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**Midwater and Bottom Trawl Tows
and Catches made on M/V *Arctic*
Harvester Cruise, AH79-1, January
22-February 9, 1979 in
Dixon Entrance**

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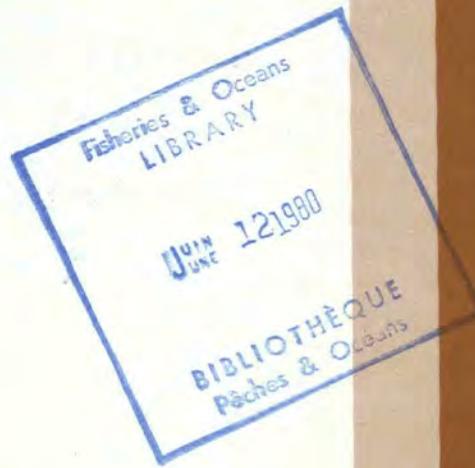
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April 1980

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**Canadian Data Report of Fisheries
and Aquatic Sciences No. 187**

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Canadian Data Report of Fisheries
and Aquatic Sciences No. 187

April 1980

MIDWATER AND BOTTOM TRAWL TOWS AND CATCHES MADE ON

M/V ARCTIC HARVESTER Cruise, AH79-1,

JANUARY 22-FEBRUARY 9, 1979

IN DIXON ENTRANCE

by

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Cat. no. Fs 97-13/187

ISSN 0706-6465

ABSTRACT

Barner, L. W., F. H. C. Taylor, D. M. A. Bennett, and J. Cave. 1980.
Midwater and bottom trawl tows and catches made on M/V ARCTIC
HARVESTER Cruise, AH79-1, January 22-February 9, 1979 in Dixon
Entrance. Can. Data Rep. Fish. Aquat. Sci. 187: 145 p.

This report gives the midwater and bottom trawl catches, fishing positions and biological sampling data, obtained during ARCTIC HARVESTER cruise AH79-1 January 22-February 9 in Dixon Entrance. Tows were made to determine the distribution and abundance of walleye pollock, (Theragra chalcogramma) and other fish stocks present.

Sex and length data were obtained for Chinook salmon, dogfish, English sole, eulachons, halibut, herring, lingcod, Pacific cod, ratfish, turbot, and four species of rockfish.

Key words: Marine fish, catch composition, walleye pollock, distribution and abundance, Dixon Entrance.

RÉSUMÉ

Barner, L. W., F. H. C. Taylor, D. M. A. Bennett, and J. Cave. 1980.
Midwater and bottom trawl tows and catches made on M/V ARCTIC
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Dans ce rapport, sont indiquées les prises au chalut flottant et au chalut de fond, les positions de pêche et les données des échantillonnages biologiques obtenues au cours de l'expédition AH79-1 de l'ARCTIC HARVESTER du 22 janvier au 9 février dans l'entrée Dixon. Des traits de chalut ont été effectués afin de déterminer la répartition et l'abondance du colin de l'Alaska (Theragra chalcogramma) et d'autres espèces présentes.

Des données sur le sexe et la longueur ont été obtenues pour le saumon quinnat, l'aiguillat, la limande sole, l'eulakane, le flétan, le hareng, l'ophiodon, la morue du Pacifique, la chimère monstrueuse, le flétan de Groenland et quatre espèces de scorpène.

Mots clés: Poissons marins, composition des prises, colin de l'Alaska, répartition et abondance, entrée Dixon.

INTRODUCTION

In 1979 an acoustical survey was carried out in Dixon Entrance and northern Hecate Strait by the C.G.S. G.B. REED and the M/V ARCTIC HARVESTER to determine the distribution and abundance of walleye pollock and other fish stocks present. These stocks were primarily: ratfish (Hydrolagus colliei), walleye pollock (Theragra chalcogramma), yellowtail rockfish (Sebastes flavidus), turbot (Atheresthes stomias), and English sole (Parophrys vetulus).

This project was supported in part by funds from the Province of British Columbia, Department of Environment.

COVERAGE

The C.G.S. G.B. REED ran the acoustical survey covering the banks and gullies of Dixon Entrance; survey lines were also run in the north end of Hecate Strait (Fig. 1).

During these surveys midwater trawl tows were made to identify the major species of fish in the main sound scattering layers. The positions of any concentrations located by the G.B. REED were reported to the M/V ARCTIC HARVESTER which was responsible for all of the fishing.

EQUIPMENT

Net and fishing gear

Two nets were used on this cruise. The first was a Canadian Diamond Number 7 midwater trawl. In this trawl, the mesh tapers from 32 in (stretched mesh) in the wings and forward section of the body to 1 1/2 in in the codend. The codend was lined with 1 in web, and was rigged with a splitting strap.

The headrope and the footrope were 205 ft in length, the breast rope 186 ft. The headrope had eighty 8-in trawl floats. The footrope was weighted with 45 kg of chain with an additional 272 kg on each wing corner. During operation the vertical opening of the net was 36-48 ft. Suberkrub otter boards 5²m in area were attached to the net by 40-fm sweeplines of 5/8 in cable.

The second net used was a Herman Engel high-opening bottom trawl. In this trawl the mesh is 7 1/4-in in the belly and wings and tapers to 3 in in the codend (stretched mesh). The headrope was 96 ft and the footrope 145 ft, using 21-in banded steel bobbins. The trawl doors used with this net were 1,020 kg (each) Polyvalent doors.

Midwater trawl tows (Fig. 2) were made to identify the species encountered on the G.B. REED hydroacoustic survey, and to provide basic biological information on the species encountered. Because of the light concentration of targets most of the tows were made in the fish layer or target depth, rather than above or below the target depth.

Bottom tows were made to determine whether there was a bottom stock of pollock and how this stock compared to the midwater stock.

SAMPLING METHODS

The entire catch was brought aboard and taken to the shelter deck by conveyor. There it was sorted by species into galvanized tubs, of about 45 kg capacity. Six tubs of each species were weighed on a beam balance and the remainder of tubs counted. Also any incomplete or partially filled tubs were weighed. If there were less than six tubs of a species all were weighed and set aside for sampling. The average weight of the six tubs per species was applied to the other tubs counted, to obtain a total estimated weight.

The main sampling effort was devoted to pollock; a total of 30 length-sex samples was taken, 24 from midwater tows and 6 from bottom tows. Fish were weighed individually from six samples, gonads for weight were taken from three samples and for maturity from eight. Pectoral fins were taken from 1078 fish for age determination. Table 5 presents a complete summary of species sampled, type of sample, and numbers of specimens examined.

This report contains the detailed tables (Appendix Table 1-2) showing the time, location and catches (kg) of midwater trawl tows made in Dixon Entrance on cruise M/V ARCTIC HARVESTER, January 22-February 9, 1979.

The report contains length, sex data for the following species:

Chinook salmon (<u>Oncorhynchus tshawytscha</u>)	Appendix Table 3
Dogfish (<u>Squalus acanthias</u>)	Appendix Table 4
English sole (<u>Parophrys vetulus</u>)	Appendix Table 5
Eulachons (<u>Thaleichthys pacificus</u>)	Appendix Table 6
Halibut (<u>Hippoglossus stenolepis</u>)	Appendix Table 7
Herring (<u>Clupea harengus pallasi</u>)	Appendix Table 8
Lingcod (<u>Ophiodon elongatus</u>)	Appendix Table 9
Pacific cod (<u>Gadus macrocephalus</u>)	Appendix Table 10
Pollock (<u>Theragra chalcogramma</u>)	Appendix Table 11
Ratfish (<u>Hydrolagus colliei</u>)	Appendix Table 12
Turbot (<u>Atheresthes stomias</u>)	Appendix Table 13
Pacific ocean perch (<u>Sebastes alutus</u>)	Appendix Table 14
Redbanded rockfish (<u>Sebastes babcocki</u>)	Appendix Table 15
Yellowtail rockfish (<u>Sebastes flavidus</u>)	Appendix Table 16
Bocaccio rockfish (<u>Sebastes paucispinis</u>)	Appendix Table 17

In addition there are included:

Vertical temperatures for tows on AH79-1	Appendix Table 18
Temperature corresponding to tow data	Appendix Table 19
Summary of mean surface and bottom temperatures	Appendix Table 20

Fork length was measured in rockfish to the nearest lower centimeter. Pollock and Pacific cod were measured to the nearest centimeter. For dogfish, the total length was measured to the nearest centimeter. In herring the length to the end of the silvery area of the caudal peduncle was measured to the nearest millimeter. Ratfish were measured to the indentation of the third dorsal fin to the nearest centimeter.

CATCH COMPOSITION

Table 1 shows the scientific and common names of species captured.

Fifty-one tows were made; 35 were made by midwater trawl, and 16 by bottom trawl. Midwater trawl catches on the average were smaller than bottom trawl catches, yielding 871.2 kg/hr as compared to 3102.0 kg/hr and were different in composition; 97.3% (by weight) of ratfish, 83.1% ofturbot, 93.5% of English sole, 55.1% of yellowtail rockfish, and 98.5% of the other fish were taken by bottom trawl while most of the walleye pollock (98.4%), 56.3% of the chinook salmon, all of the herring (100%), and eulachon (100%) were taken by midwater trawl. Midwater tows made in the same general area were grouped and average catch rates (kg/hr) for the major species calculated (Table 2).

Walleye pollock dominated the midwater catches, accounting for 12,850 kg or 74.5% by weight of the total midwater catch (Table 3). They appeared in 32 of 35 midwater tows. Sebastes flavidus (greenies) ranked second, accounting for 1820.5 kg or 10.5% of total midwater catch and were present in 21 tows. Third was the arrowtooth flounder (turbot) at 242.2 kg or 1.4% of total midwater catch.

Ratfish dominated the bottom tows accounting for 17,345.7 kg or 71.7% by weight of the total bottom catch (Table 3). They appeared in 14 of the 16 bottom tows. Sebastes flavidus (greenies) were second at 2229.4 kg or 9.2% by weight of the total bottom catch. Third was the arrowtooth flounder (turbot) at 1190.9 kg or 4.9%. The English or lemon sole was next with 1178.0 kg or 4.9% by weight of the bottom catch. The Chinook salmon accounted for 77.0 kg or 0.3% of the total bottom catch.

Table 4 shows total catch of principle species by wt (kg) and percent in Dixon Entrance and Northern Hecate Straits.

Walleye pollock usually dominated the midwater trawl catches in all areas except Cape Chacon. The majority of the adult pollock (older than 2 years) were confined to the northeastern corner of survey area, Celestial Reef, Dundas Island, and Two Peak grounds, while juvenile pollock age 1 and 2 year olds were located on the Butterworth Rocks area,

and in shallow water off the Rose Spit buoy. The Cape Chacon area contained mainly greenies (Sebastes flavidus).

SAMPLING DATA

1. Sex ratio - pollock

The proportion of males ranged from 15.8-71.4%, but in the total sample of 3717 adult pollock the proportion was 46.0%. Thus, local patchiness in sex distribution occurred, but within the whole Dixon Entrance, the pollock population remained about the same as in July 1978. The sexes are about equal in number (Table 6).

2. Pollock length

Young pollock, (approximately 1 year old) were found along the Butterworth Rocks area. These fish formed a mode at 13 cm. The 2-year-old pollock were also found along this edge and they formed a mode at 27 cm. The older fish formed a mode at 55 cm. The left pectoral fin was removed from 1078 fish to determine the age.

3. Pollock weights

Individual round weights were taken from 752 fish and ovaries were weighed on 127 fish. The total average weights for male and female pollock by cm, maturity category and by area are shown in Tables 7-10.

In the Two Peaks area pollock ranged from 27 cm (157 grams) to 64 cm (2391 grams) with a mode for males at 53 cm (1373 grams) while females were slightly larger at 57 cm (1667 grams).

The average ovary weights ranged from 26.7-160.1 grams with a mode at 113.8 grams. The ovary weights in the R-2 category = ripening, (ovaries filling more than 1/3 the body cavity) ranged from 4.2%-7.3% of the body weight with an overall average of 6.0% of body weight.

On tow AH79-1-17, the Northeast Corner, male pollock ranged from 50 cm (1259 grams) to 59 cm (1573 grams) with mode at 54 cm (1498 grams), while female pollock ranged from 51 cm (1195 grams)-63 cm (1931 grams) and a mode at 57 cm (1592 grams).

In the Butterworth Rocks area, tow AH79-1-28 the pollock were much smaller; 31 grams-433 grams with males forming a mode at 178 grams and females at 169 grams in the I-2 maturity category (Immature).

In the Rose Spit area tow, AH79-1-22 most of the fish were immature, with a trace of older pollock. The immatures ranged from 159-563 grams with a mode for females at 302 grams. The mature pollock ranged from 593-1912 grams.

MATURITY

The sexual maturity of 1164 pollock over 16 cm fork length was determined (Table 11). A total of eight samples was done for maturity, four in the Two Peaks area, and one in each of the other areas. The maturity state was much the same in all areas with the exception of the Butterworth Rocks and Rose Spit area, which contained juvenile, immature fish. Combining all the maturity samples done in Dixon Entrance showed 31% immature, 68% ripe or ripening and 1.2% spent, resting or recovering. For definitions of maturity states used see Table 12.

A total of 1248 yellowtail rockfish were measured and sexed. 851 were males (68.2%), 397 were females (31.8%). One hundred and twenty of these fish were weighed. The males ranged from 608 grams-2096 grams with a mode at 1534 grams. The females ranged from 1064-2640 grams. Too few females were weighed to show a distinct mode. The total males and females gave a mode of 1638 grams, Table 13.

Of the 51 tows made during the cruise, 27 contained Sebastes flavidus, ranging from 1.4-1296.5 kg. 63.1% of the S. flavidus caught, by weight, were from the Two Peaks area while 24.2% were from the Cape Chacon area (Table 14).

A total of 396 otoliths was taken to determine the age of the Sebastes flavidus. These will be reported on in a future report.

Water temperatures were acquired for most of the tows by an expendable bathythermograph system. Mean temperatures ranged from 5.1-5.7°C at surface and 5.6-8.0°C at bottom. Appendix Table 19 gives temperature corresponding to tow data by general area and Appendix Table 20 the mean surface and bottom temperatures, by area.

The temperature profiles obtained during the cruise show three distinct zones in the water column. First, a cold surface layer exists in the uppermost 20-70 m. Below this, there is a thermocline of 20-40 m. This acts as a boundary between the surface layer and the warm water zone beneath. Cold water overlying warm water probably means that the bottom water has a higher salinity than the surface water. In this case water density is salinity rather than temperature dependant. The isothermal situation suggested by the temperature profiles for tow 46 may have been influenced by strong winds the previous day (February 5, 1979). Fishing and sounding data suggest that midwater schools of fish have a tendency to be situated at or just below the thermocline, however, more observations would be needed to examine this tendency more fully.

ACKNOWLEDGMENTS

The help and cooperation of the Captain, Mr. Bob Baker and the crew of the M/V ARCTIC HARVESTER are gratefully acknowledged.

Table 1. Scientific and common names of species captured.

Common Name	Scientific Name
Roundfish	
Blackcod or sablefish	<u>Anoplopoma fimbria</u>
Blackfin sculpin	<u>Malacocottus kincaidi</u>
Blackmouth eelpout	<u>Lycodapus fierasfer</u>
Chinook salmon	<u>Oncorhynchus tshawytscha</u>
Eulachons	<u>Thaleichthys pacificus</u>
Fanged Viperfish	<u>Chauliodus macouni</u>
Lanternfish	<u>Family Myctophidae</u>
Lingcod	<u>Ophiodon elongatus</u>
Northern smoothtongue	<u>Leuroglossus stilbus schmidti</u>
Pacific cod or Gray cod	<u>Gadus macrocephalus</u>
Pacific herring	<u>Clupea harengus pallasi</u>
Poacher	<u>Family Agonidae</u>
Shad	<u>Alosa sapidissima</u>
Shiner perch	<u>Cymatogaster aggregata</u>
Small disk snailfish	<u>Careproctus gilberti</u>
Smooth lump sucker	<u>Aptocyclus ventricosus</u>
Walleye pollock	<u>Theragra chalcogramma</u>
Rockfish	
Shortspine thornyhead	<u>Sebastolobus alascanus</u>
Rougheye rockfish	<u>Sebastes aleutianus</u>
Pacific ocean perch	<u>Sebastes alutus</u>
Redbanded rockfish	<u>Sebastes babcocki</u>
Silvergray rockfish	<u>Sebastes brevispinis</u>
Green striped rockfish	<u>Sebastes elongatus</u>
Widow rockfish	<u>Sebastes entomelas</u>
Yellowtail rockfish (Greenies)	<u>Sebastes flavidus</u>
Quillback rockfish	<u>Sebastes maliger</u>
Bocaccio (Rock salmon)	<u>Sebastes paucispinis</u>
Canary rockfish	<u>Sebastes pinniger</u>
Sharpchin rockfish	<u>Sebastes zacentrus</u>
Flatfish	
Arrowtooth flounder (turbot)	<u>Atheresthes stomias</u>
Dover sole	<u>Microstomus pacificus</u>
English sole (lemon sole)	<u>Parophrys vetulus</u>
Flathead sole	<u>Hippoglossoides elassodon</u>
Halibut	<u>Hippoglossus stenolepis</u>

Table 1. (cont'd)

Common Name	Scientific Name
Petrale sole	<u>Eopsetta jordani</u>
Rex sole	<u>Glyptocephalus zachirus</u>
Rock sole	<u>Lepidopsetta bilineata</u>
Sand sole	<u>Psettichthys melanostictus</u>
Salachii	
Dogfish	<u>Squalus acanthias</u>
Ratfish	<u>Hydrolagus colliei</u>
Skates (Longnose)	<u>Raja rhina</u>
Agnatha	
Pacific Lamprey	<u>Lampetra tridentata</u>

Table 2. Average catch rates kg/hr of the seven major species in Dixon Entrance and northern Hecate Strait, January 22-February 9, 1979.

Table 3. Catches (kg) by species and gear-type in Dixon Entrance and northern Hecate Straits made by ARCTIC HARVESTER, January 22-February 9, 1977.

Species	Gear Type	
	Wt. (kg)	% Total
Ratfish	475.9	2.7
Walleye pollock	12850.0	98.4
<u>Sebastes flavidus</u> (Greenies)	1820.5	44.9
Arrowtooth flounder (turbot)	242.2	16.9
English sole	82.1	6.5
Pacific herring	1101.0	100.0
Skates	204.1	22.3
Pacific cod	127.8	34.2
<u>Sebastes babcocki</u>	65.4	18.6
Halibut	0	0
Chinook salmon	99.3	56.3
Dogfish	18.5	11.5
Rex sole	4.0	3.3
Eulachon	88.7	100.0
<u>Sebastes paucispinis</u>	31.8	36.8
Other rockfish	39.9	29.5
Other flatfish	0	0
Other fish	0.6	1.5
Total catch (kg)	17251.8	
Total effort (hr)	19.8	
CPUE	871.2	

Table 3. (cont'd)

Species	Gear Type		
	Wt. (kg)	% Total	Total (kg)
Ratfish	17345.7	97.3	17821.6
Walleye pollock	214.6	1.6	13064.6
<u>Sebastes flavidus</u> (Greenies)	2229.4	55.1	4049.6
Arrowtooth flounder (turbot)	1190.9	83.1	1433.1
English sole	1178.0	93.5	1260.1
Pacific herring	0	0	1101.0
Skates	711.0	77.7	915.1
Pacific cod	245.7	65.8	373.5
<u>Sebastes babcocki</u>	286.4	81.4	351.8
Halibut	220.9	100.0	220.9
Chinook salmon	77.0	43.7	176.3
Dogfish	142.2	88.5	160.7
Rex sole	115.7	96.7	119.7
Eulachon	0	0	88.7
<u>Sebastes paucispinis</u>	54.6	63.2	86.4
Other rockfish	95.2	70.5	135.1
Other flatfish	48.8	100.0	48.8
Other fish	40.0	98.5	40.6
Total catch (kg)	24196.1		41447.9
Total effort (hr)	7.8		27.6
CPUE	3102.0		1501.7

Table 4. Total catch of principal species by wt. (kg)
and % in Dixon Entrance and Northern Hecate Straits made by
ARCTIC HARVESTER, January 22-February 9, 1979.

Species	Kilograms	(%)
Ratfish	17821.6	43.0
Walleye pollock	13064.6	31.5
<u>Sebastes flavidus</u> (Greenies)	4049.9	9.8
Arrowtooth flounder (turbot)	1433.1	3.5
English sole	1260.1	3.0
Pacific herring	1101.0	2.7
Skates	915.1	2.2
Pacific cod	373.5	0.9
<u>Sebastes babcocki</u>	351.8	0.8
Halibut	220.9	0.5
Chinook salmon	176.3	0.4
Dogfish	160.7	0.4
Rex sole	119.7	0.3
Eulachon	88.7	0.2
<u>Sebastes paucispinis</u>	86.4	0.2
<u>Sebastes alutus</u> , (P.O.P.)	53.4	0.1
<u>Sebastes brevispinis</u> (silvergrays)	27.1	.07
<u>Sebastes pinniger</u> (canaries)	23.9	.06
Other rockfish	30.7	.08
Other flatfish	48.8	0.1
Other fish	40.6	0.1
Total	41447.9	

*Total weight of each species divided by total weight of all species.

Table 5. Summary of species sampled, type of sample, and number of specimens examined.

Species	Tow No.	Type of Net	Length	Sex			Maturity	Body Weight	Ovary Weight	Age	Sampling Remarks
				M	F	U					
Pollock	1	Midwater	16	6	10	-	-	-	-	-	Not a good sample
Pollock	2	Midwater	291	153	136	2	-	-	-	200	1 tub of 17
Pollock	3	Midwater	190	68	52	70	-	-	-	-	Adult, sub sample JUV total samp.
Pollock	4	Midwater	506	93	83	330	-	-	-	-	Adult, sub sample JUV total samp.
Pollock	5	Midwater	201	74	127	-	201	-	-	201	6 of 23½ tubs
Pollock	6	Midwater	189	78	111	-	-	-	-	-	6 of 47½ tubs
Pollock	9	Midwater	139	19	120	-	-	-	-	-	Total sample
Pollock	10	Midwater	198	80	118	-	91	91	48	-	6 of 31½ tubs
Pollock	11	Midwater	266	123	143	-	-	-	-	-	Total catch
Pollock	13	Midwater	210	102	108	-	210	-	-	210	6 of 16 tubs
Pollock	15	Midwater	133	74	59	-	-	-	-	-	Total catch
Pollock	16	Midwater	108	68	40	-	-	-	-	-	Total catch
Pollock	17	Midwater	124	49	75	-	124	124	-	124	Total catch
Pollock	22	Midwater	195	87	108	-	195	195	-	-	Total catch
Pollock	25	Midwater	70	30	40	-	-	-	-	-	Total catch
Pollock	26	Midwater	194	96	98	-	60	60	28	60	6 of 12 tubs
Pollock	27	Midwater	35	12	23	-	-	-	-	-	Total catch
Pollock	28	Midwater	180	98	82	-	180	180	-	180	1 of 29½ tubs
Pollock	29	Midwater	258	128	130	-	-	-	-	-	1 of 35½ tubs
Pollock	31	Bottom	20	5	15	-	-	-	-	-	Total catch
Pollock	32	Bottom	9	3	6	-	-	-	-	-	Total catch
Pollock	33	Bottom	24	12	12	-	-	-	-	-	Total catch
Pollock	34	Bottom	70	17	53	-	-	-	-	-	Total catch
Pollock	42	Bottom	7	5	2	-	-	-	-	-	Total catch
Pollock	44	Bottom	40	11	29	-	-	-	-	-	Total catch
Pollock	46	Midwater	205	113	92	-	-	-	-	-	Total catch
Pollock	47	Midwater	22	7	15	-	-	-	-	-	Total catch
Pollock	48	Midwater	94	46	48	-	-	-	-	-	Total catch
Pollock	49	Midwater	23	8	15	-	-	-	-	-	Total catch
Pollock	50	Midwater	103	48	55	-	103	103	55	103	Sample for electrophoresis
Total	30		4120	1713	2005	402	1164	752	131	1078	

Table 5. (cont'd)

Species	Tow No.	Type of Net	Length	Sex			Maturity	Body Weight	Ovary Weight	Age	Sample Remarks
				M	F	U					
Ratfish	30	Bottom	126	64	62	-	-	-	-	-	Random sub sample
Ratfish	42	Bottom	64	19	45	-	-	-	-	-	Total catch
Ratfish	43	Bottom	89	13	76	-	-	-	-	-	Random sub sample
Total	3		279	96	183	-	-	-	-	-	
<hr/>											
<i>Sebastes alutus</i>											
	27	Midwater	25	24	1	-	-	-	-	-	Total catch
	38	Bottom	9	9	-	-	-	-	-	-	Total catch
	39	Bottom	15	15	-	-	-	-	-	-	Total catch
Total	3		49	48	1	-	-	-	-	-	
<hr/>											
<i>Sabastes babcocki</i>											
	25	Midwater	21	15	6	-	-	-	-	-	Total catch
	27	Midwater	10	5	5	-	-	-	-	-	Total catch
	38	Bottom	50	16	34	-	-	-	-	-	Total catch
	39	Bottom	55	44	11	-	-	-	-	-	Total catch
	43	Bottom	37	23	14	-	-	-	-	-	Total catch
Total	5		173	103	70	-	-	-	-	-	
<hr/>											
<i>Sebastes flavidus</i>											
	5	Midwater	75	56	19	-	-	-	-	-	Total catch
	6	Midwater	182	156	26	-	-	120	-	-	Total catch
	9	Midwater	13	8	5	-	-	-	-	-	Total catch
	10	Midwater	57	46	11	-	-	-	-	-	Total catch
	13	Midwater	105	89	16	-	-	-	-	-	Total catch
	18	Midwater	23	14	9	-	-	-	-	-	Total catch
	20	Midwater	194	99	95	-	-	-	-	194	8 of 22 tubs
	33	Bottom	202	123	79	-	-	-	-	202	5 of 30 tubs
	34	Bottom	179	139	40	-	-	-	-	-	6 of 13 tubs
	37	Bottom	170	78	92	-	-	-	-	-	Total catch
	44	Bottom	48	43	5	-	-	-	-	-	Total catch
Total	11		1248	851	397	-	-	120	-	396	

Table 5. (cont'd)

Species	Tow No.	Type of Net	Length	Sex			Stomach	Body Weight	Age	Sampling Remarks
				M	F	U				
English sole	42	Bottom	103	2	99	2	-	-	-	1 of 2 tubs
Eulachons	25	Midwater	143	-	-	103	-	-	-	Random sub sample
Eulachons	48	Midwater	121	-	-	121	-	-	-	Random sub sample
Total	2		264	-	-	224	-	-	-	
Halibut	30	Bottom	29	9	20	-	29	-	29	Total catch
Halibut	31	Bottom	3	-	3	-	3	-	3	Total catch
Halibut	32	Bottom	3	-	3	-	3	-	3	Total catch
Halibut	33	Bottom	5	1	4	-	5	-	5	Total catch
Halibut	34	Bottom	8	3	5	-	8	-	8	Total catch
Halibut	44	Bottom	4	4	-	-	4	-	4	Total catch
Halibut	45	Bottom	9	6	3	-	9	-	9	Total catch
Total	7		61	23	38		61		61	
Herring	3	Midwater	-	-	-	-	-	-	-	Sample frozen 4.7 kilos
Herring	4	Midwater	-	-	-	-	-	-	-	Sample frozen 3.6 kilos
Herring	28	Midwater	-	-	-	-	-	-	-	Sample frozen 1.3 kilos
Herring	29	Midwater	105	45	60	-	-	-	-	A sample frozen
Total			105	45	60	-	-	-	-	
Lingcod	34	Bottom	1	-	1	-	1	-	-	Total catch
Lingcod	37	Bottom	2	-	2	-	2	-	-	Total catch
Total	2		3	-	3	-	3	-	-	
Pacific cod	4	Midwater	19	11	8	-	-	-	-	Total catch
Pacific cod	31	Bottom	23	9	14	-	-	-	-	Total catch
Pacific cod	34	Bottom	19	13	6	-	-	-	-	Total catch
Pacific cod	42	Bottom	15	9	6	-	-	-	-	Total catch
Pacific cod	44	Bottom	13	8	5	-	-	-	-	Total catch
Total	5		89	50	39	-	-	-	-	Total catch

Table 5. (cont'd)

Species	Tow No.	Type of Net	Length	Sex			Stomach	Body Weight .	Age	Sampling Remarks
				M	F	U				
<u>Sebastes paucispinis</u>	38	Bottom	7	7	-	-	-	-	-	Total catch
Chinook salmon	1	Midwater	2	2	-	-	2	2	-	Total catch
Chinook salmon	2	Midwater	5	4	1	-	5	5	-	Total catch
Chinook salmon	3	Midwater	3	-	3	-	3	3	-	Total catch
Chinook salmon	5	Midwater	1	1	-	-	1	1	-	Total catch
Chinook salmon	6	Midwater	4	2	2	-	4	4	-	Total catch
Chinook salmon	10	Midwater	16	11	5	-	16	16	-	Total catch
Chinook salmon	16	Midwater	2	1	1	-	2	2	-	Total catch
Chinook salmon	26	Midwater	6	-	6	-	6	6	-	Total catch
Chinook salmon	27	Midwater	3	3	-	-	3	3	-	Total catch
Chinook salmon	28	Midwater	22	13	9	-	22	22	-	Total catch
Chinook salmon	29	Midwater	10	4	6	-	10	10	-	Total catch
Chinook salmon	30	Bottom	2	-	2	-	2	2	-	Total catch
Chinook salmon	31	Bottom	2	2	-	-	2	2	-	Total catch
Chinook salmon	33	Bottom	1	1	-	-	1	1	-	Total catch
Chinook salmon	34	Bottom	5	2	3	-	5	5	-	Total catch
Chinook salmon	43	Bottom	1	-	1	-	1	1	-	Total catch
Chinook salmon	46	Midwater	1	-	1	-	1	1	-	Total catch
Chinook salmon	47	Midwater	1	1	-	-	1	1	-	Total catch
Chinook salmon	50	Midwater	2	1	1	-	2	2	-	Total catch
Total	19		89	48	41	-	89	89	-	
Dogfish	25	Midwater	5	-	5	-	5	-	-	Total catch
Dogfish	27	Midwater	5	3	2	-	5	-	-	Total catch
Dogfish	30	Bottom	8	4	4	-	8	-	-	Total catch
Dogfish	31	Bottom	11	4	7	-	11	-	-	Total catch
Dogfish	38	Bottom	7	4	3	-	7	-	-	Total catch
Dogfish	39	Bottom	57	30	27	-	57	-	-	Total catch
Dogfish	42	Bottom	7	5	2	-	7	-	-	Total catch
Dogfish	43	Bottom	22	18	4	-	22	-	-	Total catch
Total	8		122	68	54		122	-	-	

Table 5. (cont'd)

Species	Tow No.	Type of Net	Length	Sex			Stomach	Body Weight	Age	Sampling Remarks
				M	F	U				
Turbot	32	Bottom	79	4	75	-	-	-	-	Random sub sample
Turbot	42	Bottom	43	1	42	-	-	-	-	Total catch
Turbot	44	Bottom	132	24	108	-	-	-	-	Total catch
Total	3		254	29	225	-	-	-	-	

Table 6. Sex ratio of walleye pollock by trawl tow in Dixon Entrance, northern Hecate Strait, January 22-February 9, 1979.

Tow No.	Sample Size	Net	% Male	Range fork Length (cm)	Mean Depth (m)	
					Net	Bottom
1	16	M	40.4	(25-34)	75	107
2	289	M	52.9	(23-52)	105	107
3	112	M	60.7	(24-49)	106	108
4	176	M	52.8	(22-56)	114	118
5	201	M	36.8	(36-63)	93	121
6	189	M	41.3	(43-62)	100	120
9	139	M	15.8	(49-66)	117	158
10	198	M	40.4	(45-66)	55	114
11	266	M	46.2	(38-66)	65	143
13	210	M	48.6	(32-64)	118	121
15	133	M	55.6	(45-60)	137	173
16	108	M	63.0	(31-63)	138	140
17	124	M	39.5	(50-63)	134	164
22	194	M	44.8	(27-65)	54	64
25	70	M	42.9	(16-63)	223	226
26	194	M	49.5	(37-64)	69	171
27	35	M	34.3	(28-62)	200	201
28	180	M	54.4	(16-37)	101	102
29	258	M	49.6	(22-34)	103	106
31	20	B	25.0	(39-62)	123	123
32	9	B	33.3	(31-68)	90	90
33	24	B	50.0	(130-53)	91	91
34	70	B	24.3	(34-66)	105	105
42	7	B	71.4	(33-46)	146	146
44	40	B	27.5	(52-64)	137	137
46	205	M	55.1	(26-37)	75	79
47	22	M	31.8	(49-61)	251	282
48	94	M	48.9	(36-66)	300	323
49	23	M	34.8	(35-65)	124	128
50	103	M	44.6	(127-63)	59	68
Total	3717		46.0			

Table 7. The total average body weights in grams of pollock by cm and by maturity category, for the Two Peak Area, tows AH79-10, 26, and 50. Shown also is the total average ovary weights and the percentage ovary weight to body weight in grams.

Length (cm)	Total Average Male Body Weights (Grams)						Total Average Female Body Weights (Grams)					
	I-2	R-1	R-2	R	S	REC	I-2	R-1	R-2	R	S	REC
27	157 (1)	-	-	-	-	-	-	-	-	-	-	-
28	0	-	-	-	-	-	-	-	-	-	-	-
29	0	-	-	-	-	-	-	-	-	-	-	-
30	0	-	-	-	-	-	-	-	-	-	-	-
31	240 (1)	-	-	-	-	-	-	-	-	-	-	-
32	273 (2)	-	-	-	-	-	285 (2)	-	-	-	-	-
33	0	-	-	-	-	-	0	-	-	-	-	-
34	0	-	-	-	-	-	0	-	-	-	-	-
35	365 (1)	-	-	-	-	-	0	-	-	-	-	-
36	-	-	-	-	-	-	0	-	-	-	-	-
37	-	-	-	-	-	-	0	-	-	-	-	-
38	-	-	-	-	-	-	0	-	-	-	-	-
39	-	-	-	-	-	-	0	-	-	-	-	-
40	-	-	-	1171 (1)	-	-	0	-	-	-	-	-
41	-	-	-	-	-	-	0	-	-	-	-	-
42	-	-	-	-	-	-	631 (2)	-	-	-	-	-
43	-	-	-	-	-	-	696 (1)	-	-	-	-	-
44	-	-	743 (1)	-	-	-	-	-	-	-	-	-
45	-	-	-	884 (1)	-	-	-	-	-	-	-	-
46	975 (1)	-	-	907 (1)	-	-	-	-	-	-	-	-
47	-	-	-	-	-	-	-	-	-	-	-	-
48	-	-	1002 (5)	1109 (2)	-	-	-	1059 (1)	-	-	-	-
49	-	-	1120 (2)	1106 (6)	-	-	-	0	-	-	-	-
50	-	-	1223 (1)	1242 (6)	-	-	-	0	1190 (2)	-	-	-
51	-	-	-	1227 (11)	-	-	-	1186 (3)	1152 (1)	-	-	-
52	-	-	1485 (1)	1303 (15)	-	1019 (1)	-	1330 (1)	1354 (5)	-	-	-
53	-	-	1573 (1)	1373 (1)	-	-	-	0	1398 (8)	-	-	-
54	-	1287 (1)	-	1480 (15)	-	-	-	0	1580 (9)	-	1429 (1)	-
55	-	-	-	1561 (13)	-	-	-	1249 (1)	1672 (18)	-	-	-
56	-	-	1650 (1)	1586 (11)	-	-	-	1431 (1)	1803 (12)	-	-	-
57	-	-	-	1647 (5)	1455 (1)	-	-	0	1667 (20)	-	-	-
58	-	-	-	0	-	-	-	0	1837 (19)	-	-	-
59	-	-	-	1885 (1)	-	-	-	1809 (2)	1887 (9)	-	1669 (2)	-
60	-	-	-	0	-	-	-	-	1961 (3)	-	-	-
61	-	-	-	0	-	-	-	-	2009 (4)	-	-	-
62	-	-	-	1779 (1)	-	-	-	-	0	-	-	-
63	-	-	-	-	-	-	-	-	1840 (1)	-	-	-
64	-	-	-	-	-	-	-	-	2391 (2)	-	-	-

Note: For maturity stages definitions, see Table 12.

Note: Numbers in brackets denotes numbers of fish weights used in average.

Table 7. (cont'd)

Length (cm)	Total Average Ovary Weights				The % Average Ovary Weight to Average Body Weight			
	I-2	R-1	R-2	S	I-2	R-1	R-2	S
27	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-
31	-	-	-	-	-	-	-	-
32	-	-	-	-	-	-	-	-
33	-	-	-	-	-	-	-	-
34	-	-	-	-	-	-	-	-
35	-	-	-	-	-	-	-	-
36	-	-	-	-	-	-	-	-
37	-	-	-	-	-	-	-	-
38	-	-	-	-	-	-	-	-
39	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-
41	-	-	-	-	-	-	-	-
42	26.7 (1)	-	-	-	4.2	-	-	-
43	28.0 (1)	-	-	-	4.0	-	-	-
44	-	-	-	-	-	-	-	-
45	-	-	-	-	-	-	-	-
46	-	-	-	-	-	-	-	-
47	-	-	-	-	-	-	-	-
48	-	41.8 (1)	-	-	-	3.9	-	-
49	-	0	-	-	-	0	-	-
50	-	0	49.8 (2)	-	-	0	4.2	-
51	-	33.0 (3)	58.1 (1)	-	-	2.8	5.0	-
52	-	38.8 (1)	72.2 (5)	-	-	2.9	5.3	-
53	-	0	73.8 (8)	-	-	0	5.3	-
54	-	0	95.3 (9)	9.9 (1)	-	0	6.0	0.7
55	-	48.3 (1)	132.0 (18)	-	-	3.9	7.9	0
56	-	60.8 (1)	107.5 (12)	-	-	4.2	6.0	0
57	-	0	108.7 (20)	-	-	0	6.5	0
58	-	0	113.8 (19)	-	-	0	6.2	0
59	-	50.8 (2)	116.6 (9)	51.8 (2)	-	2.6	6.2	3.1
60	-	-	90.5 (3)	-	-	-	4.6	-
61	-	-	138.2 (4)	-	-	-	6.9	-
62	-	-	0	-	-	-	0	-
63	-	-	134.0 (1)	-	-	-	7.3	-
64	-	-	160.1 (2)	-	-	-	6.7	-

Table 8. The total average body weights in grams of pollock by cm and maturity category for Northeast corner. (West side Celestial Reef Area). Tow AH79-1-17.

Length (cm)	Total Average Male Body Weights (Grams)			Total Average Female Body Weights (Grams)		
	I-2	R-2	R	I-2	R-2	R
50	1047 (1)	-	1259 (3)	-	-	-
51	-	-	1247 (2)	-	1195 (1)	-
52	-	-	1309 (12)	-	1328 (3)	1340 (1)
53	-	1546 (1)	1343 (6)	-	1392 (6)	-
54	-	-	1498 (10)	-	1577 (6)	-
55	-	-	1513 (7)	-	1533 (9)	1496 (1)
56	-	1618 (1)	1621 (1)	-	1605 (10)	-
57	-	-	1533 (2)	-	1592 (13)	-
58	-	-	1707 (1)	-	1716 (10)	-
59	-	-	1573 (2)	-	1803 (4)	-
60	-	-	-	-	1917 (4)	-
61	-	-	-	-	0	-
62	-	-	-	-	2137 (4)	-
63	-	-	-	-	1931 (1)	-

I-2, R-2, R = See definition, Table 12.

Note: Numbers in brackets indicate numbers of fish used in average weight.

Table 9. The total average body weights in grams of pollock by cm and by maturity category for Butterworth Rks. Area, tow AH79-1-28.

Length (cm)	Total Average Male Body Weights (Grams)			Total Average Female Body Weights (Grams)	
	I-1	I-2	R	I-1	I-2
16	-	-	-	31 (1)	-
17	-	-	-	0	-
18	-	-	-	0	-
19	-	-	-	0	-
20	-	-	-	0	-
21	-	-	-	82 (1)	-
22	-	-	-	0	-
23	-	96 (2)	-	0	-
24	-	-	-	0	110 (2)
25	-	114 (2)	-	0	116 (2)
26	-	137 (11)	-	145 (2)	143 (5)
27	-	154 (11)	-	170 (1)	156 (8)
28	160 (1)	178 (21)	-	173 (1)	169 (20)
29	-	199 (19)	224 (1)	-	198 (11)
30	-	220 (18)	-	-	219 (13)
31	-	236 (3)	237 (1)	-	234 (7)
32	-	289 (3)	-	-	224 (2)
33	-	314 (2)	-	-	288 (1)
34	-	299 (1)	-	-	333 (3)
35	-	354 (2)	-	-	0
36	-	-	-	-	0
37	-	-	-	-	433 (1)

Note: Numbers in brackets indicates numbers of fish used in average weight.

Maturity definitions, see Table 12.

Table 10. The total average body weights in grams of pollock by cm and by maturity category for the Rose Spit Area. Tow number AH79-1-22.

Length (cm)	Total Average Male Body Weights (Grams)			
	I-2	R-1	R-2	R
27	-	-	-	-
28	-	-	-	-
29	227 (6)	-	-	-
30	232 (5)	-	-	-
31	252 (14)	-	-	-
32	289 (18)	-	280 (1)	-
33	311 (10)	-	-	-
34	345 (7)	-	-	-
35	369 (8)	-	-	-
36	397 (3)	-	-	-
37	419 (2)	-	-	-
38	463 (3)	-	463 (2)	-
39	478 (2)	-	-	-
40	0	-	-	-
41	563 (1)	-	-	-
42	-	-	-	-
43	-	-	-	-
44	-	-	-	-
45	-	-	-	-
46	-	-	-	-
47	-	-	-	-
48	-	-	-	-
49	-	-	-	-
50	-	-	-	-
51	-	-	-	-
52	-	-	-	-
53	-	-	-	1595 (1)
54	-	-	-	0
55	-	1392 (1)	-	0
56	-	-	-	1390 (3)
57	-	-	-	-
58	-	-	-	-
59	-	-	-	-
60	-	-	-	-
61	-	-	-	-
62	-	-	-	-
63	-	-	-	-
64	-	-	-	-
65	-	-	-	-

Note: Numbers in brackets indicate number of fish used in average weight.

Maturity definitions, see Table 12.

Table 10 (cont'd)

Length (cm)	Total Average Female Body Weights (Grams)			
	I-1	I-2	R-1	R-2
27	-	159 (1)	-	-
28	-	0	-	-
29	-	213 (5)	-	203 (1)
30	-	231 (8)	-	0
31	245 (1)	222 (8)	-	253 (1)
32	0	285 (13)	276 (1)	0
33	0	302 (15)	0	0
34	326 (1)	330 (10)	0	0
35	-	367 (8)	0	0
36	-	388 (6)	0	0
37	-	396 (3)	393 (1)	0
38	-	421 (2)	506 (1)	430 (1)
39	-	506 (3)	537 (1)	0
40	-	519 (2)	505 (2)	0
41	-	-	556 (1)	0
42	-	-	0	593 (1)
43	-	-	0	0
44	-	-	0	0
45	-	-	0	0
46	-	-	0	0
47	-	-	0	0
48	-	-	0	0
49	-	-	0	0
50	-	-	0	0
51	-	-	0	1167 (1)
52	-	-	0	0
53	-	-	0	0
54	-	-	0	0
55	-	-	0	1624 (1)
56	-	-	0	0
57	-	-	0	1715 (1)
58	-	-	0	0
59	-	-	0	1738 (3)
60	-	-	1367 (1)	1795 (1)
61	-	-	1805 (1)	0
62	-	-	-	0
63	-	-	-	2430 (1)
64	-	-	-	0
65	-	-	-	1912 (1)

Note: Numbers in brackets of fish used in average weight.

Maturity definitions, see Table 12.

Table 11. Maturity table, giving the numbers of fish by sex and maturity, also showing the percentage of each maturity category on AH79-1 to Dixon Entrance, January 22-February 9, 1979.

Condition Code	Two Peaks								Dundas I.		NEC	
	5		10		26		50		13		17	
Tow	M	F	M	F	M	F	M	F	M	F	M	F
Immature - 1	-	1	-	-	-	-	-	-	-	1	-	-
Immature - 2	2	0	1	1	-	-	5	3	2	1	1	-
Ripening - 1	4	60	0	4	-	3	1	2	0	9	0	-
Ripening - 2	9	61	6	43	6	23	2	49	14	94	2	73
Ripe	57	1	36	0	25	0	39	0	85	1	46	2
Spent	0	1	0	0	0	2	1	1	1	1	-	-
Resorbing	0	3	0	0	0	-	-	-	-	1	-	-
Recovering	0	0	0	0	1	-	-	-	-	-	-	-
Resting	2	0	0	0	-	-	-	-	-	-	-	-
Total	74	127	43	48	32	28	48	55	102	108	49	75

Note: For maturity condition code, see Table 12.

Table 11. (cont'd)

Condition Code	Butterworth		Rose Spit				Grand Total	Percent
	28	22			M	F		
Tow	M	F	M	F	M	F		
Immature - 1	1	6	-	2	1	10	11	0.95
Immature - 2	95	76	79	84	185	165	350	30.06
Ripening - 1	0	-	1	9	6	87	93	8.00
Ripening - 2	2	-	3	13	44	356	400	34.36
Ripe	-	-	4	-	292	4	296	25.43
Spent	-	-	-	-	2	5	7	0.60
Resorbing	-	-	-	-	0	4	4	0.34
Recovering	-	-	-	-	1	-	1	0.09
Resting	-	-	-	-	2	-	2	0.17
Total	98	82	87	108	533	631	1164	100

Note: For maturity condition code, see Table 12.

Table 12. Pacific pollock - maturity states.

	Female	Male
Immature 1 I-1	Virgin, ovary small, light pink and semi-transparent, no ova.	Virgin, testes small, no convolutions.
Immature 2 I-2	Virgin, ovary still small, light pink and semi-transparent, some ova but without yolk.	Virgin, testes small and pink but convoluted.
Ripening 1 R-1	Ovary small but starting to enlarge, fills about 1/4 body cavity, light yellow ova with yolk and opaque, blood vessels on ovary pronounced.	Testes about 1/4 body cavity and convoluted, contains small amount of milt, convolutions firm and pink.
Ripening 2 R-2	Ovary larger, filling more than 1/3 the body cavity, yellow. Ova with yolk and opaque, blood vessels on ovary pronounced.	Testes about 1/2 body cavity, convoluted, loose and about 2/3 full of milt, edge of convolutions pink and firm.
Ripe R.	Ovary translucent yellow- 1/2-2/3 the body cavity, yellow ova opaque or translucent.	Testes large, convoluted and full of milt, fills about 2/3 of body cavity, some milt may flow from vent with pressure.
1 Ripe IR	Ovary large, fills 1/2-2/3 the body cavity, less than 1/2 the ova are translucent.	No stage in males.
2 Ripe 2R	Ovary large, fills 2/3 the body cavity, more than 1/2 the ova are translucent.	No stage in males.
Running ripe R.R.	Translucent ova flow from vent with <u>slight</u> pressure. ovaries almost fill body cavity, ova opaque or translucent, ova loose in ovary. Ovary translucent.	Testes large, milt flows from vent with <u>slight</u> pressure, edge of testes may be bloodshot in fresh specimens.
Spent S.	Ovary bloodshot, purple in color, some ova may remain translucent. Ovary flaccid about 1/3 body cavity.	Testes bloodshot, and flaccid, may contain some milt, now reduced to less than 1/2 body cavity.

Table 13. The average body weights in grams of yellowtail rockfish,
Sebastes flavidus by cm length and sex.

Length (cm)	The Average Male Body Weights (grams)	The Average Female Body Weights (grams)	Total Male & Female Body Weight (grams)
35	608 (1)	-	608 (1)
36	0	-	0
37	0	-	0
38	0	-	0
39	1135 (1)	-	1135 (1)
40	1080 (1)	1064 (1)	1072 (2)
41	1099 (5)	1163 (2)	1123 (7)
42	1203 (8)	0	1203 (8)
43	1312 (6)	1288 (4)	1302 (10)
44	1374 (10)	0	1374 (10)
45	1470 (9)	1430 (1)	1566 (10)
46	1534 (20)	1551 (1)	1534 (21)
47	1618 (19)	1733 (4)	1638 (23)
48	1685 (10)	0	1685 (10)
49	1794 (9)	0	1794 (9)
50	1793 (2)	1989 (1)	1858 (3)
51	1977 (1)	0	1977 (1)
52	2096 (1)	2304 (2)	2234 (3)
53	-	2640 (1)	2640 (1)

Note: Numbers in brackets indicate numbers of fish used in average weight.

Table 14. The total catch of Sebastes flavidus by weight (kilograms) and area showing the percentage caught in each area.

Tow Number	Two Peaks	Dundas I.	Cape Chacon	Butterworth Rks.	NEC	Rose Spit
5	110.8					
6	280.9					
8	0					
9	25.0					
10	91.0					
11	7.8					
13	0	164.1				
14	0				34.0	
16	0				30.0	
17	0				33.5	
18	0		38.1			
20	0		931.2			
21	0		11.3			
22	0					1.6
23	22.0					
25	3.2					
26	9.2					
27	1.4					
32	0			30.0		
33	1296.5					
34	607.5					
37	0					210.4
38	0					5.5
42	3.5					
44	176.0					
49	1.4					
50	21.1					
Total	2557.3	164.1	980.6	30.0	97.5	220.4
Percent	63.1	4.1	24.2	0.7	2.4	5.4

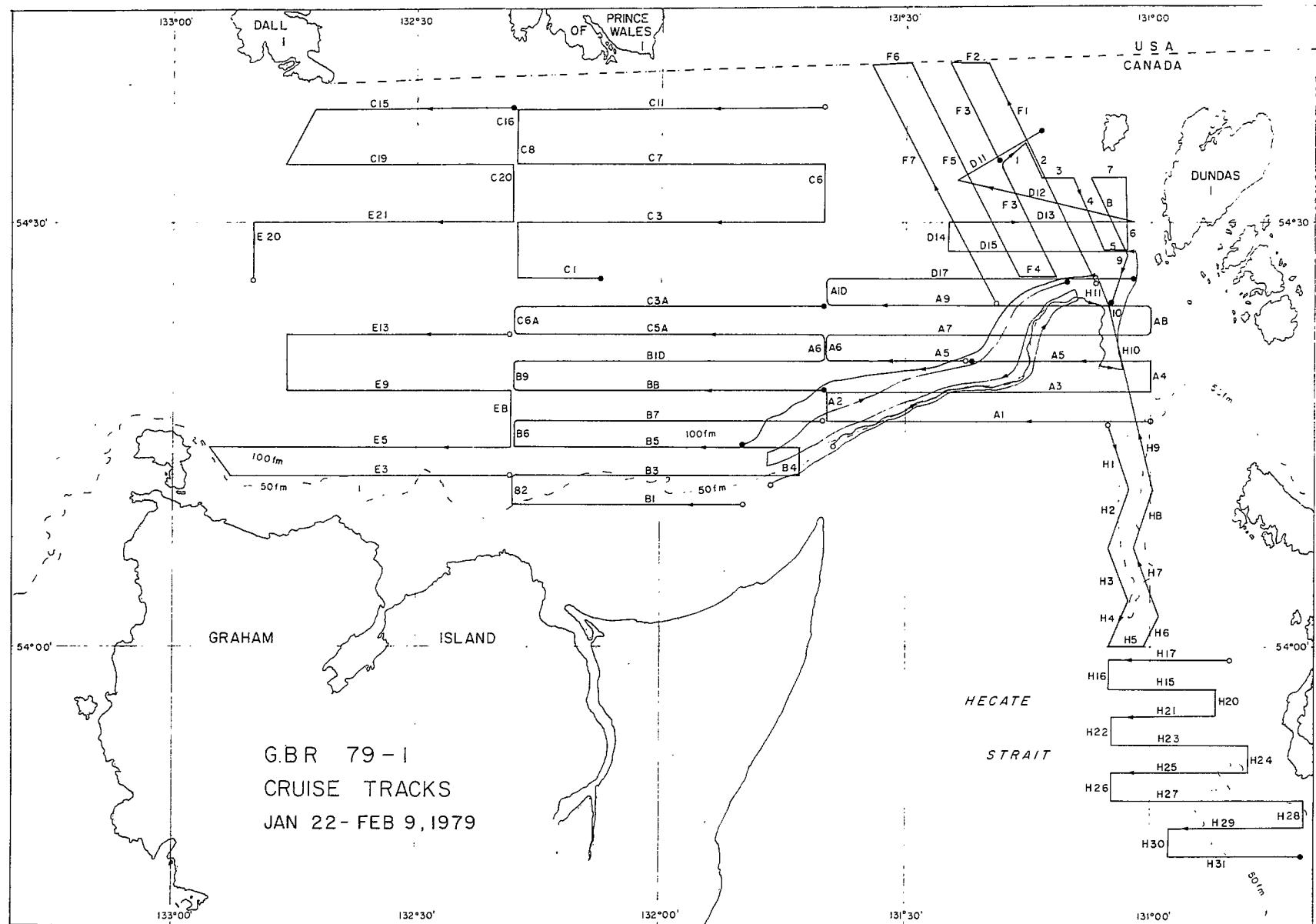
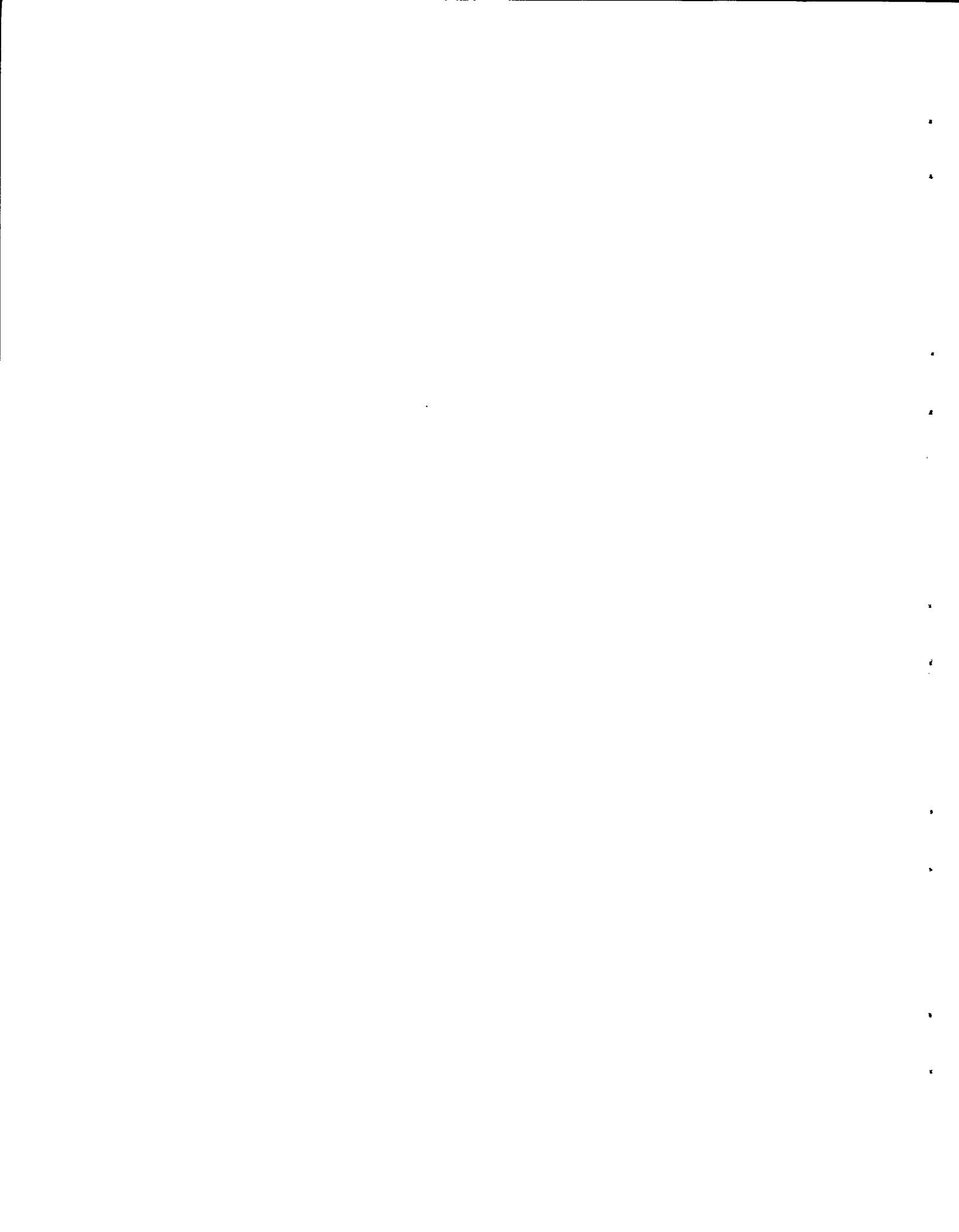


Fig. 1. Cruise tracks for cruise G.B. REED 79-1, January 22-February 9, 1979, Dixon Entrance.



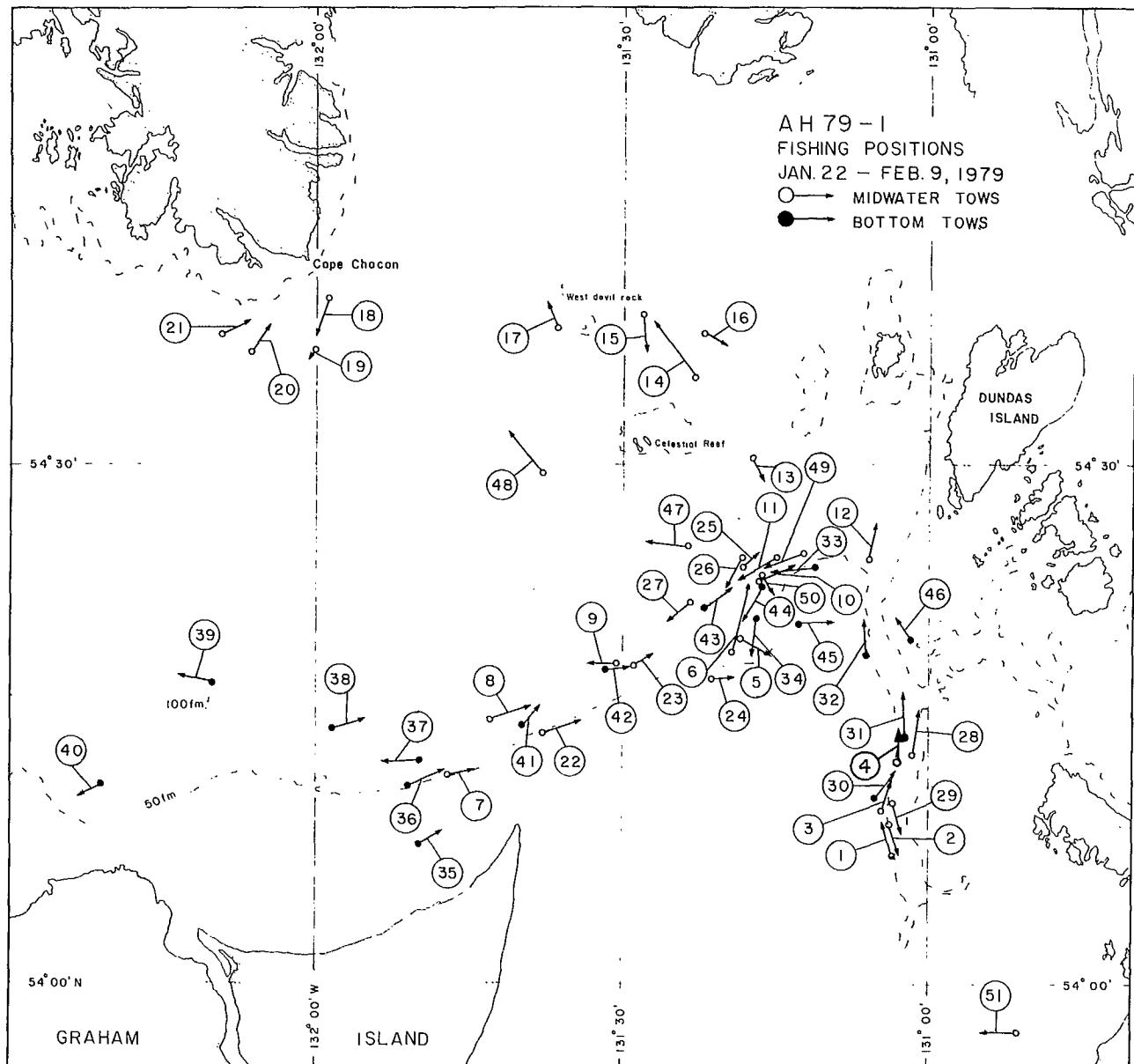
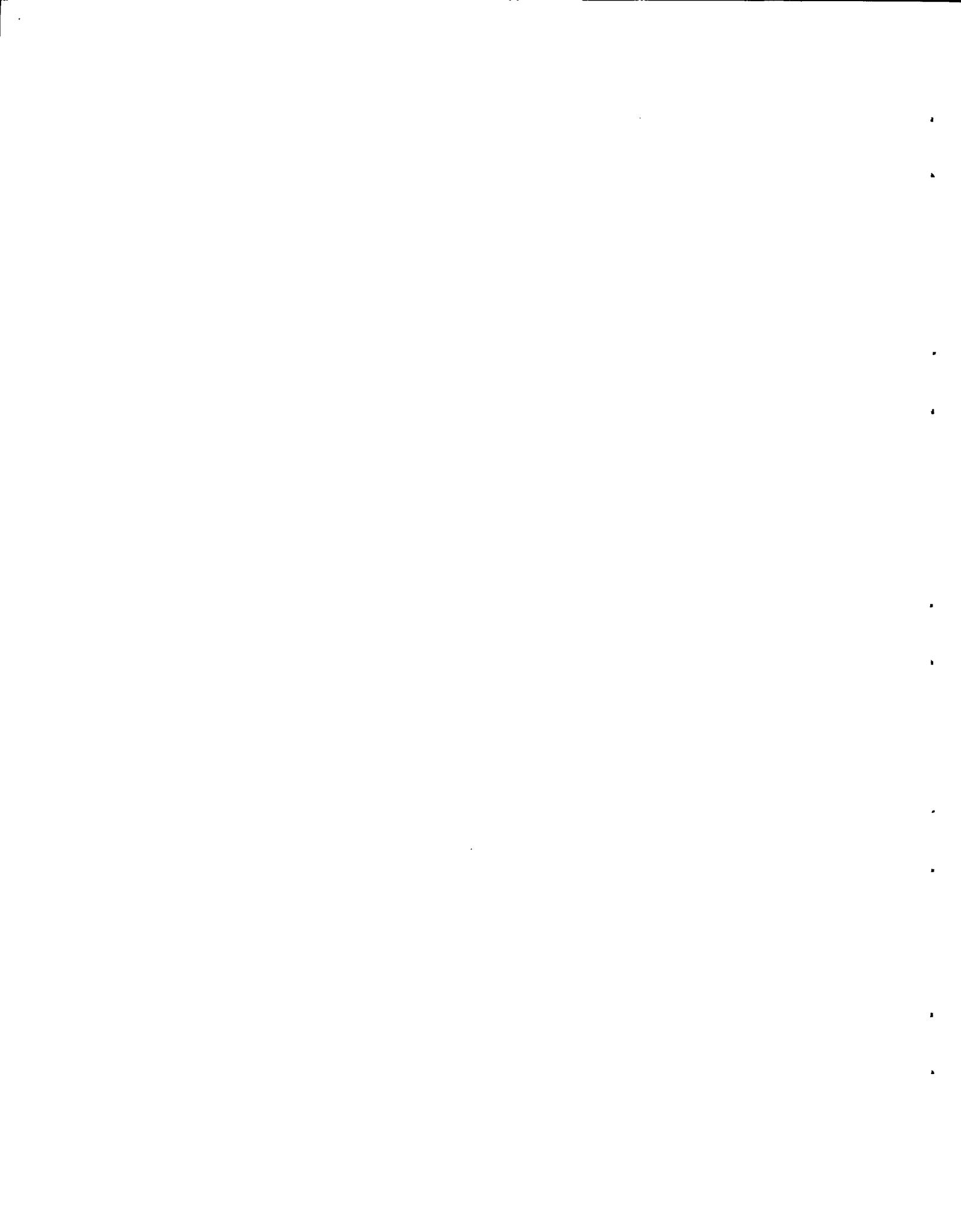


Fig. 2. Location of midwater and bottom trawl tows, Dixon Entrance, cruise A.H. 79-1, January 22-February 9, 1979.



Appendix Table 1

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VESSEL: ARCTIC HARVESTER DATE: Yr 79 Mo Jan Day 27 SET/HAUL NO: 1
 LOCATION: Hecate Strait AREA: Butterworth Rocks
 START: Lat. 54° 07.4' Long. 131° 03.7'
 END: Lat. 54° 09.3' Long. 131° 04.5'
 GEAR: MWT CD# 7 START TIME (0755) : 0827 DURATION: 32'
 BOTTOM DEPTH m: Start: 104.0 End: 110 Est. Av. Depth: 107.0
 NET DEPTH RANGE m: 80-70 Est. Av. Depth: 75 m mi.
 DIRECTION OF SET °true: 355 SPEED kn: 3.8 DISTANCE TRAVELED: 2
 SET ON: 45.7 - 67.7 m layer WATER CONDITION: Lt. Chop TIDE: Flood 0645 low
 WIND DIRECTION: 270° WIND SPEED: 5 KTS. RECORDER: W. Barner
 TTM: _____ TDM: _____ BT: 1 OTHER OCEANOGRAPHIC DATA: _____
 REMARKS: 100 fms (182.9) warp net open 6.5 f. (12 m). Fish dive as net approaches.
 SOUNDER SUMMARY: Net towed with footrope 27-36 meters off bottom.

VESSEL: ARCTIC HARVESTER DATE: Yr 79 Mo Jan Day 27 SET/HAUL NO: 2
 LOCATION: Hecate Strait AREA: Butterworth Rocks
 START: Lat. 54° 09.3' Long. 131° 03.9'
 END: Lat. 54° 07.5' Long. 131° 02.8'
 GEAR: MWT CD# 7 START TIME (0953) : 1025 DURATION: 25 min.
 BOTTOM DEPTH m: Start: 108 End: 110 Est. Av. Depth: 107.0
 NET DEPTH RANGE m: 105 M Est. Av. Depth: 105 mi.
 DIRECTION OF SET °true: 165°T SPEED kn: 3.8 DISTANCE TRAVELED: 2
 SET ON: Layer near bottom WATER CONDITION: ripple TIDE: Flood to 12:30
 WIND DIRECTION: 270° WIND SPEED: <5 KTS. RECORDER: W. Barner
 TTM: _____ TDM: _____ BT: 2 OTHER OCEANOGRAPHIC DATA: _____
 REMARKS: Net open 6 fms. (11.0m) Warp 150 fms. (274 m)
 SOUNDER SUMMARY: Net towed with footrope 2 metres off bottom.

VESSEL: ARCTIC HARVESTER DATE: 79 Jan 27 SET/HAUL NO: 3
LOCATION: Hecate Strait AREA: Butterworth Rocks
START: Lat. 54 ° 10.1' Long. 131 ° 04.5'
END: Lat. 54° 11.7' Long. 131 ° 03.8'
GEAR: MWT CD No. 7 START TIME (11:25) : 11:55 DURATION: 30 min.
BOTTOM DEPTH m: Start: 110 End: 108 Est. Av. Depth: 108.0
NET DEPTH RANGE m: Foot rope 2m off bottom Est. Av. Depth: 106 mi.
DIRECTION OF SET °true: 350°T SPEED kn: 3.2 DISTANCE TRAVELED: 1.6
SET ON: WATER CONDITION: Ripple TIDE: Flood
WIND DIRECTION: 270° WIND SPEED: 5 KTS. RECORDER: B. Baker
TTM: TDM: BT: OTHER OCEANOGRAPHIC DATA:
REMARKS: Net opening 6 fms (11 m) 150 fms. (274 m)
SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Jan 27 SET/HAUL NO: 4
LOCATION: Hecate Strait AREA: Butterworth
START: Lat. 54 ° 13.0' Long. 131 ° 02.9'
END: Lat. 54 ° 14.8' Long. 131 ° 02.7'
GEAR: MWT CD No. 7 START TIME (13:10) : 13:40 DURATION: 30 min.
BOTTOM DEPTH m: Start: 121 End: 117.0 Est. Av. Depth: 118.0
NET DEPTH RANGE m: Footrope 4 m off bottom Est. Av. Depth: 114 mi.
DIRECTION OF SET °true: 015°T SPEED kn: 3.0 DISTANCE TRAVELED: 1.5
SET ON: WATER CONDITION: Ripple TIDE: Ebb
WIND DIRECTION: 270° WIND SPEED: 5 KTS. RECORDER: B. Baker
TTM: TDM: BT: OTHER OCEANOGRAPHIC DATA:
REMARKS: Net opening 8 fms (15 m) Warp 150 fms. (274.4 m)
SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Jan 27 SET/HAUL NO: 5
LOCATION: Dixon Entrance AREA: Two Peaks
START: Lat. 54 ° 20.3' Long. 131 ° 18.8'
END: Lat. 54 ° 118.8' Long. 131 ° 15.7'
GEAR: MWT CD No. 7 START TIME (1535) : 1405 DURATION: 30 min.
BOTTOM DEPTH m: Start: 123 End: 121 Est. Av. Depth: 121
NET DEPTH RANGE m 100-85 m Est. Av. Depth: 93 m
DIRECTION OF SET °true: 180°T SPEED kn: 4.0 DISTANCE TRAVELED: 2 mi.
SET ON: WATER CONDITION: ripple TIDE: Ebb to 1910
WIND DIRECTION: 270°T WIND SPEED: 5 KTS. RECORDER: W. Barner
TTM: TDM: BT: 3 OTHER OCEANOGRAPHIC DATA:
REMARKS: 6.5 (12 m) FM opening. Small schools in layer 35-45 fms. (64-82m)
SOUNDER SUMMARY: Warp 150 fms. (274 m)

VESSEL: ARCTIC HARVESTER DATE: 79 Jan 27 SET/HAUL NO: 6
LOCATION: Dixon Entrance AREA: Two Peaks
START: Lat. 54 ° 19.3 ' Long. 131 ° 18.8 '
END: Lat. 54 ° 23.7 ' Long. 131 ° 17.3 '
GEAR: MWT CD No. 7 START TIME (17:27): 18:55 DURATION: 88 min.
BOTTOM DEPTH m: Start: 121 End: 146 Est. Av. Depth: 120.0
NET DEPTH RANGE m: 55-73 Est. Av. Depth: 100.0
DIRECTION OF SET °true: 55°T SPEED kn: 3.1 DISTANCE TRAVELED: 4.6 mi.
SET ON: WATER CONDITION: Ripple TIDE: Ebb to 1910
WIND DIRECTION: WIND SPEED: 5 KTS. RECORDER: B. Baker
TTM: TDM: BT: OTHER OCEANOGRAPHIC DATA:
REMARKS: 150 FM (274 m) Warp
SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Jan 28 SET/HAUL NO: 7
LOCATION: Dixon Entrance AREA: Off Tow Hill
START: Lat. 54 ° 12.2' Long. 131 ° 46.9'
END: Lat. 54 ° 12.5' Long. 131 ° 49.7'
GEAR: MWT CD No. 7 START TIME (07:55) : 08:25 DURATION: 30 min.
BOTTOM DEPTH m: Start: 104.3 End: 96.9 Est. Av. Depth: 100
NET DEPTH RANGE m: Footrope 2 m off bottom Est. Av. Depth: 98
DIRECTION OF SET °true: 85°T SPEED kn: 3.0 DISTANCE TRAVELED: 1.5 mi.
SET ON: Nothing WATER CONDITION: Lt. chop TIDE: Flood to 12:35
WIND DIRECTION: 135°T WIND SPEED: 10 KTS. RECORDER: W. Barner
TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____
REMARKS: 15.5 m opening (8.5 fm) 125 fm warp (229 m)

SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Jan 28 SET/HAUL NO: 8
LOCATION: Dixon Entrance AREA: Off Rose Spit buoy
START: Lat. 54 ° 15.2 Long. 131 ° 43.1
END: Lat. 54 ° 16.2 Long. 131 ° 39.4
GEAR: MWT CD No. 7 START TIME (09:20) : 09:50 DURATION: 30 min.
BOTTOM DEPTH m: Start: 131.7 End: 131.7 Est. Av. Depth: 131
NET DEPTH RANGE m: Variable 128.0-123 m Est. Av. Depth: 125 m
DIRECTION OF SET °true: 135°T SPEED kn: 4.5 DISTANCE TRAVELED: 2.25 mi.
SET ON: Nothing WATER CONDITION: Lt. chop TIDE: Flood to 13:25
WIND DIRECTION: 135°T WIND SPEED: 10-15 KTS. RECORDER: B. Baker
TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____
REMARKS: Net opening 15.5-16.5 m (8.5-9 FM) 274 m Warp (150 FM)
SOUNDER SUMMARY: Footrope 4-7 meters off bottom.

VESSEL: ARCTIC HARVESTER DATE: 79 Jan 28 SET/HAUL NO: 9
LOCATION: Dixon Entrance AREA: S.W. Edge
START: Lat. 54 ° 18.4' Long. 131 ° 30.5'
END: Lat. 54 ° 18.5' Long. 131 ° 33.1'
GEAR: MWT CD No. 7 START TIME (1140) : 1215 DURATION: 35 min.
BOTTOM DEPTH m: Start: 156 End: 161 Est. Av. Depth: 158
NET DEPTH RANGE m: Footrope - 112.5-121.6m Est. Av. Depth: 117 mi.
DIRECTION OF SET °true: 275°T SPEED kn: 2.6 DISTANCE TRAVELED: 1.5
SET ON: Mid Layers 9.15-100.6m WATER CONDITION: Lt. chop TIDE: Tide to 13:25
WIND DIRECTION: 135°T WIND SPEED: 20 KTS. RECORDER: W. Barner
TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____
REMARKS: Warp 320 m (175 fm) Net opening 11 m (6.5 fm)

SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Jan 28 SET/HAUL NO: 10
LOCATION: Dixon Entrance AREA: Two Peaks
START: Lat. 54 ° 23.3' Long. 131 ° 16.5'
END: Lat. 54 ° 24.2' Long. 131 ° 13.5'
GEAR: MWT CD No. 7 START TIME (1443): 1526 DURATION: 43 min.
BOTTOM DEPTH m: Start: 119 End: 110 Est. Av. Depth: 114
NET DEPTH RANGE m: 46.7-64.0 Est. Av. Depth: 55 mi.
DIRECTION OF SET °true: 56°T SPEED kn: 2.8 DISTANCE TRAVELED: 2
SET ON: Spotty layer 55-73 m WATER CONDITION: Lt chop TIDE: Flood to 1325
WIND DIRECTION: 135°T WIND SPEED: 25 KTS. RECORDER: W. Barner
TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____
REMARKS: Warp 183 m (100 fm) 11m (6.5 fm) net opening

SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Jan 28 Yr Mo Day SET/HAUL NO: 11
LOCATION: Dixon Entrance AREA: Two Peaks
START: Lat. 54° 24.5' Long. 131 ° 15.0'
END: Lat. 54° 23.7' Long. 131 ° 18.5'
GEAR: MWT CD No. 7 START TIME (16:20) : 16:50 DURATION: 30 min.
BOTTOM DEPTH m: Start: 146 End: 141 Est. Av. Depth: 143.0
NET DEPTH RANGE m: Footrope 61.3-70.4 m Est. Av. Depth: 65.0
DIRECTION OF SET °true: 230°T SPEED kn: 4.5 DISTANCE TRAVELED: 2.25 mi
SET ON: Small schools 64-82 m WATER CONDITION: Heavy swell TIDE: Ebb
WIND DIRECTION: 150°T WIND SPEED: 20-25 RECORDER: W. Barner
TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____
REMARKS: Net opening 9 m (5 fms) Warp 183 m (100 fms)
SOUNDER SUMMARY: Doors crossed, poor opening.

VESSEL: ARCTIC HARVESTER DATE: 79 Jan 29 Yr Mo Day SET/HAUL NO: 12
LOCATION: Dixon Entrance AREA: Two Peaks
START: Lat. 54 ° 24.5' Long. 131 ° 06 '
END: Lat. 54 ° 26.6' Long. 131 ° 05.2
GEAR: MWT CD No. 7 START TIME (0902): 0932 DURATION: 30 min.
BOTTOM DEPTH m: Start: 113 End: 130 Est. Av. Depth: 121.0
NET DEPTH RANGE m: 110-126 m Est. Av. Depth: 118.0
DIRECTION OF SET °true: 20°T SPEED kn: 4 DISTANCE TRAVELED: 2 mi.
SET ON: Light dots WATER CONDITION: Heavy chop TIDE: Flood to 1400 hrs.
WIND DIRECTION: 135°T WIND SPEED: 20 KTS" RECORDER: W. Barner
TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____
REMARKS: Warp 274 m (150 fms) Net opening 14 m (7.5 fms)
SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Jan 29 SET/HAUL NO: 13
LOCATION: Dixon Entrance AREA: East side Celestial Reefs
START: Lat. 54° 30.3' Long. 131° 17.7'
END: Lat. 54° 29.5' Long. 131° 16.8'
GEAR: MWT CD No. 7 START TIME (12:35) : 13:05 DURATION: 30 min.
BOTTOM DEPTH m: Start: 110 End: 128.0 Est. Av. Depth: 119.0
NET DEPTH RANGE m: 106-124 Est. Av. Depth: 115.0 mi.
DIRECTION OF SET °true: 150°T SPEED kn: 2 DISTANCE TRAVELED: 1
SET ON: Scratches WATER CONDITION: Lt. chop TIDE: Flood to 1400
WIND DIRECTION: 135°T WIND SPEED: 20 ^{swell} RPS. RECORDER: W. Barner
TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____
REMARKS: 8 Net opening 15 m (8 fms) Warp 274 m (150 fms)
SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Jan 29 SET/HAUL NO: 14
LOCATION: Dixon Entrance AREA: West of Zayas Island
START: Lat. 54° 35 ' Long. 131° 23'
END: Lat. 54° 38 ' Long. 131° 27'
GEAR: MWT CD No. 7 START TIME (1420) : 15:15 DURATION: 55 min
BOTTOM DEPTH m: Start: 132 End: 156 Est. Av. Depth: 143.0
NET DEPTH RANGE m: 135-143 Est. Av. Depth: 138.0
DIRECTION OF SET °true: 235°T SPEED kn: 4.1 DISTANCE TRAVELED: 3.75 mi.
SET ON: Small dots 9-37 m off bottom WATER CONDITION: Heavy swell TIDE: Flood 1400
WIND DIRECTION: 135°T WIND SPEED: RECORDER: B. Baker
TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____
REMARKS: Net opening 14 m (7.5 fm) Warp 320 m (175 fms)
SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Jan 29 Yr Mo Day SET/HAUL NO: 15
LOCATION: Dixon Entrance AREA: West of Zayas Island
START: Lat. 54° 38.5' Long. 131° 28.2'
END: Lat. 54° 36.5' Long. 131° 27.9'
GEAR: MWT CD No. 7 START TIME (1613) : 16:43 DURATION: 30 min.
BOTTOM DEPTH m: Start: 165 End: 183 Est. Av. Depth: 173
NET DEPTH RANGE m: 12.8 m - 146 Est. Av. Depth: 137
DIRECTION OF SET °true: 155°T SPEED kn: 4 DISTANCE TRAVELED: 2 mi.
SET ON: Midwater Small schools
91.4-109.7 WATER CONDITION: Lt. chop TIDE: Ebb
WIND DIRECTION: 140°T WIND SPEED: 5 KTS RECODER: W. Barner
TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____
REMARKS: Warp 274 m.

SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Jan 29 Yr Mo Day SET/HAUL NO: 16
LOCATION: Dixon Entrance AREA: West of Zayas Island
START: Lat. 54° 37.6' Long. 131° 22.2'
END: Lat. 54° 36.0' Long. 131° 20.7'
GEAR: MWT CD No. 7 START TIME (1801) : 1825 DURATION: 24 min.
BOTTOM DEPTH m: Start: 141 End: 141 Est. Av. Depth: 141
NET DEPTH RANGE m: 138-131 m Est. Av. Depth: 138 m
DIRECTION OF SET °true: 80° SPEED kn: 3.0 DISTANCE TRAVELED: 1.2 mi.
SET ON: Near bottom - single WATER CONDITION: Lt. chop TIDE: Ebb to 20:40
WIND DIRECTION: 140° fish echo WIND SPEED: 5 KTS RECODER: _____
TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____
REMARKS: Net opening 16.5 m (9 fms) Warp 320 m (175 fms)

SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Jan 30 SET/HAUL NO: 17
LOCATION: Dixon Entrance AREA: South West Devil Rock
START: Lat. 54° 37.7' Long. 131 ° 36.4'
END: Lat. 54° 39.2' Long. 131 ° 37.2'
GEAR: MWT CD No. 7 START TIME (1245) : 13:18 DURATION: 33 min.
BOTTOM DEPTH m: Start: 161.0 End: 164.5 Est. Av. Depth: 164.0
NET DEPTH RANGE m: 113 - 155 m Est. Av. Depth: 134.0 mi.
DIRECTION OF SET °true: 340° SPEED kn: 2.8 DISTANCE TRAVELED: 1.4
SET ON: Midwater layer 109-128m WATER CONDITION: Ripple TIDE: Flood to 1455
WIND DIRECTION: 335°T WIND SPEED: 5 KTS RECORDER: W. Barner
TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____
REMARKS: Warp 365.8 (200 fms) Net opening 14 m (7.5 fms)
SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Jan 30 SET/HAUL NO: 18
LOCATION: Dixon Entrance AREA: Cape Chacon
START: Lat. 54° 39.2' Long. 131 ° 59 '
END: Lat. 54° 37.5' Long. 132 ° 00 '
GEAR: MWT CD No. 7 START TIME (1530): 16:50 DURATION: 35 min.
BOTTOM DEPTH m: Start: 187 End: 201 Est. Av. Depth: 164.0
NET DEPTH RANGE m: 156 - 159 m Est. Av. Depth: 157.0 mi.
DIRECTION OF SET °true: 198°T SPEED kn: 3.9 DISTANCE TRAVELED: 2.25
SET ON: Small fish schools WATER CONDITION: Ripple TIDE: Ebb
WIND DIRECTION: 335°T ^{9 m off bottom} WIND SPEED: 5 KTS. RECORDER: W. Barner
TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____
REMARKS: Net opening - 11 m (6 fms) Warp 411 m (225 fms)
SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Jan 30 SET/HAUL NO: 19
LOCATION: Dixon Entrance AREA: Cape Chacon
START: Lat. 54° 36.3' Long. 132 ° 00 '
END: Lat. 54 ° 36.2 Long. 132 ° 08 '
GEAR: MWT CD No. 7 START TIME (1806) : 1815 DURATION: 9 min.
BOTTOM DEPTH m: Start: 247 End: 258 Est. Av. Depth: 252
NET DEPTH RANGE m: 210 - 221 Est. Av. Depth: 215 mi.
DIRECTION OF SET °true: 335°T SPEED kn: 3.3 DISTANCE TRAVELED: .5
SET ON: Bottom fuzz WATER CONDITION: Ripple TIDE: Ebb till 2115
WIND DIRECTION: 335°T WIND SPEED: 5 KTS. RECORDER: W. Barner
TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____
REMARKS: Warp - 300 fm (550 m) No net sounder picture.
SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Jan 31 SET/HAUL NO: 20
LOCATION: Dixon Entrance AREA: Cape Chacon
START: Lat. 54° 36.3' Long. 132 ° 06.3'
END: Lat. 54° 37.7' Long. 132 ° 04.8'
GEAR: MWT CD No. 7 START TIME (2012) : 2042 DURATION: 30 min.
BOTTOM DEPTH m: Start: 156 End: 152 Est. Av. Depth: 151.0
NET DEPTH RANGE m: 148.2-153.8 Est. Av. Depth: 149.0 mi.
DIRECTION OF SET °true: 60°T SPEED kn: 3.4 DISTANCE TRAVELED: 1.7
SET ON: Midwater Schools 134 m WATER CONDITION: Ripple TIDE: Ebb till 2115
WIND DIRECTION: 335°T WIND SPEED: 5 KTS. RECORDER: W. Barner
TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____
REMARKS: Net opening 14.6 m (fm) Warp 365.8 m (200 fm)
SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Jan 31 SET/HAUL NO: 21
 LOCATION: Dixon Entrance AREA: Cape Chacon
 START: Lat. 54 ° 37.7 ' Long. 132 ° 09.4 '
 END: Lat. 54 ° 38.0 ' Long. 132 ° 07.0 '
 GEAR: MWT CD No. 7 START TIME (08:04) : 08:34 DURATION: 30 min.
 BOTTOM DEPTH m: Start: 150.0 End: 135 Est. Av. Depth: 146
 NET DEPTH RANGE m: 126 - 148 Est. Av. Depth: 140
 DIRECTION OF SET °true: 50° SPEED kn: 3.0 DISTANCE TRAVELED: 1.5 mi.
 SET ON: WATER CONDITION: Ripple TIDE: Low 9:25
 WIND DIRECTION: WIND SPEED: Nil RECORDER: W. Barner
 TTM: TDM: BT: OTHER OCEANOGRAPHIC DATA:
 REMARKS: Net opening 14.6 m (8 fms) Warp 320.1 (175 fms)
 SOUNDER SUMMARY:

VESSEL:ARCTIC HARVESTER DATE: 79 Feb 1 SET/HAUL NO: 22
 LOCATION: Dixon Entrance AREA: Rose Spit
 START: Lat. 54° 14.7' Long. 131° 37.7'
 END: Lat. 54° 15.2' Long. 131° 34.2'
 GEAR: MWTCD No. 7 START TIME (08:55:09:45) DURATION: 50^{min.}
 BOTTOM DEPTH m: Start: 81 End: 55 Est. Av. Depth: 64.0
 NET DEPTH RANGE m: 37 - 77 Est. Av. Depth: 54.0
 DIRECTION OF SET °true: 65°T SPEED kn: 2.4 DISTANCE TRAVELED: 2.2 mi.
 SET ON: WATER CONDITION: TIDE:
 WIND DIRECTION: WIND SPEED: nil RECORDER: W. Barner
 TTM: TDM: BT: OTHER OCEANOGRAPHIC DATA:
 REMARKS: Net opening 11 m. Warp 182 m lots of bird life; fish sound as net approaches.
 SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Feb 1 Yr Mo Day SET/HAUL NO: 23
LOCATION: Dixon Entrance AREA: Two Peaks
START: Lat. 54 ° 18.4' Long. 131 ° 29.1'
END: Lat. 54 ° 19' Long. 131 ° 27.1'
GEAR: MWT CD No. 7 START TIME (11:00) : 11:30 DURATION: 30 min.
BOTTOM DEPTH m: Start: 146 End: 144 Est. Av. Depth: 145
NET DEPTH RANGE m: 14 - 14 Est. Av. Depth: 144
DIRECTION OF SET °true: 070°T SPEED kn: 2.4 DISTANCE TRAVELED: 1.2 mi.
SET ON: Small dots WATER CONDITION: Ripple TIDE:
WIND DIRECTION: 090°T WIND SPEED: 5 KTS. RECORDER: R. Baker
TTM: TDM: BT: OTHER OCEANOGRAPHIC DATA:
REMARKS: Net opening 12.8 (7 fms) Warp 320 m (175 fms)
SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Feb 1 Yr Mo Day SET/HAUL NO: 24
LOCATION: Dixon Entrance AREA: S.E. Edge
START: Lat. 54 17.7 ' Long. 131 ° 21.3'
END: Lat. 54° 17.8 ' Long. 131 ° 19.3 '
GEAR: MWT CD No. 7 START TIME (1223): 1253 DURATION: 20 min.
BOTTOM DEPTH m: Start: 29 End: 33 Est. Av. Depth: 31
NET DEPTH RANGE m: Footrope on bottom Est. Av. Depth: 31
DIRECTION OF SET °true: 60°T SPEED kn: 3.6 DISTANCE TRAVELED: 1.2 mi.
SET ON: Bottom school 10-20 fms WATER CONDITION: Ripple TIDE: 1620 - flood
WIND DIRECTION: WIND SPEED: RECORDER:
TTM: TDM: BT: OTHER OCEANOGRAPHIC DATA:
REMARKS: 46-91 in Warp; may have been on bottom entire tow.
SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Feb 1 Yr Mo Day SET/HAUL NO: 25
LOCATION: Dixon Entrance AREA: Two Peaks
START: Lat. 54 ° 24.2' Long. 131 ° 18.2'
END: Lat. 54 ° 25.2' Long. 131 ° 16.7'
GEAR: MWT CD No. 7 START TIME (14:00) : 14:25 DURATION: 25 min.
BOTTOM DEPTH m: Start: 199.0 End: 252 Est. Av. Depth: 226
NET DEPTH RANGE m: 196 - 250 m Est. Av. Depth: 223 mi.
DIRECTION OF SET °true: 60°T SPEED kn: DISTANCE TRAVELED:
SET ON: Small dots on bottom WATER CONDITION: Rippled TIDE: High 0 16:20 hrs.
WIND DIRECTION: 60°T WIND SPEED: 5 KTS RECORDER: W. Barner
TTM: TDM: BT: OTHER OCEANOGRAPHIC DATA:
REMARKS: 503 m of Warp
SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Feb 1 Yr Mo Day SET/HAUL NO: 26
LOCATION: Dixon Entrance AREA: North of Two Peaks
START: Lat. 54° 24.8' Long. 131 ° 18.3'
END: Lat. 54° 23.2' Long. 131 ° 20.2'
GEAR: MWT CD No. 7 START TIME (15:10) : 15:40 DURATION: 30 min.
BOTTOM DEPTH m: Start: 181 End: 161 Est. Av. Depth: 171
NET DEPTH RANGE m: 64-73 Est. Av. Depth: 69 mi.
DIRECTION OF SET °true: 220°T SPEED kn: 4.0 DISTANCE TRAVELED: 2
SET ON: Scattered layer 64-82 m WATER CONDITION: Rippled TIDE:
WIND DIRECTION: 090°T WIND SPEED: 10 KTS RECORDER: R. Baker
TTM: TDM: BT: OTHER OCEANOGRAPHIC DATA:
REMARKS: Net opening 13 m (7 fms) Warp 229 m (125 fms)
SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Feb 1 Yr Mo Day SET/HAUL NO: 27
LOCATION: Dixon Entrance AREA: North of Bend
START: Lat. 54° 22.2' Long. 131° 23.5'
END: Lat. 54° 21.2' Long. 131° 25.4'
GEAR: MWT CD No. 7 START TIME (17:30) : 18:00 DURATION: 30 min.
BOTTOM DEPTH m: Start: 201 End: 201 Est. Av. Depth: 201
NET DEPTH RANGE m: 199-200 Est. Av. Depth: 200
DIRECTION OF SET °true: 240°T SPEED kn: 3.0 DISTANCE TRAVELED: 1.5 mi.
SET ON: Light haze 1-9 m off WATER CONDITION: Rippled TIDE:
WIND DIRECTION: 090°T bottom WIND SPEED: 10 KTS. RECORDER: R. Baker
TTM: TDM: BT: OTHER OCEANOGRAPHIC DATA:
REMARKS: Warp 503 m Net opening 10 m.

SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Feb 2 Yr Mo Day SET/HAUL NO: 28
LOCATION: Dixon Entrance AREA: Butterworth Rks.
START: Lat. 54° 13.3' Long. 131° 01.8'
END: Lat. 54° 15.8' Long. 131° 01.8'
GEAR: MWT CD No. 7 START TIME (1144): 12:30 DURATION: 31 min.
BOTTOM DEPTH m: Start: 104 End: 99 Est. Av. Depth: 102
NET DEPTH RANGE m: 97 - 102 Est. Av. Depth: 101
DIRECTION OF SET °true: 5°T SPEED kn: 4.8 DISTANCE TRAVELED: 2.5 mi.
SET ON: Small school 11-13 off WATER CONDITION: Lt chop & swell TIDE: 11:20 low slack
WIND DIRECTION: 200°T bottom WIND SPEED: 15 KTS RECORDER: B. Baker
TTM: TDM: BT: OTHER OCEANOGRAPHIC DATA:
REMARKS: Warp 274 m.

SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Feb 2 SET/HAUL NO: 29
LOCATION: Dixon Entrance AREA: Butterworth Edge
START: Lat. 54 ° 10.4' Long. 131 ° 03.5'
END: Lat. 54 ° 09 ' Long. 131 ° 02.6'
GEAR: MWT CD No. 7 START TIME (13:30) : 14:00 DURATION: 30 min.
BOTTOM DEPTH m: Start: 110 End: 102 Est. Av. Depth: 106
NET DEPTH RANGE m: 99-108 Est. Av. Depth: 103
DIRECTION OF SET °true: 190°T SPEED kn: 3.4 DISTANCE TRAVELED: 1.7 mi.
SET ON: Scattered dots 5-18 WATER CONDITION: mod. chop TIDE: Flood to 17:35
WIND DIRECTION: 270°T WIND SPEED: 20 KTS RECORDER: R. Baker
TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____
REMARKS: Net opening 13 m Warp 274 m.
SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Feb 3 SET/HAUL NO: 30
LOCATION: Dixon Entrance AREA: Butterworth Edge
START: Lat. 54 ° 10.9 ' Long. 131 ° 05.2 '
END: Lat. 54 ° 11.8 ' Long. 131 ° 02.7 '
GEAR: H.I.E. Bottom Trawl START TIME (0755): 08:25 DURATION: 30 min.
BOTTOM DEPTH m: Start: 102 End: 106 Est. Av. Depth: 104
NET DEPTH RANGE m: Bottom Est. Av. Depth: 104
DIRECTION OF SET °true: 350°T SPEED kn: 4.0 DISTANCE TRAVELED: 2 mi.
SET ON: Bottom WATER CONDITION: Ripple TIDE: 12:30-Low ebb
WIND DIRECTION: 160°T WIND SPEED: 5 KTS RECORDER: R. Baker
TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____
REMARKS: Warp 320 m
SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Feb 3 Yr Mo Day SET/HAUL NO: 31
LOCATION: Dixon Entrance AREA: Butterworth Rks.
START: Lat. 54 ° 14.5' Long. 131° 02.4'
END: Lat. 54 ° 16.8' Long. 131 ° 02.7'
GEAR: H.L.E. Bottom Trawl START TIME (0930) : 1000 DURATION: 30 min.
BOTTOM DEPTH m: Start: 123 End: 123 Est. Av. Depth: 123
NET DEPTH RANGE m: Bottom Est. Av. Depth: 123
DIRECTION OF SET °true: 0°T SPEED kn: 4.8 DISTANCE TRAVELED: 2.4 mi.
SET ON: Bottom WATER CONDITION: Ripple TIDE: Ebb to 12:30
WIND DIRECTION: 60°T WIND SPEED: 5 KTS RECORDER: R. Baker
TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____
REMARKS: 366 m Warp

SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Feb 3 Yr Mo Day SET/HAUL NO: 32
LOCATION: Dixon Entrance AREA: Butterworth Rks.
START: Lat. 54 ° 19.2' Long. 131 ° 06.2'
END: Lat. 54 ° 20.9' Long. 131 ° 06.5'
GEAR: H.L.E. Bottom Trawl START TIME (11:10) : 11:40 DURATION: 30 min.
BOTTOM DEPTH m: Start: 89 End: 91 Est. Av. Depth: 90
NET DEPTH RANGE m: Bottom Est. Av. Depth: 90
DIRECTION OF SET °true: 340°T SPEED kn: 3.6 DISTANCE TRAVELED: 1.8 mi.
SET ON: Bottom WATER CONDITION: Rippled TIDE: Ebb to 12:30
WIND DIRECTION: 200°T WIND SPEED: 5 KTS RECORDER: R. Baker
TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____
REMARKS: 274 Warp

SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Feb 3 SET/HAUL NO: 33
LOCATION: Dixon Entrance AREA: Two Peaks
START: Lat. 54° 24' Long. 131° 11.2'
END: Lat. 54° 23.9' Long. 131° 15.5'
GEAR: H.I.E. Bottom Trawl START TIME (13:10) : 1340 DURATION: 30 min.
BOTTOM DEPTH m: Start: 88.0 End: 95 Est. Av. Depth: 91
NET DEPTH RANGE m: Bottom Est. Av. Depth: 91
DIRECTION OF SET °true: 240°T SPEED kn: 4.8 DISTANCE TRAVELED: 2.4 mi.
SET ON: Bottom WATER CONDITION: Ripple TIDE: Flood
WIND DIRECTION: 180°T WIND SPEED: 10 KTS RECORDER: R. Baker
TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____
REMARKS: 274 m Warp

SONDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Feb 3 SET/HAUL NO: 34
LOCATION: Dixon Entrance AREA: Bend
START: Lat. 54° 21.2' Long. 131° 17.1'
END: Lat. 54° 19' Long. 131° 17.2'
GEAR: H.I.E. Bottom Trawl START TIME (14:40): 15:10 DURATION: 30 min.
BOTTOM DEPTH m: Start: 110 End: 101 Est. Av. Depth: 105
NET DEPTH RANGE m: Bottom Est. Av. Depth: 105
DIRECTION OF SET °true: 195°T SPEED kn: 4.4 DISTANCE TRAVELED: 2.2 mi.
SET ON: Bottom WATER CONDITION: Lt. chop TIDE: Flood
WIND DIRECTION: 180°T WIND SPEED: 10 KTS RECORDER: R. Baker
TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____
REMARKS: Warp 320 m.

SONDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Feb 4 SET/HAUL NO: 35
LOCATION: Dixon Entrance AREA: McIntyre Bay
START: Lat. 54 ° 08.2' Long. 131 ° 49.8'
END: Lat. 54 ° 09.2' Long. 131 ° 47.9'
GEAR: H.L.E. Bottom Trawl START TIME (07:53 : 08:22) DURATION: 27 min.
BOTTOM DEPTH m: Start: 31 End: 40 Est. Av. Depth: 37
NET DEPTH RANGE m: Bottom Est. Av. Depth: 37 mi.
DIRECTION OF SET °true: 350° & 70° SPEED kn: 3.8 DISTANCE TRAVELED: 1.7
SET ON Bottom WATER CONDITION: Lt. chop TIDE: Ebb to 1305 hrs.
WIND DIRECTION: 160°T WIND SPEED: 20 KTS RECORDER: R. Baker
TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____
REMARKS: Warp 137 m
SOUNDER SUMMARY: _____

VESSEL: ARCTIC HARVESTER DATE: 79 Feb 4 SET/HAUL NO: 36
LOCATION: Dixon Entrance AREA: McIntyre Bay
START: Lat. 54 ° 11.5' Long. 131 ° 50.7'
END: Lat. 54 ° 11.9' Long. 131 ° 47.5'
GEAR: H.L.E. Bottom Trawl START TIME (09:10) : 0940 DURATION: 30 min.
BOTTOM DEPTH m: Start: 93 End: 93 Est. Av. Depth: 93
NET DEPTH RANGE m: 93 Bottom Est. Av. Depth: 93 mi.
DIRECTION OF SET °true: 80°T SPEED kn: 4.4 DISTANCE TRAVELED: 2.2
SET ON: Nothing WATER CONDITION: Lt. chop TIDE: Ebb to 1305
WIND DIRECTION: 160°T WIND SPEED: 15 KTS RECORDER: B. Baker
TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____
REMARKS: Warp 274 m
SOUNDER SUMMARY: _____

Yr Mo Day
VESSEL: ARCTIC HARVESTER DATE: 79 Feb 4 SET/HAUL NO: 37
LOCATION: Dixon Entrance AREA: McIntyre Bay
START: Lat. 54° 13.0 Long. 131° 49.7' min.
END: Lat. 54° 12.9 Long. 131° 53.0'
GEAR: H.L.E. Bottom Trawl START TIME (10.15) : 10.45 DURATION: 30
BOTTOM DEPTH m: Start: 132 End: 132 Est. Av. Depth: 132
NET DEPTH RANGE m: Bottom Est. Av. Depth: 132 mi.
DIRECTION OF SET °true: 260°T SPEED kn: 4.0 DISTANCE TRAVELED: 2
SET ON: Bottom WATER CONDITION: Lt. chop TIDE: Ebb to 13:05
WIND DIRECTION: 160°T WIND SPEED: 10-15 knots RECORDER: R. Baker
TTM: TDM: BT: OTHER OCEANOGRAPHIC DATA:
REMARKS: 366 m Warp
SOUNDER SUMMARY:

Yr Mo Day
VESSEL: ARCTIC HARVESTER DATE: 79 Feb 4 SET/HAUL NO: 38
LOCATION: Dixon Entrance AREA: McIntyre Bay
START: Lat. 54° 15.0' Long. 131° 58.6' min.
END: Lat. 54° 15.3' Long. 131° 55.7'
GEAR: H.L.E. Bottom Trawl START TIME (11.34) : 1204 DURATION: 30
BOTTOM DEPTH m: Start: 185 End: 185 Est. Av. Depth: 185
NET DEPTH RANGE m: Bottom Est. Av. Depth: 185 mi.
DIRECTION OF SET °true: 27 SPEED kn: 3.6 DISTANCE TRAVELED: 1.8
SET ON: Bottom WATER CONDITION: Lt. chop TIDE: Ebb to 13:05
WIND DIRECTION: 160°T WIND SPEED: 15 KTS. RECORDER: R. Baker
TTM: TDM: BT: OTHER OCEANOGRAPHIC DATA:
REMARKS: 549 in Warp
SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Feb 4 Yr Mo Day SET/HAUL NO: 39
LOCATION: Dixon Entrance AREA: McIntyre Bay
START: Lat. 54° 17.3' Long. 132 ° 10.1'
END: Lat. 54° 17.8' Long. 132 ° 13.2'
GEAR: H.L.E. Bottom Trawl START TIME (13:20) : 13:50 DURATION: 30 min.
BOTTOM DEPTH m: Start: 218 End: 221 Est. Av. Depth: 219
NET DEPTH RANGE m: Bottom Est. Av. Depth: 219 mi.
DIRECTION OF SET °true: 260°T SPEED kn: 3.4 DISTANCE TRAVELED: 1.7
SET ON: Bottom WATER CONDITION: Mod. chop TIDE: Slack (low)
WIND DIRECTION: 160°T WIND SPEED: 20 KTS RECORDER: R. Baker
TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____
REMARKS: Warp - 640 m

SONDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Feb 4 Yr Mo Day SET/HAUL NO: 40
LOCATION: Dixon Entrance AREA: Off Cape Eldensaw
START: Lat. 54° 11.5 Long. 132 ° 21.4'
END: Lat. 54 ° 11.3' Long. 132 ° 23.0'
GEAR: H.L.E. Bottom Trawl START TIME (1557) : 1627 DURATION: 30 min.
BOTTOM DEPTH m: Start: 113 End: 106 Est. Av. Depth: 110
NET DEPTH RANGE m: Bottom Est. Av. Depth: 110 mi.
DIRECTION OF SET °true: 255°T SPEED kn: 2.6 DISTANCE TRAVELED: 1.3
SET ON: Nothing WATER CONDITION: lt. chop TIDE: Flood to 195
WIND DIRECTION: 160°T WIND SPEED: 30 KTS RECORDER: W. Barner
TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____
REMARKS: 320 m Warp
SONDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Feb 5 SET/HAUL NO: 41
LOCATION: Dixon Entrance AREA: Rose Spit Bay
START: Lat. 54° 15.0' Long. 131° 40.0'
END: Lat. 54° 16.2' Long. 131° 38.1'
GEAR: H.L.°. Bottom Trawl START TIME (1104) : 1134 DURATION: 30 min.
BOTTOM DEPTH m: Start: 119 End: 124 Est. Av. Depth: 121
NET DEPTH RANGE m: Bottom Est. Av. Depth: 121
DIRECTION OF SET °true: 70°T SPEED kn: 3.0 DISTANCE TRAVELED: 1.5 mi.
SET ON: Nothing WATER CONDITION: Lt. chop TIDE: 1445 low Ebb
WIND DIRECTION: 180°T WIND SPEED: 10KTS RECORDER: W. Barner
TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____
REMARKS: Warp 320 - Nothing - possible short cabled.
SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Feb 5 SET/HAUL NO: 42
LOCATION: Dixon Entrance AREA: Two Peaks
START: Lat. 54° 18.2' Long. 131° 31.7'
END: Lat. 54° 17.5' Long. 131° 29.2'
GEAR: H.L.E. Bottom Trawl START TIME (1220): 1243 DURATION: 23 min.
BOTTOM DEPTH m: Start: 144 End: 146 Est. Av. Depth: 146
NET DEPTH RANGE m: On bottom Est. Av. Depth: 146
DIRECTION OF SET °true: 80°T SPEED kn: 3.2 DISTANCE TRAVELED: 1.6 mi.
SET ON: Nothing WATER CONDITION: Lt. chop TIDE: 1445 Low Ebb
WIND DIRECTION: 180°T WIND SPEED: 20 KTS. RECORDER: W. Barner
TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____
REMARKS: Warp 457 Net opening 7-9 m.
SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Feb 5 SET/HAUL NO: 43
LOCATION: Dixon Entrance AREA: Two Peaks
START: Lat. 54° 21.8' Long. 131° 22.2'
END: Lat. 54° 22.8' Long. 131° 19.8'
GEAR: H.L.E. Bottom Trawl START TIME (1340) : 1410 DURATION: 30 min.
BOTTOM DEPTH m: Start: 183 End: 181 Est. Av. Depth: 182
NET DEPTH RANGE m: Bottom Est. Av. Depth: 182
DIRECTION OF SET °true: 070°T SPEED kn: 3.4 DISTANCE TRAVELED: 1.7 mi.
SET ON: Bottom WATER CONDITION: Mod. Swell TIDE: Ebb to 14:45
WIND DIRECTION: 180°T WIND SPEED: 15 KTS RECORDER: R. Baker
TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____
REMARKS: Warp 549 m
SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Feb 5 SET/HAUL NO: 44
LOCATION: Dixon Entrance AREA: Two Peaks
START: Lat. 54° 23' Long. 131° 16.5'
END: Lat. 54° 21.3' Long. 131° 18.4'
GEAR: H.L.E. Bottom Trawl START TIME (15:10) : 15:40 DURATION: 30 min.
BOTTOM DEPTH m: Start: 135 End: 139 Est. Av. Depth: 137
NET DEPTH RANGE m: Bottom Est. Av. Depth: 137
DIRECTION OF SET °true: 200°T SPEED kn: 4.0 DISTANCE TRAVELED: 2.0 mi.
SET ON: Bottom WATER CONDITION: Mod. Swell TIDE: Flood to 21:10
WIND DIRECTION: 180°T WIND SPEED: 20 KTS. RECORDER: R. Baker
TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____
REMARKS: 412 m Warp
SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Feb 5 SET/HAUL NO: 45
LOCATION: Dixon Entrance AREA: Two Peaks
START: Lat. 54 ° 21' Long. 131 ° 13.2'
END: Lat. 54 ° 21.1' Long. 131 ° 09.3'
GEAR: H.L.E. Bottom Trawl START TIME (16:20): 16:50 DURATION: 30 min.
BOTTOM DEPTH m: Start: 73 End: 66 Est. Av. Depth: 69
NET DEPTH RANGE m: Bottom Est. Av. Depth: 69 mi.
DIRECTION OF SET °true: 105°T SPEED kn: 4.0 DISTANCE TRAVELED: 2.0
SET ON: Bottom WATER CONDITION: High chop TIDE: Flood to 21:10
WIND DIRECTION: 200°T WIND SPEED: 15 KNTS RECORDER: R. Baker
TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____
REMARKS: Warp 229 m

SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Feb 5 SET/HAUL NO: 46
LOCATION: Dixon Entrance AREA: Triple Island
START: Lat. 54 ° 20.0 ' Long. 131 ° 01.8 '
END: Lat. 54 ° 21.2 ' Long. 131 ° 03.3 '
GEAR: MWT CD No. 7 START TIME (08:08): 08:38 DURATION: 30 min.
BOTTOM DEPTH m: Start: 70 End: 88 Est. Av. Depth: 79
NET DEPTH RANGE m: 64-86 Est. Av. Depth: 75 mi.
DIRECTION OF SET °true: 340°T SPEED kn: 3.0 DISTANCE TRAVELED: 1.5
SET ON: Midwater schools WATER CONDITION: H. Chop TIDE: High 8:50 Flood swell
WIND DIRECTION: 180°T WIND SPEED: 30+ kts RECORDER: W. Barner
TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____
REMARKS: 182 m Warp Net opening 13-15 m

SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Feb 6 Yr Mo Day SET/HAUL NO: 47
LOCATION: Dixon Entrance AREA: Deep off Two Peaks
START: Lat. 54 ° 25.4' Long. 131 ° 23.7'
END: Lat. 54 ° 25.4' Long. 131 ° 27.4' min.
GEAR: MWT CD No. 7 START TIME (10.45) : 11.15 DURATION: 30
BOTTOM DEPTH m: Start: 274 End: 289 Est. Av. Depth: 282
NET DEPTH RANGE m: 241-260 Est. Av. Depth: 251 mi.
DIRECTION OF SET °true: 270°T SPEED kn: 4.4 DISTANCE TRAVELED: 2.2
SET ON: Deep - nothing WATER CONDITION: Lt. chop & TIDE: 16:00 low ebb
WIND DIRECTION: 180°T WIND SPEED: 20 KTS. SWELL RECORDER: W. Barner
TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____
REMARKS: Net opening 13 fms
SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Feb 6 Yr Mo Day SET/HAUL NO: 48
LOCATION: Dixon Entrance AREA: Deep off Celestial Reef
START: Lat. 54 ° 29.6' Long. 131 ° 38.2'
END: Lat. 54 ° 31.8' Long. 131 ° 41.2'
GEAR: MWT CD No. 7 START TIME (1305): 14.05 DURATION: 60 min.
BOTTOM DEPTH m: Start: 305 End: 340 Est. Av. Depth: 323
NET DEPTH RANGE m: 269-331 Est. Av. Depth: 300 mi.
DIRECTION OF SET °true: 300°T SPEED kn: 1.8 DISTANCE TRAVELED: 1.8
SET ON: Nothing - Mid. WATER CONDITION: Lt. chop TIDE: 16.05 low ebb
WIND DIRECTION: 250°T WIND SPEED: 5KTS RECORDER: W. Barner
TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____
REMARKS: Warp 686-732 m
SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Feb 6 SET/HAUL NO: 49
LOCATION: Dixon Entrance AREA: Two Peaks
START: Lat. 54° 25.1' Long. 131 ° 12.6'
END: Lat. 54° 24.3' Long. 131 ° 15.2'
GEAR: MWT CD No. 7 START TIME (1830) :1900 DURATION: 30 min.
BOTTOM DEPTH m: Start: 128 End: 128 Est. Av. Depth: 128
NET DEPTH RANGE m: 124-124 Est. Av. Depth: 124 mi.
DIRECTION OF SET °true: 250°T SPEED kn: 4.0 DISTANCE TRAVELED: 2.0
SET ON: Almost nothing WATER CONDITION: Lt. chop TIDE: 22:20 High flood
WIND DIRECTION: 230°T WIND SPEED: 10 KTS RECORDER: W. Barner
TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____
REMARKS: Net opening 13-15 m. Warp 274 m
SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Feb 6 SET/HAUL NO: 50
LOCATION: Dixon Entrance AREA: Two Peaks
START: Lat. 54° 23.8 ' Long. 131 ° 16.4'
END: Lat. 54° 22.5 ' Long. 131 ° 16.0'
GEAR: MWT CD No. 7 START TIME (1940): 20:25 DURATION: 45 min.
BOTTOM DEPTH m: Start: 117 End: 113 Est. Av. Depth: 115
NET DEPTH RANGE m: 99-112 Est. Av. Depth: 106 mi.
DIRECTION OF SET °true: 250°T SPEED kn: 1.6 DISTANCE TRAVELED: 1.2
SET ON: Light bottom layer WATER CONDITION: Lt. chop TIDE: 22:20 high flood
WIND DIRECTION: 230°T WIND SPEED: 10 KTS RECORDER: W. Barner
TTM: _____ TDM: _____ BT: _____ OTHER OCEANOGRAPHIC DATA: _____
REMARKS: Warp 229 m Net opening 13 m
SOUNDER SUMMARY:

VESSEL: ARCTIC HARVESTER DATE: 79 Feb 7 Yr Mo Day SET/HAUL NO: 51
LOCATION: Hecate Strait AREA: Off Porcher Island
START: Lat. 53 57.3' Long. 130 ° 51.4'
END: Lat. 53 ° 57.3' Long. 130 ° 54.3'
GEAR: MWT CD No. 7 START TIME (12:50) : 13:20 DURATION: 30 min.
BOTTOM DEPTH m: Start: 68 End: 68 Est. Av. Depth: 68
NET DEPTH RANGE m: 59 Est. Av. Depth: 59 mi.
DIRECTION OF SET °true: 270°T SPEED kn: 4.0 DISTANCE TRAVELED: 2.0
SET ON: Nothing WATER CONDITION: Lt. chop TIDE: 1650 low tide
WIND DIRECTION: WIND SPEED: 10 KTS RECORDER: W. Barner
TTM: TDM: BT: OTHER OCEANOGRAPHIC DATA:
REMARKS: Warp 137 m

SOUNDER SUMMARY:

VESSEL: DATE: Yr Mo Day SET/HAUL NO:
LOCATION: AREA:
START: Lat. ° ; ' Long. ° ; '
END: Lat. ° ; ' Long. ° ; '
GEAR: START TIME (): DURATION: min.
BOTTOM DEPTH m: Start: End: Est. Av. Depth:
NET DEPTH RANGE m: Est. Av. Depth: mi.
DIRECTION OF SET °true: SPEED kn: DISTANCE TRAVELED:
SET ON: WATER CONDITION: TIDE:
WIND DIRECTION: WIND SPEED: RECORDER:
TTM: TDM: BT: OTHER OCEANOGRAPHIC DATA:
REMARKS:

SOUNDER SUMMARY:

Appendix Table 2. Species composition of ARCTIC HARVESTER cruise 79-1, January 22-February 9, 1979.

Midwater or Bottom Net	Midwater	Midwater	Midwater	Midwater
Tow Number	1	2	3	4
Total catch (kg)	6.4	841.9	577.1	501.6
Duration min.	32	32	30	30
	No.	Wt.	No.	Wt.
	No.	Wt.	No.	Wt.

Roundfish

Blackcod	-	-	-	-	1	Tr ^a	-	-
Blackfin sculpin	-	-	-	-	-	-	-	-
Blackmouth eelpout	-	-	-	-	-	-	-	-
Chinook salmon	2	2.9	5	7.0	3	4.9	-	-
Eulachons	-	-	-	-	5	Tr ^a	36	1.9
Fanged viperfish	-	-	-	-	-	-	-	-
Lanternfish	-	-	-	-	-	-	-	-
Lingcod	-	-	-	-	-	-	-	-
Northern smoothtongue	-	-	-	-	-	-	-	-
Pacific cod	-	-	-	-	7	19.8	19	58.0
Pacific herring	-	-	2	Tr ^a	-	4.7	-	3.6
Poacher	-	-	-	-	21	0.5	-	-
Shad	-	-	-	-	-	-	-	-
Shiner perch	-	-	-	-	-	-	1	Tr ^a
Small disk snailfish	-	-	-	-	-	-	-	-
Smooth lump sucker	-	-	-	-	-	-	-	-
Walleye pollock	16	3.5	4759	832.8	2233	380.4	713	119.4

Rockfish

<u>Sebastolobus alascanus</u>	-	-	-	-	-	-	-	-
<u>Sebastes aleutianus</u>	-	-	-	-	-	-	-	-
<u>Sebastes alutus</u>	-	-	-	-	-	-	-	-
<u>Sebastes babcocki</u>	-	-	-	-	-	-	-	-

Tr^a = Trace less than 0.5 kilograms.

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Midwater	Midwater	Midwater	Midwater
Tow Number	1	2	3	4
Total catch (kg)	6.4	841.9	577.1	501.6
Duration min.	32	32	30	30
	No. Wt.	No. Wt.	No. Wt.	No. Wt.

Rockfish

<u>Sebastes brevispinis</u>	- -	- -	3 3.8	1 1.4
<u>Sebastes elongatus</u>	- -	- -	- -	- -
<u>Sebastes entomelas</u>	- -	- -	- -	- -
<u>Sebastes flavidus</u>	- -	- -	- -	- -
<u>Sebastes maliger</u>	- -	- -	- -	- -
<u>Sebastes paucispinis</u>	- -	- -	- -	- -
<u>Sebastes pinniger</u>	- -	- -	1 1.6	- -
<u>Sebastes zacentrus</u>	- -	- -	1 Tr ^a	- -

Flatfish

Arrowtooth flounder	- -	1 1.8	147 19.0	17 11.0
Dover sole	- -	- -	- -	- -
English sole	- -	- -	220 42.9	16 9.8
Flathead sole	- -	- -	- -	- -
Halibut	- -	- -	- -	- -
Petrale sole	- -	- -	- -	- -
Rex sole	- -	- -	3 1.0	- -
Rock sole	- -	- -	- -	- -
Sand sole	- -	- -	- -	- -

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Midwater		Midwater		Midwater		Midwater	
Tow Number	1		2		3		4	
Total catch (kg)	6.4		841.9		577.1		501.6	
Duration min.	32		32		30		30	
	No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.
<u>Selachii</u>								
Dogfish	-	-	-	-	-	-	1	3.2
Ratfish	-	-	-	-	80	78.5	188	184.0
Skates	-	-	-	-	1	20.0	3	107.0
<u>Agnatha</u>								
Pacific lamprey	-	-	-	-	-	-	-	-
<u>Invertebrates</u>								
Squid	-	-	2	0.3	-	-	6	2.3
Shrimp	-	-	-	-	-	Tr	-	-

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Midwater	Midwater	Midwater	Midwater				
Tow Number	5	6	7	8				
Total catch (kg)	1331.6	2662.0	1.3	5.7				
Duration min.	30	88	30	30				
	No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.
<u>Roundfish</u>								
Blackcod	-	-	-	-	-	-	-	-
Blackfin sculpin	-	-	-	-	-	-	-	-
Blackmouth eelpout	-	-	-	-	-	-	-	-
Chinook salmon	1	2.0	4	9.5	-	-	-	-
Eulachons	-	-	-	-	-	-	-	-
Fanged viperfish	-	-	-	-	-	-	-	-
Lanternfish	-	-	-	-	-	-	-	-
Lingcod	-	-	-	-	-	-	-	-
Northern smoothtongue	-	-	-	-	-	-	-	-
Pacific cod	-	-	1	1.5	-	-	-	-
Pacific herring	-	-	-	Tr ^a	-	-	-	-
Poacher	-	-	-	-	-	-	-	-
Shad	-	-	-	-	-	-	-	-
Shiner perch	-	-	-	-	-	-	-	-
Small disk snailfish	-	-	-	-	-	-	-	-
Smooth lump sucker	-	-	-	-	-	-	-	-
Walleye pollock	797	1218.8	874	2254.7	4	1.3	4	2.8

Rockfish

<u>Sebastolobus alascanus</u>	-	-	-	-
<u>Sebastes aleutianus</u>	-	-	-	-
<u>Sebastes alutus</u>	-	-	-	-
<u>Sebastes babcocki</u>	-	-	-	-
<u>Sebastes brevispinis</u>	-	-	-	-

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Midwater	Midwater	Midwater	Midwater
Tow Number	5	6	7	8
Total catch (kg)	1131.6	2662.0	1.3	5.7
Duration min.	30	88	30	30
	No.	Wt.	No.	Wt.
	No.	Wt.	No.	Wt.
	No.	Wt.	No.	Wt.

Rockfish

<u>Sebastes elongatus</u>	-	-	-	-	-	-	-	
<u>Sebastes entomelas</u>	-	-	-	-	-	-	-	
<u>Sebastes flavidus</u>	75	110.8	182	280.9	-	-	2	2.9
<u>Sebastes maliger</u>	-	-	-	-	-	-	-	
<u>Sebastes paucispinis</u>	-	-	2	9.0	-	-	-	
<u>Sebastes pinniger</u>	-	-	-	-	-	-	-	
<u>Sebastes zacentrus</u>	-	-	-	-	-	-	-	

Flatfish

Arrowtooth flounder	-	-	43	60.1	-	-	-
Dover sole	-	-	-	-	-	-	-
English sole	-	-	10	6.0	-	-	-
Flathead sole	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-
Petrale sole	-	-	-	-	-	-	-
Rex sole	-	-	-	Tr ^a	-	-	-
Rock sole	-	-	-	-	-	-	-
Sand sole	-	-	-	-	-	-	-

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Midwater	Midwater	Midwater	Midwater				
Tow Number	5	6	7	8				
Total catch (kg)	1131.6	2662.0	1.3	5.7				
Duration min.	30	88	30	30				
	No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.
<u>Selachii</u>								
Dogfish	-	-	-	-	-	-	-	-
Ratfish	-	-	40	39.0	-	-	-	-
Skates	-	-	1	1.3	-	-	-	-
<u>Agnatha</u>								
Pacific lamprey	-	-	-	-	-	-	-	-
<u>Invertebrates</u>								
Squid	-	-	-	-	-	-	-	-
Shrimp	-	-	-	-	-	-	-	-

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Midwater	Midwater	Midwater	Midwater
Tow Number	9	10	11	12
Total catch	269.4	1685.2	406.9	4.9
Duration	35	43	30	30
	No.	Wt.	No.	Wt.
	No.	Wt.	No.	Wt.
	No.	Wt.	No.	Wt.
<u>Roundfish</u>				
Blackcod	-	-	-	-
Blackfin sculpin	-	-	-	-
Blackmouth eelpout	-	-	-	-
Chinook salmon	-	-	1.6	24.0
Eulachons	-	-	-	-
Fanged viperfish	-	-	-	-
Lanternfish	-	-	-	-
Lingcod	-	-	-	-
Northern smoothtongue	-	-	-	-
Pacific cod	-	-	-	-
Pacific herring	-	-	-	-
Poacher	-	-	-	-
Shad	-	-	-	-
Shiner perch	-	-	-	-
Small disk snailfish	-	-	-	-
Smooth lump sucker	-	-	-	-
Walleye pollock	139	244.4	989	1564.2
			266	399.1
			28	4.9

Rockfish

<u>Sebastolobus alascanus</u>	-	-	-	-
<u>Sebastes aleutianus</u>	-	-	-	-
<u>Sebastes alutus</u>	-	-	-	-
<u>Sebastes babcocki</u>	-	-	-	-
<u>Sebastes brevispinis</u>	-	-	-	-

Appendix Table 2. (cont'd)

Midwater or Bottom Net	Midwater	Midwater	Midwater	Midwater
Tow Number	9	10	11	12
Total catch (kg)	269.4	1685.2	406.9	4.9
Duration	35	43	30	30

Rockfish

<u>Sebastes elongatus</u>	-	-	-	-	-	-	-
<u>Sebastes entomelas</u>	-	-	-	-	-	-	-
<u>Sebastes flavidus</u>	13	25.0	57	91.0	5	7.8	-
<u>Sebastes maliger</u>	-	-	-	-	-	-	-
<u>Sebastes paucispinis</u>	-	-	1	6.0	-	-	-
<u>Sebastes pinniger</u>	-	-	-	-	-	-	-
<u>Sebastes zacentrus</u>	-	-	-	-	-	-	-

Flatfish

Arrowtooth flounder	-	-	-	-	-	-	-
Dover sole	-	-	-	-	-	-	-
English sole	-	-	-	-	-	-	-
Flathead sole	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-
Petrale sole	-	-	-	-	-	-	-
Rex sole	-	-	-	-	-	-	-
Sand sole	-	-	-	-	-	-	-

Selachii

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Midwater	Midwater	Midwater	Midwater
Tow Number	9	10	11	12
Total catch (kg)	269.4	1685.2	406.9	4.9
Duration	35	43	30	30
	No.	Wt.	No.	Wt.
	No.	Wt.	No.	Wt.
	No.	Wt.	No.	Wt.

Agnatha

Pacific lamprey	-	-	-	-	-	-	-
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Invertebrates

Squid	-	-	-	-	-	-	1 Tr
Shrimp	-	-	-	-	-	-	-

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Midwater	Midwater	Midwater	Midwater
Tow Number	13	14	15	16
Total catch (kg)	998.7	49.0	192.0	209.8
Duration	30	55	30	24
	No.	Wt.	No.	Wt.
	No.	Wt.	No.	Wt.
	No.	Wt.	No.	Wt.
Roundfish				
Blackcod	-	-	-	-
Blackfin sculpin	-	-	-	-
Blackmouth eelpout	-	-	-	-
Chinook salmon	-	-	-	2 6.3
Eulachons	-	-	Tr	-
Fanged viperfish	-	-	-	-
Lanternfish	-	-	-	-
Lingcod	-	-	-	-
Northern smoothtongue	-	-	-	-
Pacific cod	-	-	-	2 5.3
Pacific herring	-	-	-	1 Tr ^a
Poacher	-	-	-	-
Shad	-	-	-	-
Shiner perch	-	-	-	-
Small disk snailfish	-	-	-	-
Smooth lump sucker	-	-	-	1 Tr ^a
Walleye pollock	560	834.6	11	15.0
			133	192.0
			108	100.9

Rockfish

<u>Sebastolobus alascanus</u>	-	-	-	-	-	-
<u>Sebastes aleutianus</u>	-	-	-	-	-	-
<u>Sebastes alutus</u>	-	-	-	-	-	-
<u>Sebastes babcocki</u>	-	-	-	-	-	1 4.6

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Midwater	Midwater	Midwater	Midwater
Tow Number	13	14	15	16
Total catch (kg)	998.7	49.0	192.0	209.8
Duration	30	55	30	24
	No.	Wt.	No.	Wt.
	No.	Wt.	No.	Wt.

Rockfish

<u>Sebastes brevispinis</u>	-	-	-	-	-	-	-
<u>Sebastes elongatus</u>	-	-	-	-	-	-	-
<u>Sebastes entomelas</u>	-	-	-	-	-	-	-
<u>Sebastes flavidus</u>	105	164.1	18	34.0	-	-	13 30.0
<u>Sebastes maliger</u>	-	-	-	-	-	-	-
<u>Sebastes paucispinis</u>	-	-	-	-	-	-	-
<u>Sebastes pinniger</u>	-	-	-	-	-	-	-
<u>Sebastes zacentrus</u>	-	-	-	-	-	-	-

Flatfish

Arrowtooth flounder	-	-	-	-	-	-	-
Dover sole	-	-	-	-	-	-	-
English sole	-	-	-	-	-	-	-
Flathead sole	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-
Petrale sole	-	-	-	-	-	-	-
Rex sole	-	-	-	-	-	-	1 Tr ^a
Sand sole	-	-	-	-	-	-	-

Selachii

Dogfish	-	-	-	-	-	-	-
Ratfish	-	-	-	-	-	-	58 60.0
Skates	-	-	-	-	-	-	-

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Midwater	Midwater	Midwater	Midwater
Tow Number	13	14	15	16
Total catch (kg)	998.7	49.0	192.0	209.8
Duration	30	55	30	24
	No.	Wt.	No.	Wt.
	No.	Wt.	No.	Wt.
<u>Agnatha</u>				
Pacific lamprey	-	-	-	-
<u>Invertebrates</u>				
Squid	-	-	-	-
Shrimp	-	-	-	-
			1	0.6

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Midwater	Midwater	Midwater	Midwater
Tow Number	17	18	19	20
Total catch (kg)	232.7	41.7	3.5	934.2
Duration	33	35	9	30
	No.	Wt.	No.	Wt.
	No.	Wt.	No.	Wt.
	No.	Wt.	No.	Wt.

Roundfish

Blackcod	-	-	-	-	-	-	-
Blackfin sculpin	-	-	-	-	-	-	1 Tr
Blackmouth eelpout	-	-	-	-	1	Tr ^a	-
Chinook salmon	-	-	-	-	-	-	-
Eulachons	-	-	-	Tr	32	1.0	-
Fanged viperfish	-	-	-	-	-	-	-
Lanternfish	-	-	-	-	3	Tr	-
Lingcod	-	-	-	-	-	-	-
Northern smoothtongue	-	-	-	-	-	-	-
Pacific cod	-	-	-	-	-	-	-
Pacific herring	-	-	-	-	-	-	-
Poacher	-	-	-	-	-	-	-
Shad	-	-	-	-	-	-	-
Shiner perch	-	-	-	-	-	-	-
Small disk snailfish	-	-	-	-	1	Tr ^b	-
Smooth lump sucker	-	-	-	-	-	-	-
Walleye pollock	124	193.0	1	2.1	1	1.5	-

Rockfish

<u>Sebastolobus alascanus</u>	-	-	-	-	-	-	-
<u>Sebastes aleutianus</u>	-	-	-	-	-	-	-
<u>Sebastes alutus</u>	-	-	-	-	-	-	-
<u>Sebastes babcocki</u>	-	-	-	-	-	-	-

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Midwater 17	Midwater 18	Midwater 19	Midwater 20
Tow Number	232.7	41.7	3.5	934.2
Total Catch	33	35	9	30
Duration				
	No. Wt.	No. Wt.	No. Wt.	No. Wt.

Rockfish

<u>Sebastes brevispinis</u>	- -	- -	- -	2 3.0
<u>Sebastes elongatus</u>	- -	- -	- -	- -
<u>Sebastes entomelas</u>	- -	- -	- -	- -
<u>Sebastes flavidus</u>	- 33.5	23 38.1	- -	545 931.2
<u>Sebastes maliger</u>	- -	- -	- -	- -
<u>Sebastes paucispinis</u>	1 6.2	- -	- -	- -
<u>Sebastes pinniger</u>	- -	- -	- -	- -
<u>Sebastes zacentrus</u>	- -	- -	- -	- -

Flatfish

Arrowtooth flounder	- -	- -	- -	- -
Dover sole	- -	- -	- -	- -
English sole	- -	- -	- -	- -
Flathead sole	- -	- -	- -	- -
Halibut	- -	- -	- -	- -
Petrale sole	- -	- -	- -	- -
Rex sole	- -	- -	- -	- -
Rock sole	- -	- -	- -	- -
Sand sole	- -	- -	- -	- -

Selachii

Dogfish	- -	- -	- -	- -
Ratfish	- -	- -	- -	- -
Skates	- -	- -	- -	- -

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Midwater	Midwater	Midwater	Midwater
Tow Number	17	18	19	20
Total catch (kg)	232.7	41.7	3.5	934.2
Duration	33	35	9	30
	No.	Wt.	No.	Wt.
	No.	Wt.	No.	Wt.

Agnatha

Pacific Lamprey	1	Tr	-	-	-	-	-	-
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Invertebrates

Squid	-	-	3	1.5	1	Tr*	1	Tr*
Shrimp	-	-	-	-	-	1.0	-	-

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Midwater	Midwater	Midwater	Midwater
Tow Number	21	22	23	24
Total catch (kg)	11.3	1160.7	52.2	1.5
Duration	30	50	30	20
	No.	Wt.	No.	Wt.
	No.	Wt.	No.	Wt.

Roundfish

Blackcod	-	-	-	-	-	-	-	
Blackfin sculpin	-	-	-	-	-	-	-	
Blackmouth eelpout	-	-	-	-	-	-	-	
Chinook salmon	-	-	-	-	-	-	-	
Eulachons	-	-	-	-	-	-	-	
Fanged viperfish	-	-	-	-	-	-	-	
Lanternfish	-	-	-	-	-	-	-	
Lingcod	-	-	-	-	-	-	-	
Northern smoothtongue	-	Tr	-	-	-	-	-	
Pacific cod	-	-	-	-	-	-	-	
Pacific herring	-	-	6044	1075.9	-	-	-	
Poacher	-	-	-	-	-	-	-	
Shad	-	-	-	-	-	-	-	
Shiner perch	-	-	-	-	-	-	-	
Small disk snailfish	-	-	-	-	-	-	-	
Smooth lump sucker	-	-	-	-	-	-	-	
Walleye pollock	-	-	194	83.2	16	27.4	1	1.5

Rockfish

<u>Sebastolobus alascanus</u>	-	-	-	-	-	-	-
<u>Sebastes aleutianus</u>	-	-	-	-	-	-	-
<u>Sebastes alutus</u>	-	-	-	-	-	-	-
<u>Sebastes babcocki</u>	-	-	-	-	-	-	-
<u>Sebastes brevispinis</u>	-	-	-	-	-	-	-

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Midwater	Midwater	Midwater	Midwater
Tow Number	17	18	19	20
Total catch (kg)	232.7	41.7	3.5	934.2
Duration	33	35	9	30
	No.	Wt.	No.	Wt.
	No.	Wt.	No.	Wt.

Agnatha

Pacific Lamprey	1	Tr	-	-	-	-	-	-
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Invertebrates

Squid	-	-	3	1.5	1	Tr*	1	Tr*
Shrimp	-	-	-	-	-	1.0	-	-

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Midwater	Midwater	Midwater	Midwater
Tow Number	21	22	23	24
Total catch (kg)	11.3	1160.7	52.2	1.5
Duration	30	50	30	20
	No.	Wt.	No.	Wt.
<u>Roundfish</u>				
Blackcod	-	-	-	-
Blackfin sculpin	-	-	-	-
Blackmouth eelpout	-	-	-	-
Chinook salmon	-	-	-	-
Eulachons	-	-	-	-
Fanged viperfish	-	-	-	-
Lanternfish	-	-	-	-
Lingcod	-	-	-	-
Northern smoothtongue	-	Tr	-	-
Pacific cod	-	-	-	-
Pacific herring	-	-	6044	1075.9
Poacher	-	-	-	-
Shad	-	-	-	-
Shiner perch	-	-	-	-
Small disk snailfish	-	-	-	-
Smooth lump sucker	-	-	-	-
Walleye pollock	-	-	194	83.2
			16	27.4
			1	1.5

Rockfish

<u>Sebastolobus alascanus</u>	-	-	-	-	-	-
<u>Sebastes aleutianus</u>	-	-	-	-	-	-
<u>Sebastes alutus</u>	-	-	-	-	-	-
<u>Sebastes babcocki</u>	-	-	-	-	-	-
<u>Sebastes brevispinis</u>	-	-	-	-	-	-

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Midwater	Midwater	Midwater	Midwater
Tow Number	21	22	23	24
Total catch (kg)	11.3	1160.7	52.2	1.5
Duration	30	50	30	20
	No.	Wt.	No.	Wt.
	No.	Wt.	No.	Wt.
	No.	Wt.	No.	Wt.

Rockfish

<u>Sebastes elongatus</u>	-	-	-	-	-	-	-
<u>Sebastes entomelas</u>	-	-	-	-	-	-	-
<u>Sebastes flavidus</u>	8	11.3	1	1.6	11	22.0	-
<u>Sebastes maliger</u>	-	-	-	-	-	-	-
<u>Sebastes paucispinis</u>	-	-	-	-	-	-	-
<u>Sebastes pinniger</u>	-	-	-	-	-	-	-
<u>Sebastes zacentrus</u>	-	-	-	-	-	-	-

Flatfish

Arrowtooth flounder	-	-	-	-	1	1.4	-
Dover sole	-	-	-	-	-	-	-
English sole	-	-	-	-	-	-	-
Flathead sole	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-
Petrale sole	-	-	-	-	-	-	-
Rex sole	-	-	-	-	-	-	-
Rock sole	-	-	-	-	-	-	-
Sand sole	-	-	-	-	-	-	-

Selachii

Dogfish	-	-	-	-	-	-	-
Ratfish	-	-	-	-	-	-	-
Skates	-	-	-	-	1	1.4	-

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Midwater	Midwater	Midwater	Midwater
Tow Number	21	22	23	24
Total catch (kg)	11.3	1160.7	52.2	1.5
Duration	30	50	30	20
	No.	Wt.	No.	Wt.
	No.	Wt.	No.	Wt.

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Midwater	Midwater	Midwater	Midwater				
Tow Number	25	26	27	28				
Total catch (kg)	283.3	598.8	134.2	1513.8				
Duration	25	30	30	31				
	No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.
Roundfish								
Blackcod	-	-	-	-	-	-	-	-
Blackfin sculpin	-	-	-	-	-	-	-	-
Blackmouth eelpout	-	-	-	-	-	-	-	-
Chinook salmon	-	-	6	6.6	3	3.3	22	19.4
Eulachons	-	30.5	-	-	-	5.8	-	-
Fanged viperfish	-	-	-	-	-	-	-	-
Lanternfish	-	-	-	-	-	-	-	-
Lingcod	-	-	-	-	-	-	-	-
Northern smoothtongue	-	-	-	-	-	-	-	-
Pacific cod	2	7.5	-	-	-	-	4	10.8
Pacific herring	-	-	-	-	-	-	-	1.3
Poacher	-	-	-	-	-	-	-	-
Shad	-	-	-	-	-	-	-	-
Shiner perch	-	-	-	-	-	-	-	-
Small disk snailfish	-	-	-	-	-	-	-	-
Smooth lump sucker	-	-	-	-	-	-	-	-
Walleye pollock	70	44.0	389	579.0	35	54.5	7869	1479.3

Rockfish

<u>Sebastolobus alascanus</u>	-	-	-	-	-	-	-	-
<u>Sebastes aleutianus</u>	-	-	-	-	-	-	-	-
<u>Sebastes alutus</u>	-	-	-	-	25	25.2	-	-
<u>Sebastes babcocki</u>	21	36.5	-	-	10	24.3	-	-
<u>Sebastes brevispinis</u>	1	1.5	-	-	-	-	-	-

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Midwater		Midwater		Midwater		Midwater	
Tow Number	25		26		27		28	
Total catch (kg)	283.3		598.8		134.2		1513.8	
Duration	25		30		30		31	
	No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.
<u>Rockfish</u>								
<u>Sebastes entomelas</u>	1	-						
<u>Sebastes flavidus</u>	2	3.2	5	9.2	1	1.4		
<u>Sebastes maliger</u>	-	-	-	-	-	-		
<u>Sebastes paucispinis</u>	-	-	1	3.8	-	-		
<u>Sebastes pinniger</u>	-	-	-	-	-	-		
<u>Sebastes zacentrus</u>	-	-	-	-	-	-	1	1
							1	1
<u>Flatfish</u>								
Arrowtooth flounder	126	119.9	-	-	25	16.8	-	-
Dover sole	-	-	-	-	-	-	-	-
English sole	17	13.2	-	-	-	-	-	-
Flathead sole	-	-	-	-	-	-	-	-
Halibut	-	-	-	-	-	-	-	-
Petrale sole	-	-	-	-	-	-	-	-
Rex sole	8	2.5	-	-	3	0.5	-	-
Rock sole	-	-	-	-	-	-	-	-
Sand sole	-	-	-	-	-	-	-	-
<u>Selachii</u>								
Dogfish	5	5.2	-	-	5	2.4	-	-
Ratfish	18	15.3	-	-	-	-	1	1.0
Skates	-	-	-	-	-	-	-	-

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Midwater		Midwater		Midwater		Midwater	
Tow Number	25		26		27		28	
Total catch (kg)	283.3		598.8		134.2		1513.8	
Duration	25		30		30		31	
	No.	Wt.		No.	Wt.		No.	Wt.
<u>Agnatha</u>								
Pacific lamprey	-	-	-	-	-	-	-	-
<u>Invertebrates</u>								
Squid	2	2.0	-	-	-	-	3	2.0
Shrimp	-	2.0	-	-	-	Tr	-	-

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Midwater		Bottom		Bottom		Bottom	
Tow Number	29		30		31		32	
Total catch (kg)	1843.7		3636.0		13636.4		1590.0	
Duration	30		30		30		30	
	No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.
<u>Roundfish</u>								
Blackcod	-	-	-	-	2	1.0	-	-
Blackfin sculpin	-	-	-	-	-	-	-	-
Blackmouth eelpout	-	-	-	-	-	-	-	-
Chinook salmon	10	7.9	1	2.8	2	11.1	-	-
Eulachons	-	-	-	-	-	-	-	-
Fanged viperfish	-	-	-	-	-	-	-	-
Lanternfish	-	-	-	-	-	-	-	-
Lingcod	-	-	-	-	-	-	-	-
Northern smoothtongue	-	-	-	-	-	-	-	-
Pacific cod	7	16.5	7	17.3	23	57.8	7	30.0
Pacific herring	517	15.5	-	-	-	-	-	-
Poacher	-	-	-	-	-	-	-	-
Shad	-	-	-	-	-	-	-	-
Shiner perch	-	-	-	-	-	-	-	-
Small disk snailfish	-	-	-	-	-	-	-	-
Smooth lump sucker	-	-	-	-	-	-	-	-
Walleye pollock	9275	1743.8	6	9.8	20	25.8	9	13.2

Rockfish

<u>Sebastolobus alascanus</u>	-	-	-	-	-	-	-	-
<u>Sebastes aleutianus</u>	-	-	-	-	-	-	-	-
<u>Sebastes alutus</u>	-	-	-	-	-	-	-	-
<u>Sebastes babcocki</u>	-	-	-	-	-	-	-	-
<u>Sebastes brevispinis</u>	-	-	-	-	-	-	-	-

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Midwater	Bottom	Bottom	Bottom
Tow Number	29	30	31	32
Total catch (kg)	1843.7	3636.0	13636.4	1590.0
Duration	30	30	30	30
	No.	Wt.	No.	Wt.
	No.	Wt.	No.	Wt.
	No.	Wt.	No.	Wt.

Rockfish

<u>Sebastes elongatus</u>	-	-	8	2.5	-	-	-	-
<u>Sebastes entomelas</u>	-	-	-	-	-	-	-	-
<u>Sebastes flavidus</u>	-	-	-	-	-	-	21	30.0
<u>Sebastes maliger</u>	-	-	-	-	1	1.2	30	4.5
<u>Sebastes paucispinis</u>	-	-	-	-	-	-	-	-
<u>Sebastes pinniger</u>	-	-	9	13.0	1	1.2	-	-
<u>Sebastes zacentrus</u>	-	-	-	-	-	-	-	-

Flatfish

Arrowtooth flounder	-	-	-	192.0	-	139.7	313	140.9
Dover sole	-	-	30	4.6	6	1.8	-	-
English sole	-	-	-	443.0	-	264.0	-	148.4
Flathead sole	-	-	-	9.0	4	1.0	-	-
Halibut	-	-	-	76.0	3	14.6	3	25.4
Petrale sole	-	-	1	Tr	-	-	-	-
Rex sole	-	-	-	66.0	-	7.1	11	3.0
Rock sole	-	-	-	-	1	Tr	-	-
Sand sole	-	-	-	-	-	-	-	-

Selachii

Dogfish	-	-	8	4.0	11	27.2	1	2.2
Ratfish	-	-	3612	2796.0	12503	12502.9	1142	1142.4
Skates	3	60.0	-	-	24	580.0	3	50.0

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Midwater	Bottom	Bottom	Bottom
Tow Number	29	30	31	32
Total catch (kg)	1843.7	3636.0	13636.4	1590.0
Duration	30	30	30	30
	No.	Wt.	No.	Wt.
	No.	Wt.	No.	Wt.

Agnatha

Pacific lamprey	-	-	-	-	-	-	-
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Invertebrates

Squid	-	-	-	-	-	-	-
Shrimp	-	-	-	-	-	-	-

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Bottom	Bottom	Bottom	Bottom
Tow Number	33	34	35	36
Total catch (kg)	1768.7	1145.2	43.9	94.6
Duration	30	30	27	30
	No.	Wt.	No.	Wt.
	No.	Wt.	No.	Wt.
	No.	Wt.	No.	Wt.

Roundfish

Blackcod	2	1.0	-	-	-	-	-
Blackfin sculpin	-	-	-	-	-	-	-
Blackmouth eelpout	-	-	-	-	-	-	-
Chinook salmon	1	47.5	5	9.6	-	-	-
Eulachons	-	-	-	-	-	-	-
Fanged viperfish	-	-	-	-	-	-	-
Lanternfish	-	-	-	-	-	-	-
Lingcod	1	0.6	1	10.0	-	-	-
Northern smoothtongue	-	-	-	-	-	-	-
Pacific cod	-	16.0	19	22.7	1	3.8	6
Pacific herring	-	-	-	-	-	-	-
Poacher	-	-	-	-	-	-	-
Shad	-	-	-	-	-	-	1
Shiner perch	-	-	-	-	-	-	1
Small disk snailfish	-	-	-	-	-	-	Tr ^a
Smooth lump sucker	-	-	-	-	-	-	-
Walleye pollock	24	17.8	71	116.9	-	-	-

Rockfish

<u>Sebastolobus alascanus</u>	-	-	-	-	-	-	-
<u>Sebastes aleutianus</u>	-	-	-	-	-	-	-
<u>Sebastes alutus</u>	-	-	-	-	-	-	-
<u>Sebastes babcocki</u>	-	-	-	-	-	-	-
<u>Sebastes brevispinis</u>	3	2.6	-	-	-	-	-

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Bottom	Bottom	Bottom	Bottom
Tow Number	33	34	35	36
Total catch (kg)	1768.7	1145.2	43.9	94.6
Duration	30	30	27	30
	No.	Wt.	No.	Wt.
	No.	Wt.	No.	Wt.
<u>Rockfish</u>				
<u>Sebastes elongatus</u>	-	-	-	-
<u>Sebastes entomelas</u>	1	1.2	-	-
<u>Sebastes flavidus</u>	1235	1296.5	390	607.5
<u>Sebastes maliger</u>	2	2.0	-	-
<u>Sebastes paucispinis</u>	1	3.0	1	4.1
<u>Sebastes pinniger</u>	-	-	1	1.6
<u>Sebastes zacentrus</u>	-	-	-	-
<u>Flatfish</u>				
Arrowtooth flounder	-	60.4	-	281.2
Dover sole	-	-	-	-
English sole	270	156.6	-	30.8
Flathead sole	-	-	-	-
Halibut	5	7.2	8	28.8
Petrale sole	-	-	-	-
Rex sole	12	1.0	14	1.0
Rock sole	1	0.5	-	-
Sand sole	-	-	-	-
<u>Selachii</u>				
Dogfish	-	-	-	-
Ratfish	155	154.8	44	31.0
Skates	-	-	-	-

* Fish released

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Bottom	Bottom	Bottom	Bottom
Tow Number	33	34	35	36
Total catch (kg)	1768.7	1145.2	43.9	94.6
Duration	30	30	27	30
	No.	Wt.	No.	Wt.
	No.	Wt.	No.	Wt.

Agnatha

Pacific lamprey	-	-	-	-	-	-	-	-
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Invertebrates

Squid	-	-	-	-	-	-	-	-
Shrimp	-	-	-	-	-	-	-	-

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Bottom	Bottom	Bottom	Bottom
Tow Number	37	38	39	40
Total catch (kg)	369.9	286.3	271.6	133.9
Duration	30	30	30	30

No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.
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Roundfish

Blackcod	-	-	-	-	1	0.5	-	-
Blackfin sculpin	-	-	-	-	-	-	-	-
Blackmouth eelpout	-	-	-	-	-	-	-	-
Chinook salmon	-	-	-	-	-	-	-	-
Eulachons	-	-	-	-	-	-	-	-
Fanged viperfish	-	-	-	-	-	-	-	-
Lanternfish	-	-	-	-	-	-	-	-
Lingcod	2	27.4	-	-	-	-	-	-
Northern smoothtongue	-	-	-	-	-	-	-	-
Pacific cod	6	15.8	11	14.4	-	-	-	-
Pacific herring	-	-	-	-	-	-	-	-
Poacher	-	-	-	-	-	-	-	-
Shad	-	-	-	-	-	-	-	-
Shiner perch	1	Tr	-	-	-	-	-	-
Small disk snailfish	-	-	-	-	-	-	-	-
Smooth lump sucker	-	-	-	-	-	-	-	-
Walleye pollock	1	0.2	-	-	1	0.6	-	-

Rockfish

<u>Sebastolobus alascanus</u>	-	-	3	2.0	23	8.5	-	-
<u>Sebastes aleutianus</u>	-	-	1	1.0	-	-	-	-
<u>Sebastes alutus</u>	-	-	9	7.8	15	15.4	-	-
<u>Sebastes babcocki</u>	-	-	50	111.2	55	108.5	-	-

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Bottom 37	Bottom 38	Bottom 39	Bottom 40
Tow Number				
Total catch (kg)	369.9	286.3	271.6	133.9
Duration	30	30	30	30
	No. Wt.	No. Wt.	No. Wt.	No. Wt.
<u>Rockfish</u>				
<u>Sebastes brevispinis</u>	1 1.0	3 3.6	2 5.2	- -
<u>Sebastes elongatus</u>	- -	- -	- -	- -
<u>Sebastes antomelas</u>	- -	- -	- -	- -
<u>Sebastes flavidus</u>	170 210.4	3 5.5	- -	- -
<u>Sebastes maliger</u>	- -	- -	- -	- -
<u>Sebastes paucispinis</u>	- -	7 27.4	1 2.7	- -
<u>Sebastes pinniger</u>	4 5.5	- -	- -	- -
<u>Sebastes zacentrus</u>	- -	- -	- -	- -
<u>Flatfish</u>				
Arrowtooth flounder	22 10.2	36 19.0	29 35.8	14 19.0
Dover sole	- -	- -	- -	- -
English sole	7 2.2	- -	- -	17 2.5
Flathead sole	6 2.0	- -	- -	- -
Halibut	- -	- -	- -	- -
Petrale sole	- -	- -	- -	- -
Rex sole	56 15.0	15 3.5	12 2.0	3 1.0
Rock sole	- -	- -	- -	3 2.0
Sand sole	- -	- -	- -	- -
<u>Selachii</u>				
Dogfish	1 1.4	7 5.5	57 52.0	- -
Ratfish	- 78.8	- 84.4	40 39.4	45 51.4
Skates	- -	- -	- -	3 57.0

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Bottom	Bottom	Bottom	Bottom
Tow Number	37	38	39	40
Total catch (kg)	369.9	286.3	271.6	133.9
Duration	30	30	30	30
	No.	Wt.	No.	Wt.
	No.	Wt.	No.	Wt.
	No.	Wt.	No.	Wt.

Agnatha

Pacific Lamprey	-	-	-	-	-	-	-
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Invertebrates

Squid	-	-	1	1.0	1	1.0	1	1.0
Shrimp	-	-	-	-	-	-	-	-

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Bottom 41	Bottom 42	Bottom 43	Bottom 44
Tow Number				
Total catch (kg)	0	277.3	549.8	303.9
Duration	30	23	30	30
	No.	Wt.	No.	Wt.
	No.	Wt.	No.	Wt.

Roundfish

Blackcod	-	-	-	-	-	-	-	
Blackfin sculpin	-	-	-	-	-	-	-	
Blackmouth eelpout	-	-	-	-	-	-	-	
Chinook salmon	-	-	-	-	1	2.2	-	
Eulachons	-	-	-	-	-	-	-	
Fanged viperfish	-	-	-	-	-	-	-	
Lanternfish	-	-	-	-	-	-	-	
Lingcod	-	-	-	-	-	-	-	
Northern smoothtongue	-	-	-	-	-	-	-	
Pacific cod	-	-	15	16.8	2	5.3	13	12.8
Pacific herring	-	-	-	-	-	-	-	
Poacher	-	-	-	-	-	-	-	
Shad	-	-	-	-	-	-	-	
Shiner perch	-	-	-	-	-	-	-	
Small disk snailfish	-	-	-	-	-	-	-	
Smooth lump sucker	-	-	-	-	-	-	-	
Walleye pollock	-	-	7	3.0	3	3.6	40	23.2

Rockfish

<u>Sebastolobus alascanus</u>	-	-	-	-	8	7.8	-	-
<u>Sebastes aleutianus</u>	-	-	-	-	-	-	-	-
<u>Sebastes alutus</u>	-	-	-	-	5	5.0	-	-
<u>Sebastes babcocki</u>	-	-	-	-	37	66.7	-	-
<u>Sebastes brevispinis</u>	-	-	2	1.6	-	-	-	-

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Bottom		Bottom		Bottom		Bottom	
Tow Number	41		42		43		44	
Total catch (kg)	0		277.3		549.8		303.9	
Duration	30		23		30		30	
	No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.
<u>Rockfish</u>								
<u>Sebastes elongatus</u>	-	-	-	-	-	-	-	-
<u>Sebastes entomelas</u>	-	-	-	-	-	-	-	-
<u>Sebastes flavidus</u>	-	-	3	3.5	-	-	48	76.0
<u>Sebastes maliger</u>	-	-	-	-	-	-	-	-
<u>Sebastes paucispinis</u>	-	-	2	7.0	2	6.2	1	4.2
<u>Sebastes pinniger</u>	-	-	-	-	-	-	1	1.0
<u>Sebastes zacentrus</u>	-	-	-	-	-	-	-	-
<u>Flatfish</u>								
Arrowtooth flounder	-	-	44	69.1	-	100.3	132	93.5
Dover sole	-	-	-	-	-	-	-	-
English sole	-	-	243	89.8	-	-	2	1.2
Flathead sole	-	-	1	Tr ^a	-	-	4	1.5
Halibut	-	-	-	-	-	-	4	18.4
Petrale sole	-	-	-	-	-	-	-	-
Rex sole	-	-	12	2.8	25	10.3	6	2.0
Rock sole	-	-	1	Tr ^a	-	-	-	-
Sand sole	-	-	-	-	-	-	-	-
<u>Selachii</u>								
Dogfish	-	-	7	12.2	22	29.5	2	6.2
Ratfish	-	-	64	71.5	261	312.9	-	63.9
Skates	-	-	-	-	-	-	-	-

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Bottom	Bottom	Bottom	Bottom
Tow Number	41	42	43	44
Total catch (kg)	0	277.3	549.8	303.9
Duration	30	23	30	30
	No.	Wt.	No.	Wt.
	No.	Wt.	No.	Wt.

Agnatha

Pacific lamprey	-	-	-	-	-	-	-
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Invertebrates

Squid	-	-	-	-	-	-	-
Shrimp	-	-	-	-	-	-	-

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Midwater		Midwater		Midwater		Midwater	
Tow Number	45		46		47		48	
Total catch (kg)	102.6		112.0		45.8		185.7	
Duration	30		30		30		60	
	No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.
Roundfish								
Blackcod	-	-	-	-	-	-	-	-
Blackfin sculpin	-	-	-	-	-	-	-	-
Blackmouth eelpout	-	-	-	-	-	-	7	Tr ^a
Chinook salmon	-	-	1	2.0	1	1.6	-	-
Eulachons	-	-	-	-	251	6.0	1255	30.0
Fanged viperfish	-	-	-	-	-	-	8	Tr ^a
Lanternfish	-	-	-	-	-	-	-	-
Lingcod	-	-	-	-	-	-	-	-
Northern smoothtongue	-	-	-	-	-	-	-	-
Pacific cod	4	13.8	-	-	-	-	-	-
Pacific herring	-	-	-	-	-	-	-	-
Poacher	-	-	-	-	-	-	-	-
Shad	-	-	-	-	-	-	-	-
Shiner perch	-	-	-	-	-	-	-	-
Small disk snailfish	-	-	-	-	-	-	13	Tr ^a
Smooth lump sucker	-	-	-	-	-	-	-	-
Walleye pollock	1	0.5	205	110.0	22	34.2	94	144.2
Rockfish								
<u>Sebastolobus alascanus</u>	-	-	-	-	-	-	-	-
<u>Sebastes aleutianus</u>	-	-	-	-	-	-	-	-
<u>Sebastes alutus</u>	-	-	-	-	-	-	-	-
<u>Sebastes babcocki</u>	-	-	-	-	-	-	-	-
<u>Sebastes brevispinis</u>	-	-	-	-	-	-	-	-

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Midwater	Midwater	Midwater	Midwater
Tow Number	45	46	47	48
Total catch (kg)	102.6	112.0	45.8	185.7
Duration	30	30	30	60
	No.	Wt.	No.	Wt.
	No.	Wt.	No.	Wt.
	No.	Wt.	No.	Wt.

Rockfish

<u>Sebastes elongatus</u>	-	-	-	-	-	-	-
<u>Sebastes entomelas</u>	-	-	-	-	-	-	-
<u>Sebastes flavidus</u>	-	-	-	-	-	-	-
<u>Sebastes maliger</u>	-	-	-	-	-	-	-
<u>Sebastes paucispinis</u>	-	-	-	-	-	-	-
<u>Sebastes pinniger</u>	-	-	-	-	-	-	-
<u>Sebastes zacentrus</u>	-	-	-	-	-	-	-

Flatfish

Arrowtooth flounder	14	28.8	-	-	-	-	-
Dover sole	-	-	-	-	-	-	-
English sole	-	24.0	-	-	-	-	-
Flathead sole	-	-	-	-	-	-	-
Halibut	9	28.5	-	-	-	-	-
Petrale sole	-	-	-	-	-	-	-
Rex sole	-	-	-	-	-	-	-
Rock sole	-	-	-	-	-	-	-
Sand sole	8	3.2	-	-	-	-	-

Selachii

Dogfish	-	-	-	-	1	1.0	3	3.5
Ratfish	4	3.8	-	-	-	-	-	-
Skates	-	-	-	-	-	-	-	-

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Midwater	Midwater	Midwater	Midwater
Tow Number	45	46	47	48
Total catch (kg)	102.6	112.0	45.8	185.7
Duration	30	30	30	60
	No.	Wt.	No.	Wt.
	No.	Wt.	No.	Wt.
	No.	Wt.	No.	Wt.
<u>Agnatha</u>				
Pacific Lamprey	-	-	-	-
<u>Invertebrates</u>				
Squid	-	-	1	1.0
Shrimp	-	-	-	2.0
	6	5.0	-	3.0

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Midwater	Midwater	Midwater			
Tow Number	49	50	51			
Total catch (kg)	170.1	208.0	0			
Duration	30	45	30			
	No.	Wt.	No.	Wt.	No.	Wt.

Roundfish

Blackcod	-	-	-	-	-	-
Blackfin sculpin	-	-	-	-	-	-
Blackmouth eelpout	-	-	-	-	-	-
Chinook salmon	-	-	2	1.9	-	-
Eulachons	-	7.5	-	4.0	-	-
Fanged viperfish	-	-	-	-	-	-
Lanternfish	-	Tr*	-	-	-	-
Lingcod	-	-	-	-	-	-
Northern smoothtongue	-	-	-	-	-	-
Pacific cod	4	8.4	-	-	-	-
Pacific herring	-	-	-	-	-	-
Poacher	-	-	-	-	-	-
Shad	-	-	-	-	-	-
Shiner perch	-	-	-	-	-	-
Small disk snailfish	-	-	-	-	-	-
Smooth lump sucker	-	-	-	-	-	-
Walleye pollock	23	36.5	103	147.0	-	-

Rockfish

<u>Sebastolobus alascanus</u>	-	-	-	-	-	-
<u>Sebastes aleutianus</u>	-	-	-	-	-	-
<u>Sebastes alutus</u>	-	-	-	-	-	-
<u>Sebastes babcocki</u>	-	-	-	-	-	-
<u>Sebastes brevispinis</u>	1	3.4	-	-	-	-

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Midwater	Midwater	Midwater
Tow Number	49	50	51
Total catch (kg)	170.1	208.0	0
Duration	30	45	30

No.	Wt.	No.	Wt.	No.	Wt.
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Rockfish

<u>Sebastes elongatus</u>	-	-	-	-	-
<u>Sebastes entomelas</u>	-	-	-	-	-
<u>Sebastes flavidus</u>	1	1.4	12	21.1	-
<u>Sebastes maliger</u>	-	-	-	-	-
<u>Sebastes paucispinis</u>	-	-	1	6.8	-
<u>Sebastes pinniger</u>	-	-	-	-	-
<u>Sebastes zacentrus</u>	-	-	-	-	-

Flatfish

Arrowtooth flounder	13	10.4	2	1.8	-	-
Dover sole	-	-	-	-	-	-
English sole	11	10.2	-	-	-	-
Flathead sole	-	-	-	-	-	-
Halibut	-	-	-	-	-	-
Petrale sole	-	-	-	-	-	-
Rex sole	-	-	-	-	-	-
Rock sole	-	-	-	-	-	-
Sand sole	-	-	-	-	-	-

Selachii

Dogfish	1	3.2	-	-	-	-
Ratfish	-	87.1	16	11.0	-	-
Skates	-	-	1	14.4	-	-

Appendix Table 2 (cont'd)

Midwater or Bottom Net	Midwater	Midwater	Midwater
Tow Number	49	50	51
Total catch (kg)	170.1	208.0	0
Duration	30	45	30
	No. Wt.	No. Wt.	No. Wt.

<u>Agnatha</u>						
Pacific lamprey	-	-	-	-	-	-
<u>Invertebrates</u>						
Squid	1	1.0	-	-	-	-
Shrimp	-	1.0	-	-	-	-

Appendix Table 3. Size composition of chinook salmon (Oncorhynchus tshawytscha) numbers sampled by haul, weight and sex for MV ARCTIC HARVESTER cruise January 22-February 9, 1979.

Tow Number	Date	Midwater or Bottom Net	General Area	Species	Kilo			Stomach
					Wt.	Length	Sex	
AH79-1-1	27 Jan 79	Midwater	Butterworth Rks.	Chinook	1.3	49.0	♂	Empty
					1.6	48.0	♂	Empty
AH79-1-2	27 Jan 79	Midwater	Butterworth	Chinook	2.5	58.0	♂	Empty
					1.5	58.0	♀	Empty
					0.5	35.5	♂	Empty
					0.4	29.0	♂	Euphausiids
					0.3	26.0	♂	Empty
AH79-1-3	27 Jan 79	Midwater	Butterworth	Chinook	1.9	46.0	♀	Empty
					1.5	41.5	♀	Empty
					1.5	45.0	♀	Empty
AH79-1-5	27 Jan 79	Midwater	Two Peaks	Chinook	2.0	49.0	♂	Euphausiids and Sandlance
AH79-1-6	27 Jan 79	Midwater	Bend Two Peaks	Chinook	1.9	49.0	♂	Euphausiids
					3.8	64.0	♀	Euphausiids
					2.5	51.0	♀	Euphausiids
					1.3	39.0	♂	Euphausiids
AH79-1-10	28 Jan 79	Midwater	Bend Two Peaks	Chinook	1.7	49.0	♂	Euphausiids
					2.1	54.0	♂	Euphausiids
					1.4	42.5	♂	Euphausiids
					2.0	50.0	♂	Euphausiids
					1.5	46.0	♀	Euphausiids
					1.4	47.0	♂	Euphausiids
					1.9	48.0	♂	Euphausiids
					1.9	47.5	♂	Euphausiids
					1.6	45.5	♂	Euphausiids

Appendix Table 3 (cont'd)

Tow Number	Date	Midwater or Bottom Net	General Area	Species	Kilo Wt.	Length	Sex	Stomach
AH79-1-10	28 Jan 79	Midwater	Bend Two Peaks	Chinook	1.5 1.6 1.2 1.0 1.3 1.6 0.3	45.0 48.5 43.5 38.5 42.0 45.5 33.0	♀ ♀ ♂ ♂ ♀ ♀ ♂	Euphausiids Euphausiids Euphausiids Euphausiids Euphausiids Euphausiids Euphausiids
AH79-1-16	29 Jan 79	Midwater	Zayas Island	Chinook	4.8 1.5	71.5 53.5	♀ ♂	Euphausiids Sandlance
AH79-1-26	1 Feb 79	Midwater	Two Peaks	Chinook	1.5 1.5 1.2 1.2 0.8 0.6	46.0 48.0 46.0 46.5 40.5 39.5	♀ ♀ ♀ ♀ ♀ ♀	Euphausiids Euphausiids Euphausiids Euphausiids Euphausiids Euphausiids
AH79-1-27	1 Feb 79	Midwater	North of Bend	Chinook	1.5 1.0 0.8	52.0 42.5 45.0	♂ ♂ ♂	Euphausiids Euphausiids Euphausiids
AH79-1-28	2 Feb 79	Midwater	Butterworth	Chinook	0.6 3.4 1.0 1.6 1.5 1.8 0.8	33.0 65.0 51.0 47.0 49.5 50.0 39.0	♀ ♀ ♂ ♀ ♂ ♀ ♀	1 Sandlance Empty Empty Empty Empty Empty 1 Squid

Appendix Table 3 (cont'd)

Tow Number	Date	Midwater or Bottom Net	General Area	Species	Kilo Wt.	Length	Sex	Stomach
AH79-1-28	2 Feb 79	Midwater	Butterworth	Chinook	0.8	41.0	♀	Dig Material
					0.8	40.5	♂	Empty
					0.7	35.5	♀	Empty
					0.7	35.5	♂	Sandlance
					0.6	32.0	♂	2 Squid
					0.6	33.5	♂	Empty
					0.6	34.0	♂	1 Sandlance
					0.6	33.0	♂	1 Sandlance
					0.6	32.5	♀	Dig Material
					0.6	33.0	♀	Amphipod
					0.6	29.9	♂	1 Shrimp
					0.6	28.0	♂	Empty
					0.6	29.5	♂	Squid
					0.6	32.0	♂	Empty
					0.6	33.0	♂	Euphausiid
AH79-1-29	2 Feb 79	Midwater	Butterworth	Chinook	2.2	53.5	♀	Amphipod
					0.9	37.0	♀	Euphausiid
					0.6	34.5	♀	2 Sandlances
					0.6	33.5	♀	Dig Material
					0.6	35.5	♀	Euphausiid
					0.6	34.5	♂	1 Squid
					0.6	33.0	♂	Euphausiid
					0.6	33.0	♀	Amphipods
					0.6	32.5	♂	Euphausiid
					0.6	29.5	♂	Euphausiid
AH79-1-30	3 Feb 79	Bottom	Butterworth	Chinook	1.3	46.5	♀	Empty
					1.5	50.0	♀	Empty

Appendix Table 3 (cont'd)

Tow Number	Date	Midwater or Bottom Net	General Area	Species	Kilo			Stomach
					Wt.	Length	Sex	
AH79-1-31	3 Feb 79	Bottom	Butterworth	Chinook	9.8 1.3	85.5 46.5	♂ ♂	Empty Empty
AH79-1-33	3 Feb 79	Bottom	Two Peaks	Chinook	1.5	47.5	♂	Euphausiid
AH79-1-34	3 Feb 79	Bottom	Bend Two Peaks	Chinook	2.7 1.8 2.0 2.0 1.1	62.0 55.0 57.0 56.0 47.0	♂ ♀ ♂ ♀ ♀	Euphausiid Euphausiid Euphausiid Euphausiid Euphausiid
AH79-1-43	5 Feb 79	Bottom	Two Peaks	Chinook	2.2	56.0	♀	Euphausiid
AH79-1-46	6 Feb 79	Midwater	Triple I	Chinook	2.0	54.0	♀	Empty
AH79-1-47	6 Feb 79	Midwater	Deep off Two Peaks	Chinook	1.6	51.0	♂	Empty
AH79-1-50	6 Feb 79	Midwater	Two Peaks	Chinook	1.2 0.7	43.0 41.5	♀ ♂	Euphausiid Euphausiid

Appendix Table 4. Size composition of dogfish (Squalus acanthias), numbers sampled by haul, by sex for MV ARCTIC HARVESTER cruise AH79-1, January–February 9, 1979.

Total Length (cm)	Haul No.																							
	25			27			30			31			38			39			42			43		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	-	-	-	-	-	-	-	-	-	1	1	2	-	-	-	-	-	-	-	-	-	-	-	-
42	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-
43	-	-	-	-	-	-	-	-	-	2	-	2	-	-	-	-	-	-	-	-	-	-	-	-
44	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
45	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
46	-	-	-	-	-	-	-	-	-	2	-	2	-	-	-	-	-	-	-	-	-	-	-	-
47	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
48	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
49	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
51	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
52	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
53	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
56	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
57	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
58	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
59	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
60	-	1	0	1	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
61	-	0	0	0	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
62	-	0	0	0	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
63	-	0	0	0	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
64	-	1	1	1	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
65	-	0	0	0	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-

Appendix Table 4 (cont'd)

Total Length (cm)	Haul No.															GTM	GTF	GT									
	25			27			30			31			38			39			42								
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T						
66	-	2	2	-	-	-	-	-	-	-	1	1	1	2	3	0	-	0	0	1	1	1	6	7			
67	-	0	0	-	1	1	-	-	-	-	-	-	3	1	4	0	-	0	2	0	2	5	2	7			
68	-	1	1	-	-	-	-	-	-	-	-	-	1	1	2	0	-	0	1	0	1	2	2	4			
69	-	-	-	-	-	-	-	-	-	-	-	-	1	0	1	0	-	0	1	1	0	1	2	0			
70	-	-	-	-	-	-	-	-	-	-	-	-	1	0	1	0	-	1	3	0	3	6	1	7			
71	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	100	-	0	1	0	1	1	0	1			
72	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	0	-	0	3	1	4	4	1	5			
73	-	-	-	-	-	-	-	-	-	-	1	-	1	1	0	0	-	0	1	0	1	3	0	3			
74	-	-	-	-	-	-	-	-	-	-	1	-	1	1	1	1	-	1	2	1	0	1	3	2			
75	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	100	-	0	0	0	0	0	0	0			
76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	1	1	0	0	1				
77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	1	-	1	1	0				
78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	0	-	0	0	1				
79	-	-	-	-	-	-	-	-	-	-	1	1	2	1	1	1	-	1	0	0	0	2	1				
80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	10	0	0	0	0	0				
81	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1	0	0	2	0				
82	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	-	1	1	0	0	1	1				
83	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0				
84	-	-	-	-	-	-	-	-	-	-	1	-	1	1	1	1	-	1	0	0	0	1	0				
85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0				
86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	0	0	1				
87	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	0	0	0	0				
88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0				
89	-	-	-	-	-	-	-	-	-	-	1	-	1	1	1	1	-	1	1	1	1	0	1				
90	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	-	1	1	1	1	1	1				
91	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0				
92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0				
93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0				
94	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	-	1	1	1	1	1	1				
95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0				
96	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0				
97	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	-	1	1	1	1	1	1				
Total	0	5	5	3	2	5	4	4	8	4	7	11	4	3	7	30	27	57	6	1	7	18	4	22	69	53	122

Appendix Table 5. Size composition of English sole (*Parophrys vetulus*) numbers sampled, by haul, by sex for MV ARCTIC HARVESTER cruise AH79-1, January 22-February 9, 1979.

Fork Length (cm)	Tow No.			
	M	F	42	T
		U		
26	-	-	1	1
27	-	-	-	0
28	-	-	-	0
29	-	-	-	0
30	-	1	-	1
31	-	0	-	0
32	-	0	-	0
33	-	2	-	2
34	-	0	-	0
35	-	0	-	0
36	-	2	-	2
37	-	1	-	1
38	-	2	-	2
39	-	4	-	4
40	-	4	-	4
41	-	7	1	8
42	1	4	-	5
43	0	7	-	7
44	0	11	-	11
45	0	13	-	13
46	1	12	-	13
47	-	7	-	7
48	-	8	-	8
49	-	6	-	6
50	-	4	-	4
51	-	3	-	3
52	-	1	-	1
Total	2	99	2	103

Appendix Table 6. Size composition of eulachon (Thaleichthys pacificus) numbers sampled, by haul, by sex, for MV ARCTIC HARVESTER cruise AH79-1, January 22-February 9, 1979.

Length Group (mm)	Tow No.	
	25	48
Mixed Sex	Mixed Sex	
93 - 95	1	-
96 - 98	1	-
99 - 101	1	-
102 - 4	3	1
5 - 7	0	1
8 - 110	3	1
111 - 3	2	0
4 - 6	0	0
7 - 9	8	1
120 - 2	2	1
3 - 5	4	0
6 - 8	0	2
9 - 131	2	0
132 - 4	5	1
5 - 7	3	1
8 - 140	4	6
141 - 3	4	7
4 - 6	5	4
7 - 9	10	12
150 - 2	5	9
3 - 5	9	10
6 - 8	22	19
9 - 161	4	10
162 - 4	18	15
5 - 7	5	1
8 - 170	5	5
171 - 3	7	3
4 - 6	2	7
7 - 9	0	0
180 - 2	5	1
3 - 5	2	0
6 - 8	1	1
9 - 191		0
192 - 4		1
Total	143	120

Appendix Table 7. Size composition of pacific halibut (*Hippoglossus stenolepis*) numbers sampled, by haul, by sex for MV ARCTIC HARVESTER cruise AH79-1, January 22-February 9, 1979.

Fork Length (cm)	Tow No.												GTM	GTF	GT						
	30			31			32			33			34			44					
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	GTM	GTF	GT
31	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	1	1	
32	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	1	1	
33	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	1	1	
34	1	0	1	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2
35	0	0	0	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	0	1	1
36	0	0	0	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	0	1	1
37	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
38	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
39	0	0	0	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	0	1	1
40	0	1	1	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	0	2	2
41	0	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	2	2
42	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
43	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	0	1
44	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
45	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
46	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
47	0	0	0	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	0	1	1
48	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	1	0	1
49	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
50	0	0	0	-	-	-	-	-	-	-	-	-	-	-	1	1	-	1	1	1	2
51	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1	0	1
52	2	1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	3
53	0	0	0	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	0	1	1
54	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	1
55	0	0	0	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	1	0	1
56	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
57	2	1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	3
58	0	1	1	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	0	2	2
59	0	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1	2
60	0	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1	2
61	1	2	3	-	-	-	-	-	-	-	-	1	-	1	-	-	1	-	1	3	2
62	0	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1	1
63	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1	0	1
64	0	1	1	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	1	1	2
65	0	0	0	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	1	0	1
66	0	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1	1
67	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
68	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	1
69	1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	2
70	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	2	2	2

Appendix Table 7 (cont'd)

Fork Length (cm)	Tow No.																							
	30			31			32			33			34			44			45					
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	GTM	GTF	GT
71	-	1	1	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	1	1	2	
72	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	
73	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	
74	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	0	1	1	1	
75	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	
76	-	0	0	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	1	0	2	2	
77	-	1	1	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	1	1	2	
78	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1	1	
79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1	1	
80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	
81	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	
82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	0	-	0	
83	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	1	
84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	
85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	1	-	1
Total	9	20	29	0	3	3	0	3	3	1	4	5	3	5	8	4	0	4	6	3	9	23	38	61

Appendix Table 8. Size composition of herring (Clupea harengus pallasi) numbers sampled, by haul for M/V ARCTIC HARVESTER cruise AH 79-1, January 22-February 9, 1979.

Length Frequency	Tow No.				Total
	3	4	28	29	
90- 92 mm	-	1	-	-	1
93- 95	-	0	-	-	0
96- 98	1	0	-	-	1
99-101	0	0	-	-	0
102-104	0	1	-	-	1
105-107	0	0	-	-	0
108-110	0	0	-	-	0
111-113	0	1	-	-	1
114-116	0	0	-	-	0
117-119	1	0	-	-	1
120-122	1	0	-	-	1
123-125	1	1	1	3	6
126-128	2	5	1	5	13
129-131	5	7	2	7	21
132-134	15	10	3	13	41
135-137	22	2	16	18	58
138-140	17	15	8	15	55
141-143	6	11	5	14	36
144-146	11	11	5	10	37
147-149	9	5	4	7	25
150-152	5	5	2	1	13
153-155	1	1	1	1	4
156-158	0	1	0	1	2
159-161	1	-	0	1	2
162-164	0	-	0	1	1
165-167	0	-	0	0	0
168-170	0	-	0	1	1
171-173	0	-	0	0	0
174-176	0	-	0	0	0
177-179	0	-	0	0	0
180-182	0	-	1	0	1
183-185	0	-	-	0	0
186-188	2	-	-	0	2
189-191	-	-	-	0	0
192-194	-	-	-	0	0
195-197	-	-	-	0	0
198-200	-	-	-	0	0
201-203	-	-	-	1	1
Total	100	77	49	99	325

Appendix Table 9. Size composition of lingcod, (Ophiodon elongatus) numbers sampled by haul for MV ARCTIC HARVESTER cruise AH79-1, January 22-February, 1979.

Fork Length (cm)	Tow No.					
	34			37		
	M	F	T	M	F	T
93	-	1	1	-	-	-
94	-	-	-	-	-	-
95	-	-	-	-	-	-
96	-	-	-	-	-	-
97	-	-	-	-	-	-
98	-	-	-	-	-	-
99	-	-	-	-	-	-
100	-	-	-	-	-	-
101	-	-	-	-	-	-
102	-	-	-	-	-	-
103	-	-	-	-	-	-
104	-	-	-	-	-	-
105	-	-	-	-	1	1
106	-	-	-	-	-	-
107	-	-	-	-	-	-
108	-	-	-	-	-	-
109	-	-	-	-	1	1
Total	0	1	1	0	2	2

Appendix Table 10. Size composition of Pacific cod, (*Gadus macrocephalus*) numbers sampled, by haul, by sex for MV ARCTIC HARVESTER cruise AH79-1, January 22-February 9, 1979.

Fork Length (cm)	Tow No.																	
	4			31			34			42			44			GTM	GTF	GT
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T			
33	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1	-	1
34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0
35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0
36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0
37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0
38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0
39	-	-	-	1	1	2	-	-	-	-	-	-	-	1	1	1	2	3
40	-	-	-	0	1	1	-	1	1	-	-	-	-	0	0	0	2	2
41	-	1	1	0	0	0	2	0	2	2	-	2	1	0	1	5	1	6
42	1	0	1	0	2	2	0	0	0	-	0	1	0	1	2	2	2	4
43	0	1	1	1	1	2	1	1	2	4	-	4	0	0	0	6	3	9
44	1	0	1	1	1	2	5	0	5	1	-	1	1	1	2	9	2	11
45	0	0	0	0	0	0	0	0	0	1	1	2	0	1	1	1	2	3
46	2	0	2	0	0	0	0	2	2	1	0	1	2	1	3	5	3	8
47	0	0	0	0	0	0	1	0	1	-	0	0	2	1	3	3	1	4
48	1	0	1	1	1	2	1	0	1	-	2	2	-	-	-	3	3	6
49	0	0	0	0	0	0	0	1	1	-	0	0	-	-	-	0	1	1
50	0	0	0	1	0	1	0	1	1	-	1	1	-	-	-	1	2	3
51	0	0	0	1	0	1	1	-	1	-	0	0	-	-	-	2	0	2
52	0	0	0	0	0	0	1	-	1	-	0	0	-	-	-	1	0	1
53	0	0	0	0	0	0	0	-	0	-	0	0	-	-	-	0	0	0
54	0	0	0	1	0	1	0	-	0	-	0	0	-	-	-	1	0	1
55	0	0	0	0	0	0	0	-	0	-	0	0	-	-	-	0	0	0
56	0	0	0	0	0	0	0	-	0	-	1	1	-	-	-	0	1	1
57	0	0	0	0	0	0	0	-	0	-	0	0	-	-	-	0	0	0
58	1	0	1	0	1	1	0	-	0	-	0	0	-	-	-	1	1	2

Appendix Table 10 (cont'd)

Fork Length (cm)	Tow No.																	
	4			31			34			42			44					
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T			
59	0	0	0	0	0	0	0	-	0	-	0	0	-	-	0			
60	2	0	2	0	0	0	1	-	1	-	1	1	-	-	3			
61	1	0	1	0	0	0	-	-	-	-	-	-	-	-	1			
62	0	0	0	1	1	2	-	-	-	-	-	-	-	-	1			
63	0	1	1	0	0	0	-	-	-	-	-	-	-	-	0			
64	0	0	0	1	0	1	-	-	-	-	-	-	-	-	1			
65	0	0	0	-	0	0	-	-	-	-	-	-	-	-	0			
66	0	1	1	-	0	0	-	-	-	-	-	-	-	-	3			
67	0	2	2	-	1	1	-	-	-	-	-	-	-	-	0			
68	0	0	0	-	0	0	-	-	-	-	-	-	-	-	0			
69	0	0	0	-	2	2	-	-	-	-	-	-	-	-	0			
70	0	2	2	-	0	0	-	-	-	-	-	-	-	-	0			
71	0	-	0	-	1	1	-	-	-	-	-	-	-	-	1			
72	1	-	1	-	0	0	-	-	-	-	-	-	-	-	0			
73	0	-	0	-	0	0	-	-	-	-	-	-	-	-	1			
74	1	-	1	-	0	0	-	-	-	-	-	-	-	-	1			
75	-	-	-	-	0	0	-	-	-	-	-	-	-	-	0			
76	-	-	-	-	0	0	-	-	-	-	-	-	-	-	0			
77	-	-	-	-	0	0	-	-	-	-	-	-	-	-	0			
78	-	-	-	-	1	1	-	-	-	-	-	-	-	-	1			
Total	11	8	19	9	14	23	13	6	19	9	6	15	8	5	13	53	36	89

Appendix Table 11. Size composition of walleye pollock (*Theragra chalcogramma*) numbers sampled, by haul, by sex for MV ARCTIV HARVESTER cruise AH79-1, January 22-February 9, 1979.

Length (cm)	Tow no.													
	1			2			3			4				
	M	F	T	M	F	T	M	F	U	T	M	F	U	T
11	-	-	-	-	-	-	-	-	2	2	-	-	10	10
12	-	-	-	-	-	-	-	-	13	13	-	-	33	33
13	-	-	-	-	-	-	-	-	21	21	-	-	60	60
14	-	-	-	-	-	-	-	-	18	18	-	-	88	88
15	-	-	-	-	-	-	-	-	6	6	-	-	70	70
16	-	-	-	-	-	-	-	-	7	7	-	-	40	40
17	-	-	-	-	-	-	-	-	3	3	-	-	15	15
18	-	-	-	-	-	-	-	-	-	0	-	-	11	11
19	-	-	-	-	-	-	-	-	-	0	-	-	1	1
20	-	-	-	-	-	-	-	-	-	0	-	-	0	0
21	-	-	-	-	-	-	-	-	-	0	-	-	2	2
22	-	-	-	-	-	-	-	-	-	0	1	-	-	1
23	-	-	-	3	-	3	-	-	-	0	2	-	-	2
24	-	-	-	10	-	10	1	2	-	3	1	1	-	2
25	-	1	1	14	7	21	7	1	-	8	8	2	-	10
26	-	0	0	27	25	52	4	6	-	10	14	12	-	26
27	-	3	3	34	29	63	15	14	-	29	16	13	-	29
28	1	0	1	23	27	50	17	12	-	29	10	11	-	21
29	3	1	4	19	20	39	11	9	-	20	12	14	-	26
30	2	1	3	15	15	30	9	6	-	15	8	6	-	14
31	-	1	1	4	5	9	1	2	-	3	8	6	-	14
32	-	1	1	0	5	5	1	-	-	1	0	5	-	5
33	-	1	1	3	1	4	0	-	-	0	2	2	-	4
34	-	1	1	0	0	0	0	-	-	0	1	0	-	1
35	-	-	-	0	0	0	0	-	-	0	1	2	-	3
36	-	-	-	0	0	0	0	-	-	0	0	1	-	1
37	-	-	-	0	0	0	0	-	-	0	0	0	-	0
38	-	-	-	0	0	0	0	-	-	0	0	0	-	0
39	-	-	-	0	0	0	0	-	-	0	0	0	-	0
40	-	-	-	0	0	0	0	-	-	0	0	2	-	2
41	-	-	-	0	0	0	0	-	-	0	0	0	-	0
42	-	-	-	0	0	0	0	-	-	0	1	0	-	1
43	-	-	-	0	0	0	0	-	-	0	0	1	-	1
44	-	-	-	0	0	0	1	-	-	1	0	0	-	0
45	-	-	-	0	0	0	0	-	-	0	0	1	-	1
46	-	-	-	0	1	1	0	-	-	0	0	0	-	0
47	-	-	-	0	0	0	0	-	-	0	0	1	-	1
48	-	-	-	0	0	0	0	-	-	0	2	0	-	2
49	-	-	-	0	0	0	1	-	-	1	3	0	-	3

Appendix Table 11 (cont'd)

Length (cm)	Tow no.													
	1			2			3			4				
	M	F	T	M	F	T	M	F	U	T	M	F	U	T
50	-	-	-	0	0	0	-	-	-	-	2	0	-	2
51	-	-	-	0	0	0	-	-	-	-	0	0	-	0
52	-	-	-	1	1	2	-	-	-	-	1	1	-	2
53	-	-	-	-	-	-	-	-	-	-	0	-	0	
54	-	-	-	-	-	-	-	-	-	-	0	-	0	
55	-	-	-	-	-	-	-	-	-	-	1	-	1	
56	-	-	-	-	-	-	-	-	-	-	1	-	1	
57	-	-	-	-	-	-	-	-	-	-	-	-	-	
58	-	-	-	-	-	-	-	-	-	-	-	-	-	
59	-	-	-	-	-	-	-	-	-	-	-	-	-	
60	-	-	-	-	-	-	-	-	-	-	-	-	-	
61	-	-	-	-	-	-	-	-	-	-	-	-	-	
62	-	-	-	-	-	-	-	-	-	-	-	-	-	
63	-	-	-	-	-	-	-	-	-	-	-	-	-	
64	-	-	-	-	-	-	-	-	-	-	-	-	-	
65	-	-	-	-	-	-	-	-	-	-	-	-	-	
66	-	-	-	-	-	-	-	-	-	-	-	-	-	
67	-	-	-	-	-	-	-	-	-	-	-	-	-	
68	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total	6	10	16	153	136	289	68	52	70	190	93	83	330	506

Appendix Table 11 (cont'd)

Length (cm)	Tow no.											
	5			6			9			10		
	M	F	T	M	F	T	M	F	T	M	F	T
11	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-	-	-
31	-	-	-	-	-	-	-	-	-	-	-	-
32	-	-	-	-	-	-	-	-	-	-	-	-
33	-	-	-	-	-	-	-	-	-	-	-	-
34	-	-	-	-	-	-	-	-	-	-	-	-
35	-	-	-	-	-	-	-	-	-	-	-	-
36	1	-	1	-	-	-	-	-	-	-	-	-
37	0	-	0	-	-	-	-	-	-	-	-	-
38	0	-	0	-	-	-	-	-	-	-	-	-
39	0	-	0	-	-	-	-	-	-	-	-	-
40	0	-	0	-	-	-	-	-	-	-	-	-
41	0	-	0	-	-	-	-	-	-	-	-	-
42	0	-	0	-	-	-	-	-	-	-	-	-
43	0	-	0	2	1	3	-	-	-	-	-	-
44	1	-	1	0	0	0	0	-	-	-	-	-
45	0	-	0	1	0	1	-	-	-	1	-	1
46	0	-	0	0	0	0	0	-	-	1	-	1
47	1	-	1	0	0	0	-	-	-	2	-	2
48	1	1	2	2	1	3	-	-	-	3	-	3
49	0	2	2	4	3	7	1	-	-	1	-	2

Appendix Table 11 (cont'd)

Length (cm)	Tow no.											
	5			6			9			10		
	M	F	T	M	F	T	M	F	T	M	F	T
50	3	4	7	2	1	3	1	1	2	8	5	13
51	4	2	6	8	1	9	1	2	3	4	7	11
52	9	8	17	6	1	7	3	0	3	10	4	14
534	13	10	23	10	9	19	2	2	4	11	6	17
54	10	8	18	11	8	19	3	5	8	12	11	23
55	11	15	26	17	13	30	0	16	16	11	19	30
56	12	11	23	11	15	26	1	21	22	11	18	29
57	4	28	32	4	19	23	2	18	20	2	10	12
58	1	17	18	-	15	15	3	20	23	2	14	16
59	2	10	12	-	10	10	1	21	22	0	7	7
60	1	7	8	-	7	7	0	9	9	0	9	9
61	-	1	1	-	4	4	1	3	4	1	1	2
62	-	2	2	-	3	3	-	1	1	-	4	4
63	-	1	1	-	-	-	-	0	0	-	1	1
64	-	-	-	-	-	-	-	0	0	-	0	0
65	-	-	-	-	-	-	-	0	0	-	0	0
66	-	-	-	-	-	-	-	1	1	-	1	1
67	-	-	-	-	-	-	-	-	-	-	-	-
68	-	-	-	-	-	-	-	-	-	-	-	-
Total	74	127	201	78	111	189	19	120	139	80	118	198

Appendix Table 11 (cont'd)

Length (cm)	Tow no.											
	11			13			15			16		
	M	F	T	M	F	T	M	F	T	M	F	T
11	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-	-	-
31	-	-	-	-	-	-	-	-	-	1	-	1
32	-	-	-	-	1	1	-	-	-	0	-	0
33	-	-	-	-	0	0	-	-	-	0	-	0
34	-	-	-	-	0	0	-	-	-	0	-	0
35	-	-	-	-	0	0	-	-	-	0	-	0
36	-	-	-	-	0	0	-	-	-	0	-	0
37	-	-	-	-	0	0	-	-	-	0	-	0
38	1	-	1	-	0	0	-	-	-	0	-	0
39	1	-	1	-	0	0	-	-	-	0	-	0
40	0	-	0	-	0	0	-	-	-	0	-	0
41	0	1	1	1	0	1	-	-	-	0	-	0
42	0	0	0	0	0	0	-	-	-	0	-	0
43	0	0	0	0	0	0	-	-	-	1	-	1
44	0	0	0	0	0	0	-	-	-	0	-	0
45	0	1	1	2	0	2	1	-	1	1	-	1
46	1	0	1	1	0	1	1	1	2	3	-	3
47	1	1	2	0	0	0	1	0	1	0	-	1
48	4	2	6	4	1	5	4	2	6	1	0	1
49	2	0	2	2	2	4	2	0	2	6	0	6

Appendix Table 11 (cont'd)

Length (cm)	Tow no.											
	11			13			15			16		
	M	F	T	M	F	T	M	F	T	M	F	T
50	8	3	11	6	2	8	4	0	4	7	1	8
51	13	4	17	13	3	16	5	0	5	7	4	11
52	18	4	22	14	4	18	7	1	8	13	1	14
53	14	15	29	18	3	21	15	4	19	9	5	14
54	14	14	28	12	10	22	15	6	21	11	7	18
55	22	22	44	13	16	29	13	9	22	2	4	6
56	4	22	26	8	16	24	3	6	9	4	3	7
57	9	16	25	3	19	22	2	14	16	1	6	7
58	7	11	18	5	15	20	1	9	10	1	2	3
59	2	14	16	-	11	11	-	3	3	-	2	2
60	1	5	6	-	2	2	-	4	4	-	3	3
61	0	6	6	-	1	1	-	-	-	-	0	0
62	0	0	0	-	0	0	-	-	-	-	0	0
63	1	1	2	-	1	1	-	-	-	-	1	1
64	-	0	0	-	1	1	-	-	-	-	-	-
65	-	0	0	-	-	-	-	-	-	-	-	-
66	-	1	1	-	-	-	-	-	-	-	-	-
67	-	-	-	-	-	-	-	-	-	-	-	-
68	-	-	-	-	-	-	-	-	-	-	-	-
Total	123	143	266	102	108	210	74	59	133	68	40	108

Appendix Table 11 (cont'd)

Length (cm)	Tow no.											
	17			22			25			26		
	M	F	T	M	F	T	M	F	T	M	F	T
11	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-	-
27	-	-	-	1	1	4	-	4	-	-	-	-
28	-	-	-	0	0	7	1	8	-	-	-	-
29	-	-	6	6	12	1	3	4	-	-	-	-
30	-	-	5	8	13	0	3	3	-	-	-	-
31	-	-	14	10	24	3	5	8	-	-	-	-
32	-	-	19	14	33	1	0	1	-	-	-	-
33	-	-	10	14	24	1	5	6	-	-	-	-
34	-	-	7	12	19	0	3	3	-	-	-	-
35	-	-	8	8	16	2	6	8	-	-	-	-
36	-	-	3	5	8	1	1	2	-	-	-	-
37	-	-	2	4	6	3	0	3	1	-	1	0
38	-	-	5	4	9	1	1	2	0	-	1	0
39	-	-	2	4	6	0	0	0	0	-	1	1
40	-	-	0	5	5	1	0	1	0	-	0	0
41	-	-	1	0	1	0	0	0	0	-	0	0
42	-	-	0	1	1	0	0	0	0	-	1	1
43	-	-	0	0	0	0	0	0	0	2	0	2
44	-	-	0	0	0	0	0	0	0	0	2	2
45	-	-	0	0	0	0	0	0	0	1	2	3
46	-	-	0	0	0	0	2	2	2	2	0	2
47	-	-	0	0	0	1	0	1	1	1	1	2
48	-	-	0	0	0	0	0	0	0	5	0	5
49	-	-	0	0	0	0	0	0	1	1	1	2

Appendix Table 11 (cont'd)

Length (cm)	Tow no.											
	17			22			25			26		
	M	F	T	M	F	T	M	F	T	M	F	T
50	4	-	4	0	0	0	0	1	1	2	1	3
51	2	1	3	0	1	1	0	0	0	8	1	9
52	12	4	16	0	0	0	0	1	1	16	2	18
53	7	6	13	1	0	1	0	0	0	11	4	15
54	10	6	16	0	0	0	1	1	2	13	6	19
55	7	10	17	1	1	2	1	1	2	11	14	25
56	2	10	12	3	0	3	0	3	3	12	9	21
57	2	14	16	-	1	1	1	1	2	6	19	25
58	1	10	11	-	0	0	0	0	0	0	11	11
59	2	4	6	-	3	3	0	2	2	3	12	15
60	-	5	5	-	2	2	0	-	0	0	5	5
61	-	0	0	-	1	1	0	-	0	0	4	4
62	-	4	4	-	0	0	0	-	0	1	1	2
63	-	1	1	-	1	1	1	-	1	-	0	0
64	-	-	-	-	0	0	-	-	-	-	1	1
65	-	-	-	-	1	1	-	-	-	-	-	-
66	-	-	-	-	-	-	-	-	-	-	-	-
67	-	-	-	-	-	-	-	-	-	-	-	-
68	-	-	-	-	-	-	-	-	-	-	-	-
Total	49	75	124	87	107	194	30	40	70	96	98	194

Appendix Table 11 (cont'd)

Length (cm)	Tow no.											
	27			28			29			31		
	M	F	T	M	F	T	M	F	T	M	F	T
11	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	1	1	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	1	1	-	-	-	-	-	-
21	-	-	-	-	1	1	-	-	-	-	-	-
22	-	-	-	-	0	0	-	1	1	-	-	-
23	-	-	-	2	2	2	-	0	0	-	-	-
24	-	-	-	0	2	2	3	1	4	-	-	-
25	-	-	-	2	2	4	5	5	10	-	-	-
26	-	-	-	11	8	19	14	12	26	-	-	-
27	-	-	-	11	9	20	17	12	29	-	-	-
28	1	-	1	22	21	43	23	25	48	-	-	-
29	0	-	0	20	11	31	32	24	56	-	-	-
30	0	-	0	18	13	31	16	25	41	-	-	-
31	0	-	0	4	7	11	8	14	22	-	-	-
32	0	-	0	3	2	5	9	6	15	-	-	-
33	0	-	0	2	1	3	0	4	4	-	-	-
34	0	-	0	1	3	4	1	1	2	-	-	-
35	0	-	0	2	0	2	-	-	-	-	-	-
36	0	-	0	0	0	0	-	-	-	-	-	-
37	1	0	1	0	1	1	-	-	-	-	-	-
38	0	-	0	-	-	-	-	-	-	-	-	-
39	0	-	0	-	-	-	-	-	-	1	1	-
40	0	-	0	-	-	-	-	-	-	0	0	-
41	0	-	0	-	-	-	-	-	-	0	0	-
42	0	-	0	-	-	-	-	-	-	0	0	-
43	0	-	0	-	-	-	-	-	-	2	2	-
44	0	-	0	-	-	-	-	-	-	0	0	-
45	0	-	0	-	-	-	-	-	-	1	1	-
46	0	-	0	-	-	-	-	-	-	0	0	-
47	1	-	1	-	-	-	-	-	-	2	0	2
48	0	-	0	-	-	-	-	-	-	1	2	3
49	0	-	0	-	-	-	-	-	-	2	1	3

Appendix Table 11 (cont'd)

Length (cm)	Tow no.											
	27			28			29			31		
	M	F	T	M	F	T	M	F	T	M	F	T
50	1	-	1	-	-	-	-	-	-	-	2	2
51	1	-	1	-	-	-	-	-	-	-	0	0
52	0	-	0	-	-	-	-	-	-	-	0	0
53	2	1	3	-	-	-	-	-	-	-	0	0
54	1	1	2	-	-	-	-	-	-	-	2	2
55	3	3	6	-	-	-	-	-	-	-	2	2
56	0	6	6	-	-	-	-	-	-	-	0	0
57	0	7	7	-	-	-	-	-	-	-	0	0
58	1	1	2	-	-	-	-	-	-	-	0	0
59	1	0	1	-	-	-	-	-	-	-	0	0
60	-	2	2	-	-	-	-	-	-	-	1	1
61	-	1	1	-	-	-	-	-	-	-	0	0
62	-	1	1	-	-	-	-	-	-	-	1	1
63	-	-	-	-	-	-	-	-	-	-	-	-
64	-	-	-	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-	-	-	-
66	-	-	-	-	-	-	-	-	-	-	-	-
67	-	-	-	-	-	-	-	-	-	-	-	-
68	-	-	-	-	-	-	-	-	-	-	-	-
Total	12	23	36	98	82	180	128	130	258	5	15	20

Appendix Table 11 (cont'd)

Length (cm)	Tow no.											
	32			33			34			42		
	M	F	T	M	F	T	M	F	T	M	F	T
11	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	-	-
30	-	-	-	-	1	1	-	-	-	-	-	-
31	1	-	1	-	0	0	-	-	-	-	-	-
32	0	-	0	-	1	1	-	-	-	-	-	-
33	0	-	0	1	0	1	-	-	-	2	-	2
34	0	-	0	1	1	2	1	-	-	1	0	1
35	0	-	0	2	0	2	0	-	-	0	0	0
36	0	-	0	1	0	1	0	-	-	0	0	0
37	0	-	0	0	1	1	0	1	1	1	0	1
38	0	-	0	1	1	2	2	0	2	0	0	1
39	0	-	0	1	0	1	1	3	4	0	-	0
40	0	-	0	1	2	3	0	0	0	0	-	0
41	0	-	0	0	1	1	1	0	1	0	-	0
42	0	-	0	1	1	2	0	1	1	0	-	0
43	0	-	0	2	0	2	0	1	1	0	-	0
44	0	-	0	0	0	0	1	0	1	1	-	1
45	1	-	1	0	2	2	0	0	0	0	-	0
46	0	-	0	0	0	0	0	0	0	1	-	1
47	0	-	0	0	0	0	0	0	0	-	-	-
48	0	-	0	0	0	0	0	0	0	-	-	-
49	0	-	0	1	0	1	0	1	1	-	-	-

Appendix Table 11 (cont'd)

Length (cm)	Tow no.											
	32			33			34			42		
	M	F	T	M	F	T	M	F	T	M	F	T
50	0	-	0	-	0	0	0	1	1	-	-	-
51	1	1	2	-	0	0	0	0	0	-	-	-
52	-	0	0	-	-	-	0	1	1	-	-	-
53	-	1	1	-	1	1	0	1	1	-	-	-
54	-	0	0	-	-	-	1	3	4	-	-	-
55	-	0	0	-	-	-	2	4	6	-	-	-
56	-	0	0	-	-	-	3	0	3	-	-	-
57	-	0	0	-	-	-	1	3	4	-	-	-
58	-	0	0	-	-	-	4	4	8	-	-	-
59	-	0	0	-	-	-	-	7	7	-	-	-
60	-	0	0	-	-	-	-	3	3	-	-	-
61	-	2	2	-	-	-	-	13	13	-	-	-
62	-	0	0	-	-	-	-	3	3	-	-	-
63	-	1	1	-	-	-	-	0	0	-	-	-
64	-	0	0	-	-	-	-	1	1	-	-	-
65	-	0	0	-	-	-	-	1	1	-	-	-
66	-	0	0	-	-	-	-	2	2	-	-	-
67	-	0	0	-	-	-	-	-	-	-	-	-
68	-	1	1	-	-	-	-	-	-	-	-	-
Total	3	6	9	12	12	24	17	53	70	5	2	7

Appendix Table 11 (cont'd)

Length (cm)	Tow no.											
	44			46			47			48		
	M	F	T	M	F	T	M	F	T	M	F	T
11	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	2	2	-	-	-	-	-	-
27	-	-	-	4	6	10	-	-	-	-	-	-
28	-	-	-	6	12	18	-	-	-	-	-	-
29	-	-	-	23	17	40	-	-	-	-	-	-
30	-	-	-	31	16	47	-	-	-	-	-	-
31	-	-	-	21	11	32	-	-	-	-	-	-
32	-	-	-	14	16	30	-	-	-	-	-	-
33	-	-	-	11	9	20	-	-	-	-	-	-
34	-	-	-	2	0	2	-	-	-	-	-	-
35	-	-	-	0	2	2	-	-	-	-	-	-
36	-	-	-	0	1	1	-	-	-	1	-	1
37	-	-	-	1	-	1	-	-	-	0	-	0
38	-	-	-	-	-	-	-	-	-	0	-	0
39	-	-	-	-	-	-	-	-	-	0	-	0
40	-	-	-	-	-	-	-	-	-	0	-	0
41	-	-	-	-	-	-	-	-	-	0	-	0
42	-	-	-	-	-	-	-	-	-	0	-	0
43	-	-	-	-	-	-	-	-	-	0	-	0
44	-	-	-	-	-	-	-	-	-	0	-	0
45	-	-	-	-	-	-	-	-	-	0	-	0
46	-	-	-	-	-	-	-	-	-	0	-	0
47	-	-	-	-	-	-	-	-	-	1	-	1
48	-	-	-	-	-	-	-	-	-	0	-	0
49	-	-	-	-	-	-	-	-	-	1	-	0

Appendix Table 11 (cont'd)

Length (cm)	Tow no.											
	44			46			47			48		
	M	F	T	M	F	T	M	F	T	M	F	T
50	-	-	-	-	-	-	-	0	0	2	2	4
51	-	-	-	-	-	-	-	0	0	4	2	6
52	1	-	1	-	-	-	1	0	1	7	5	12
53	3	-	3	-	-	-	2	3	5	7	1	8
54	2	-	2	-	-	-	0	3	3	10	0	10
55	1	-	1	-	-	-	3	0	3	5	4	9
56	2	1	3	-	-	-	1	1	2	4	9	13
57	2	3	5	-	-	-	-	3	3	3	8	11
58	-	4	4	-	-	-	-	2	2	2	4	6
59	-	5	5	-	-	-	-	1	1	-	4	4
60	-	5	5	-	-	-	-	0	0	-	2	2
61	-	4	4	-	-	-	-	1	1	-	2	2
62	-	3	3	-	-	-	-	-	-	-	2	2
63	-	3	3	-	-	-	-	-	-	-	2	2
64	-	1	1	-	-	-	-	-	-	-	0	0
65	-	-	-	-	-	-	-	-	-	-	0	0
66	-	-	-	-	-	-	-	-	-	-	1	1
67	-	-	-	-	-	-	-	-	-	-	-	-
68	-	-	-	-	-	-	-	-	-	-	-	-
Total	11	29	40	113	92	205	7	15	22	46	48	94

Appendix Table 11 (cont'd)

Length (cm)	Tow no.					
	49			50		
	M	F	T	M	F	T
11	-	-	-	-	-	-
12	-	-	-	-	-	-
13	-	-	-	2	-	-
14	-	-	-	-	-	-
15	-	-	-	-	-	-
16	-	-	-	-	-	-
17	-	-	-	-	-	-
18	-	-	-	-	-	-
19	-	-	-	-	-	-
20	-	-	-	-	-	-
21	-	-	-	-	-	-
22	-	-	-	-	-	-
23	-	-	-	-	-	-
24	-	-	-	-	-	-
25	-	-	-	-	-	-
26	-	-	-	-	-	-
27	-	-	-	1	-	1
28	-	-	-	0	-	0
29	-	-	-	0	-	0
30	-	-	-	0	-	0
31	-	-	-	1	-	1
32	-	-	-	2	2	4
33	-	-	-	0	0	0
34	-	-	-	0	0	0
35	-	1	1	1	0	1
36	-	0	0	0	0	0
37	-	0	0	0	0	0
38	-	0	0	0	0	0
39	-	0	0	0	0	0
40	-	0	0	0	0	0
41	-	0	0	0	0	0
42	-	0	0	0	2	2
43	-	0	0	0	0	0
44	1	0	1	0	0	0
45	1	0	1	0	0	0
46	0	0	0	0	0	0
47	0	0	0	0	0	0
48	0	0	0	1	0	1
49	1	0	1	6	0	6

Appendix Table 11 (cont'd)

Length (cm)	Tow no.					
	49			50		
	M	F	T	M	F	T
50	0	1	1	4	0	4
51	0	1	1	2	1	3
52	0	0	0	6	1	7
53	0	0	0	9	5	14
54	0	2	2	5	5	10
55	2	1	3	5	10	15
56	2	2	4	2	6	8
57	0	2	2	3	9	12
58	0	2	2	-	5	5
59	0	1	1	-	6	6
60	1	1	2	-	1	1
61	0	0	0	-	1	1
62	0	0	0	-	0	0
63	0	0	0	-	1	1
64	0	0	0	-	-	-
65	0	1	1	-	-	-
66	-	-	-	-	-	-
67	-	-	-	-	-	-
68	-	-	-	-	-	-
Total	8	15	23	48	55	103

Appendix Table 12. Size composition of ratfish (Hydrolagus colliei) numbers sampled by haul, by sex for MV ARCTIC HARVESTER cruise AH79-1, January 22-February 9, 1979.

(cm)	Tow No.											
	30			42			43					
	M	T	T	M	F	T	M	F	T	TM	TF	GT
35	-	2	2	-	-	-	-	-	-	-	2	2
36	-	1	1	-	-	-	1	1	2	1	2	3
37	-	4	4	-	-	-	0	0	0	0	0	4
38	1	0	1	-	-	-	0	0	0	1	0	1
39	2	0	2	-	-	-	2	1	3	4	1	5
40	0	0	0	-	-	-	2	0	2	2	0	2
41	1	2	3	-	-	-	2	2	4	3	4	7
42	1	0	1	-	-	-	5	2	7	6	2	8
43	1	0	1	-	-	-	1	1	2	2	1	3
44	0	1	1	-	-	-	-	2	2	0	3	3
45	0	0	0	1	1	2	-	0	0	1	1	2
46	0	0	0	0	0	0	-	1	1	0	1	1
47	0	1	1	0	0	0	-	6	6	0	7	7
48	3	1	4	0	0	0	-	3	3	3	4	7
49	4	1	5	0	0	0	-	6	6	4	7	11
50	11	2	13	1	0	1	-	12	12	12	14	26
51	15	2	17	2	1	3	-	18	18	17	21	38
52	7	2	9	4	0	4	-	12	12	11	14	25
53	6	3	9	5	3	8	-	3	3	11	9	20
54	8	0	8	1	0	1	-	1	1	9	1	10
55	1	5	6	0	1	1	-	2	2	1	8	9
56	2	4	6	1	0	1	-	2	2	3	6	9
57	0	1	1	1	0	1	-	1	1	1	2	3
58	0	0	0	0	0	0	-	-	-	0	0	0
59	0	3	3	2	3	5	-	-	-	2	6	8
60	0	10	10	0	0	0	-	-	-	0	10	10
61	0	3	3	0	5	5	-	-	-	0	8	8
62	1	4	5	0	2	2	-	-	-	1	6	7
63	-	6	6	0	4	4	-	-	-	0	10	10
64	-	1	1	1	11	12	-	-	-	1	12	13
65	-	1	1	-	9	9	-	-	-	0	10	10
66	-	1	1	-	4	4	-	-	-	0	5	5
67	-	1	1	-	-	-	-	-	-	0	1	1
68	-	-	-	-	0	0	-	-	-	0	0	0
69	-	-	-	-	1	1	-	-	-	0	1	1
Total	64	62	126	19	45	64	13	76	89	96	183	279

Note: Tows number 30 and 42, the total length of fish was measured. On tow number 43, the fish were measured to the base of the third dorsal fin (caudal insertion).

Appendix Table 13. Size composition of turbot. (*Atheresthes stomias*) numbers sampled by haul, by sex for MV ARCTIC HARVESTER cruise AH79-1, January 22-February 9, 1979.

Fork Length (cm)	Tow No.											
	32			42			44			GTM	GTF	GT
	M	F	T	M	F	T	M	F	T			
17	-	1	1	-	-	-	-	-	-	-	1	1
18	-	0	0	-	-	-	-	-	-	-	0	0
19	-	1	1	-	-	-	-	-	-	-	1	1
20	-	1	1	-	-	-	-	-	-	-	1	1
21	-	0	0	-	-	-	-	-	-	-	0	0
22	-	0	0	-	1	1	-	-	-	-	1	1
23	-	0	0	-	0	0	-	-	-	-	0	0
24	-	0	0	-	0	0	1	1	2	1	1	2
25	-	1	1	-	0	0	0	0	0	0	1	1
26	-	0	0	-	0	0	0	1	1	0	1	1
27	-	1	1	-	0	0	0	0	0	0	1	1
28	-	0	0	-	0	0	0	0	0	0	0	0
29	-	0	0	-	0	0	0	0	0	0	0	0
30	-	1	1	-	0	0	3	1	4	3	2	5
31	2	1	3	1	0	1	2	3	5	5	4	9
32	0	0	0	-	1	1	6	2	8	6	3	9
33	1	0	1	-	2	2	2	4	6	3	6	9
34	0	3	3	-	0	0	2	3	5	2	6	8
35	0	2	2	-	1	1	2	5	7	2	8	10
36	0	4	4	-	0	0	2	4	6	2	8	10
37	1	1	2	-	0	0	1	6	7	2	7	9
38	-	0	0	-	0	0	2	5	7	2	5	7
39	-	2	2	-	0	0	0	3	3	0	5	5
40	-	0	0	-	0	0	0	5	5	0	5	5
41	-	1	1	-	0	0	0	3	3	0	4	4
42	-	0	0	-	0	0	0	6	6	0	6	6
43	-	1	1	-	0	0	1	5	6	1	6	7
44	-	0	0	-	0	0	-	2	2	-	2	2
45	-	0	0	-	2	2	-	4	4	-	6	6
46	-	0	0	-	0	0	-	7	7	-	7	7
47	-	0	0	-	1	1	-	6	6	-	7	7
48	-	3	3	-	0	0	-	9	9	-	12	12
49	-	4	4	-	3	3	-	6	6	-	13	13
50	-	3	3	-	3	3	-	3	3	-	9	9
51	-	1	1	-	5	5	-	2	2	-	8	8
52	-	2	2	-	1	1	-	1	1	-	4	4
53	-	4	4	-	2	2	-	2	2	-	8	8
54	-	2	2	-	3	3	-	2	2	-	7	7
55	-	3	3	-	1	1	-	2	2	-	6	6
56	-	3	3	-	2	2	-	0	0	-	5	5

Appendix Table 13 (cont'd)

Fork Length (cm)	Tow No.											
	32			42			44			GTM	GTF	GT
	M	F	T	M	F	T	M	F	T			
57	-	5	5	-	2	2	-	2	2	-	9	9
58	-	5	5	-	2	2	-	0	0	-	7	7
59	-	4	4	-	2	2	-	0	0	-	6	6
60	-	5	5	-	0	0	-	0	0	-	5	5
61	-	4	4	-	0	0	-	0	0	-	4	4
62	-	1	1	-	1	1	-	1	1	-	3	3
63	-	1	1	-	0	0	-	0	0	-	1	1
64	-	1	1	-	1	1	-	0	0	-	2	2
65	-	1	1	-	0	0	-	2	2	-	3	3
66	-	2	2	-	0	0	-	-	-	-	2	2
67	-	-	-	-	0	0	-	-	-	-	0	0
68	-	-	-	-	0	0	-	-	-	-	0	0
69	-	-	-	-	2	2	-	-	-	-	2	2
70	-	-	-	-	2	2	-	-	-	-	2	2
71	-	-	-	-	0	0	-	-	-	-	0	0
72	-	-	-	-	1	1	-	-	-	-	1	1
73	-	-	-	-	0	0	-	-	-	-	0	0
74	-	-	-	-	0	0	-	-	-	-	0	0
75	-	-	-	-	1	1	-	-	-	-	1	1
76	-	-	-	-	0	0	-	-	-	-	0	0
77	-	-	-	-	0	0	-	-	-	-	0	0
78	-	-	-	-	0	0	-	-	-	-	0	0
79	-	-	-	-	0	0	-	-	-	-	0	0
80	-	-	-	-	1	1	-	-	-	-	1	1
Total	4	75	79	1	43	44	24	108	132	29	226	255

Appendix Table 14. Size composition of Pacific ocean perch (Sebastes alutus) numbers sampled, by haul, by sex for MV ARCTIC HARVESTER cruise AH 79-1, January 22-February 9, 1979.

(cm)	Tow No.											
	28			38			39			GTM	GTF	GT
	M	F	T	M	F	T	M	F	T			
37	1	-	1	-	-	-	-	-	-	1	-	1
38	1	-	1	-	-	-	1	-	1	2	-	2
39	1	-	1	-	-	-	0	-	0	1	-	1
40	7	1	8	1	-	1	3	-	3	11	1	12
41	6	-	6	1	-	1	4	-	4	11	-	11
42	6	-	6	6	-	6	2	-	2	14	-	14
43	1	-	1	1	-	1	2	-	2	4	-	4
44	1	-	1	-	-	-	2	-	2	3	-	3
45	-	-	-	-	-	-	0	-	0	0	-	0
46	-	-	-	-	-	-	0	-	0	0	-	0
47	-	-	-	-	-	-	1	-	1	1	-	1
Total	24	1	25	9	0	9	15	0	15	48	1	49

Appendix Table 15. Size composition of red-banded rockfish, (Sebastodes babcocki) numbers sampled by haul, by sex, for MV ARCTIC HARVESTER cruise AH79-1, January 22-February 9, 1979.

Fork Length (cm)	Tow No.																	
	25			27			38			39			43			GTM	GTF	GT
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T			
35	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	1	1
36	-	-	-	-	-	-	1	1	-	-	-	-	0	0	-	-	1	1
37	-	-	-	-	-	-	1	1	-	-	-	-	0	0	-	-	1	1
38	-	-	-	-	-	-	0	0	-	-	-	-	0	0	-	0	0	0
39	1	-	1	-	-	-	0	0	-	-	-	-	0	0	-	1	0	1
40	0	-	0	-	-	-	0	0	1	-	-	1	2	2	1	2	3	
41	0	1	1	-	-	-	1	2	3	0	-	0	1	1	1	4	5	
42	3	0	3	-	-	-	1	1	2	1	1	2	-	1	1	5	3	8
43	0	0	0	-	1	1	2	1	3	5	0	5	2	3	5	9	5	14
44	3	1	4	-	0	0	1	0	1	1	0	1	4	0	4	9	9	10
45	3	0	3	1	0	1	3	3	6	7	1	8	2	0	2	16	4	20
46	2	0	2	0	0	0	0	0	0	8	0	8	2	3	5	12	3	15
47	0	1	1	0	0	0	0	5	5	7	0	7	4	0	4	11	6	17
48	0	2	2	3	0	3	1	4	5	4	1	5	4	0	4	12	7	19
49	1	1	2	0	1	1	0	3	3	3	1	4	2	1	3	6	7	13
50	1	-	1	0	0	0	1	6	7	4	1	5	3	1	4	9	8	17
51	0	-	0	1	0	1	2	0	2	3	0	3	-	0	0	6	0	6
52	1	-	1	-	0	0	2	2	4	-	3	3	-	1	1	3	6	9
53	-	-	-	-	0	0	1	1	2	-	1	1	-	-	-	1	2	3
54	-	-	-	-	1	1	0	0	0	-	0	0	-	-	-	0	1	1
55	-	-	-	-	1	1	0	1	1	-	0	0	-	-	-	0	2	2
56	-	-	-	-	1	1	1	1	2	-	1	1	-	-	-	1	3	4
57	-	-	-	-	-	-	-	2	2	-	0	0	-	-	-	-	2	2
58	-	-	-	-	-	-	-	-	-	0	0	0	-	-	-	-	0	0
59	-	-	-	-	-	-	-	-	-	0	0	0	-	-	-	-	0	0
60	-	-	-	-	-	-	-	-	-	0	0	-	-	-	-	0	0	0
61	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	1	1	1
Total	15	6	21	5	5	10	16	34	50	44	11	55	23	14	37	103	70	173

Appendix Table 16. Size composition of yellowtail rockfish (*Sebastodes flavidus*) numbers sampled by haul, by sex for MV ARCTIC HARVESTER cruise AH79-1, January 22-February 9, 1979.

Length	Tow No.																							
	5			6			9			10			13			18			20					
	Sex																							
Length	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	-	-	-	0	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	1	-	1	0	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	1	-	1	1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	2	-	2	2	0	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1
40	1	1	2	3	1	4	-	-	-	-	-	-	4	-	4	1	-	1	2	-	2	-	-	-
41	0	2	2	5	2	7	-	-	-	2	1	3	2	1	3	1	-	1	5	3	8	-	-	-
42	7	2	9	13	0	13	-	-	-	1	2	3	2	0	2	1	-	1	5	2	7	-	-	-
43	4	4	8	11	6	17	1	-	1	2	0	2	4	1	5	1	-	1	6	3	9	-	-	-
44	5	1	6	11	4	15	0	-	0	3	1	4	8	1	9	3	1	4	14	3	17	-	-	-
45	9	0	9	17	1	18	2	-	2	6	2	8	5	1	6	1	0	1	16	5	21	-	-	-
46	8	1	9	28	2	30	1	-	1	1	2	13	16	3	19	0	0	0	15	3	18	-	-	-
47	10	0	10	28	4	32	1	-	1	5	0	5	16	0	16	2	0	2	15	9	24	-	-	-
48	4	3	7	15	0	15	1	-	1	5	0	5	15	2	17	1	2	3	12	8	20	-	-	-
49	2	1	3	14	0	14	0	-	0	9	1	10	8	1	9	0	0	0	2	16	18	-	-	-
50	2	2	4	5	2	7	0	-	0	2	1	3	5	1	6	3	1	4	3	13	16	-	-	-
51	-	1	1	0	0	0	3	3	-	0	0	3	1	4	0	1	1	2	15	17	-	-	-	
52	-	1	1	2	2	4	0	0	0	-	0	0	0	3	3	0	2	2	0	5	5	-	-	-
53	-	-	-	1	1	0	0	0	-	0	0	0	0	0	0	0	2	2	1	7	8	-	-	-
54	-	-	-	-	-	-	0	2	2	-	1	1	0	0	0	-	-	-	-	1	1	-	-	-
55	-	-	-	-	-	-	1	-	1	-	-	-	1	1	2	-	-	-	-	0	0	-	-	-

Appendix Table 16 (cont'd)

		Tow No.																																									
		5						6						9						10						13						18						20					
		Sex																																									
Length		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T																		
56	-	-	-	-	-	-	-	0	-	0	-	-	-	-	-	-	-	-	-	-	2	2																					
57	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-																					
Total	56	19	75	156	26	182	8	5	13	46	11	57	89	16	105	14	9	23	99	95	194																						

Appendix Table 16 (cont'd)

Length	Tow No.														
	33			34			37			44			Sex		
	M	F	T	M	F	T	M	F	T	M	F	T	TM	TF	GT
33	1	-	1	-	-	-	-	-	-	-	-	-	1	0	1
34	0	-	0	-	-	-	-	-	-	-	-	-	0	0	0
35	1	-	1	-	-	-	-	-	-	-	-	-	2	0	2
36	1	-	1	-	-	-	-	-	-	-	-	-	1	0	1
37	5	2	7	1	-	1	1	-	1	-	-	-	8	2	10
38	9	6	15	2	1	3	2	2	4	-	-	-	15	10	25
39	12	6	18	2	1	3	1	2	3	-	-	-	20	9	29
40	25	14	39	11	2	13	15	7	22	-	-	-	62	25	87
41	29	12	41	4	0	4	11	11	22	1	-	1	60	32	92
42	17	19	36	6	3	9	14	17	31	2	-	2	68	45	113
43	11	11	22	7	6	13	4	17	21	5	1	6	56	49	105
44	5	3	8	11	7	18	7	16	23	5	0	5	72	37	109
45	0	5	5	15	3	18	5	5	10	3	0	3	79	22	101
46	4	0	4	25	3	28	8	5	13	7	1	8	123	20	143
47	0	0	0	24	4	33	2	2	4	3	0	3	111	19	130
48	2	1	3	12	3	15	7	4	11	9	0	9	83	23	106
49	1	-	1	6	2	8	1	3	4	4	1	5	47	25	72

Appendix Table 16 (cont'd)

Length	Tow No.												Sex		
	33			34			37			44					
	M	F	T	M	F	T	M	F	T	M	F	T	TM	TF	GT
49	1	-	1	6	2	8	1	3	4	4	1	5	47	25	72
50	-	-	-	5	2	7	-	0	0	4	0	4	29	22	51
51	-	-	-	1	1	2	-	1	1	-	2	2	6	25	31
52	-	-	-	1	1	2	-	-	-	-	-	-	3	14	17
53	-	-	-	1	1	2	-	-	-	-	-	-	2	11	13
54	-	-	-	-	-	-	-	-	-	-	-	-	0	4	4
55	-	-	-	-	-	-	-	-	-	-	-	-	2	1	3
56	-	-	-	-	-	-	-	-	-	-	-	-	0	2	2
57	-	-	-	-	-	-	-	-	-	-	-	-	1	0	1
Total	123	79	202	139	40	179	78	92	170	43	5	48	851	397	1248

Appendix Table 17. Size composition of bocaccio (Sebastes paucispinis) numbers sampled by haul by sex for MV ARCTIC HARVESTER cruise AH 79-1 January 22-February 9, 1979.

Fork Length (cm)	Sex	Tow No.		
		M	F	T
59		1	-	1
60		0	-	0
61		0	-	0
62		0	-	0
63		1	-	1
64		2	-	2
65		0	-	0
66		0	-	0
67		1	-	1
68		0	-	0
69		1	-	1
70		0	-	0
71		0	-	0
72		0	-	0
73		0	-	0
74		0	-	0
75		0	-	0
76		0	-	0
77		0	-	0
78		0	-	0
79		1	-	1
Total		7	0	7

Appendix Table 18. Vertical temperature determinations (C) from MV ARCTIC HARVESTER cruise AH79-1 Dixon Entrance, January 22-February 9, 1979.

Depth (m)	Tow No.											
	1	2	3	4	5	6	7**	8	9	10	11	12
0	4.5	5.0	x	x	5.4	5.3	5.2	5.3	5.3	5.1	5.3*	5.5
10	4.5	5.0			5.4	5.3	5.2	5.3	5.3	5.1		5.5
20	4.5	5.0			5.4	5.3	5.2	5.3	5.3	5.1		5.5
30	4.5	5.1			5.4	5.3	5.3	5.3	5.6	5.1		5.5
40	4.5	5.3			5.4	5.3	5.3	5.5	5.9	5.2		5.5
50	4.5	5.5			5.4	5.3	5.3	5.7	6.0	5.3		5.5
60	5.2	5.5			5.4	5.3	5.3	6.2	6.1	5.5		5.5
70	5.5	5.7			5.4	5.3	5.5	6.2	6.2	5.8		5.5
80	5.6	6.0			5.4	5.5	5.7	6.3	6.2	5.9		5.6
90	5.6	6.0			5.5	5.8	6.3	6.3	6.2	6.0		5.6
100	5.7	6.0			5.5	5.9	6.7	6.5	6.2	6.0		5.6
110		6.0			6.0	6.0		6.6	6.2	6.0		5.7
120						6.2		6.7	6.2	6.1		5.8
130						6.2		6.8	6.2	6.1		5.8
140						6.2			6.2			5.9
150						6.2			6.2			6.0
160						6.2			6.1			
170									6.1			
180												
190												
200												
210												
220												
230												
240												
250												

x - No record--similar locale to tow 1 and 2.

* - Ground out. Some data salvaged.
** - Artifact?

Appendix Table 18 (cont'd)

Depth (m)	Tow No.											
	13**	14	15	16	17	18**	19	20**	21*	22	23	24
0	5.2	x	5.3	x	5.3	5.1	x	5.5	5.1	5.0	5.0	x
10	5.1		5.2		5.3	5.1		5.2		5.0	5.0	
20	5.1		5.2		5.4	5.1		5.2		5.3	5.3	
30	5.2		5.3		5.4	5.1		5.3		5.7	5.3	
40	5.3		5.3		5.3	5.1		5.4		6.1	5.5	
50	5.5		5.4		5.3	5.4		5.4		6.1	5.6	
60	5.7		5.3		5.5	6.5		5.5			5.7	
70	5.8		5.5		5.7	6.9		5.9			5.7	
80	5.8		5.6		5.7	7.3		6.3			5.7	
90	5.8		5.7		5.8	7.4		6.6			5.7	
100	6.2		5.7		5.8	7.8		7.0			5.9	
110			5.8		5.8	7.9		8.0			6.0	
120			5.8		5.9	8.0		8.0			6.0	
130			5.9		6.0	8.0		8.0			6.0	
140			6.0		6.0	8.1		8.0			6.1	
150			6.0		6.0	8.2		8.0				
160			6.0		5.9	8.3		7.8				
170			6.0		5.9	8.2		7.8				
180			6.0		5.9	8.1		7.9				
190						8.1						
200												
210												
220												
230												
240												
250												

x - No record.

* - Ground out. Some data salvaged.

** - Artifact?

Appendix Table 18 (cont'd)

Depth (m)	Tow No.											
	25	26	27	28	29	30	31	32	33	34	35	36
0	4.7	5.2	5.0	5.6	5.7	4.8	x	4.9	4.7	5.2	5.4	5.5
10	4.6	5.2	5.0	5.6	5.7	5.3		4.9	4.7	5.2	5.5	5.5
20	4.6	5.3	5.2	5.6	5.7	5.0		5.0	4.7	5.3	5.5	5.5
30	4.7	5.5	5.4	5.6	5.9	5.3		5.0	4.7	5.0	5.6	5.5
40	4.7	5.3	5.6	5.6	6.0	5.6		5.0	4.7	5.4	5.6	5.7
50	4.8	5.4	5.7	5.5	6.0	6.0		5.0	5.0	5.6		5.8
60	5.0	6.0	5.8	5.4	6.0	5.8		5.1	5.2	5.7		5.8
70	5.7	6.2	5.8	5.3	6.0	5.8		5.5	5.3	5.8		6.0
80	5.8	6.2	5.9	5.1	6.0	5.8		5.7	5.4	6.0		6.0
90	6.3	6.2	6.0	5.1	6.2	5.4		5.8	5.5	6.1		6.0
100	6.4	6.2	6.0			5.4				6.1		6.1
110	6.3	6.2	6.0									6.1
120	6.3	6.2	6.0									
130	6.3	6.2	6.0									
140	6.3	6.2	6.0									
150	6.3	6.2	6.0									
160	6.3		6.0									
170	6.3		6.0									
180	6.3		6.0									
190	6.2		6.0									
200	6.2		6.0									
210	6.2											
220												
230												
240												
250												

x - No record.

Appendix Table 18 (cont'd)

Depth (m)	Tow No.										
	37	38*	39*	40*	41	42	43	44	45	46	47
0	5.5	5.2	5.5	5.7	5.5	6.0	5.2	5.3	5.3	5.25	5.2
10	5.4	5.2	5.2	5.7	5.5	5.4	5.2	5.2	5.3	5.25	5.2
20	5.4		5.2		5.5	5.4	5.2	5.2	5.2	5.25	5.2
30	5.4		5.2		5.6	5.4	5.3	5.3	5.2	5.25	5.2
40	5.4		5.2		5.6	5.4	5.3	5.3	5.2	5.25	5.3
50	5.7		5.5		5.7	5.4	5.3	5.3	5.2	5.25	5.3
60	5.8				5.8	5.5	5.3	5.3	5.2	5.25	5.5
70	5.9				5.9	5.5	5.3	5.3	5.5	5.25	5.7
80	6.0				6.0	5.5	5.3	5.3		5.25	5.8
90	6.1				6.1	5.5	5.4	5.7		5.25	5.9
100	6.1				6.2	5.5	5.7	5.8			5.9
110	6.1				6.3	5.5	5.8	5.8			5.9
120	6.1				6.3	5.6	5.9	5.8			5.9
130	6.1				6.3	5.7	6.0				5.9
140						6.0	6.0				5.9
150							6.0				5.9
160							6.0				5.9
170							6.0				5.9
180							6.0				5.9
190											5.9
200											5.8
210											5.8
220											5.8
230											5.8
240											5.8
250											5.8
260											5.7
270											5.7

Tows 49 & 50 - No record--similar locale to tow 43.

* - Ground out. Some data salvaged.

Appendix Table 18 (cont'd)

Depth (m)	Tow No.	
	48	51
0	5.3	5.7
10	5.4	5.7
20	5.4	6.0
30	5.4	6.1
40	5.7	6.0
50	6.0	6.0
60	6.1	6.0
70	6.1	
80	6.2	
90	6.2	
100	6.3	
110	6.3	
120	6.3	
130	6.3	
140	6.3	
150	6.2	
160	6.2	
170	6.2	
180	6.2	
190	6.1	
200	6.1	
210	6.1	
220	6.1	
230	6.1	
240	6.1	
250	6.0	
260	6.0	
270	6.0	
280	6.1	
290	6.1	

Appendix Table 18 (cont'd)

Depth (m)	Tow No.	
	48	51
300	6.1	
310	6.1	
320	6.1	
330	6.1	
340		

Tows 49 and 50 - no record--similar locale
to Tow 43.

Appendix Table 19. Temperature corresponding to tow data by general area in Dixon Entrance, AH79-1 January 22-February 9, 1979.

General Area	Tow Number	Bottom Depth (M)	School Depth	T°C at School Depth	T°C at Surface	T°C at Bottom	Comments
Butterworth	1	107	68- 82	5.2-5.6	4.5	5.7	Schools at thermocline
	2	109	86-104	6.0	5.0	6.0	Below thermocline
	28	102	86- 93	5.1	5.6	5.1	Fish just below thermocline
	29	106	84-104	6.0-6.2	5.7	6.2	Fish below thermocline
	30	104	104	5.4	4.8	5.4	Bottom tow
	31	123	123	-	-	-	No temp. data
	32	91	91	5.8	4.9	5.8	Bottom tow
	45	70	70	5.5	5.3	5.5	Bottom tow
	46	80	45- 64	5.3	5.3	5.3	No fish
Two Peaks	5	122	64- 82	5.4	5.4	6.0	No thermocline
	6	134	100-120	5.9-6.2	5.3	6.2	School in and below thermocline
	10	114	55- 73	5.3-5.9	5.1	6.1	In thermocline
	11	144	64- 82	-	-	-	-
	12	122	110-126	5.7-5.8	5.5	6.0	In thermocline
	23	145	126-145	6.0-6.1	5.0	6.1	Well below thermocline
	25	226	200-256	6.2	4.7	6.2	Few fish
	26	171	64- 82	6.0-6.2	5.2	6.2	Fish just below thermocline
	27	201	192-200	6.0	5.0	6.0	Fish well below thermocline
	33	91	91	5.5	4.7	5.5	Bottom tow
	34	105	105	6.1	5.2	6.1	Bottom tow
	43	182	182	6.0	5.2	6.0	Bottom tow
	44	137	137	5.8	5.3	5.8	Bottom tow
	47	282	241-260	5.8-5.7	5.2	5.7	Set on nothing
Rose Spit McIntyre Bay	7	101	95-105	6.3-6.7	5.2	6.7	No fish
	8	132	122-128	6.6-6.7	5.3	6.8	No fish
	9	158	91-100	6.2	5.3	6.1	Well below thermocline
	22	68	24- 36	5.3-6.1	5.0	6.1	Herring in thermocline
	35	36	36	5.6	5.4	5.6	Bottom tow
	36	93	93	6.1	5.5	6.1	Bottom tow
	37	132	132	6.1	5.5	6.1	Bottom tow
	38	185	185	-	5.2	-	Bottom tow no data
	39	219	219	-	5.5	-	Bottom tow no data
	41	122	-	-	5.5	6.3	Gear short cabled
	42	145	145	6.0	6.0	6.0	

Appendix Table 19 (cont'd)

General Area	Tow Number	Bottom Depth (M)	School Depth	T°C at School at Depth	T°C at Surface	T°C at Bottom	Comments
Off Zayas and Celestial Reef	13	119	55- 73	5.5-5.8	5.2	6.5	1st layer in thermocline
	13	119	100-120	6.2-6.5	5.2	6.5	2nd layer fish near bottom
	14	144	90-146	5.7-6.0	5.3	6.0	Data from tow 15
	15	174	91-110	5.7-5.8	5.3	6.0	Fish below thermocline
	16	141	131-139	5.9-6.0	5.3	6.0	Fish well below thermocline
	17	163	110-130	5.8-6.0	5.3	5.9	Well below thermocline
	48	340	270-331	6.0-6.1	5.3	6.1	No fish below thermocline
Cape Chacon	18	184	175-200	8.2-8.1	5.1	8.1	Few fish and plankton below thermocline
	19	252	228-240	-	-	-	No temperature data
	20	154	133-137	8.0-8.1	5.5	7.9	Fish well below thermocline
Porcher Island	51	68	59	6.0	5.7	6.0	No fish

Appendix Table 20. Summary of mean surface and bottom temperatures by area in Dixon Entrance
AH79-1, January 22-February 9, 1979.

Area	Surface Temp. Range (°C)	Mean	Bottom Temperature (°C)	Mean	Number of Observations	
					Surface	Bottom
Butterworth	4.5 - 5.7	5.1	5.1 - 6.2	5.6	8	8
Two Peaks	4.7 - 5.5	5.1	5.5 - 6.2	6.0	13	13
Rose Spit	5.0 - 6.0	5.4	5.6 - 6.8	6.2	12	9
Off Zayas	5.2 - 5.3	5.3	5.9 - 6.1	6.1	6	6
Cape Chacon	5.1 - 5.5	5.2	7.9 - 8.1	8.0	3	2
Porcher Island	5.7	5.7	6.0	6.0	1	1

