	534	2355	242	.54	100	14	533	2546	234	.69	100	25	533	2462	252	1.62	100
540	4	542	2488	214	.56	100	3	541	2883	301	.82	100	7	542	2657	313	1.67	100
550	1	557	2700		.56	100	4	552	2863	499	.70	100	5	553	2830	438	1.68	100
560	2	565	2600	1202	.45	100	2	560	2950	141	.68	100	4	562	2775	727	1.56	100
570							2	575	2850	849	.50	100	2	575	2850	849	1.50	100
580	1	587	2850		1.41	100	2	584	3675	318	1.85	100	3	585	3400	527	1.70	100
830													1	833	0		0.00	0
TOTAL	330						150						487					
MEAN		491	1901	400	1.57			505	2177	502	1.66			496	1980	470	1.60	

9

Table 86. Test fishery results for Arcticcharr from Netsilik River (Spence Bay area), 31 August to 7 September 1983.

<u>Quota</u>	<u>PRODUCTION</u>	<u>Harvest</u>
1 360 kg		1 398.95 kg

<u>Total Number Of Fish</u>	<u>CATCH-EFFORT</u>				
	<u>Mesh Size (mm)</u>	<u>Net Depth (Meshes)</u>	<u>Hours Set Per 100 (m)</u>	<u>CPE¹</u>	<u>CPE²</u>
724	139	25	351.13	50.7	97.9

<u>LENGTH-WEIGHT RELATIONSHIP</u> $\log_{10}W = a + b(\log_{10}L)$					
<u>Sex</u>	<u>_N</u>	<u>Y-Intercept (a)</u>	<u>Slope (b)</u>	<u>95% C.I. of b</u>	<u>r</u>
Male	120	-4.6972	2.9227	2.7614-3.0840	0.95
Female	170	-4.8254	2.9695	2.8691-3.0699	0.98
Total	299	-4.6179	2.8935	2.0393-3.7477	0.97

<u>MORTALITY</u>					
<u>Age-Classes Used</u>	<u>_N</u>	<u>Instantaneous Total Mortality (Z) (Catch Curve)</u>	<u>r</u>	<u>Annual Mortality (A)</u>	<u>Annual Survival (S)</u>
13-17	162	0.79	0.99	0.55	0.45

Table 87. Biological data by age group for Arctic charr taken from Netsilik River (Spence Bay area), 31 August to 7 September, 1983.

AGE (YR)	MALES								FEMALES								COMBINED							
	LENGTH(MM)			WEIGHT(G)			K	%	LENGTH(MM)			WEIGHT(G)			K	%	LENGTH(MM)			WEIGHT(G)			K	%
	N	MEAN	SD	MEAN	SD	MEAN			SD	MEAN	SD	MEAN	SD	MEAN			SD	MEAN	SD	MEAN	SD			
4																		1	256	-	250		1.49	0
6	-																	1	316	-	500		1.58	0
7	5	347	26.6	480	110	.21	0	4	324	35.1	451	11.10	1.32	0	11	329	33.0	455	93	1.32	0			
8	3	349	32.9	700	132	.68	0	7	368	52.7	643	30.5	1.25	43	10	362	46.6	660	258	1.38	30			
9	6	414	73.2	983	561	.31	33	23	416	61.0	976	490	1.28	48	31	412	62.6	948	492	1.28	42			
10	6	418	43.3	942	335	.26	50	10	404	60.6	850	392	1.23	70	17	406	53.0	862	364	1.23	59			
11	14	501	65.6	1529	711	.16	71	22	496	61.2	1541	587	1.21	100	36	498	62.1	1536	628	1.19	89			
12	20	591	40.1	2640	528	.26	100	21	550	37.2	2102	521	1.24	100	42	570	43.1	2358	579	1.25	98			
13	32	580	54.9	2523	735	.26	97	35	554	51.6	2143	644	1.22	97	67	567	54.4	2325	710	1.24	97			
14	12	617	50.2	3104	640	1.32	100	18	559	37.0	2300	483	1.30	94	30	582	50.7	2622	673	1.31	97			
15	8	611	19.1	2775	266	1.22	100	8	571	39.9	2375	484	1.27	100	16	591	36.7	2575	430	1.25	100			
16	2	550	75.0	2075	1096	1.18	100	1	622	-	2700	-	1.12	100	3	574	67.4	2283	855	1.16	100			
17	1	697	-	3150	-	0.93	100	2	594	9.2	2700	141	1.29	100	3	628	60.1	2850	278	1.17	100			
18								1	578	-	2450	-	1.27	100	1	578	-	2450	-	1.27	100			
TOTAL	109							152							269									
MEAN		544	96	2181	981	1.26			502	87.7	1719	803	1.25			515	97.6	1874	926	1.26				
MEAN AGE	11.8																							

Table 88. Biological data by length interval for Arctic charr taken from Netsilik River (Spence Bay area), 31 August to 7 September, 1983.

LENGTH INTERVAL (MM)	MALES								FEMALES								COMBINED							
	LENGTH(MM)			WEIGHT(G)			K	%	LENGTH(MM)			WEIGHT(G)			K	%	LENGTH(MM)			WEIGHT(G)			K	%
	N	MEAN	SD	MEAN	SD	MEAN			SD	MEAN	SD	MEAN	SD	MEAN			SD	MEAN	SD	MEAN	SD			
250	-							1	294		400	-	1.57	0	3	277		350	87	1.62	0			
300	4	323		550	71	1.65	0	9	327		472	83	1.37	11	17	324		515	149	1.54	6			
350	10	374		630	155	.21	0	16	374		641	84	.22	31	28	375		632	112	1.20	18			
400	7	420		936	163	.26	57	21	424		940	128	.23	76	28	423		939	134	1.24	71			
450	10	479		1225	138	.11	90	22	474		1227	125	.16	91	32	475		1227	127	1.14	91			
500	16	523		1825	383	.27	94	31	524		1874	392	.27	100	47	526		1857	385	1.27	98			
550	31	581		2452	326	.25	97	53	572		2370	246	.26	98	85	575		2396	279	1.26	96			
600	34	618		2978	299	.26	100	16	613		2804	252	.25	100	50	617		2948	286	1.26	100			
650	7	667		3543	369	1.20	100	1	693		3300	-	0.99	100	8	670		3513	352	1.17	100			
700	1	707		4400	-	1.25	100	-	-		-	-	-	-	1	707		4400	-	1.25	100			
TOTAL	120							170							299									
MEAN		546		2191	954	1.25			504		1734	804	1.25			516		1886	912	1.26				

Table 89. Test fishery results for Arcticcharr from Crooked Lake (Spence Bay area), 24-27 April 1982.

<u>Quota</u>		<u>PRODUCTION</u>				<u>Harvest</u>
Ni 1						20 kg
<u>Quota</u>		<u>CATCH-EFFORT</u>				
<u>Total Number Of Fish</u>	<u>Mesh Size (mm)</u>	<u>Net Depth (Meshes)</u>	<u>Hours Set Per 100 (m)</u>	<u>CPE¹</u>	<u>CPE²</u>	
13	63		9.76	31.98	50.28	
<u>LENGTH-WEIGHT RELATIONSHIP</u> $\log_{10}W = a + b(\log_{10}L)$						
<u>Sex</u>	<u>N</u>	<u>Y-Intercept (a)</u>	<u>Slope (b)</u>	<u>95% C.I. of b</u>	<u>r</u>	
Male	9	-5.4182	3.1272	2.5801-3.6742	0.98	
Female	4	-6.3448	3.4931	2.6631-4.3231	0.99	
Total	13	-5.6252	3.2112	2.7757-3.6469	0.98	
<u>MORTALITY</u>						
<u>Age-Classes Used</u>	<u>N</u>	<u>Instantaneous Total Mortality (Z) (Catch Curve)</u>	<u>r</u>	<u>Annual Mortality (A)</u>	<u>Annual Survival (S)</u>	

No Ages Available

Table 90. Test fishery results for leastcisco from Crooked Lake (Spence Bay area), 24-27 April 1982.

<u>Quota</u>		<u>PRODUCTION</u>				<u>Harvest</u>
454 kg						13 kg
<u>CATCH-EFFORT</u>						
<u>Total Number of Fish</u>	<u>Mesh Size (mm)</u>	<u>Net Depth (Meshes)</u>	<u>Hours Set Per 100 (m)</u>	<u>CPE¹</u>	<u>CPE²</u>	
32	63		9.76	78.72	31.09	
<u>LENGTH-WEIGHT RELATIONSHIP</u> $\log_{10}W = a + b(\log_{10}L)$						
<u>Sex</u>	<u>N</u>	<u>Y-Intercept (a)</u>	<u>Slope (b)</u>	<u>95% C.I. of b</u>	<u>r</u>	
Male	17	0.1424	0.9752	-13.1122-15.0626	0.04	
Female	13	-2.7738	2.1154	-0.0068-4.2376	0.55	
Total	31	-0.8072	1.3482	-2.9604-5.6568	0.12	
<u>MORTALITY</u>						
<u>Age-Classes Used</u>	<u>N</u>	<u>Instantaneous Mortality (Z) (Catch Curve)</u>	<u>r</u>	<u>Annual Mortality (A)</u>	<u>Annual Survival (S)</u>	
No Ages Available						

Table 91. Biological data by length interval for Arctic charr from Crooked Lake (Spence Bay area), 24-27 April, 1982.

LENGTH INTERVAL (MM)	N %		MALES			K	N	%	FEMALES			K	N	%	COMBINED			K	% FEMALE
			LENGTH(MM)	WEIGHT(G)					LENGTH(MM)	WEIGHT(G)					LENGTH(MM)	WEIGHT(G)			
			MEAN	MEAN	SD				MEAN	MEAN	SD				MEAN	MEAN	SD		
300	1	11	322	260	-	0.7B	-	-				1	8	322	260	-	0.7B	-	
350	1	11	363	400	-	0.84	1	25	397	520	-	0.83	2	15	380	460	85	0.83	50
450	1	11	455	870	-	0.92	-	-				1	8	455	870	-	0.92	-	
500	1	11	525	050	-	0.73	1	25	504	1280	-	1.00	2	15	515	165	163	0.86	50
550	1	11	567	1570		0.86	1	25	560	1930	-	1.10	2	15	564	1750	255	0.9B	50
600	2	22	615	2005	799	0.85	-	-				2	15	615	2005	799	0.85		
650	2	22	661	2680	438	0.93	1	25	671	3190	-	1.06	3	23	664	2850	42B	0.97	33
TOTAL MEAN	9		531	1502	967	0.86		4	533	1730	1131	1.00		13	532	1572	977	0.90	31

Table 92. Biological data by length interval for least cisco from Crooked Lake (Spence Bay area), 24-27 April, 1982.

LENGTH INTERVAL (MM)	N %		MALES			K	N	%	FEMALES			K	N	%	COMBINED			K	% FEMALE
			LENGTH(MM)	WEIGHT(G)					LENGTH(MM)	WEIGHT(G)					LENGTH(MM)	WEIGHT(G)			
			MEAN	MEAN	SD				MEAN	MEAN	SD				MEAN	MEAN	SD		
320	1	6	329	250	-	0.70	-	-				1	3	329	250	-	0.70		
330	6	35	337	357	40	0.94	-	-				7	23	337	359	37	0.94		
340	8	47	345	785	1140	1.96	1	8	348	420	-	1.00	9	29	345	744	1074	1.85	11
350	2	12	358	385	21	0.84	4	31	355	413	30	0.93	6	19	356	403	29	0.90	67
360	-	-					5	38	365	434	43	0.89	5	16	365	434	43	0.89	
370	-	-					2	15	374	515	21	0.99	2	6	374	515	21	0.99	
380	-	-					1	8	381	450	-	0.81	1	3	381	450	-	0.81	
TOTAL MEAN	17		343	555	788	1.39		13	363	440	46	0.92		31	351	501	579	1.18	43