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## R/V *W. E. RICKER* Assemblage Survey of Hecate Strait, May 17-June 3, 1993

C. M. Hand, B. D. Robison, J. Fargo, G. D. Workman,  
and M. Stocker

Biological Sciences Branch  
Department of Fisheries and Oceans  
Pacific Biological Station  
Nanaimo, British Columbia V9R 5K6



1994

## Canadian Data Report of Fisheries and Aquatic Sciences 925



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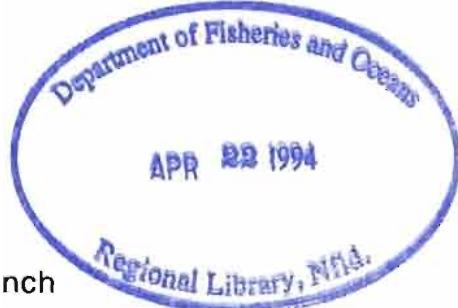
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R/V W.E. RICKER ASSEMBLAGE SURVEY OF HECATE STRAIT,  
MAY 17 - JUNE 3, 1993

by

C. M. Hand, B. D. Robison, J. Fargo, G. D. Workman, and M. Stocker



Biological Sciences Branch  
Department of Fisheries and Oceans  
Pacific Biological Station  
Nanaimo, British Columbia V9R 5K6



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## ABSTRACT

Hand, C. M., B. D. Robison, J. Fargo, G. D. Workman, and M. Stocker. 1994. R/V W.E. RICKER assemblage survey of Hecate Strait, May 17 - June 3, 1993. Can. Data Rep. Fish. Aquat. Sci. 925: 197 p.

During the period May 17 to June 3, 1993, a trawl survey of groundfish species occupying the shelf area (10-80 fath; 18-146 m) of Hecate Strait was conducted using the R/V W.E. RICKER. Previous surveys of this nature have been conducted in May-June 1984, February 1986, May-June 1987, May-June 1989, and June 1991. The purpose of these surveys is to collect catch composition data to be used for classifying demersal fish assemblages and to relate the distributions of these assemblages to oceanographic variables. This information will be used to develop an ecological basis for mixed-species stock assessment for the region. These surveys also provide abundance indices for individual species and are a source of information on recruitment. A total of 98 hauls were completed in 89 unique block/depth strata, of which 94 were usable. This report contains summaries of the bridge log data, biological data and temperature and salinity profiles from each tow location in Hecate Strait. Biological data includes total weights and numbers for each species caught, as well as length frequencies for each species by haul.

## RESUME

Hand, C. M., B. D. Robison, J. Fargo, G. D. Workman, and M. Stocker. 1994.  
R/V *W.E. RICKER* assemblage survey of Hecate Strait, May 17 - June 3,  
1993. Can. Data Rep. Fish. Aquat. Sci. 925: 197 p.

Entre le 17 mai et le 3 juin 1993, une étude au chalut des espèces de fond occupant la plate-forme continentale (10 - 80 fath.; 18 - 146 m) du détroit de Hecate a été menée avec le navire de recherches océanographiques *W. E. RICKER*. D'autres études semblables avaient été faites aux mois de mai et juin 1984, en février 1986, aux mois de mai et juin 1987 et 1989 et en juin 1991. L'objet de ces études est de recueillir des données sur la composition des prises afin de classifier les assemblages hétérogènes de poissons démersaux et de déterminer la relation entre la répartition de ces assemblages et les variables océanographiques. Cette information permettra d'élaborer un cadre écologique pour l'étude des populations hétérogènes de la région. Ces études nous permettent d'avoir une indication des taux d'abondances de certaines espèces et elles sont une bonne source d'information sur le "recrutement". Au total, 98 relevages de filet, dont 94 furent utilisables, ont été effectués dans 89 strates de profondeur. Ce compte-rendu contient les principales données du journal de passerelle et les données biologiques, les données de température et les profils de salinité pour chaque opération de relevage. Les données biologiques comprennent les poids totaux et les chiffres pour chaque espèce capturée, de même que les fréquences de taille (longueur) selon les espèces et les relevages.

## INTRODUCTION

This survey was carried out as part of the Pacific Biological Station's Hecate Strait Program. Our purpose was to develop an ecological basis for mixed-species stock assessment, by using species catch composition data from several surveys to map the distribution of demersal fish assemblages in Hecate Strait. Water temperature and salinity data were collected at each haul location to incorporate oceanographic variables into the assemblage distribution framework. A secondary objective of these surveys was to provide fisheries-independent indices of relative abundance for single-species stock assessments in Hecate Strait. These surveys may also provide early indications of recruitment strength for single species.

This was the sixth in a series of groundfish assemblage surveys that have been conducted in Hecate Strait over the past ten years, since 1984. Surveys have been carried out in both summer and winter, to examine inter-seasonal as well as inter-annual variability within assemblages. Catch rate variability at identical sites has also been examined. The first two surveys were conducted as joint operations with a chartered fishing vessel and a fisheries research vessel (Fargo et al. 1984, Westrheim et al. 1984, Fargo and Davenport 1986 and Foucher et al. 1988). The third and fourth surveys were conducted by a single, chartered fishing vessel (Fargo et al. 1988 and Antonsen et al. 1990). The fifth (Wilson et al. 1991) and present surveys employed the use of a Fisheries research vessel.

## METHODS AND MATERIALS

### FISHING VESSEL

The R/V W.E. RICKER, a 57.3 m (overall length) steel stern trawler, was used for the survey. The vessel is equipped with a stern ramp, three net drums and two main winches with 1.5" warps. A separate winch and platform were used for oceanographic work.

## FISHING GEAR

The gear consisted of a Yankee 36 trawl net (Fig. 1) connected to the vessel's 900 kg (2000 lb) steel doors. A conventional groundline consisting of 16.3-cm rubber discs was used. The headrope of the net contained 24 15.2-cm round plastic floats. The net had 9.0-cm mesh in the wings and body and 2.5-cm mesh in the codend.

## SURVEY DESIGN

Locations for trawling sites on the survey were assigned over a grid of 10x10 nm (18.5 km) blocks over a depth range of 10-80 fathoms (18-146 m), where each 10 fathom depth interval within a block was considered a potential sampling stratum. Blocks were labelled A to L from north to south and 1 to 5 from west to east (Fig. 2). The selection of the specific fishing location was made by the fishing master who searched the target stratum for suitable bottom and decided whether a set could be made. A total of 98 trawl hauls were made within seven depth strata and 33 blocks for a total of 89 unique trawl locations. Haul duration was generally 20 minutes. Replicate tows were made in four block/depth strata, the location of which were determined mid-survey, according to the method described by Francis (1984). These replicates were intended to reduce the error in abundance estimates by increasing the sample size in depth strata where there was high variability in catch rates.

## CATCH PROCESSING

Once on board, the catch from each trawl haul was dumped into a large hopper below deck. Fish were then released onto a conveyor belt, sorted by species into plastic tubs (ca. 50 kg capacity), and weighed to the nearest kilogram using a platform deck balance. The total weight for each species was equal to the sum of the individual tub weights for that species. In cases where halibut weights were not obtained, approximate weights were determined using the following weight-length relationship (Stanley 1984):

$$W = (9.2043 \times 10^{-6}) L^{3.24}$$

where       $W$  = weight (lb)    (weights were converted to kilograms)  
               $L$  = length (cm).

Length-frequencies were taken from all fish caught, except when there were large catches of individual species. In these cases and if specimens were large (mode greater than 32 cm), subsampling was done according to Westrheim (1967). For small specimens, such as juvenile flatfish, subsampling continued until a smooth length-frequency was

obtained. Estimates for the total number of fish caught in such cases were derived using the following equation:

$$n = Nw/W$$

where       $n$  = total number of a given species caught,  
 $N$  = number of a given species measured,  
 $w$  = total weight of a given species caught, and  
 $W$  = weight of a given species measured.

Species were measured for fork length or total length, except ratfish which were measured to the posterior edge of the third dorsal fin (Foucher et al. 1988). For dogfish, sex was also recorded, based on external characteristics.

#### ADDITIONAL BIOLOGICAL DATA

Personnel from the Aquaculture Division's Fishery Impacts Program examined the survivability of bycatch and discard species of the commercial trawl fishery. Pacific halibut, petrale sole, and lingcod were the target species of this study. Several blood chemistry parameters were examined to determine their suitability as indicators of stress. The results of these studies will be reported elsewhere.

#### OCEANOGRAPHIC DATA

During the course of the survey, a portable STD-12 probe (Applied Microsystems Ltd.) was cast at each trawl station. Temperature and salinity were recorded by the probe at 1.0 m depth intervals.

#### RESULTS

#### TRAWLING SCHEME

We completed a total of 98 hauls, of which 94 were deemed "usable". Haul numbers 8, 22, 63, and 70 were not usable because the net snagged on rocky bottom. Two

replicate hauls were performed at three stations (H301, I405, J502) and three replicate hauls were performed at one station (I302). A summary of hauls by block and depth strata is presented (Table 1).

#### SPECIES CAUGHT

The total catch from usable hauls was 35,440 kg, comprising 57 species. An index to common and scientific names of each species is contained in Table 2. We have revised the common and scientific names of several species used in reports from previous surveys. These changes reflect the nomenclature recommended by Gillespie (1993). Specific changes are noted in the footnotes of Table 2. Total weights of fish caught, and weight and number of fish sampled for length, by species, is shown in Table 3. The three principal species by weight, comprising 44.8% of the total catch, were english sole (24.4%), arrowtooth flounder (11.7%), and dover sole (8.7%). The three principal species by numbers, comprising 78.4% of the total catch were english sole (41.0%), rex sole (21.3%), and dover sole (16.1%). Detailed records of all the trawl hauls and catch weights by species are presented in Appendix Table 1.

#### LENGTH FREQUENCIES

Lengths were recorded to the nearest cm for 56,259 specimens in 94 hauls. Appendix Tables 2-43 contain length-frequency records, by haul, for each species measured. An index to these records is included in Table 3. Catch subsampling occurred for one or more species in 48 hauls (Table 4).

#### TEMPERATURE AND SALINITY DATA

Temperature and salinity profiles for each haul location are shown in Figure 3. Temperatures ranged from 9.26° C to 12.03° C at the surface and from 6.48° C to 10.77° C on the bottom.

## PERSONNEL

M. Stocker	(i/c, May 17-24)	Pacific Biological Station	May 17 - 24
J. Fargo	(i/c, May 25-June 3)	"	May 17 - June 3
C. M. Hand		"	May 17 - June 3
G. D. Workman		"	May 17 - June 3
B. D. Robison		"	May 17 - June 3
D. McCorquodale		"	May 26 - June 3
J. Blackburn		"	May 17 - 24
H. Kreiberg		"	May 17 - 24

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Table 1. Inventory of hauls, by block and depth strata<sup>1</sup>, completed by the R/V W.E. RICKER, May 17-June 3, 1993.

Block-strata	Haul Number	Block-strata	Haul Number	Block-strata	Haul Number
A206	58	E402	83	I402	13
A207	57	E405	82	I403	91
A303	60	E407	85	I404	27
A304	61	E505	84	I405	11, 14
A306	59	F201	35	I407	28
B103	48	F302	43	I506	15
B105	51	F303	44	I507	16
B106	49	F402	87	J202	22, 93
B107	50	F403	45	J204	23
B202	56	F404	46	J207	24
B203	55	F405	42	J301	21
B204	52	F406	86	J401	94
B205	54	F407	47	J402	12
B207	53	G201	36	J404	10
B301	65	G301	37	J502	95, 96
B302	63, 66	G302	88	J504	97
B303	62	G303	38	J505	8, 9
B304	67	G305	39	J506	98
C201	64	G405	41	K404	6
C301	69	G407	40	K405	5
C302	68	H301	34, 90	K406	4
C303	70, 73	H302	89	K506	7
C305	71	H303	33	L406	2
D301	72	H304	32	L407	1
D302	74	H405	31	L507	3
D303	75	H406	30		
D304	76	H407	29		
D404	80	I201	25		
E201	77	I301	19		
E202	78	I302	17, 18, 20		
E302	79	I303	26		
E303	81	I401	92		

<sup>1</sup> The depth strata are coded as 01 for 10-19 fathoms, with each successive number (i.e. 02, 03, 04, etc.) denoting a 10 fathom depth increment.

Table 2. List of common and scientific names of all fish species caught during R/V W.E. RICKER assemblage survey of Hecate Strait, May 17 - June 3, 1993.

Common name	Scientific name
<b>Flatfish</b>	
Arrowtooth flounder	<i>Atheresthes stomias</i>
Pacific sanddab	<i>Citharichthys sordidus</i>
Speckled sanddab	<i>Citharichthys stigmaeus</i>
Petrale sole	<i>Eopsetta jordani</i>
Slender sole	<i>Eopsetta exilis</i> <sup>1</sup>
Rex sole	<i>Errex zachirus</i> <sup>2</sup>
Flathead sole	<i>Hippoglossoides elassodon</i>
Pacific halibut	<i>Hippoglossus stenolepis</i>
Dover sole	<i>Microstomus pacificus</i>
Starry flounder	<i>Platichthys stellatus</i>
Rock sole	<i>Pleuronectes bilineatus</i> <sup>3</sup>
Butter sole	<i>Pleuronectes isolepis</i> <sup>4</sup>
English sole	<i>Pleuronectes vetulus</i> <sup>5</sup>
Curlfin sole	<i>Pleuronichthys decurrens</i>
Sand sole	<i>Psettichthys melanostictus</i>
<b>Rockfish</b>	
Pacific ocean perch	<i>Sebastodes alutus</i>
Silvery rockfish	<i>S. brevispinis</i>
Copper rockfish	<i>S. caurinus</i>
Greenstriped rockfish	<i>S. elongatus</i>
Yellowtail rockfish	<i>S. flavidus</i>
Quillback rockfish	<i>S. maliger</i>
Bocaccio	<i>S. paucispinus</i>
Canary rockfish	<i>S. pinniger</i>
Yelloweye rockfish	<i>S. ruberrimus</i>
Pygmy rockfish	<i>S. wilsoni</i>
Sharpchin rockfish	<i>S. zacentrus</i>
Dark blotched rockfish	<i>S. crameri</i>

<sup>1</sup> formerly *Lyopsetta exilis*

<sup>2</sup> formerly *Glyptocephalus zachirus*

<sup>3</sup> formerly *Lepidopsetta bilineata*

<sup>4</sup> formerly *Isopsetta isolepis*

<sup>5</sup> formerly *Parophrys vetulus*

Table 2 (continued)

Common name	Scientific name
<b><u>Roundfish</u></b>	
Sturgeon poacher	<i>Agonus acipenserinus</i>
Pacific sandlance	<i>Ammodytes hexapterus</i>
Wolf eel	<i>Anarhichthys ocellatus</i>
Sablefish	<i>Anoplopoma fimbria</i>
Shiner perch	<i>Cymatogaster aggregata</i>
Pacific herring	<i>Clupea pallasi</i>
Buffalo sculpin	<i>Enophrys bison</i>
Pacific cod	<i>Gadus macrocephalus</i>
Brown irish lord	<i>Hemilepidotus spinosus</i>
Kelp greenling	<i>Hexagrammos decagrammos</i>
White spotted greenling	<i>Hexagrammos stelleii</i>
Spotfin sculpin	<i>Icelinus tenuis</i>
Pacific staghorn sculpin	<i>Leptocottus armatus</i>
Shortfin eelpout	<i>Lycodes brevipes</i>
Bigfin eelpout	<i>Lycodes corteziensis</i>
Pacific hake	<i>Merluccius productus</i>
Pacific tomcod	<i>Micromesistius proximus</i>
Lingcod	<i>Ophiodon elongatus</i>
Slim sculpin	<i>Radulinus asprellus</i>
Northern ronquil	<i>Ronquilus jordani</i>
Cabezon	<i>Scorpaenichthys marmoratus</i>
Eulachon	<i>Thaleichthys pacificus</i>
Pollock	<i>Theragra chalcogramma</i>
Pacific sandfish	<i>Trichodon trichodon</i>
Prickleback	Family Stichaeidae
<b><u>Selachii</u></b>	
Spotted ratfish	<i>Hydrolagus colliei</i>
Spiny dogfish	<i>Squalus acanthias</i>
Longnose skate	<i>Raja rhina</i>
Big skate	<i>Raja binoculata</i>
Sandpaper skate	<i>Bathyraja interrupta</i>

<sup>6</sup> formerly *Clupea harrengus pallasi*

Table 3. Total weight (kg) of fish caught, and weight and number of fish sampled for length, by species, of fish specimens caught in usable hauls during R/V W.E. RICKER assemblage survey of Hecate Strait, May 17-June 3, 1993. A weight of 'Tr' indicates that in no single haul was the weight of that species greater than 1 kg, although the total weight may be greater than 1 kg.

	Total weight (kg)	Weight of fish measured for length (kg)	Number of fish measured for length	Total number of fish caught	Appendix Table
<b>Flatfish</b>					
Arrowtooth flounder	4152	2655	5007	7830	20
Pacific sanddab	329	288	1498	1711	27
Speckled sanddab	Tr	Tr	5	5	43
Petrale sole	62	62	95	95	21
Rex sole	2502	772	6158	19958	22
Flathead sole	277	176	1442	2270	23
Pacific halibut	1818	1818	446	446	33
Butter sole	747	278	1361	3657	30
Rock sole	1724	1471	5633	6602	28
Slender sole	49	43	400	456	24
Dover sole	3089	899	4381	15053	25
English sole	8647	3175	14124	38466	26
Starry flounder	50	50	14	14	32
Curlfin sole	69	69	195	195	29
Sand sole	294	294	1251	1251	31
<b>Subtotal</b>	<b>23809</b>	<b>12050</b>	<b>42010</b>	<b>83001</b>	
<b>Rockfish</b>					
Pacific ocean perch	45	24	182	341	34
Silvery grey rockfish	399	399	200	200	35
Copper rockfish	72	72	53	53	36
Greenstriped rockfish	4	4	4	4	43
Yellowtail rockfish	187	187	177	177	37
Quillback rockfish	106	106	132	132	38
Bocaccio	48	48	12	12	39
Canary rockfish	38	38	64	64	40
Yelloweye rockfish	21	21	11	11	41
Pygmy rockfish	Tr	Tr	2	2	43
Sharpchin rockfish	Tr	Tr	13	13	42
Dark blotched rockfish	Tr	Tr	3	3	43
<b>Subtotal</b>	<b>920</b>	<b>899</b>	<b>852</b>	<b>890</b>	

Table 3. (continued)

	Total weight (kg)	Weight of fish measured for length (kg)	Number of fish measured for length	Total number of fish caught	Appendix Table
<b>Roundfish</b>					
Sturgeon poacher	33	0	0	-	
Pacific sandlance	3	3	104	104	17
Wolf eel	6	0	0	1	
Sablefish	1002	343	935	2731	15
Shiner perch	4	2	99	198	13
Pacific herring	214	168	1479	1884	9
Buffalo sculpin	Tr	Tr	2	2	43
Pacific cod	1097	1097	945	945	10
Brown irish lord	Tr	0	0	1	
Kelp greenling	15	15	64	64	18
White spotted greenling	Tr	Tr	1	1	43
Spotfin sculpin	Tr	Tr	1	1	43
Pacific staghorn sculpin	42	9	26	12	19
Shortfin eelpout	Tr	0	0		
Bigfin eelpout	Tr	Tr	2	2	43
Pacific hake	Tr	Tr	3	3	43
Pacific tomcod	148	77	803	1543	14
Lingcod	277	277	42	42	12
Slim sculpin	Tr	0	0		
Northern rockfish	Tr	Tr	5	5	43
Cabezon	Tr	Tr	1	1	43
Eulachon	3	3	166	166	16
Walleye pollock	1074	755	2055	2923	11
Pacific sandfish	Tr	Tr	1	1	43
Prickleback	Tr	0	0		
<b>Subtotal</b>	<b>3919</b>	<b>2798</b>	<b>6737</b>	<b>9458</b>	
<b>Selachii</b>					
Spotted ratfish	2591	1532	4594	7770	6
Spiny dogfish	2980	2750	1845	1999	2, 3, 4
Longnose skate	102	102	31	31	5
Big skate	1097	1097	178	178	7
Black skate	22	22	16	16	8
<b>Subtotal</b>	<b>6792</b>	<b>5503</b>	<b>6664</b>	<b>8225</b>	
<b>Grand total</b>	<b>35440</b>	<b>21274</b>	<b>56259</b>	<b>93721</b>	

Table 4. Calculated numbers of specimens, by species, for hauls in which measured specimens were a subsample of the total number of specimens caught during R/V W.E. RICKER assemblage survey of Hecate Strait May 17 - June 3, 1993.

Haul no.	Species	Weight (kg)		Numbers	
		Sample	Total	Sample	Total
02	English sole	75	146	518	1008
06	English sole	16	35	204	446
10	Arrowtooth flounder	98	146	340	507
10	Spiny dogfish	146	226	262	406
13	Spotted ratfish	81	115	188	267
13	English sole	60	190	378	1197
14	Rex sole	30	91	235	713
16	Arrowtooth flounder	114	276	295	714
16	Pacific Ocean perch	19	40	138	291
17	English sole	22	85	163	630
18	English sole	35	121	162	555
20	English sole	27	55	238	485
23	Pacific herring	13	45	157	543
23	Spotted ratfish	44	89	294	595
23	English sole	42	150	312	1114
24	Spotted ratfish	35	49	207	290
27	Pacific sanddab	62	103	190	315
29	Pacific herring	10	24	93	223
29	Spiny dogfish	207	357	134	231
42	Walleye pollock	7	14	148	296
45	Shiner perch	1	3	64	192
46	English sole	44	72	356	582
47	Rex sole	41	120	284	831
47	Walleye pollock	243	531	322	704
51	English sole	118	162	235	323
51	Spotted ratfish	15	99	248	1637
56	Butter sole	131	588	331	1486
58	Arrowtooth flounder	161	504	145	454
59	Arrowtooth flounder	139	220	135	214
59	Dover sole	125	152	178	216
59	Spotted ratfish	111	418	323	1216
60	English sole	63	150	251	598
60	Spotted ratfish	111	157	250	354
61	Rex sole	40	43	234	252
61	English sole	82	282	375	1290
62	Dover sole	56	249	267	1187

Table 4 (continued)

Haul no.	Species	Weight (kg)		Numbers	
		Sample	Total	Sample	Total
62	English sole	84	720	339	2906
64	English sole	81	91	740	831
66	English sole	101	1936	369	7073
66	Sablefish	75	734	283	2770
66	Butter sole	97	109	241	271
66	Pacific tomcod	16	31	207	401
67	Dover sole	40	1503	186	6989
67	English sole	65	79	246	299
68	Rex sole	34	51	390	585
68	Pacific tomcod	17	47	220	608
68	English sole	67	178	509	1352
69	English sole	38	71	315	589
71	Rex sole	20	1092	172	9391
71	Dover sole	29	242	228	1903
71	English sole	65	1064	348	5696
71	Spotted ratfish	63	306	295	1433
72	English sole	40	44	332	365
73	English sole	37	70	243	460
73	Pacific tomcod	16	42	169	444
73	Rex sole	10	79	233	1841
73	Spotted ratfish	39	83	185	394
74	English sole	42	112	353	941
75	Rex sole	8	30	207	776
75	Walleye pollock	12	36	165	495
75	English sole	54	167	297	919
76	Rex sole	15	28	190	355
76	English sole	62	119	305	585
76	Arowtooth flounder	87	117	255	343
78	Spotted ratfish	111	170	197	302
80	Rex sole	32	44	220	303
80	English sole	67	116	340	589
80	Rock sole	18	113	166	1042
81	English sole	43	158	288	1058
82	Rex sole	35	244	366	2552
82	Dover sole	39	143	188	689
82	Flathead sole	35	69	327	645
83	Rock sole	75	117	409	638

Table 4 (continued)

Haul no.	Species	Weight (kg)		Numbers	
		Sample	Total	Sample	Total
84	Dover sole	41	70	200	341
84	Flathead sole	19	86	150	679
84	Spotted ratfish	40	118	199	588
85	Rex sole	44	182	209	865
85	Slender sole	17	23	149	202
85	Dover sole	63	175	250	694
85	Arrowtooth flounder	104	842	146	1182
85	Spotted ratfish	34	48	109	154
86	English sole	32	73	149	340
86	Rex sole	36	71	307	605
86	Dover sole	24	73	146	444
86	Arrowtooth flounder	126	221	180	316
87	English sole	37	83	260	583
87	Rock sole	49	96	340	666
87	Spotted ratfish	36	102	123	349
88	English sole	34	74	195	424
88	Rock sole	162	231	360	513
91	English sole	42	229	423	2306
93	Spotted ratfish	69	128	184	2617
96	English sole	38	253	316	2104

NET DIMENSIONS AND CHARACTERISTICS FOR BOTTOM TRAWL

VESSEL W. E. RICKER

NET Yankee 36

OBSERVATION PERIOD May 17 - June 3, 1993

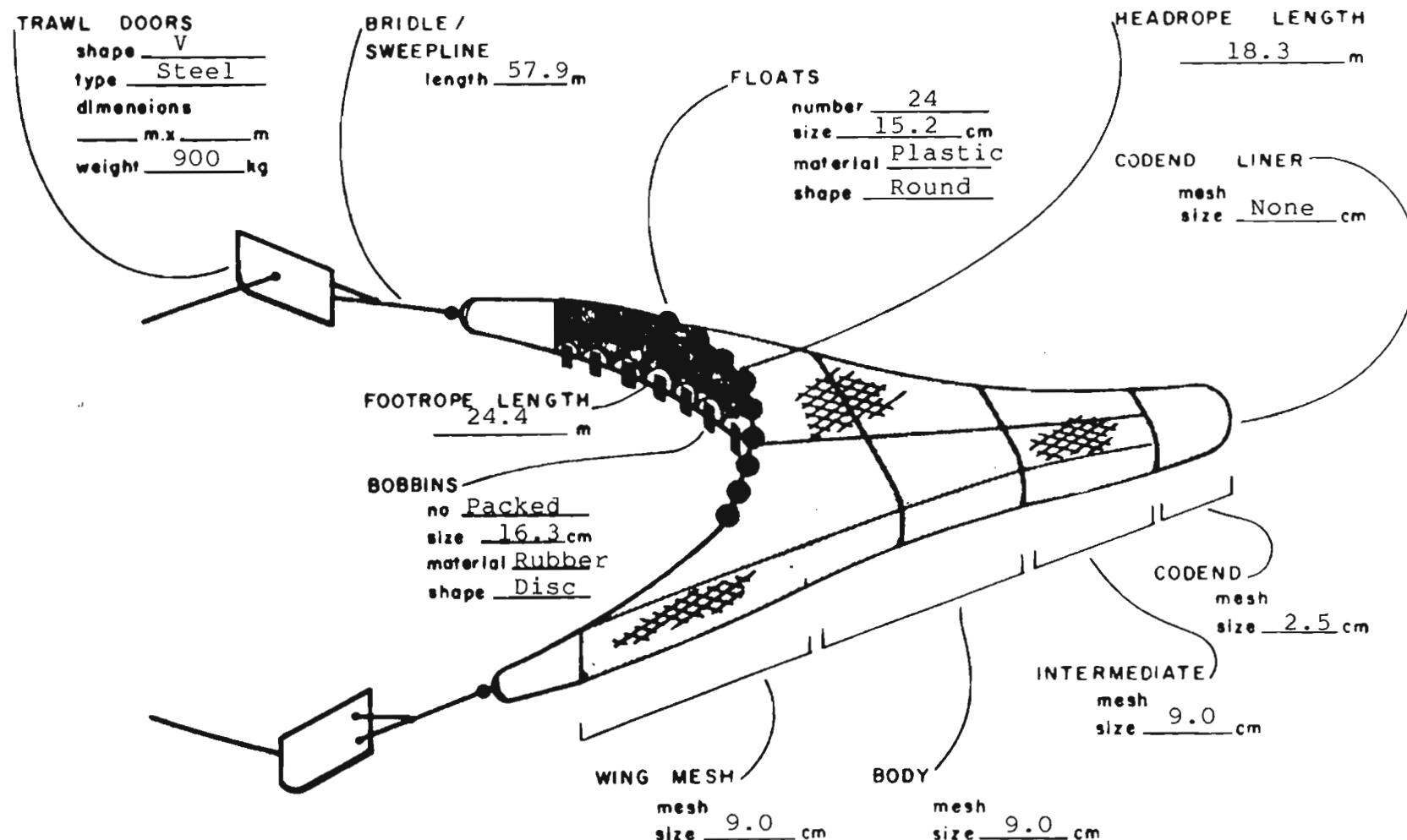


Figure 1. Net dimensions and characteristics for the Yankee 36 trawl net used by R/V W.E. RICKER on species assemblage survey May 17 - June 3, 1993.



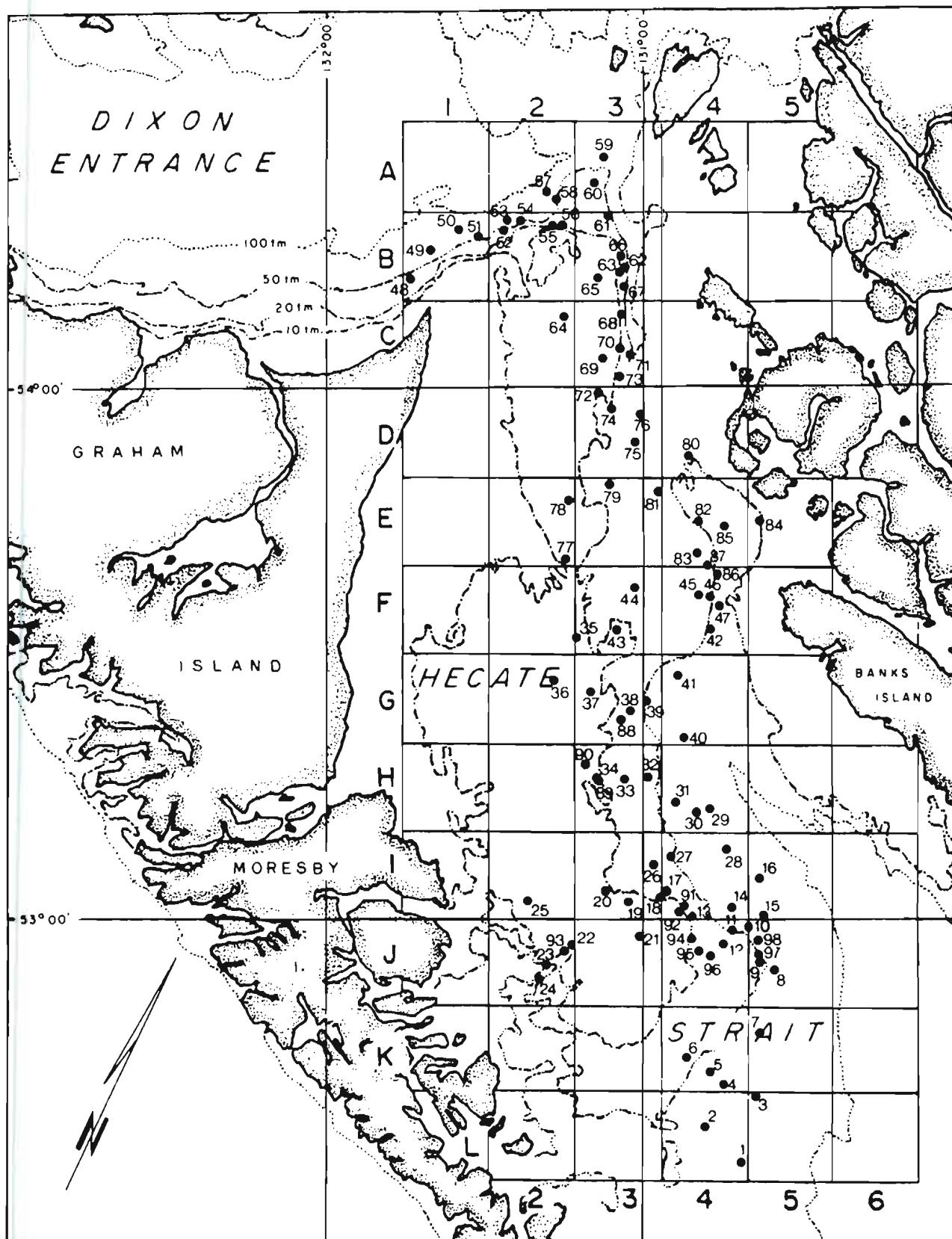
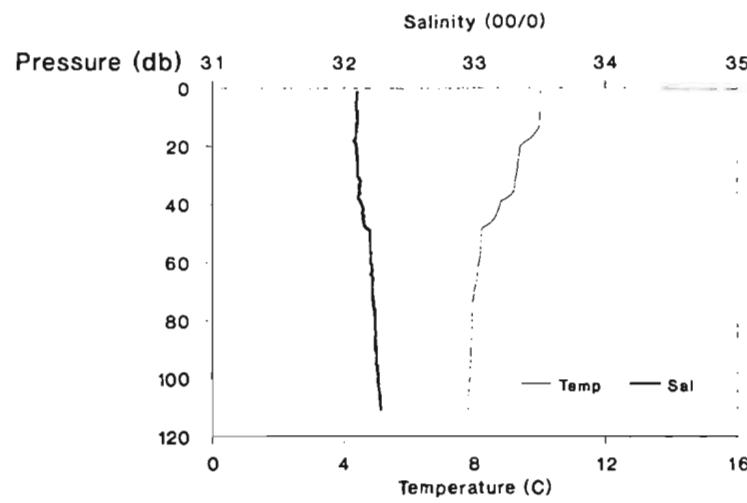


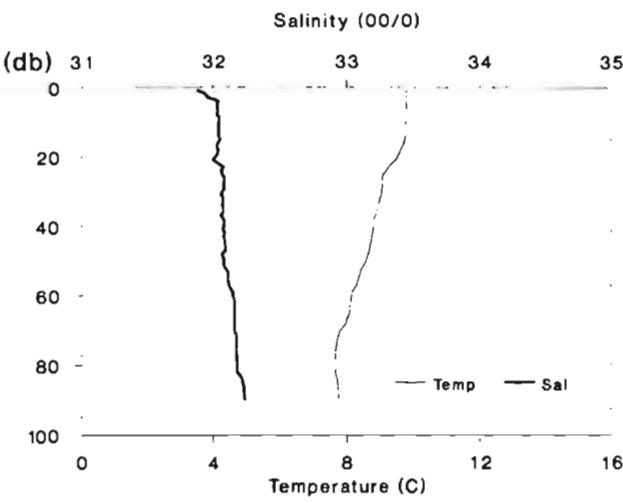
Figure 2. Locations of trawl hauls made by R/V W.E. RICKER on species assemblage survey May 17 - June 3, 1993.



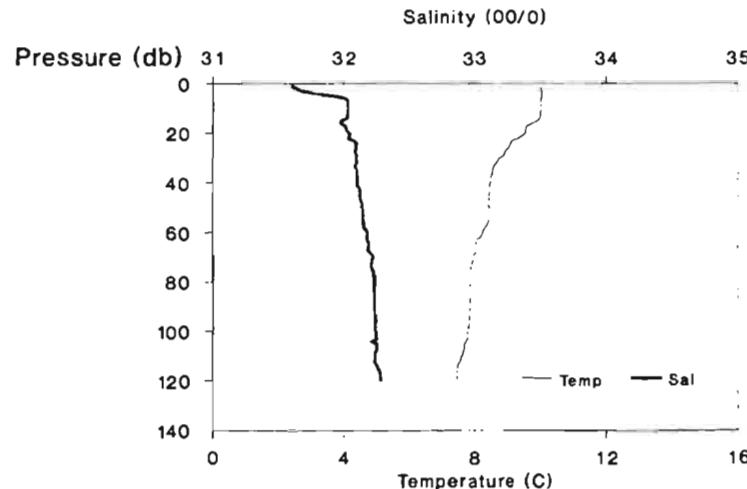
Haul:1 UTC: 15:50  
52-33.8 N, 130-40.8 W



Haul: 2 UTC: 17:06  
52-37.6 N, 130-48.2 W



Haul: 3 UTC: 18:24  
52-39.33 N, 130-36.93 W



Haul: 4 UTC: 19:48  
52-41.8 N, 130-43.8 W

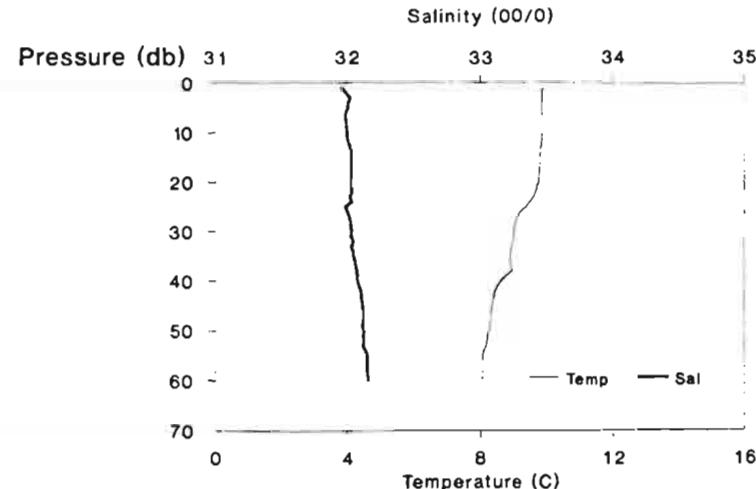
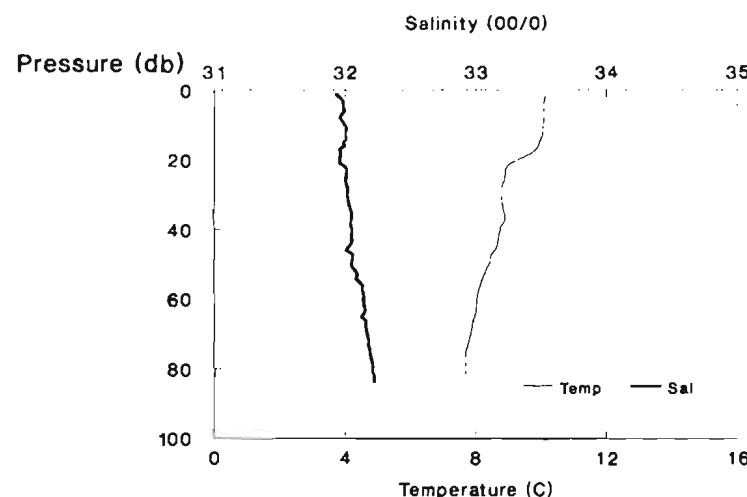


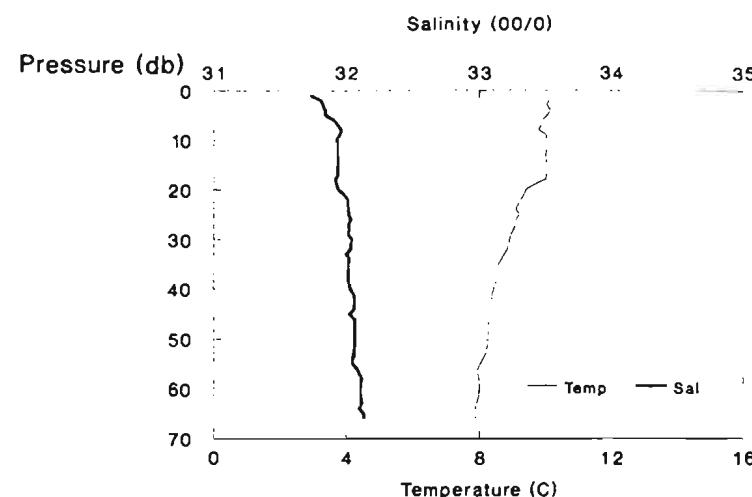
Figure 3. Temperature and salinity profiles from the R/V W.E. RICKER assemblage survey in Hecate Strait, May 17 - June 3, 1993.



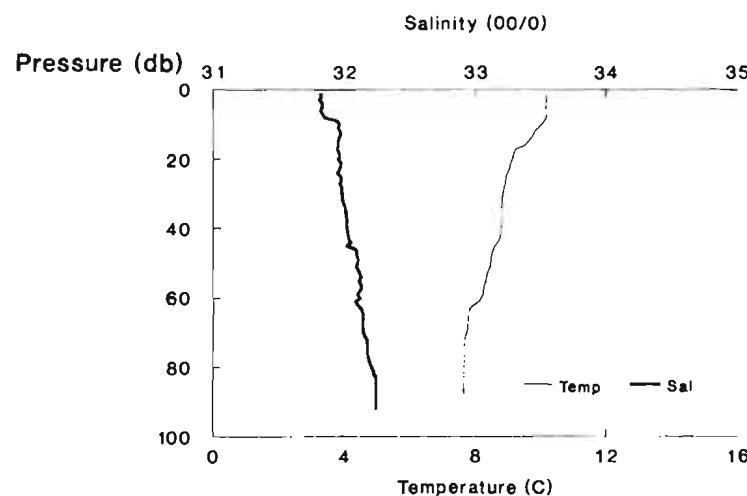
Haul: 5 UTC: 20:47  
52-43.1 N, 130-46.0 W



Haul: 6 UTC: 21:57  
52-44.5 N, 130-49.9 W



Haul: 7 UTC: 7  
52-47.7 N, 130-37.7 W



Haul: 8 UTC: 1:07  
52-55.4 N, 130-35.2 W

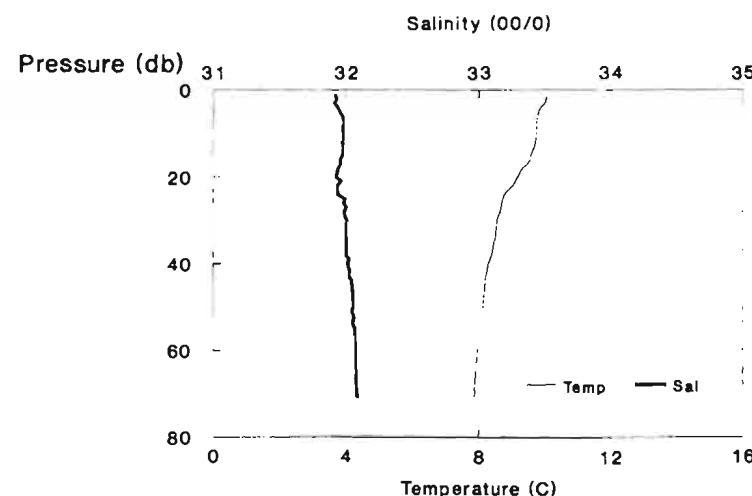
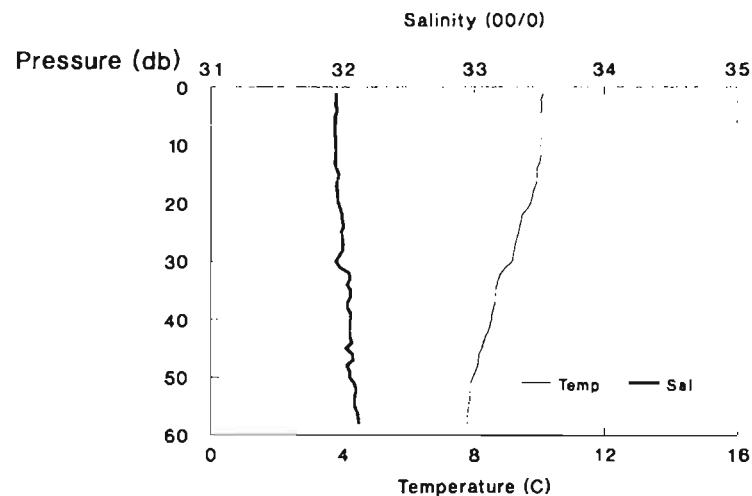


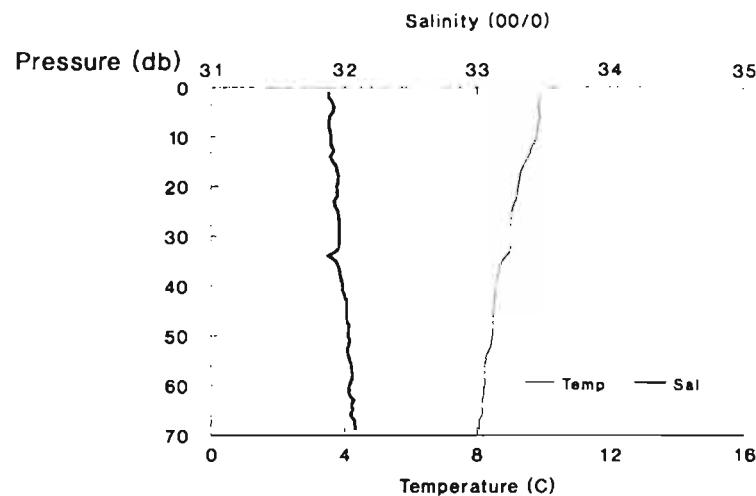
Figure 3.



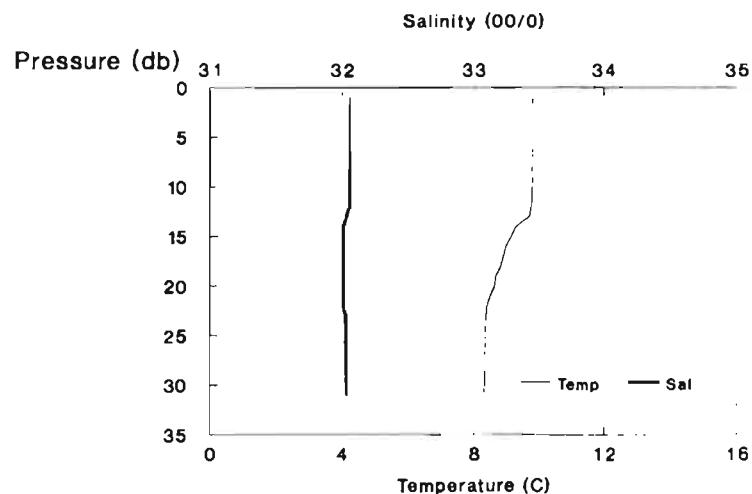
Haul: 9 UTC: 15:39  
52-57.1 N, 130-38.06 W



Haul: 10 UTC: 16:53  
52-58.9 N, 130-42.5 W



Haul: 17 UTC: 15:40  
53-3.8 N, 130-58.3 W



Haul: 19 UTC: 17:24  
53-1.9 N, 131-5.8 W

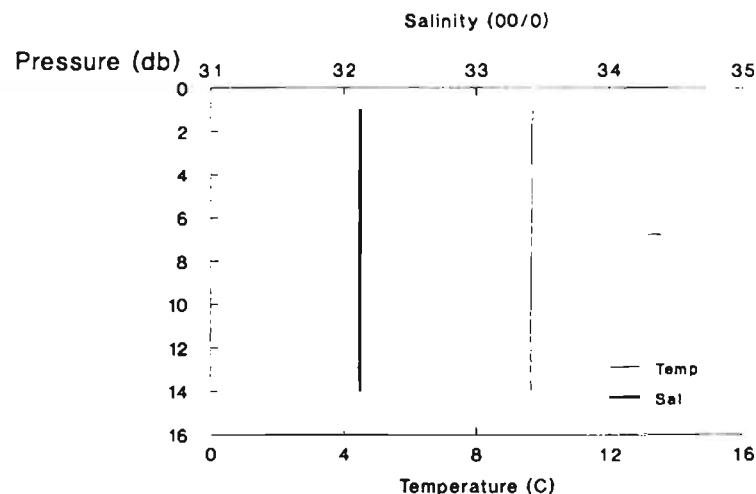
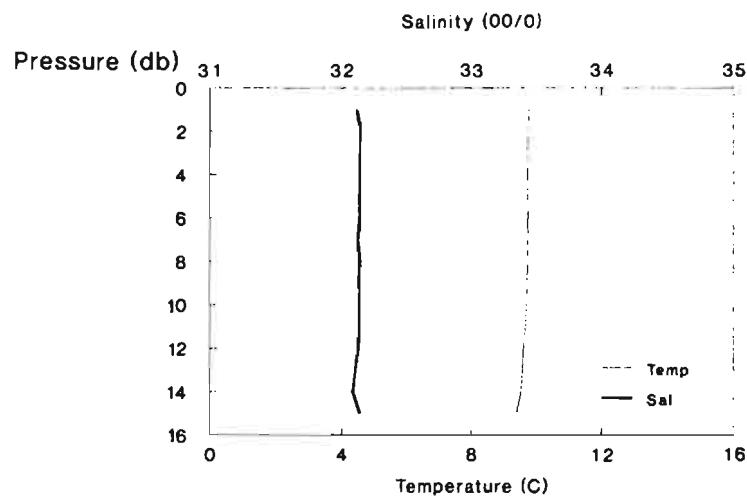


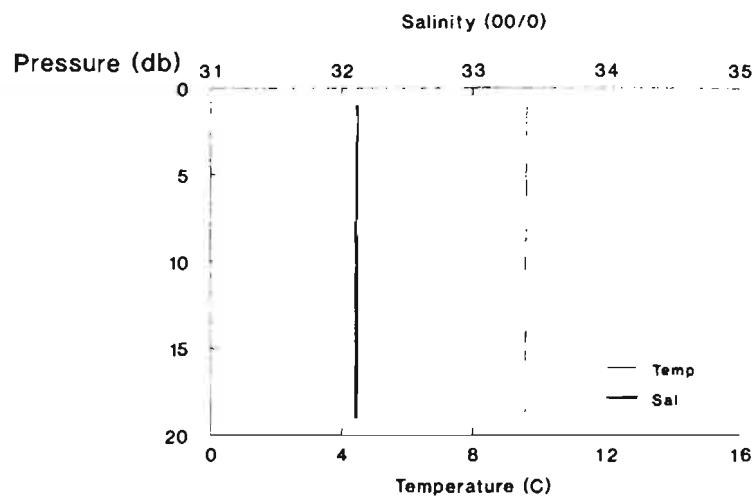
Figure 3.



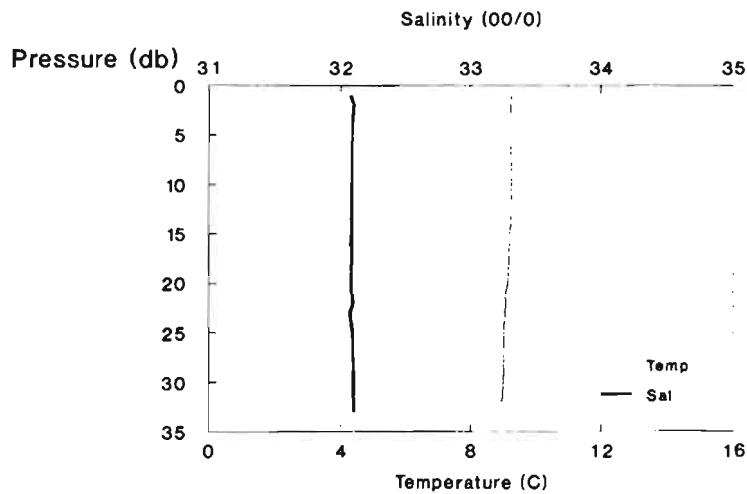
Haul: 20 UTC: 18:15  
53- 4.8 N, 131- 9.7 W



Haul: 21 UTC: 19:52  
52-58.4 N, 131- 4.1 W



Haul: 22 UTC: 21:12  
52-56.0 N, 131-15.6 W



Haul: 23 UTC: 22:19  
52-54.8 N, 131-17.2 W

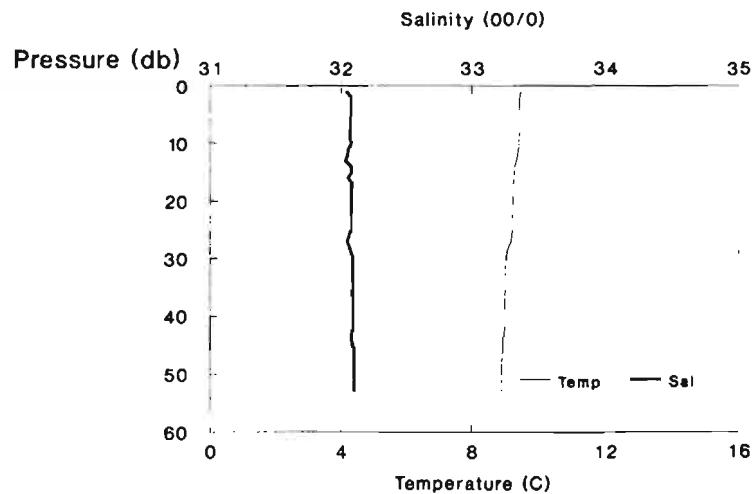
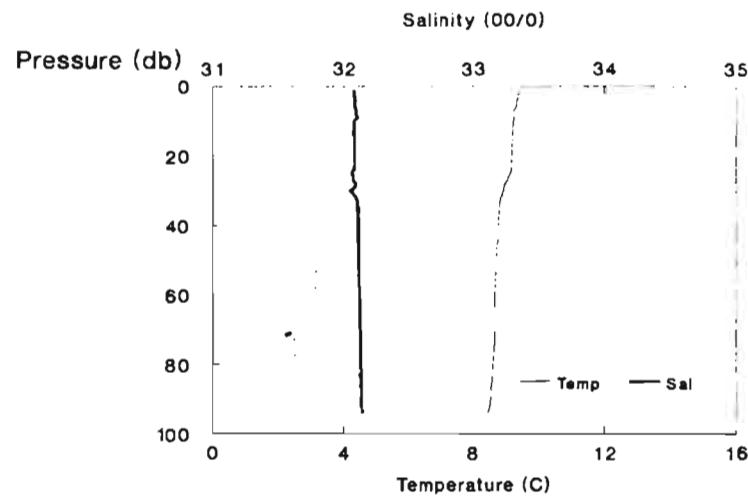


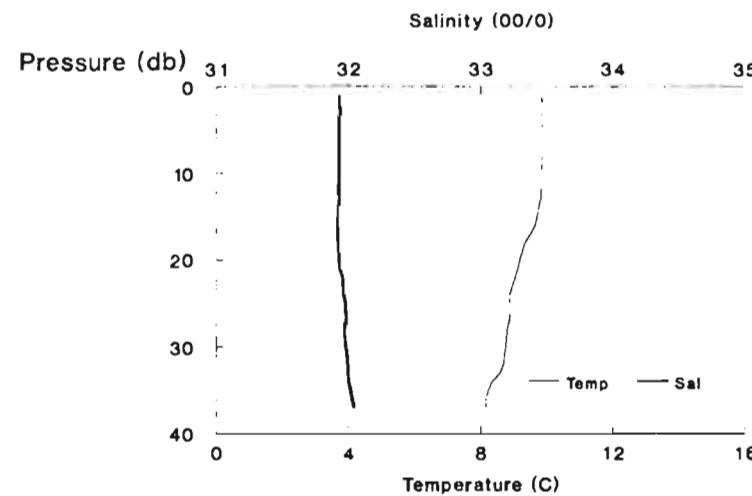
Figure 3.



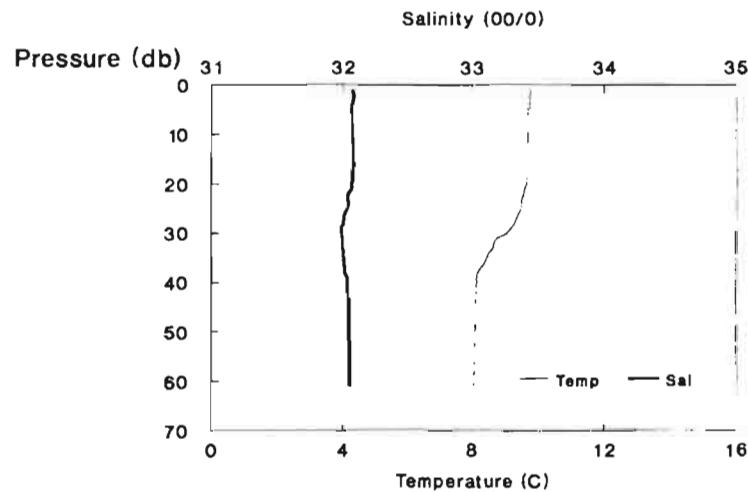
Haul: 24 UTC: 23:21  
52-53.7 N, 131-18.3 W



Haul: 26 UTC: 15:47  
53- 7.0 N, 130-59.0 W



Haul: 27 UTC: 16:29  
53- 6.2 N, 130-54.3 W



Haul: 28 UTC: 17:43  
53- 9.26 N, 130-46.5 W

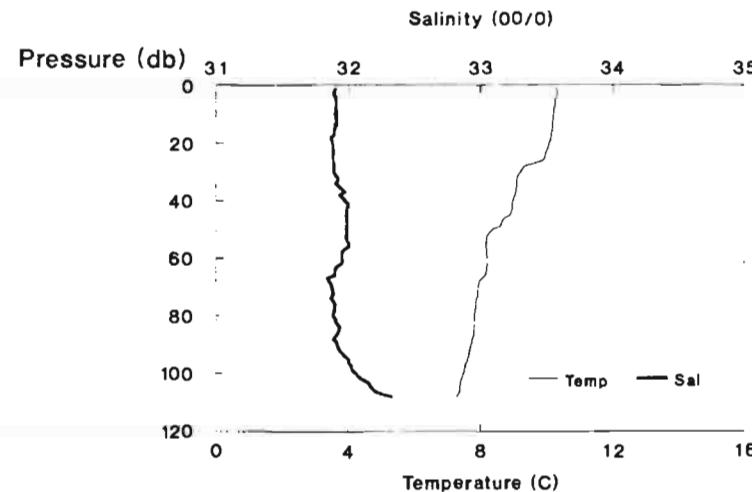
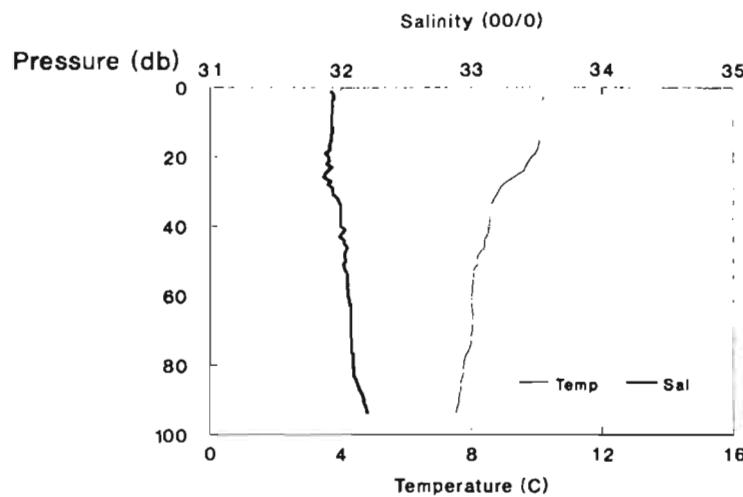


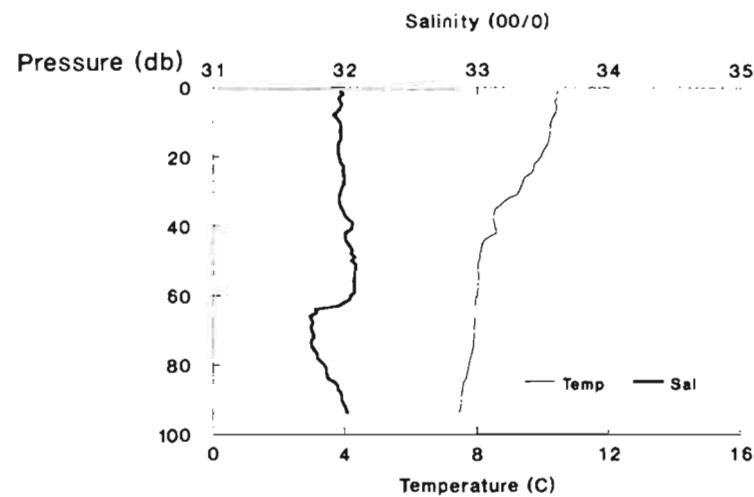
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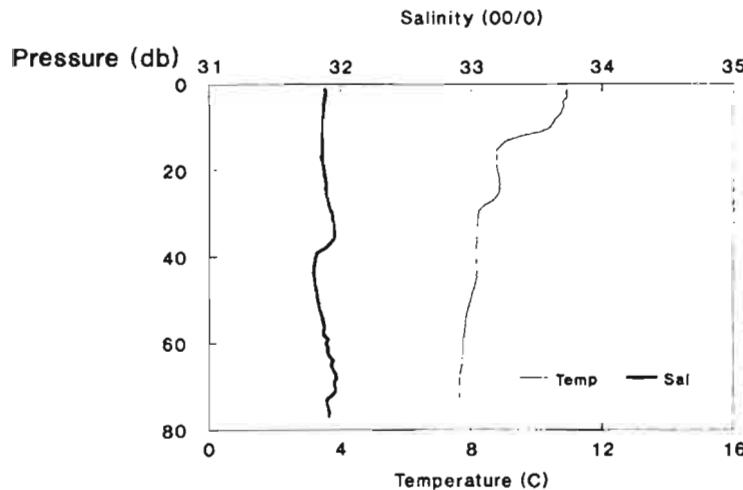
Haul: 29 UTC: 18:44  
53-11.95 N, 130-47.5 W



Haul: 30 UTC: 20:17  
53-11.6 N, 130-50.9 W



Haul: 31 UTC: 21:25  
53-12.6 N, 130-54.4 W



Haul: 32 UTC: 22:40  
53-15.05 N, 131- 0.1 W

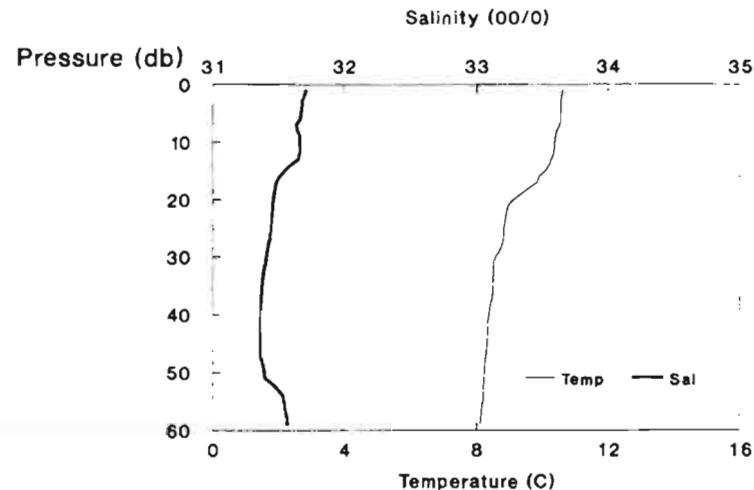
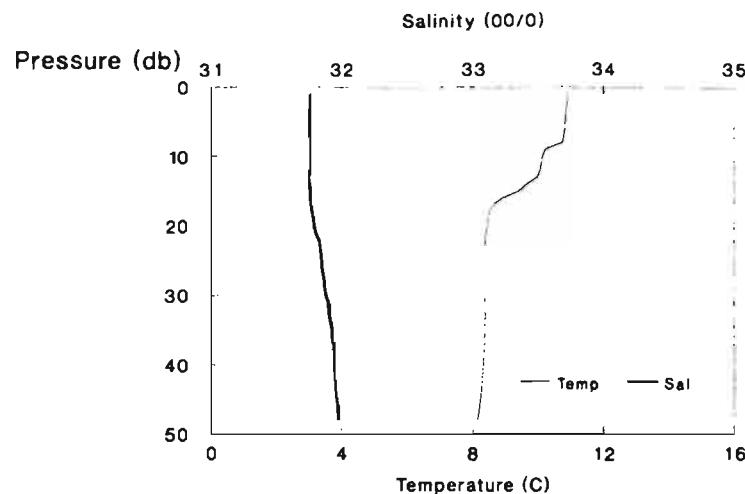


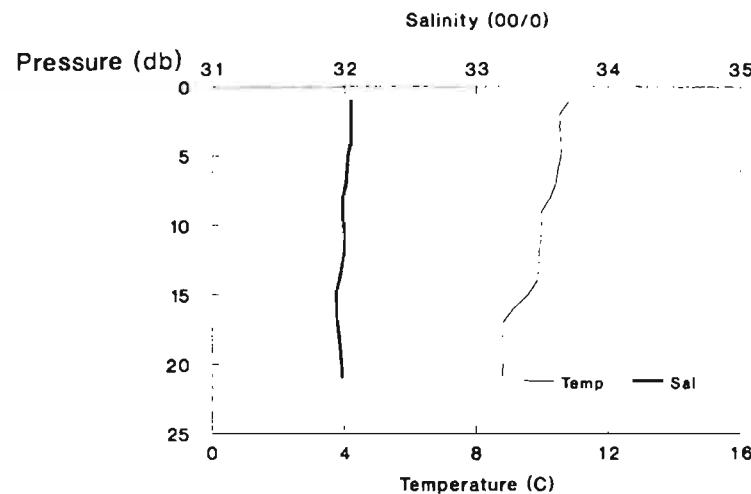
Figure 3.



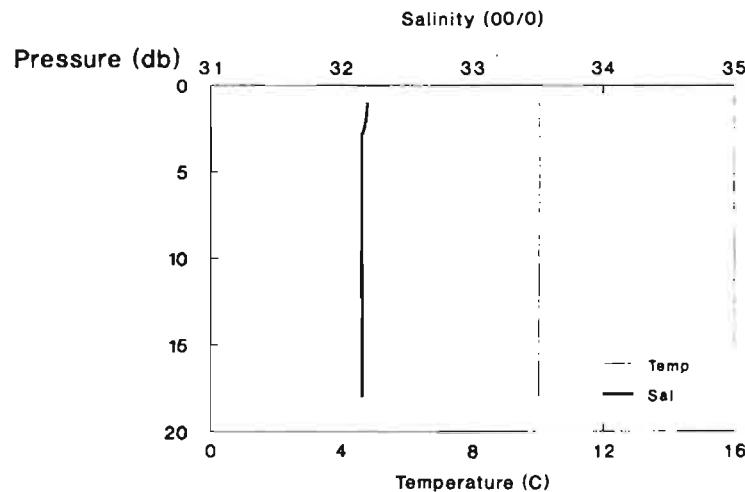
Haul: 33 UTC: 00:33  
53-16.6 N, 131- 3.4 W



Haul: 34 UTC: 01:47  
53-15.6 N, 131- 7.3 W



Haul: 35 UTC: 15:34  
53-31.3 N, 131-15.6 W



Haul: 36 UTC: 16:32  
53-26.8 N, 131-19.1 W

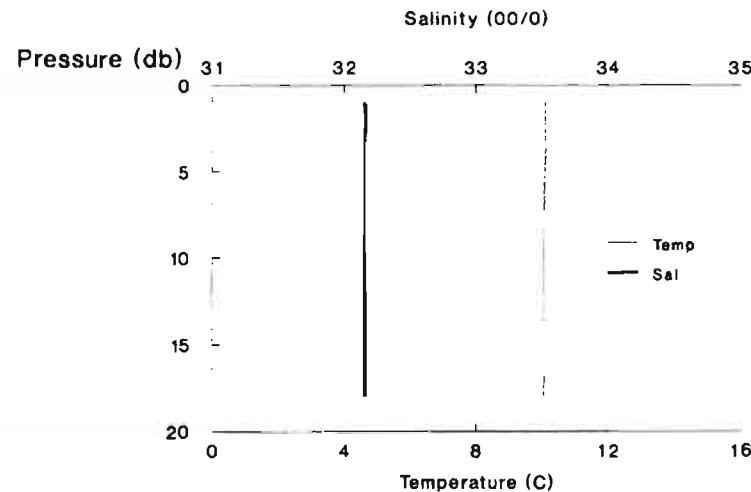
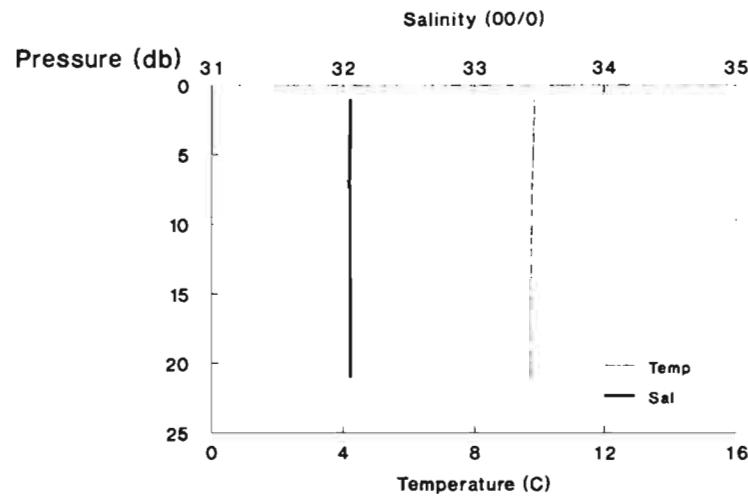


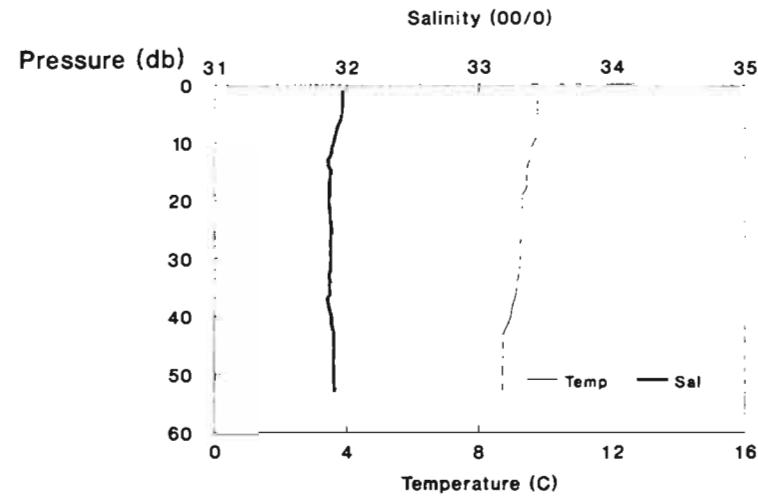
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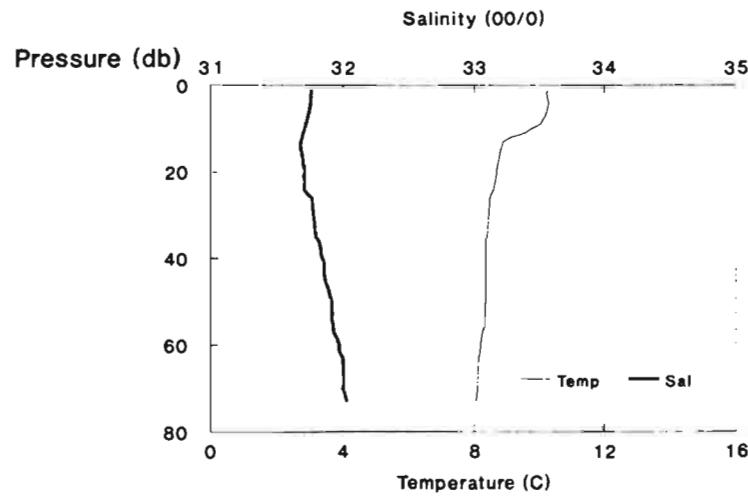
Haul: 37 UTC: 17:29  
53-25.6 N, 131- 9.9 W



Haul: 38 UTC: 18:28  
53-23.2 N, 131- 3.6 W



Haul: 39 UTC: 19:40  
53-23.6 N, 130-59.0 W



Haul: 40 UTC: 20:52  
53-22.2 N, 130-54.0 W

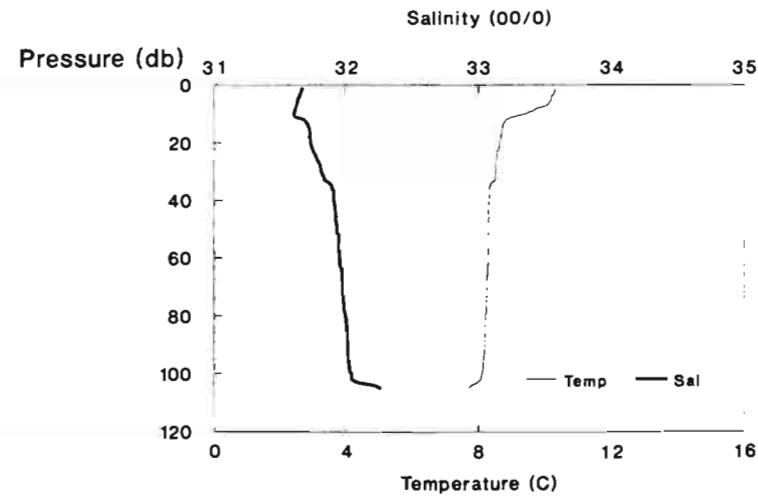
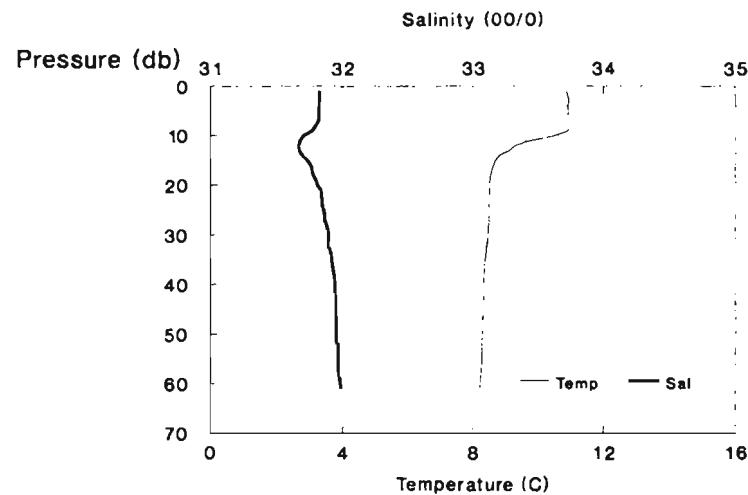


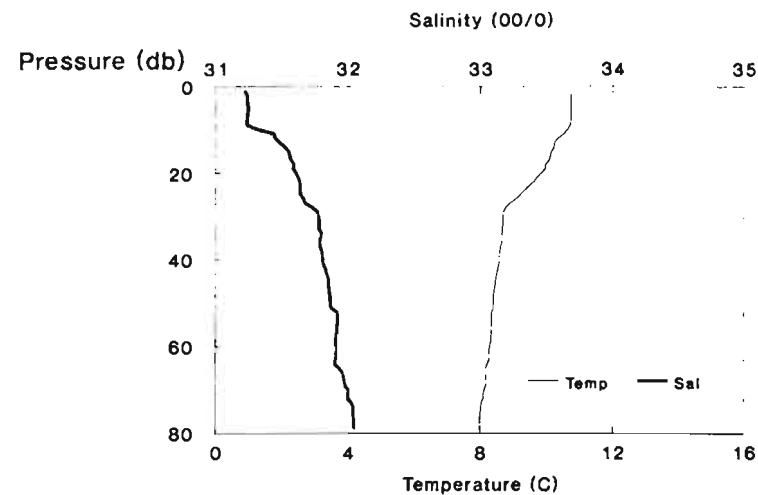
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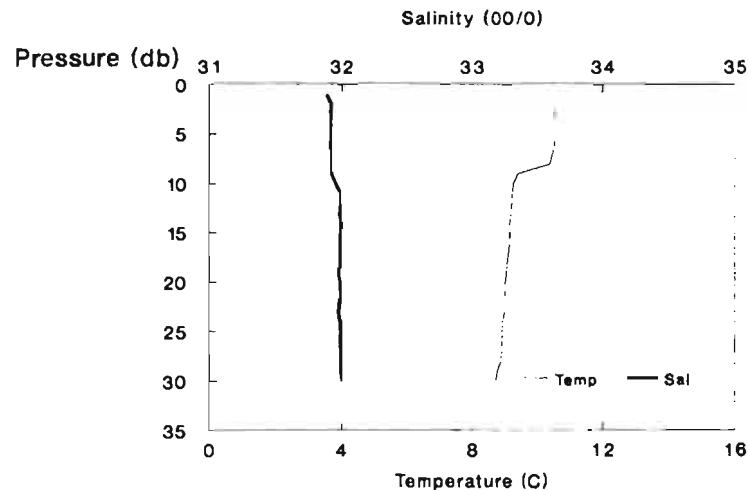
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Haul: 42 UTC: 00:39  
53-32.1 N, 130-48.0 W



Haul: 43 UTC: 15:44  
53-33.9 N, 131- 6.7 W



Haul: 44 UTC: 16:47  
53-38.4 N, 131- 1.4 W

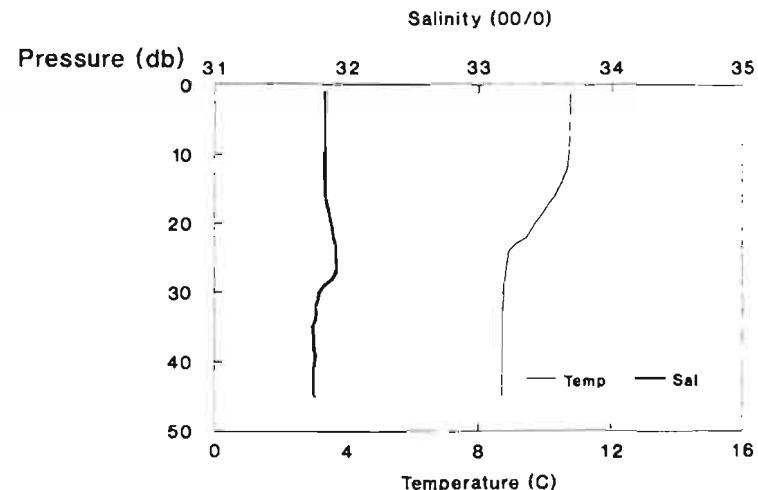


Figure 3.



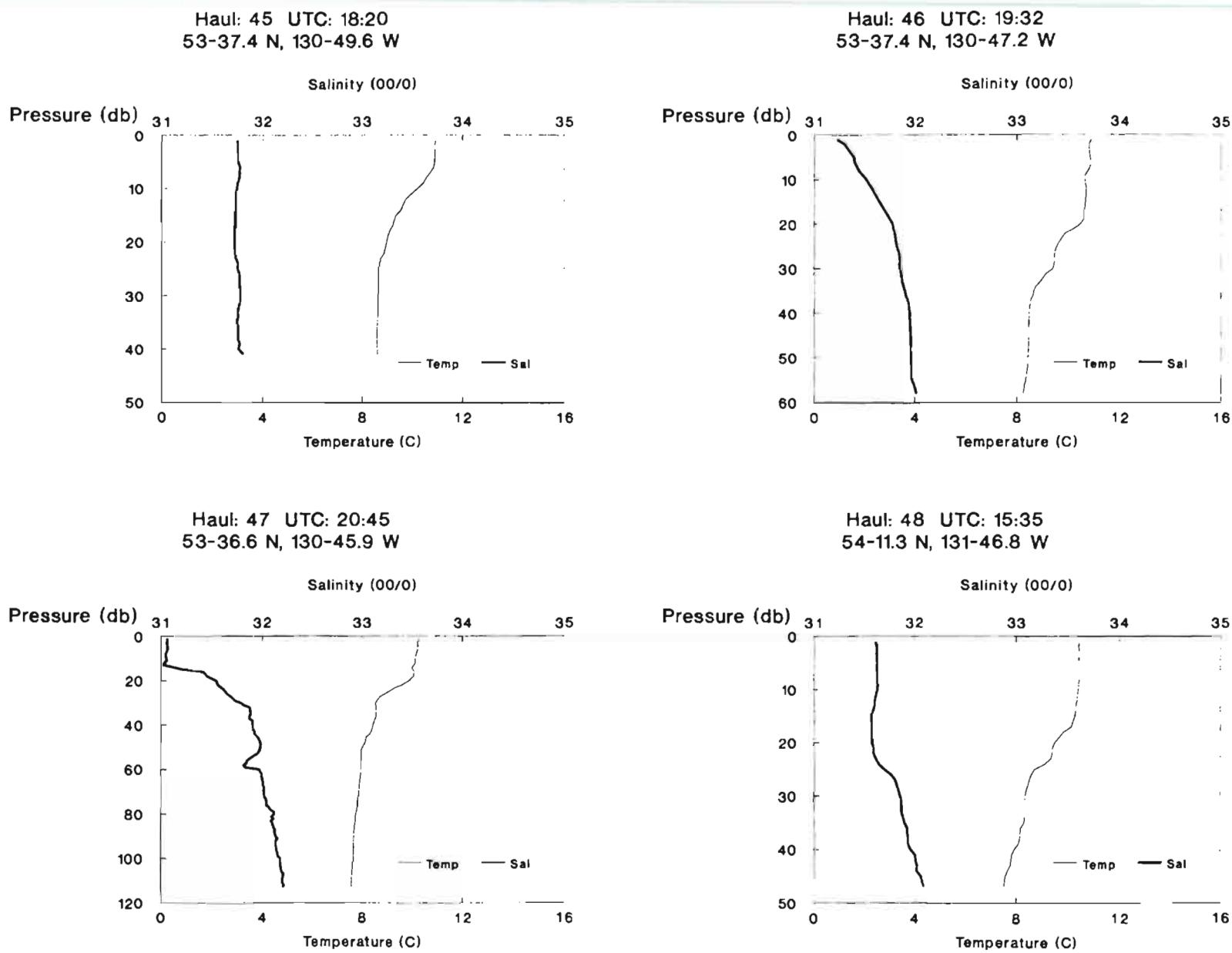
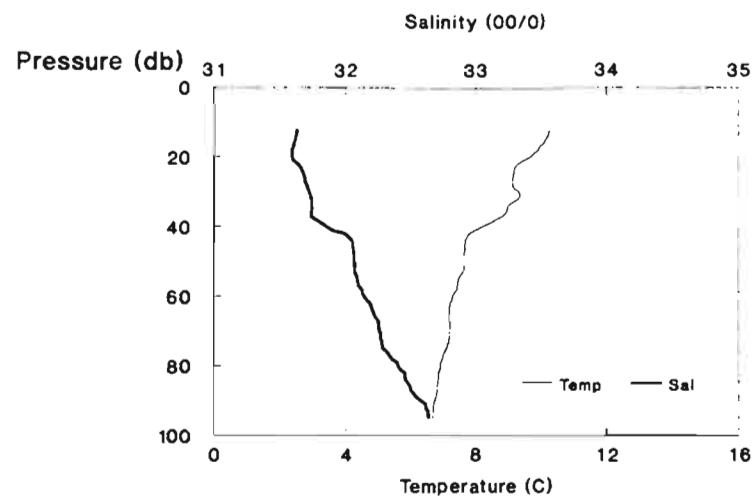


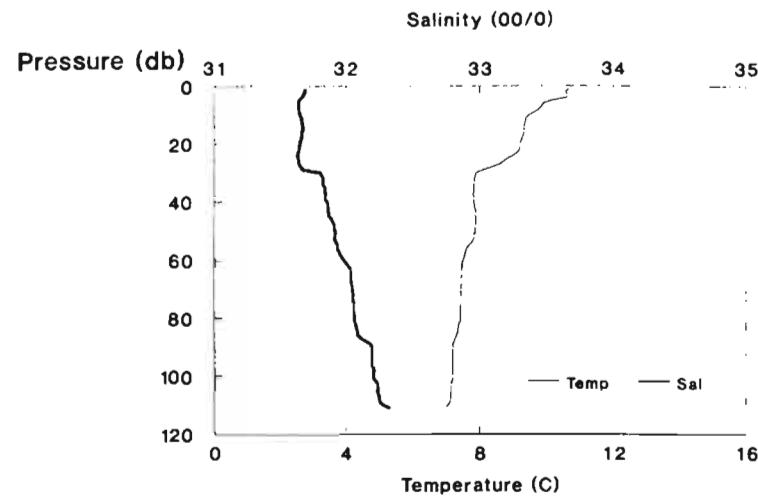
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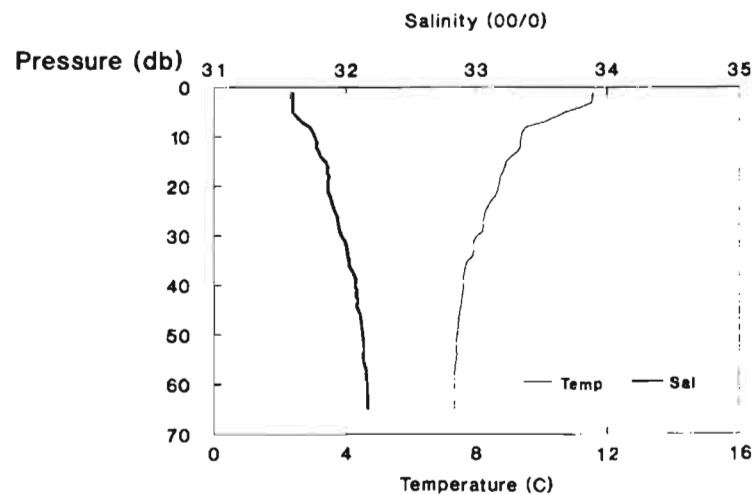
Haul: 49 UTC: 16:40  
54-15.2 N, 131-40.1 W



Haul: 50 UTC: 17:50  
54-16.3 N, 131-39.7 W



Haul: 52 UTC: 20:59  
54-17.7 N, 131-25.9 W



Haul: 53 UTC: 21:53  
54- 1.8 N, 131-28.8 W

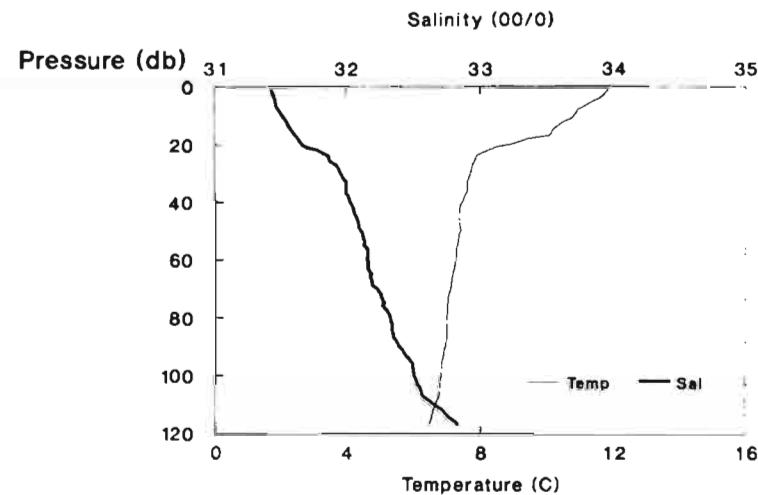
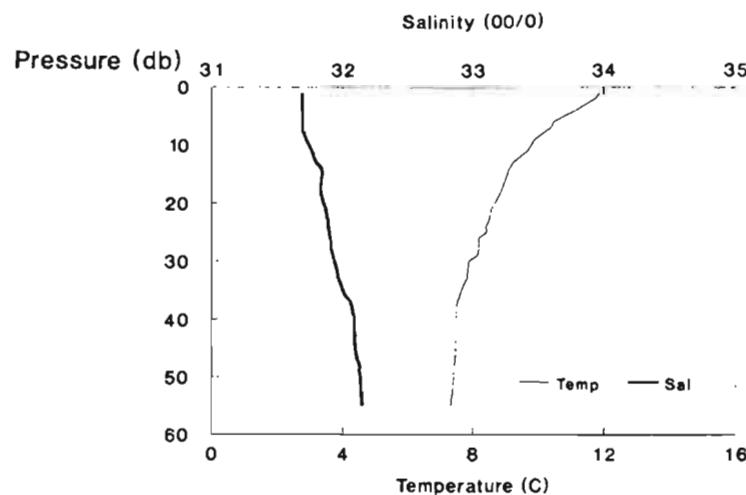


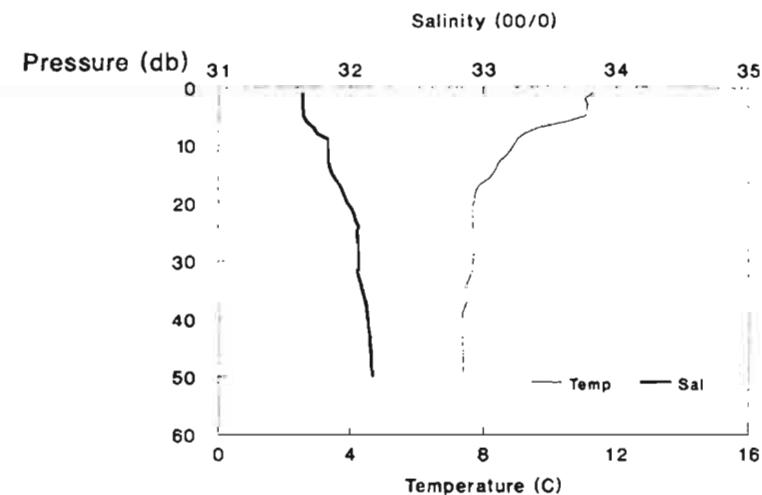
Figure 3.



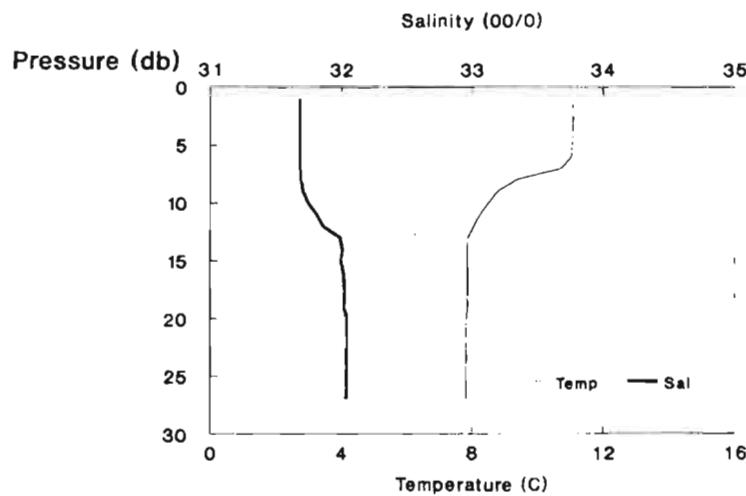
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Haul: 55 UTC: 23:33  
54-18.0 N, 131-20.6 W



Haul: 56 UTC: 00:44  
54-17.7 N, 131-19.5 W



Haul: 57 UTC: 15:35  
54-20.0 N, 131-18.5 W

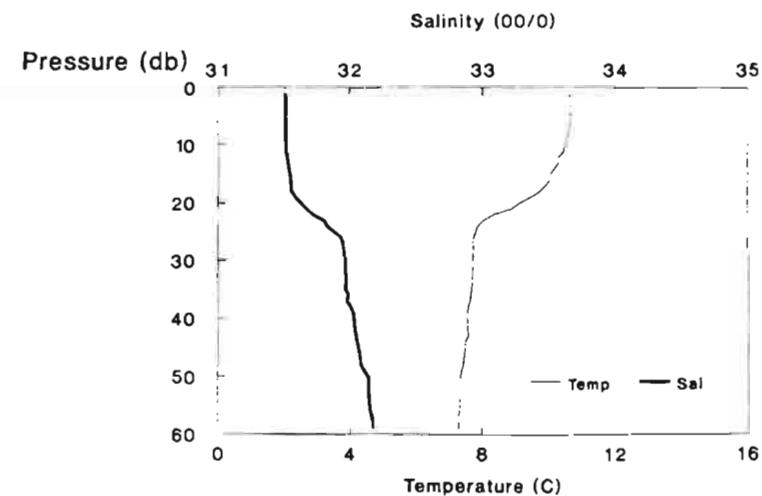
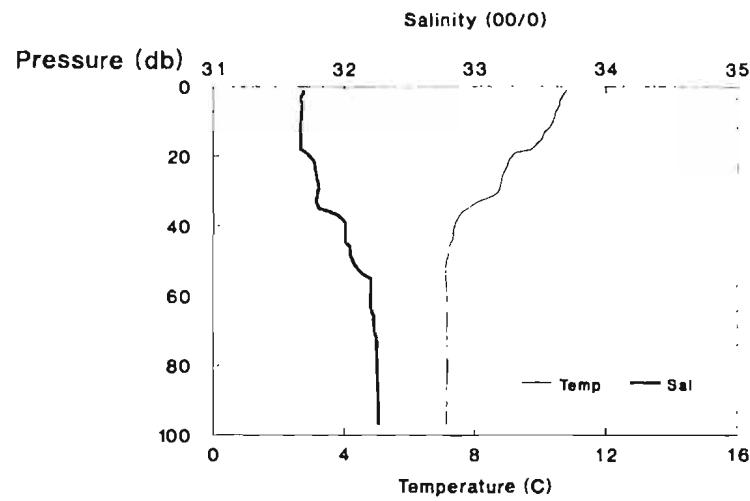


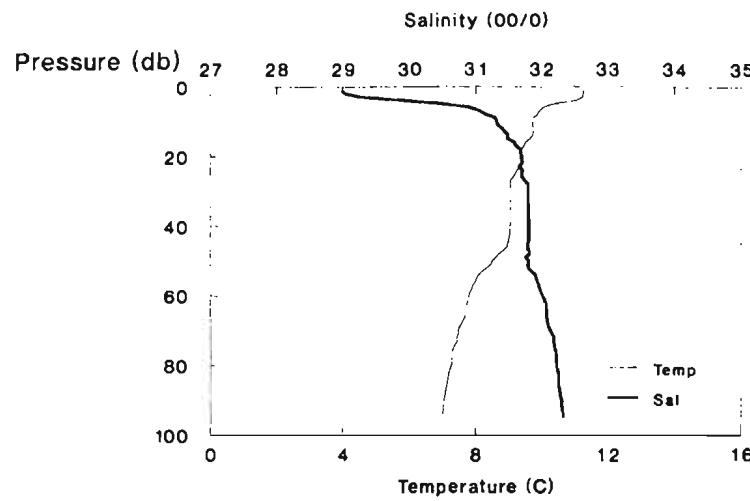
Figure 3.



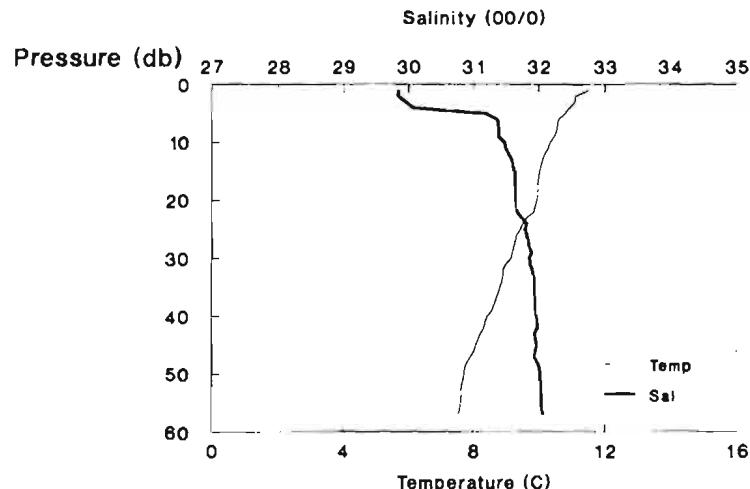
Haul: 58 UTC: 16:30  
54-22.0 N, 131-16.6 W



Haul: 59 UTC: 18:00  
54-25.0 N, 131-7.9 W



Haul: 60 UTC: 19:30  
54-21.6 N, 131-9.8 W



Haul: 61 UTC: 20:30  
54-20.9 N, 131-7.5 W

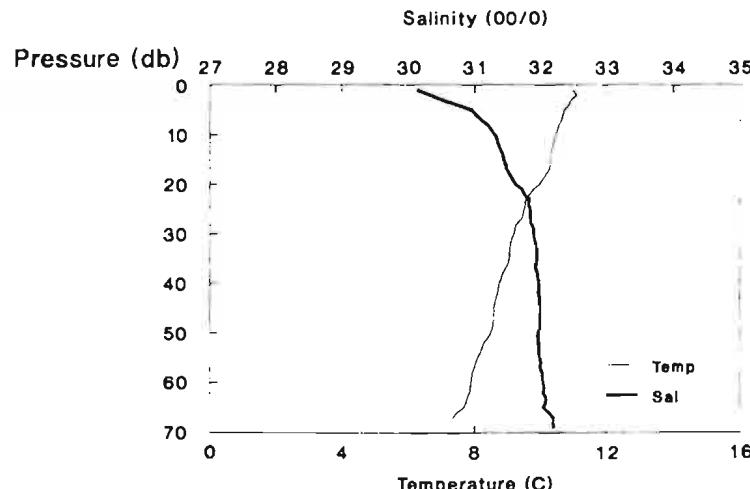
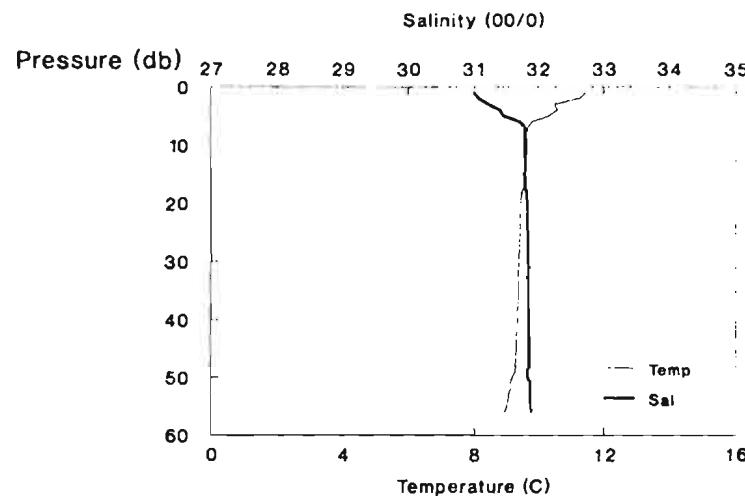


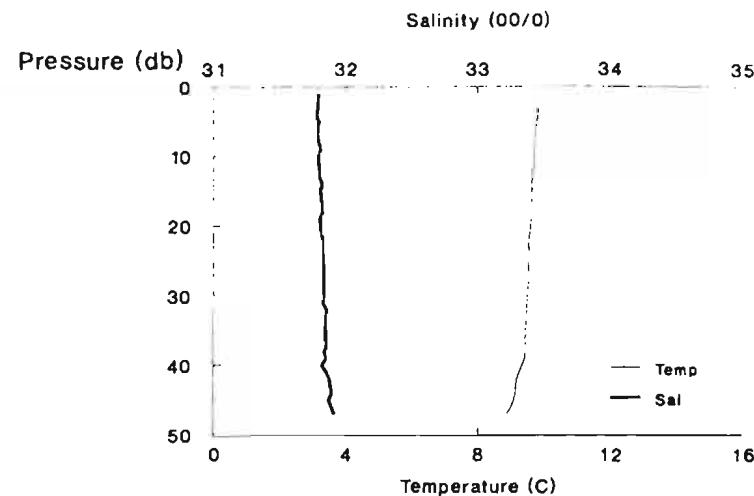
Figure 3.



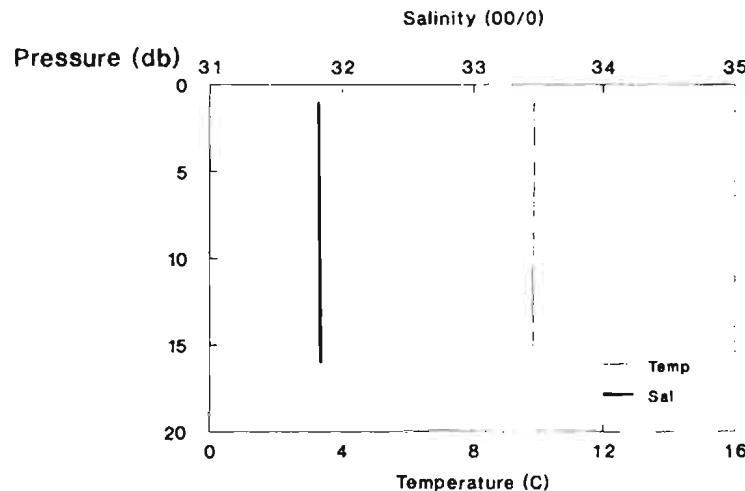
Haul: 62 UTC: 00:26  
54-13.7 N, 131- 4.2 W



Haul: 63 UTC: 00:30  
54-13.3 N, 131- 4.8 W



Haul: 64 UTC: 15:30  
54- 8.1 N, 131-18.2 W



Haul: 65 UTC: 17:57  
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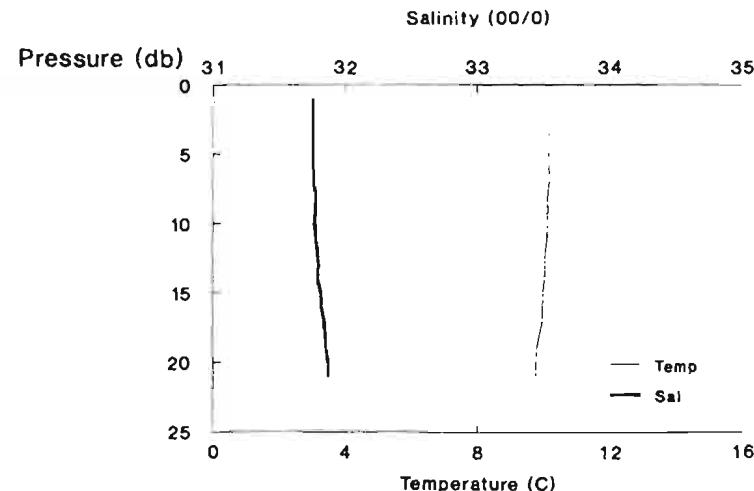
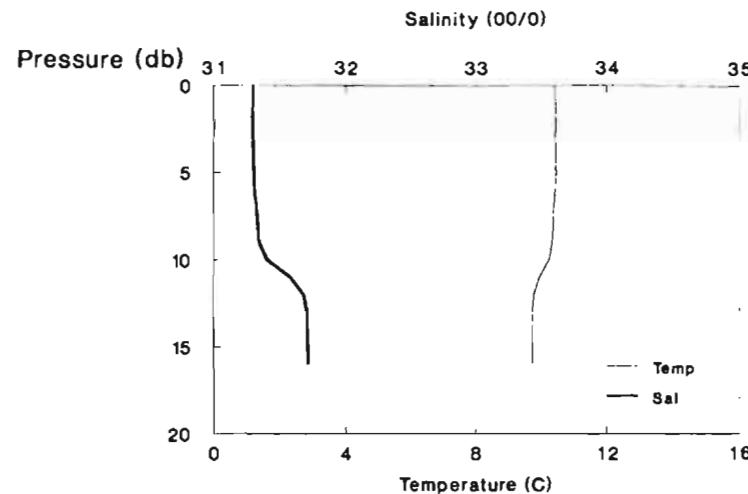


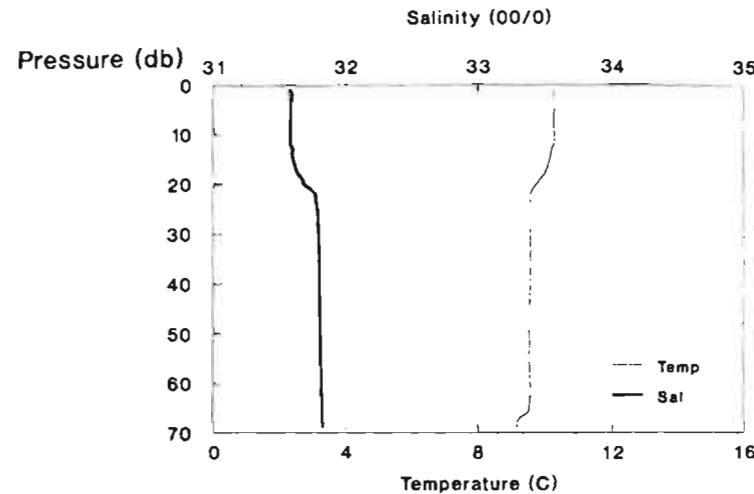
Figure 3.



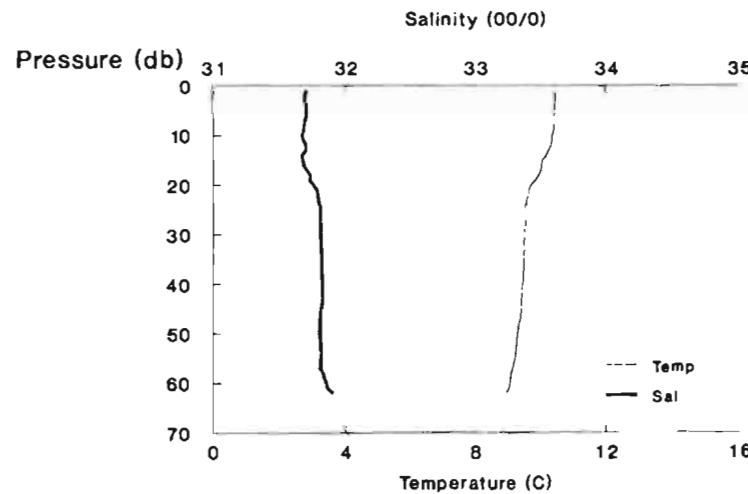
Haul: 66 UTC: 18:05  
54-12.5 N, 131- 4.9 W



Haul: 67 UTC: 21:40  
54-10.1 N, 131- 4.3 W



Haul: 68 UTC: 23:15  
54- 8.1 N, 131- 4.5 W



Haul: 69 UTC: 01:40  
54- 2.7 N, 131- 7.9 W

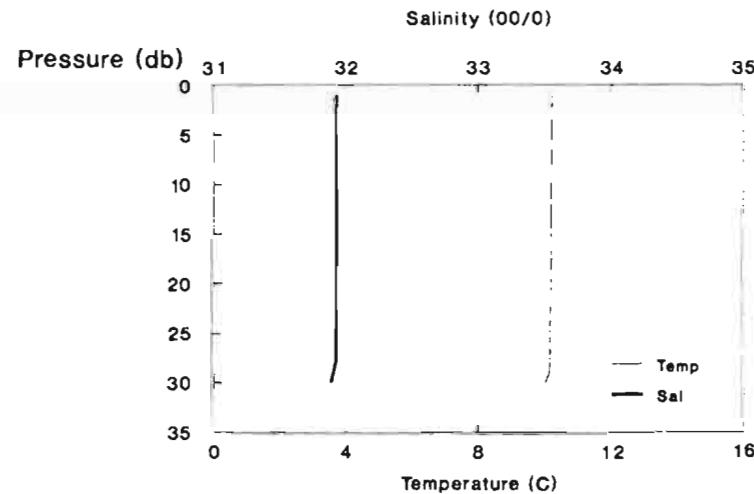
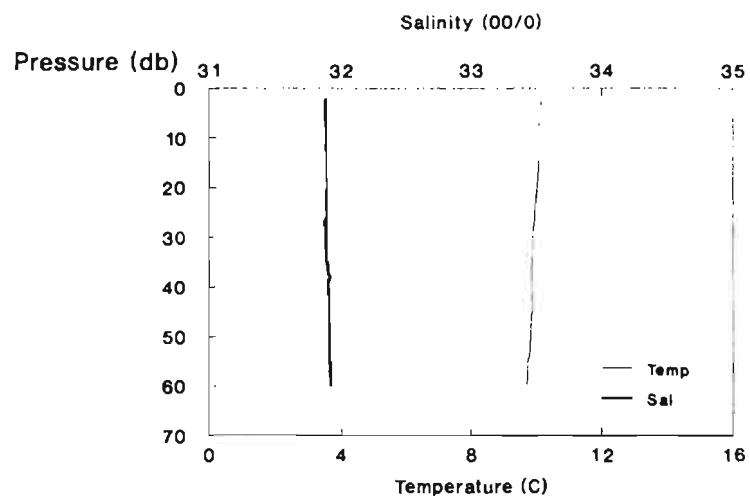


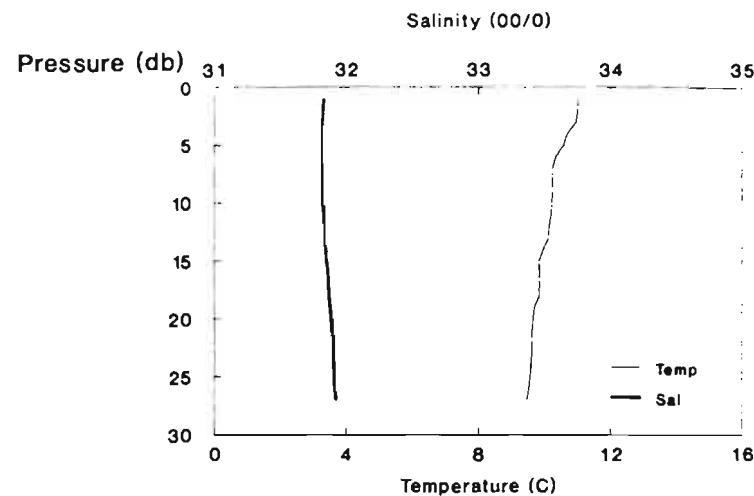
Figure 3.



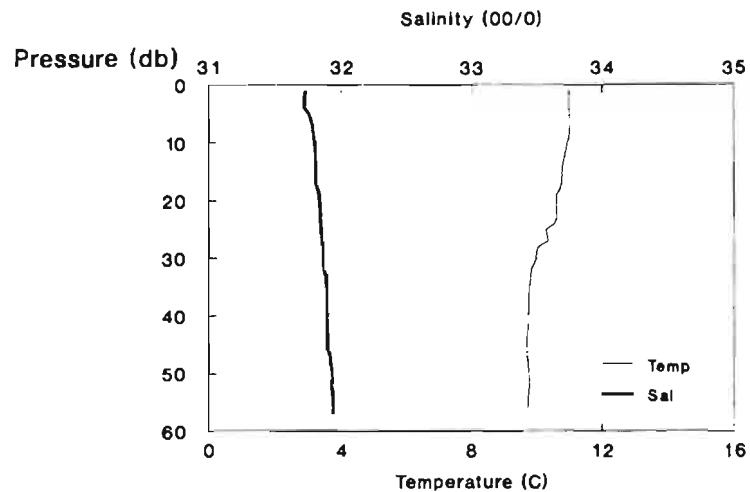
Haul: 70 UTC: 15:40  
54° 3.4 N, 131° 5.1 W



Haul: 72 UTC: 18:10  
53-60.0 N, 131- 7.0 W



Haul: 73 UTC: 20:15  
54° 0.5 N, 131° 5.2 W



Haul: 74 UTC: 21:43  
53-59.2 N, 131- 7.7 W

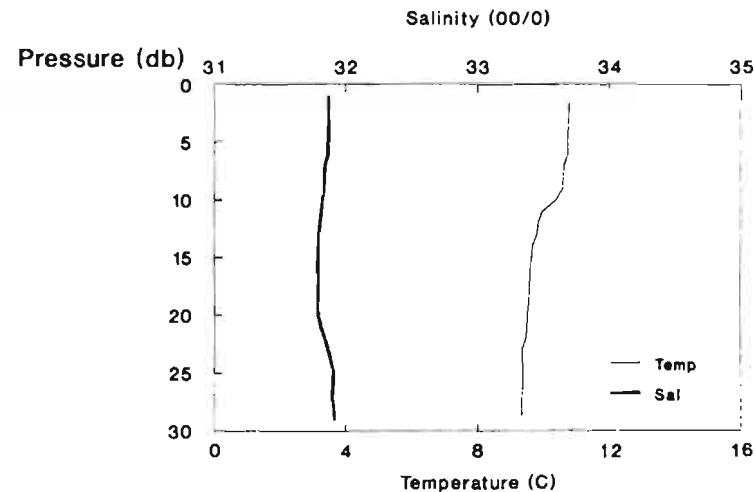
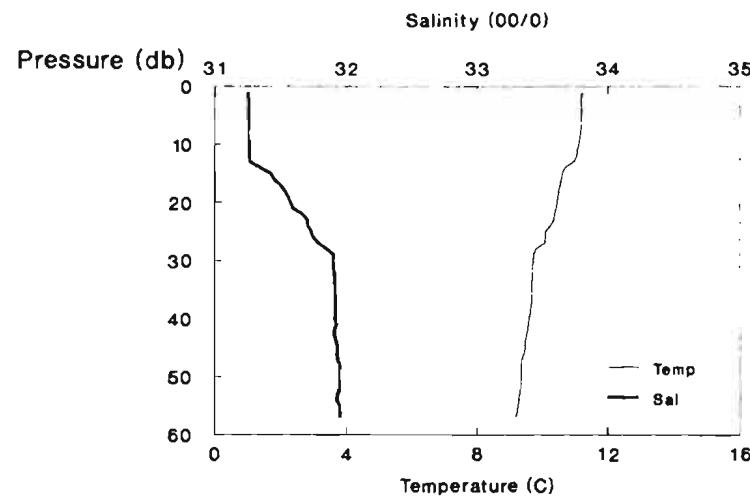


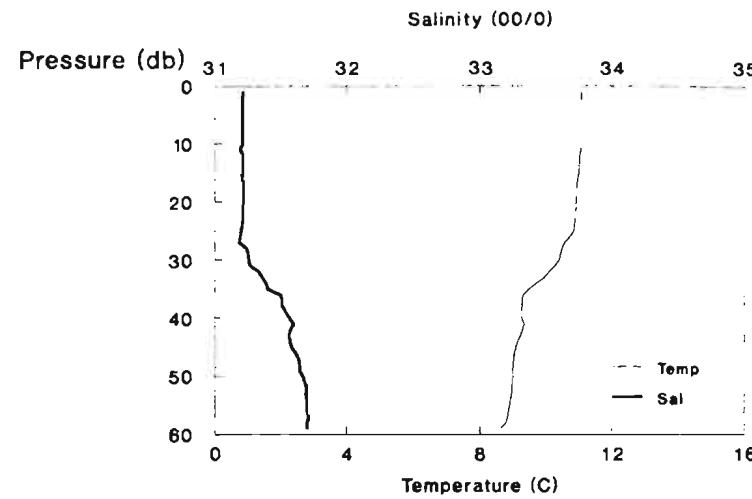
Figure 3.



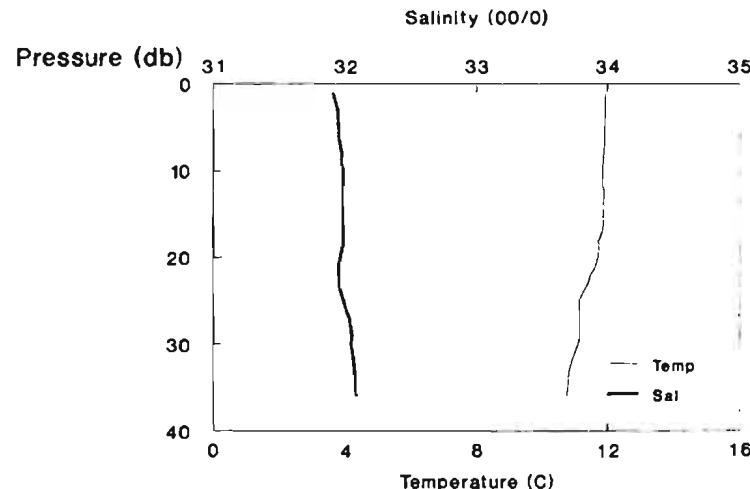
Haul: 75 UTC: 23:07  
53-55.0 N, 131- 3.6 W



Haul: 76 UTC: 01:30  
53-55.7 N, 131- 0.8 W



Haul: 78 UTC: 17:12  
53-42.3 N, 131-17.1 W



Haul: 79 UTC: 18:18  
53-49.1 N, 131- 7.3 W

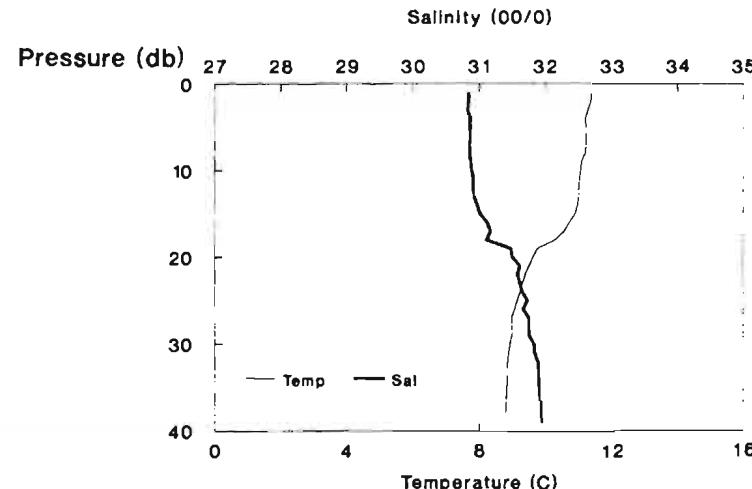
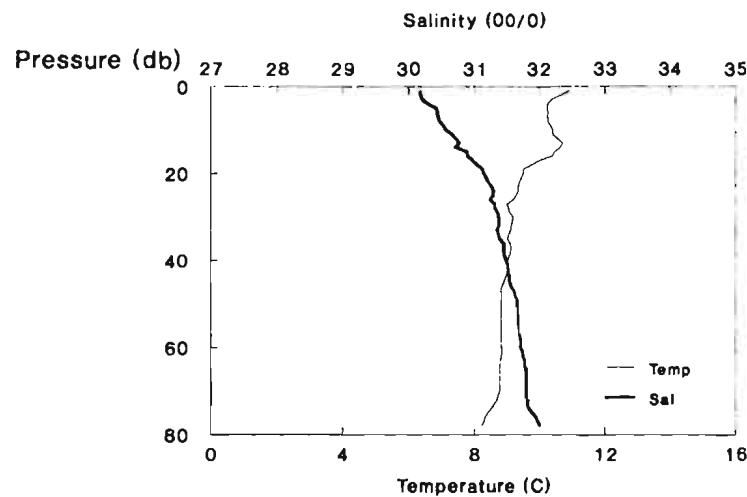


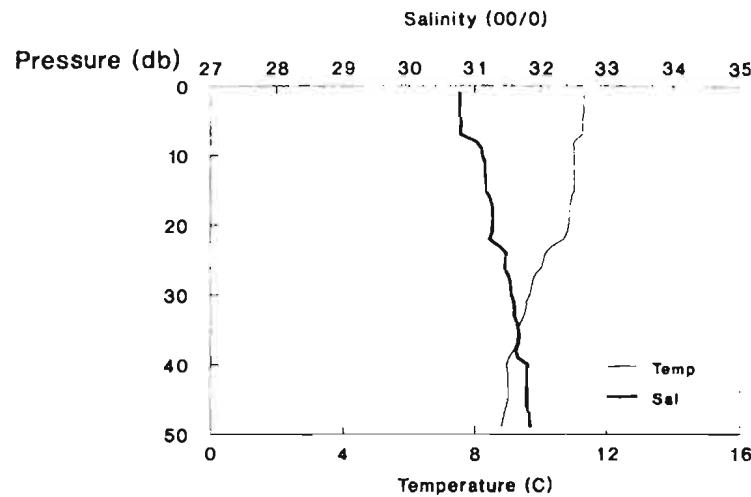
Figure 3.



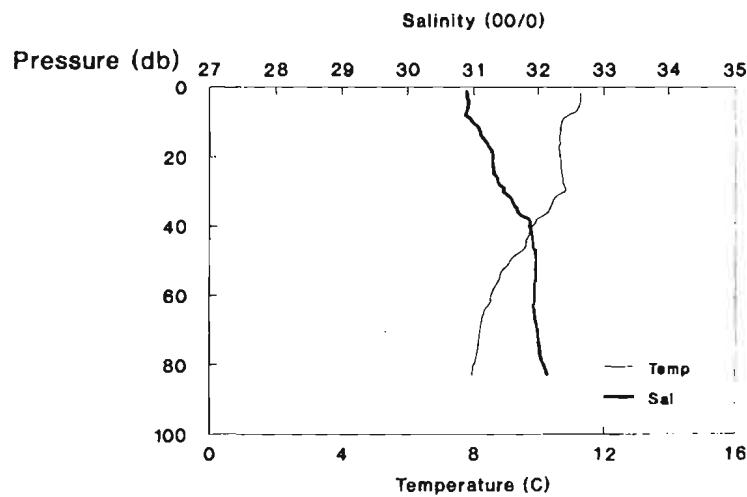
Haul: 80 UTC: 20:35  
53-52.3 N, 130-52.3 W



Haul: 81 UTC: 22:35  
53-47.8 N, 130-57.0 W



Haul: 82 UTC: 23:12  
53-46.0 N, 130-50.4 W



Haul: 83 UTC: 01:11  
53-42.9 N, 130-52.2 W

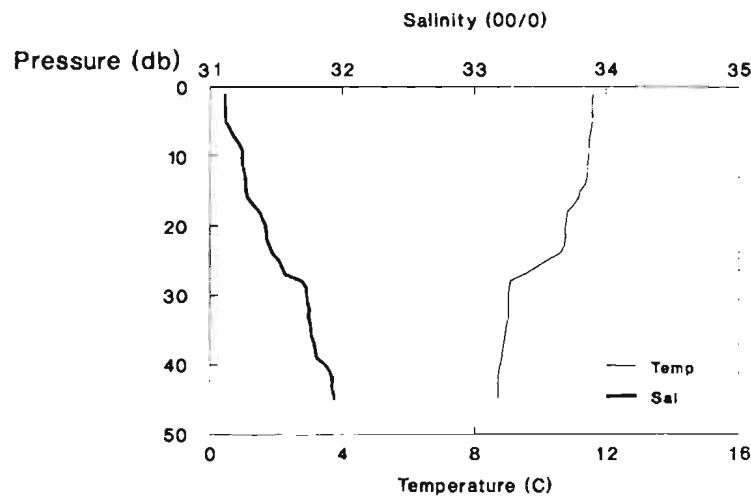
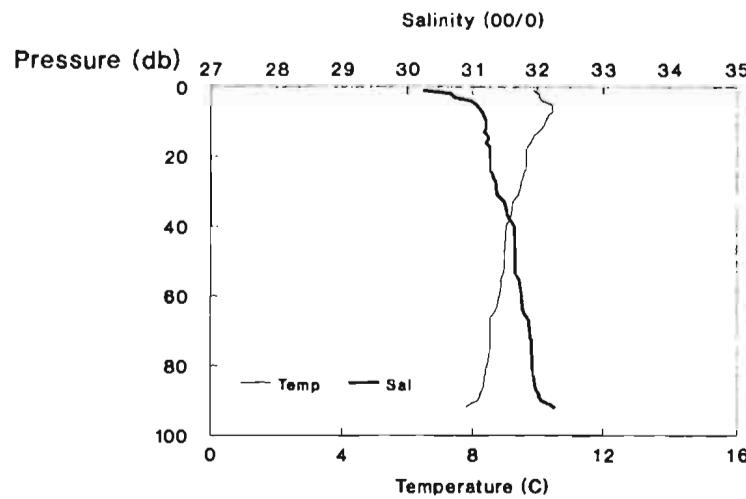


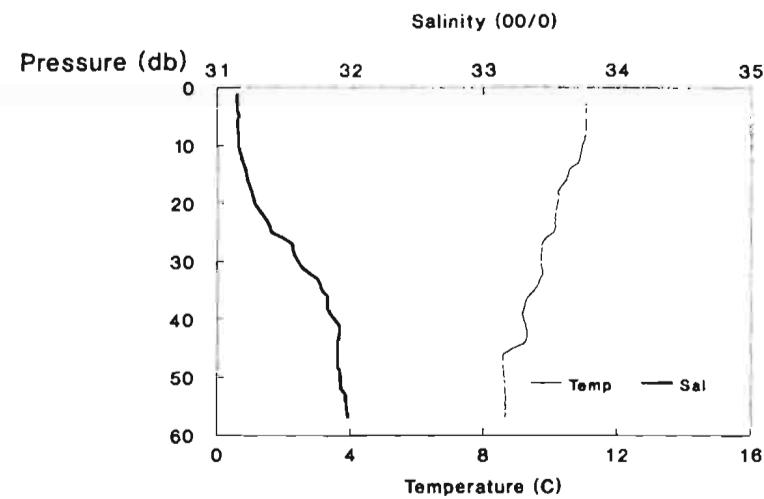
Figure 3.



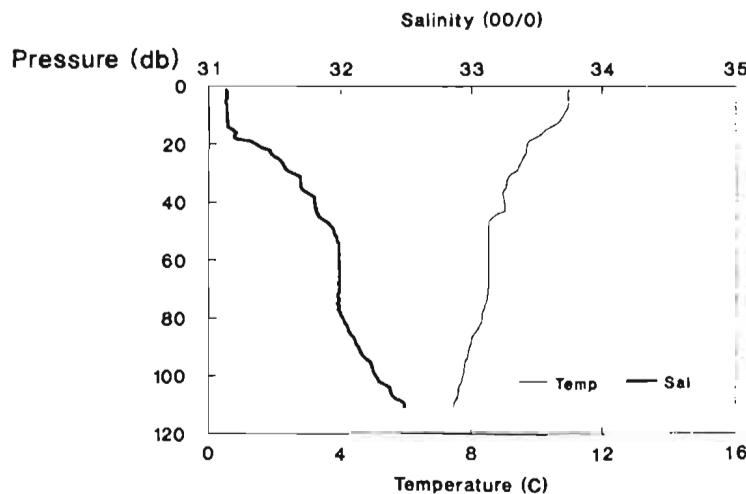
Haul: 84 UTC: 16:40  
53-44.1 N, 130-37.9 W



Haul: 85 UTC: 17:09  
53-43.5 N, 130-44.5 W



Haul: 86 UTC: 18:17  
53-39.9 N, 130-45.3 W



Haul: 87 UTC: 19:55  
53-39.1 N, 130-48.8 W

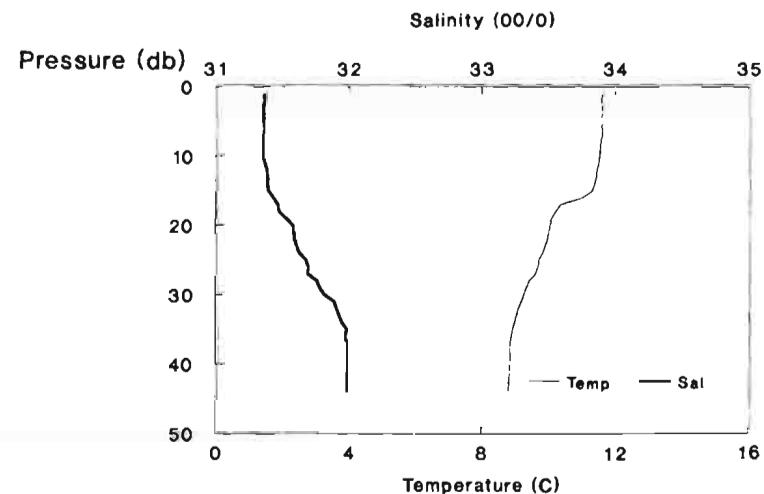
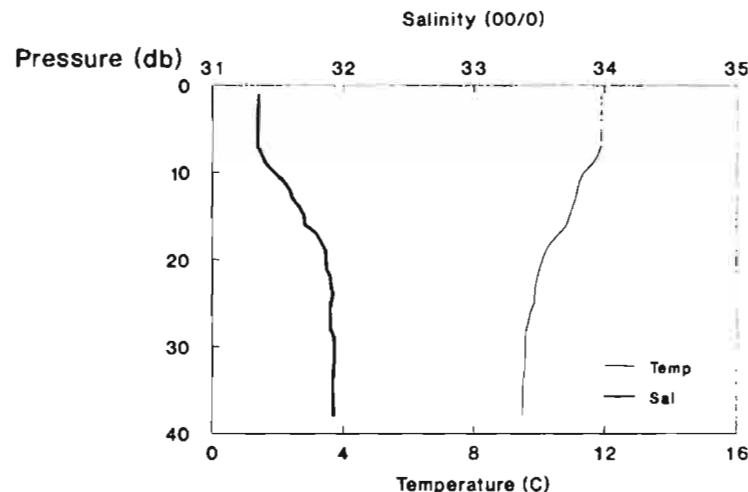


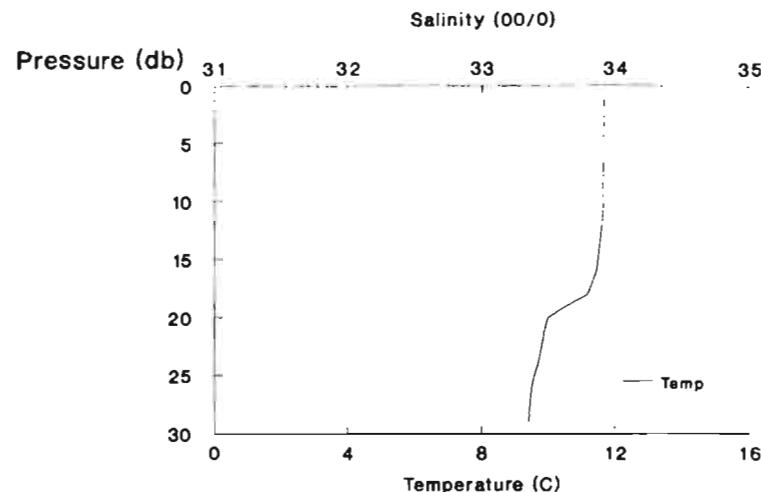
Figure 3.



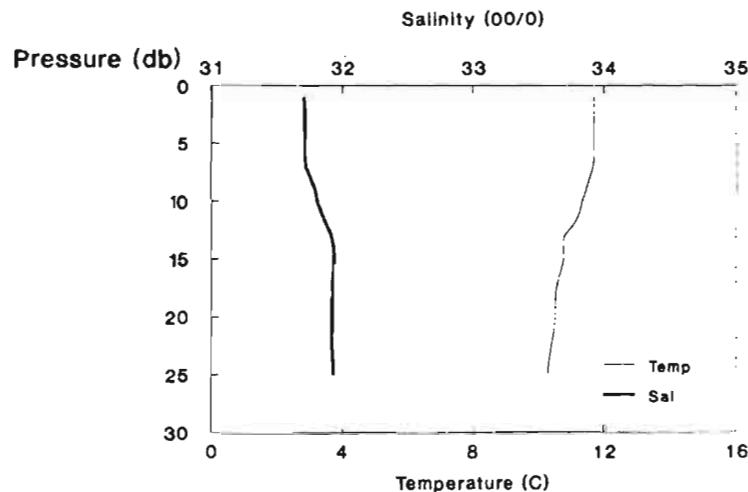
Haul: 88 UTC: 22:37  
53-23.6 N, 131- 3.8 W



Haul: 89 UTC: 00:33  
53-15.5 N, 131- 7.3 W



Haul: 90 UTC: 01:35  
53-16.7 N, 131- 9.4 W



Haul: 91 UTC: 15:35  
53- 0.7 N, 130-32.2 W

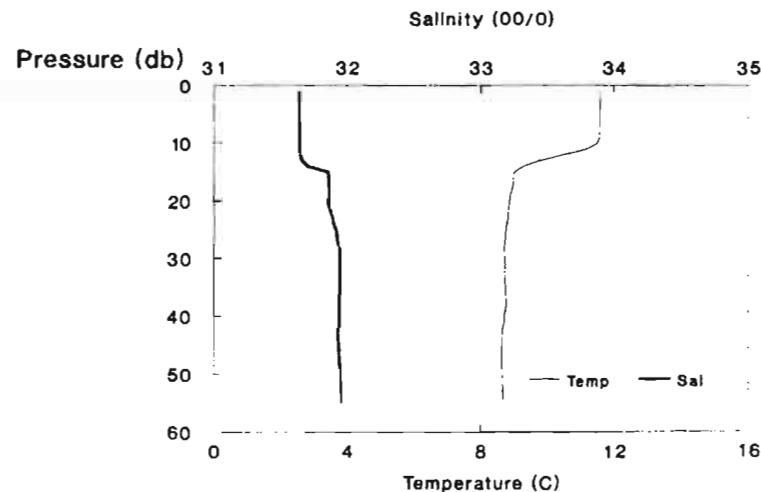


Figure 3.



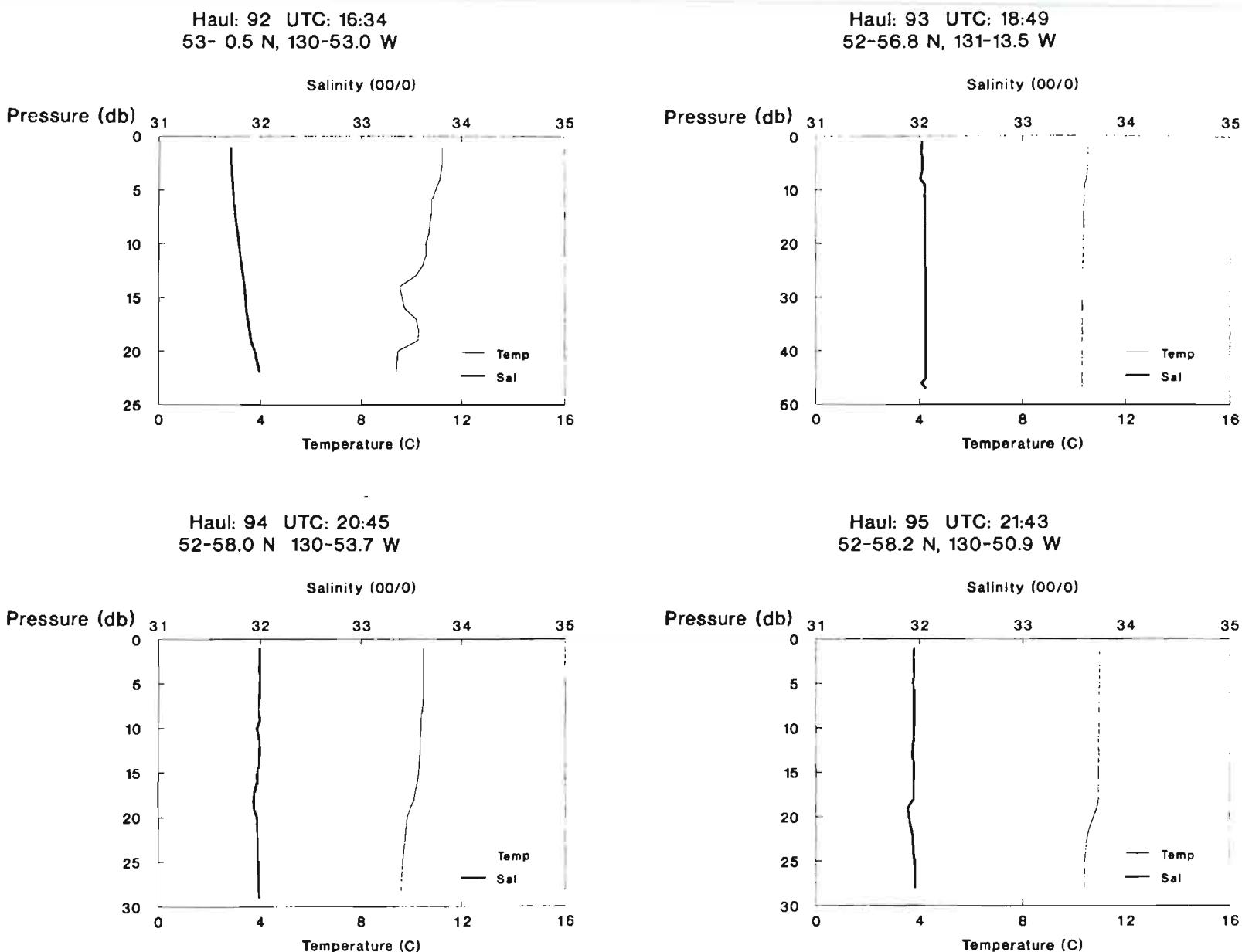
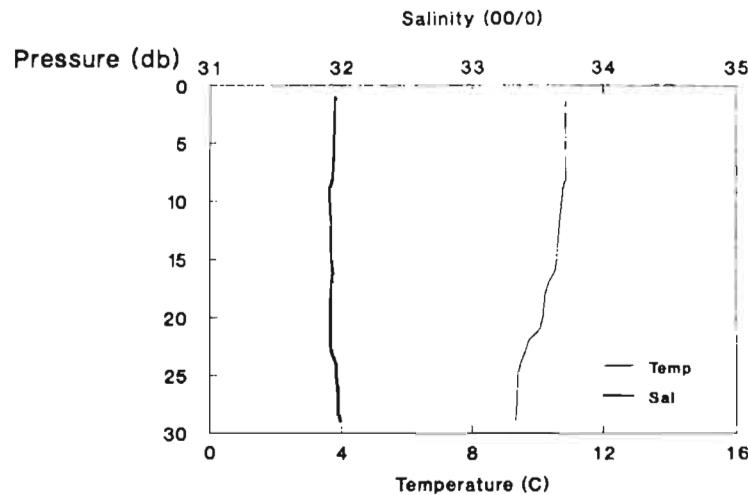


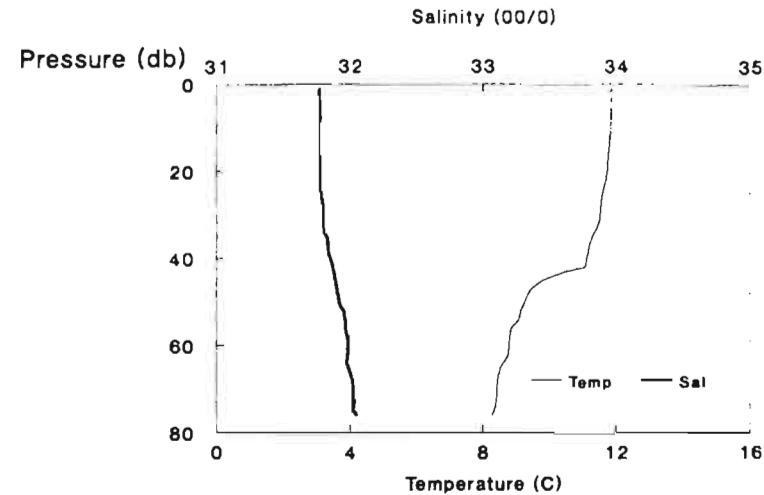
Figure 3.



Haul: 96 UTC: 22:55  
52-57.6 N, 130-49.9 W



Haul: 97 UTC: 00:45  
52-57.8 N, 130-38.2 W



Haul: 97 UTC: 01:32  
52-57.5 N, 130-36.8 W

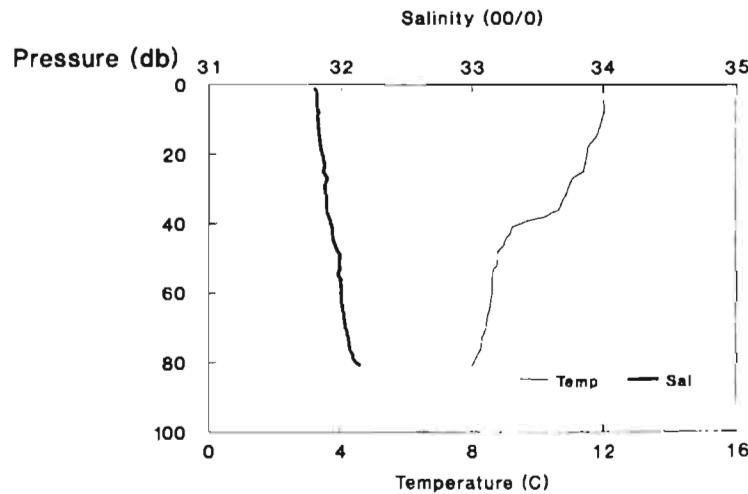


Figure 3.



Appendix Table 1. Bridge log and catch data for R/V W.E. RICKER Hecate Strait assemblage survey May 17 - June 3, 1993.

HAUL NO.	1	2	3			
BLOCK	L407	L406	L507			
DATE (1993)	MAY 19	MAY 19	MAY 19			
DEPTH INTERVAL (FA)	70	60	70			
DURATION (H)	0.33	0.33	0.33			
DIRECTION (DEG. TRUE)	55	6	115			
TIME (PDT)	START 8:15	STOP 8:35	START 9:34	STOP 9:54	START 10:51	STOP 11:11
LAT.(DEG,MIN)	52 33	52 33.7	52 36.4	52 37.6	52 39.7	52 39.3
LONG.(DEG,MIN)	130 41.6	130 40.8	130 48.5	130 48.2	130 39.4	130 36.9
LC-5990-X	12511.7	12509.9	12461.1	12454.3	12481	12490
LC-5990-Z	41412	41415.6	41418.3	41422.9	41440.5	41440.5
DEPTH (FA)	69.9	70.5	61.2	61.2	74.9	74.9

SPECIES CATCH(KG.)

Arrowtooth flounder	1	1	1
Butter sole	-	-	-
Curlfin sole	-	-	-
Dover sole	1	-	3
English sole	19	146	17
Flatfish	-	4	-
Flathead sole	1	1	1
Pacific halibut	-	4	16
Pacific sanddab	-	-	-
Petrale sole	1	7	4
Rex sole	3	2	5
Rock sole	-	3	-
Sand sole	-	-	-
Slender sole	TRACE	-	TRACE
Speckled sanddab	-	-	-
Starry flounder	-	-	-
Bocaccio	-	-	23
Canary rockfish	-	-	7
Copper rockfish	-	-	-
Darkblotched rockfish	-	-	-
Greenstriped rockfish	-	-	3
Pacific ocean perch	-	-	-
Pygmy rockfish	-	-	-
Quillback rockfish	-	-	-
Rosethorn rockfish	-	-	-
Sharpchin rockfish	-	-	-
Silvergray rockfish	12	-	335
Yelloweye rockfish	-	-	5
Yellowtail rockfish	-	-	1
Eelpouts	-	-	TRACE
Eulachon	-	-	-
Greenlings	-	-	-
Irish lord	-	-	-
Kelp greenling	-	-	-
Lingcod	13	-	16
Northern rockfish	-	-	-
Pacific cod	2	-	39
Pacific hake	-	-	-
Pacific herring	4	TRACE	-
Pacific tomcod	-	-	-
Poachers	-	-	-
Sablefish	-	-	-
Sandlance	-	-	-
Sculpins	TRACE	-	-
Shiner perch	-	-	-
Walleye pollock	TRACE	-	1
Wolf eel	-	-	-
Big skate	-	-	-
Longnose skate	TRACE	-	-
Sandpaper skate	-	-	-
Spiny dogfish	215	2	83
Spotted ratfish	16	24	34
Bivalves (scallop)	-	-	-
Crabs	-	-	-
Invertebrates	-	-	-
Octopus	-	-	-

Appendix Table 1 (continued)

HAUL NO.	4	5	6	
BLOCK	K406	K405	K404	
DATE (1993)	MAY 19	MAY 19	MAY 19	
DEPTH INTERVAL (FA)	60	50	40	
DURATION (H)	0.33	0.33	0.33	
DIRECTION (DEG. TRU)	35	55	40	
TIME (PDT)	START 12:14	STOP 12:34	START 13:18	STOP 13:38
LAT.(DEG,MIN)	52 41.1	52 41.8	52 42.4	52 43.0
LONG.(DEG,MIN)	130 45	130 43.8	130 47.4	130 46
LC-5990-X	12444.2	12444.9	12425.7	12427.3
LC-5990-Z	41438.9	41442.8	41441.5	41445.3
DEPTH (FA)	60.7	60.7	55.2	54.6
TOTAL CATCH (KG.)	59	66	279	
Arrowtooth flounder	TRACE	TRACE	-	
Butter sole	-	-	-	
Curlfin sole	1	2	1	
Dover sole	TRACE	-	TRACE	
English sole	16	14	35	
Flatfish	TRACE	TRACE	16	
Flathead sole	TRACE	-	-	
Pacific halibut	17	10	49	
Pacific sanddab	-	-	-	
Petrale sole	1	8	6	
Rex sole	1	1	3	
Rock sole	-	17	50	
Sand sole	-	-	-	
Slender sole	-	-	-	
Speckled sanddab	-	-	-	
Starry flounder	-	-	-	
Bocaccio	-	-	-	
Canary rockfish	2	-	-	
Copper rockfish	-	-	-	
Darkblotched rockfish	-	-	-	
Greenstriped rockfish	-	-	-	
Pacific ocean perch	-	-	-	
Pygmy rockfish	-	-	-	
Quillback rockfish	-	-	-	
Rosethorn rockfish	-	-	-	
Sharpchin rockfish	-	-	-	
Silvergray rockfish	-	-	-	
Yelloweye rockfish	-	-	-	
Yellowtail rockfish	-	-	-	
Eelpouts	-	-	-	
Eulachon	-	-	-	
Greenlings	-	-	-	
Irish lord	-	-	-	
Kelp greenling	-	-	-	
Lingcod	-	-	101	
Northern rockfish	-	-	-	
Pacific cod	-	-	-	
Pacific hake	-	-	-	
Pacific herring	-	-	-	
Pacific tomcod	-	-	-	
Poachers	-	TRACE	-	
Sablefish	-	-	-	
Sandlance	-	-	-	
Sculpins	-	-	-	
Shiner perch	-	TRACE	TRACE	
Walleye pollock	-	-	-	
Wolfeel	-	-	-	
Big skate	-	-	-	
Longnose skate	-	-	5	
Sandpaper skate	-	-	-	
Spiny dogfish	5	9	2	
Spotted ratfish	16	5	11	
Bivalves (scallop)	-	-	-	
Crabs	-	-	-	
Invertebrates	-	-	-	
Octopus	-	-	-	

Appendix Table 1 (continued)

HAUL NO.	7	8	9
BLOCK	K506	J505	J505
DATE (1993)	MAY 19	MAY 19	MAY 20
DEPTH INTERVAL (FA)	60	50	50
DURATION (H)	0.33	0.33	0.33
DIRECTION (DEG. TRUE)	28	5	352
TIME (PDT)	15:46	16:06	17:36
LAT.(DEG,MIN)	52 46.8	52 47.7	52 54.3
LONG.(DEG,MIN)	130 38.6	130 37.7	130 35.4
LC-5990-X	12432.7	12430.7	12394.4
LC-5990-Z	41467.1	41471.5	41499.2
DEPTH (FA)	61.7	62.3	55.2
START			
STOP			
START			
STOP			
START			
STOP			
SPECIES CATCH(KG.)			
Arrowtooth flounder	-	2	1
Butter sole	-	-	-
Curlfin sole	-	-	1
Dover sole	-	10	1
English sole	1	17	14
Flatfish	-	1	TRACE
Flathead sole	TRACE	TRACE	-
Pacific halibut	-	1	51
Pacific sanddab	-	-	-
Petrale sole	TRACE	16	5
Rex sole	TRACE	33	1
Rock sole	-	-	13
Sand sole	-	-	-
Slender sole	TRACE	2	-
Speckled sanddab	-	-	-
Starry flounder	-	-	-
Hopaccio	-	-	-
Canary rockfish	-	-	-
Copper rockfish	-	-	-
Darkblotched rockfish	-	-	-
Greenstriped rockfish	-	-	-
Pacific ocean perch	-	-	-
Pygmy rockfish	-	2	-
Quillback rockfish	-	37	-
Rosethorn rockfish	-	-	-
Sharpchin rockfish	-	-	-
Silvergray rockfish	-	-	-
Yelloweye rockfish	-	27	-
Yellowtail rockfish	-	TRACE	-
Eelpouts	-	TRACE	-
Eulachon	-	-	-
Greenlings	-	-	-
Irish lord	-	-	-
Kelp greenling	-	-	-
Lingcod	3	9	-
Northern rockfish	-	-	-
Pacific cod	-	33	-
Pacific hake	-	-	-
Pacific herring	-	-	-
Pacific tomcod	-	-	-
Poachers	-	TRACE	TRACE
Sablefish	-	-	-
Sandlance	-	-	-
Sculpins	-	TRACE	-
Shiner perch	-	-	-
Walleye pollock	-	-	-
Wolfie	-	-	-
Big skate	-	-	8
Longnose skate	-	-	-
Sandpaper skate	-	-	-
Spiny dogfish	5	3	16
Spotted ratfish	1	2	-
Bivalves (scallop)	-	-	-
Crabs	-	-	-
Invertebrates	-	-	TRACE
Octopus	-	-	-
TOTAL CATCH (KG.)	10	196	111

Appendix Table 1 (continued)

HAUL NO.	10	11	12	
BLOCK	J404	I405	J402	
DATE (1993)	MAY 20	MAY 20	MAY 20	
DEPTH INTERVAL (FA)	40	50	20	
DURATION (H)	0.33	0.33	0.33	
DIRECTION (DEG. TRUE)	270	313	270	
TIME (PDT)	START 9:20	STOP 9:40	START 10:05	STOP 10:25
LAT.(DEG,MIN)	52 58.9	52 58.8	52 59.0	52 59.9
LONG.(DEG,MIN)	130 40.5	130 42.5	130 43.8	130 45.3
LC-5990-X	12341.2	12333.3	12327	12313.9
LC-5990-Z	41510.2	41507.6	41506.7	41508.6
DEPTH (FA)	48.9	48.9	50.3	52.5
			27.3	27.3

SPECIES CATCH(KG.)

Arrowtooth flounder	146	67	5
Butter sole	-	-	1
Curlfin sole	-	-	1
Dover sole	10	27	-
English sole	16	30	1
Flatfish	-	-	TRACE
Flathead sole	-	1	-
Pacific halibut	15	2	25
Pacific sanddab	-	-	-
Petrale sole	1	TRACE	-
Rex sole	16	14	1
Rock sole	TRACE	-	36
Sand sole	-	-	-
Slender sole	-	-	-
Speckled sanddab	-	-	-
Starry flounder	-	-	-
Bocaccio	-	-	-
Canary rockfish	-	-	-
Copper rockfish	-	-	-
Darkblotched rockfish	-	-	-
Greenstriped rockfish	-	-	-
Pacific ocean perch	-	-	-
Pygmy rockfish	-	-	-
Quillback rockfish	-	-	-
Rosethorn rockfish	-	-	-
Sharpchin rockfish	-	-	-
Silvergray rockfish	-	-	-
Yelloweye rockfish	-	-	-
Yellowtail rockfish	-	-	-
Eelpouts	-	TRACE	-
Eulachon	-	-	-
Greenlings	-	-	-
Irish lord	-	-	-
Kelp greenling	-	-	-
Lingcod	-	-	-
Northern rockfish	-	-	-
Pacific cod	-	5	-
Pacific hake	-	-	-
Pacific herring	-	TRACE	-
Pacific tomcod	-	TRACE	-
Poachers	2	2	2
Sablefish	-	-	-
Sandlance	-	-	-
Sculpins	-	-	-
Shiner perch	-	-	-
Walleye pollock	-	TRACE	-
Wolfeel	-	-	-
Big skate	14	-	-
Longnose skate	-	-	-
Sandpaper skate	-	-	-
Spiny dogfish	226	2	22
Spotted ratfish	6	6	-
Bivalves (scallop)	-	-	-
Crabs	-	-	-
Invertebrates	-	-	-
Octopus	-	-	-
TOTAL CATCH (KG.)	452	156	94

Appendix Table 1 (continued)

HAUL NO.	13	14	15
BLOCK	1402	1405	1506
DATE (1993)	MAY 20	MAY 20	MAY 20
DEPTH INTERVAL (FA)	20	50	60
DURATION (H)	0.33	0.33	0.33
DIRECTION (DEG. TRUE)	326	146	156
TIME (PDT)	12:49	13:09	14:27
LAT.(DEG,MIN)	53 00.7	53 01.7	52 00.9
LONG.(DEG,MIN)	130 51.9	130 33.1	130 44
LC-5990-X	12281.5	12269.9	12313
LC-5990-Z	41503.6	41505.9	41514.8
DEPTH (FA)	29.6	29.6	59
START	STOP	START	STOP
START	STOP	START	STOP

SPECIES CATCH(KG.)

Arrowtooth flounder	1	34	-
Butter sole	1	-	-
Curlfin sole	12	TRACE	-
Dover sole	10	25	27
English sole	190	46	18
Flatfish	16	2	-
Flathead sole	-	5	21
Pacific halibut	13	3	8
Pacific sanddab	-	-	-
Petrale sole	3	-	-
Rex sole	26	91	31
Rock sole	12	1	-
Sand sole	-	-	-
Slender sole	-	TRACE	4
Speckled sanddab	-	-	-
Starry flounder	-	-	-
Bocaccio	-	-	-
Canary rockfish	22	-	-
Copper rockfish	4	-	-
Darkblotched rockfish	-	-	-
Greenstriped rockfish	-	-	-
Pacific ocean perch	-	-	-
Fygmy rockfish	-	-	-
Quillback rockfish	9	-	-
Rosethorn rockfish	-	-	-
Sharpchin rockfish	TRACE	-	-
Silvergray rockfish	-	-	-
Yelloweye rockfish	-	-	-
Yellowtail rockfish	TRACE	-	-
Kelpouts	-	-	TRACE
Eulachon	-	-	-
Greenlings	-	-	-
Irish lord	-	-	-
Kelp greenling	-	-	-
Lingcod	-	-	-
Northern rockfish	-	-	-
Pacific cod	3	-	-
Pacific hake	-	-	-
Pacific herring	1	TRACE	TRACE
Pacific tomcod	1	-	-
Poachers	1	TRACE	TRACE
Sablefish	-	-	-
Sandlance	-	-	-
Sculpins	-	-	-
Shiner perch	TRACE	-	-
Walleye pollock	TRACE	TRACE	-
Wolf eel	-	-	-
Big skate	11	-	-
Longnose skate	-	-	TRACE
Sandpaper skate	-	-	-
Spiny dogfish	20	14	54
Spotted ratfish	115	6	12
Bivalves (scallop)	-	-	-
Crabs	-	-	-
Invertebrates	-	-	-
Octopus	-	-	-

TOTAL CATCH (KG.)

471

227

175

Appendix Table 1 (continued)

HAUL NO.	16	17	18			
BLOCK	1507	1302	1302			
DATE (1993)	MAY 20	MAY 21	MAY 21			
DEPTH INTERVAL (FA)	70	20	20			
DURATION (H)	0.33	0.33	0.33			
DIRECTION (DEG. TRUE)	113	270	255			
TIME (PDT)	START 17:10	STOP 17:30	START 8:07	STOP 8:27	START 8:57	STOP 9:17
LAT.(DEG,MIN)	53 05.4	53 05.0	53 03.6	53 03.7	53 02.7	53 02.5
LONG.(DEG,MIN)	130 38	130 36.4	130 56.6	130 58.3	130 57.6	130 59.3
LC-5990-X	12305.7	12315.1	12242	12234.8	12245	12239.5
LC-5990-Z	41537.4	41538.2	41509.2	41507.5	41504.7	41501.9
DEPTH (FA)	77	77	25.2	25.8	21.2	21.2

SPECIES CATCH(KG.)

Arrowtooth flounder	276	13	-
Butter sole	-	2	-
Curlfin sole	-	2	TRACE
Dover sole	9	1	-
English sole	20	85	121
Flatfish	-	5	4
Flathead sole	5	-	-
Pacific halibut	9	9	36
Pacific sanddab	-	-	-
Petrale sole	2	-	-
Rex sole	22	-	-
Rock sole	-	4	2
Sand sole	-	-	-
Slender sole	-	-	-
Speckled sanddab	-	-	-
Starry flounder	-	-	-
Bocaccio	-	-	-
Canary rockfish	-	-	-
Copper rockfish	-	-	-
Darkblotched rockfish	-	-	-
Greenstriped rockfish	-	-	-
Pacific ocean perch	40	-	-
Pygmy rockfish	-	-	-
Quillback rockfish	-	-	-
Rosethorn rockfish	-	-	-
Sharpchin rockfish	-	-	-
Silvergray rockfish	2	-	-
Yelloweye rockfish	-	-	-
Yellowtail rockfish	-	-	-
Eelpouts	-	-	-
Eulachon	-	-	-
Greenlings	-	-	-
Irish lord	-	-	-
Kelp greenling	-	-	-
Lingcod	-	-	6
Northern rockfish	-	-	-
Pacific cod	20	-	TRACE
Pacific hake	-	-	-
Pacific herring	-	TRACE	-
Pacific tomcod	-	TRACE	TRACE
Poachers	-	TRACE	TRACE
Sablefish	2	-	-
Sandlance	-	-	-
Scorpions	-	-	-
Shiner perch	-	TRACE	-
Walleye pollock	7	-	-
Wolf eel	-	-	-
Big skate	-	-	4
Longnose skate	-	-	-
Sandpaper skate	-	-	-
Spiny dogfish	21	1	29
Spotted ratfish	6	-	TRACE
Bivalves (scallop)	-	-	-
Crabs	-	-	-
Invertebrates	-	-	-
Octopus	-	-	-
TOTAL CATCH (KG.)	441	122	202
REMARKS	USARLE	USARLE	USARLE

Appendix Table 1 (continued)

HAUL NO.	19	20	21
BLOCK	I301	I302	J301
DATE (1993)	MAY 21	MAY 21	MAY 21
DEPTH INTERVAL (FA)	10	10	10
DURATION (H)	0.33	0.33	0.33
DIRECTION (DEG. TRUE)	262	0	270

	START	STOP	START	STOP	START	STOP
TIME (PDT)	9:54	10:14	10:44	11:04	12:22	12:42
LAT.(DEG,MIN)	53 02.1	53 01.8	53 03.7	53 04.7	52 58.4	52 58.4
LONG.(DEG,MIN)	131 04.1	131 05.8	131 09.3	131 09.7	131 02.6	131 04.1
LC-5990-X	12223.9	12218.8	12192.5	12183.4	12255.4	12249.6
LC-5990-Z	41495.4	41492.7	41495.6	41499	41484.7	41482.4
DEPTH (FA)	15.5	16.1	20	20	19.7	17.9

SPECIES CATCH(KG.)

Arrowtooth flounder	-	-	-
Butter sole	-	6	11
Curlfin sole	1	1	1
Dover sole	-	-	-
English sole	3	55	2
Flatfish	-	-	-
Flathead sole	-	-	-
Pacific halibut	80	61	13
Pacific sanddab	-	-	-
Petrale sole	-	-	-
Rex sole	-	-	-
Rock sole	28	30	25
Sand sole	14	-	-
Slender sole	-	-	-
Speckled sanddab	TRACE	TRACE	TRACE
Starry flounder	-	-	-
Bocaccio	-	-	-
Canary rockfish	-	-	-
Copper rockfish	-	-	-
Darkblotched rockfish	-	-	-
Greenstriped rockfish	-	-	-
Pacific ocean perch	-	-	-
Pygmy rockfish	-	-	-
Quillback rockfish	-	-	-
Rosethorn rockfish	-	-	-
Sharpchin rockfish	-	-	-
Silvergray rockfish	-	-	-
Yelloweye rockfish	-	-	-
Yellowtail rockfish	-	-	-
Eelpouts	-	-	-
Eulachon	-	-	-
Greenlings	-	-	-
Irish lord	-	-	-
Kelp greenling	-	-	-
Lingcod	-	-	6
Northern rockfish	-	-	-
Pacific cod	-	-	-
Pacific hake	-	-	-
Pacific herring	-	TRACE	-
Pacific tomcod	-	TRACE	-
Poachers	TRACE	TRACE	TRACE
Sablefish	-	-	-
Sandlance	-	-	-
Scorpions	-	-	-
Shiner perch	TRACE	-	TRACE
Walleye pollock	-	-	-
Wolfieel	-	-	-
Big skate	24	15	-
Longnose skate	-	-	-
Sandpaper skate	-	-	-
Spiny dogfish	31	11	8
Spotted ratfish	-	-	-
Bivalves (scallop)	-	-	-
Crabs	-	-	-
Invertebrates	-	-	-
Octopus	-	-	-
TOTAL CATCH (KG.)	181	179	66
REMARKS	USABLE	USABLE	USABLE

Appendix Table 1 (continued)

HAUL NO.	22	23	24			
BLOCK	J202	J204	J207			
DATE (1993)	MAY 21	MAY 21	MAY 21			
DEPTH INTERVAL (FA)	10	40	70			
DURATION (H)	0.33	0.33	0.33			
DIRECTION (DEG. TRUE)	225	52	49			
TIME (PDT)	START 13:38	STOP 13:58	START 14:49	STOP 15:09	START 15:50	STOP 16:10
LAT.(DEG,MIN)	52 56.7	52 55.9	52 54.2	52 54.8	52 52.7	52 53.6
LONG.(DEG,MIN)	131 14.9	131 15.6	131 18.7	131 17.2	131 19.4	131 18.3
LC-5990-X	1220.5	12223.1	12223.7	12224.9	12231.4	12228.5
LC-5990-Z	41465.7	41462.5	41453.8	41456.9	41447.7	41451.9
DEPTH (FA)	16.4	16.4	44.8	48.1	69.7	69.7
SPECIES CATCH(KG.)						
Arrowtooth flounder	-	-	-	-	1	
Butter sole	-	-	1	-	-	
Curlfin sole	-	-	1	-	1	
Dover sole	-	-	14	-	1	
English sole	-	-	150	-	13	
Flatfish	-	-	-	-	-	
Flathead sole	-	-	-	-	-	
Pacific halibut	-	-	-	-	7	
Pacific sanddab	-	-	7	-	-	
Petrale sole	-	-	TRACE	-	1	
Rex sole	-	-	5	-	1	
Rock sole	-	-	9	-	TRACE	
Sand sole	-	-	-	-	-	
Slender sole	-	-	-	-	-	
Speckled sanddab	-	-	-	-	-	
Starry flounder	-	-	-	-	-	
Bocaccio	-	-	-	-	-	
Canary rockfish	-	-	-	-	-	
Copper rockfish	-	-	-	-	-	
Darkblotched rockfish	-	-	-	-	-	
Greenstriped rockfish	-	-	-	-	-	
Pacific ocean perch	-	-	-	-	-	
Pygmy rockfish	-	-	-	-	-	
Quillback rockfish	-	-	-	-	-	
Rosethorn rockfish	-	-	-	-	-	
Sharpchin rockfish	-	-	-	-	-	
Silvergray rockfish	-	-	-	-	-	
Yelloweye rockfish	-	-	-	-	-	
Yellowtail rockfish	-	-	-	-	-	
Eelpouts	-	-	TRACE	-	TRACE	
Eulachon	-	-	-	-	-	
Greenlings	-	-	-	-	-	
Irish lord	-	-	-	-	-	
Kelp greenling	-	-	-	-	-	
Lingcod	-	-	-	-	-	
Northern rockfish	-	-	-	-	-	
Pacific cod	-	-	-	-	-	
Pacific hake	-	-	-	-	-	
Pacific herring	-	-	45	-	-	
Pacific tomcod	-	-	-	-	-	
Poachers	-	-	TRACE	-	-	
Sablefish	-	-	-	-	1	
Sandlance	-	-	-	-	-	
Sculpins	-	-	-	-	-	
Shiner perch	-	-	-	-	-	
Walleye pollock	-	-	14	-	15	
Wolf eel	-	-	-	-	-	
Big skate	-	-	-	-	-	
Longnose skate	-	-	-	-	-	
Sandpaper skate	-	-	-	-	-	
Spiny dogfish	-	-	1	-	-	
Spotted ratfish	-	-	89	-	49	
Bivalves (scallop)	-	-	-	-	-	
Crabs	-	-	-	-	-	
Invertebrates	-	-	-	-	-	
Octopus	-	-	-	-	-	
TOTAL CATCH (KG.)	0	336	90			

Appendix Table 1 (continued)

HAUL NO.	25	26	27
BLOCK	1201	1303	1404
DATE (1993)	MAY 21	MAY 22	MAY 22
DEPTH INTERVAL (FA)	10	30	40
DURATION (H)	0.33	0.33	0.33
DIRECTION (DEG. TRUE)	90	357	138
TIME (PDT)	17:41	18:01	8:07
START			8:27
STOP			8:59
LAT.(DEG,MIN)	53 02.4	53 02.4	53 05.9
LONG.(DEG,MIN)	131 23.7	131 21.8	130 59
LC-5990-X	12148.4	12155.3	12216.7
LC-5990-Z	41477.1	41478.9	41514.4
DEPTH (FA)	15.6	16.1	29.5
START			42.1
STOP			44.3
SPECIES CATCH(KG.)			
Arrowtooth flounder	-	-	1
Butter sole	-	-	-
Curlfin sole	-	-	-
Dover sole	-	-	-
English sole	1	9	11
Flatfish	-	-	-
Flathead sole	-	-	-
Pacific halibut	9	4	-
Pacific sanddab	-	TRACE	103
Petrale sole	-	-	-
Rex sole	TRACE	-	5
Rock sole	5	1	-
Sand sole	TRACE	-	-
Slender sole	-	-	-
Speckled sanddab	-	-	-
Starry flounder	-	-	-
Bocaccio	-	-	-
Canary rockfish	-	-	-
Copper rockfish	-	-	-
Darkblotched rockfish	-	-	-
Greenstriped rockfish	-	-	-
Pacific ocean perch	-	-	-
Pygmy rockfish	-	-	-
Quillback rockfish	-	-	-
Rosethorn rockfish	-	-	-
Sharpchin rockfish	-	-	-
Silvergray rockfish	-	-	-
Yelloweye rockfish	-	-	-
Yellowtail rockfish	-	-	-
Eelpouts	TRACE	-	-
Eulachon	-	-	-
Greenlings	-	-	-
Irish lord	-	-	-
Kelp greenling	-	-	-
Lingcod	-	-	-
Northern rockfish	-	-	-
Pacific cod	-	-	-
Pacific hake	-	-	-
Pacific herring	3	-	-
Pacific tomcod	-	-	-
Poachers	-	-	-
Sablefish	-	-	-
Sandlance	-	TRACE	-
Sculpins	-	-	-
Shiner perch	-	-	-
Walleye pollock	-	-	3
Wolfieel	-	-	-
Big skate	-	-	-
Longnose skate	-	-	-
Sandpaper skate	-	-	-
Spiny dogfish	-	28	5
Spotted ratfish	11	1	5
Bivalves (scallop)	-	-	-
Crabs	-	-	-
Invertebrates	-	-	-
Octopus	-	-	-
TOTAL CATCH (KG.)	29	43	133
REMARKS	USABLE	USABLE	USABLE

Appendix Table 1 (continued)

HAUL NO.	28	29	30
BLOCK	I407	H407	H406
DATE (1993)	MAY 22	MAY 22	MAY 22
DEPTH INTERVAL (FA)	70	70	60
DURATION (H)	0.33	0.33	0.33
DIRECTION (DEG. TRUE)	322	145	132
TIME (PDT)	START	STOP	START
LAT.(DEG,MIN)	10:12	10:32	11:15
LONG.(DEG,MIN)	53 08.2	53 09.1	53 12.6
LC-5990-X	130 45.7	130 46.5	130 48.3
LC-5990-Z	12253.4	12243.8	12210.9
DEPTH (FA)	70.5	70.5	69.3
	STOP	START	STOP
	11:35	12:48	13:08
	53 11.9	53 12.6	53 11.6
	130 47.5	130 51.4	130 50.9
	12220	12199.3	12207.5
	41551	41549.1	41546.6
	69.3	71.3	64.5
	71.3	64.5	64.5

SPECIES CATCH(KG.)

Arrowtooth flounder	1	1	1
Butter sole	-	-	-
Curlfin sole	-	-	-
Dover sole	-	-	TRACE
English sole	12	19	5
Flatfish	-	-	-
Flathead sole	2	-	-
Pacific halibut	9	-	-
Pacific sanddab	TRACE	-	-
Petrale sole	-	-	-
Rex sole	2	-	1
Rock sole	-	-	-
Sand sole	-	-	-
Slender sole	TRACE	-	-
Speckled sanddab	-	-	-
Starry flounder	-	-	-
Bocaccio	-	9	-
Canary rockfish	-	1	-
Copper rockfish	-	-	-
Darkblotched rockfish	-	-	-
Greenstriped rockfish	-	-	-
Pacific ocean perch	2	-	-
Pygmy rockfish	-	-	-
Quillback rockfish	-	-	-
Rosethorn rockfish	-	-	-
Sharpchin rockfish	-	-	-
Silvergray rockfish	3	15	-
Yelloweye rockfish	1	-	-
Yellowtail rockfish	-	TRACE	-
Eelpouts	TRACE	-	-
Eulachon	TRACE	TRACE	TRACE
Greenlings	-	-	-
Irish lord	-	-	-
Kelp greenling	-	-	-
Lingcod	-	-	-
Northern rockfish	-	-	-
Pacific cod	43	6	5
Pacific hake	-	-	-
Pacific herring	-	24	2
Pacific tomcod	-	-	-
Poachers	-	-	-
Sablefish	-	-	1
Sandlance	-	-	-
Sculpins	-	-	-
Shiner perch	-	-	-
Walleye pollock	24	TRACE	TRACE
Wolf eel	-	-	-
Big skate	-	-	-
Longnose skate	-	-	-
Sandpaper skate	-	-	-
Spiny dogfish	225	357	101
Spotted ratfish	4	TRACE	-
Bivalves (scallop)	-	-	-
Crabs	-	-	-
Invertebrates	-	-	-
Octopus	-	-	-
TOTAL CATCH (KG.)	328	432	116

Appendix Table 1 (continued)

HAUL NO.	31	32	33
BLOCK	H405	H304	H303
DATE (1993)	MAY 22	MAY 22	MAY 22
DEPTH INTERVAL (FA)	50	40	30
DURATION (H)	0.33	0.27	0.33
DIRECTION (DEG. TRUE)	180	180	16
TIME (PDT)	13:53	14:13	15:18
LAT.(DEG,MIN)	53 13.7	53 12.6	53 15.8
LONG.(DEG,MIN)	130 54.4	130 54.4	131 00.1
LC-5990-X	12178.8	12186.5	12140.6
LC-5990-Z	41547.2	41543.3	41547.9
DEPTH (FA)	53.6	53.6	43.7

SPECIES CATCH(KG.)

Arrowtooth flounder	TRACE	-	TRACE
Butter sole	-	-	-
Curlfin sole	-	-	-
Dover sole	-	-	-
English sole	63	1	1
Flatfish	-	-	-
Flathead sole	-	-	-
Pacific halibut	-	-	23
Pacific sanddab	3	1	1
Petrale sole	2	-	-
Rex sole	1	TRACE	TRACE
Rock sole	-	-	-
Sand sole	-	-	-
Slender sole	-	-	-
Speckled sanddab	-	-	-
Starry flounder	-	-	-
Bocaccio	-	-	-
Canary rockfish	-	-	-
Copper rockfish	-	-	-
Darkblotched rockfish	-	-	-
Greenstriped rockfish	-	-	-
Pacific ocean perch	-	-	-
Pygmy rockfish	-	-	-
Quillback rockfish	-	-	-
Rosethorn rockfish	-	-	-
Sharpchin rockfish	-	-	-
Silvergray rockfish	-	-	-
Yelloweye rockfish	-	-	-
Yellowtail rockfish	-	-	-
Eelpouts	-	-	-
Eulachon	-	-	-
Greenlings	-	-	-
Irish lord	-	-	-
Kelp greenling	-	-	-
Lingcod	-	17	-
Northern rockfish	-	-	-
Pacific cod	-	-	-
Pacific hake	-	-	-
Pacific herring	TRACE	-	-
Pacific tomcod	-	-	-
Poachers	TRACE	-	-
Sablefish	-	-	-
Sandlance	-	-	-
Scorpions	-	-	-
Shiner perch	-	-	-
Walleye pollock	-	-	TRACE
Wolf eel	-	-	-
Big skate	-	-	11
Longnose skate	-	-	-
Sandpaper skate	-	-	-
Spiny dogfish	17	7	4
Spotted ratfish	-	-	-
Bivalves (scallop)	-	-	-
Crabs	-	-	-
Invertebrates	-	-	-
Octopus	-	-	-
TOTAL CATCH (KG.)	86	26	40

Appendix Table 1 (continued)

HAUL NO.	34	35	36	
BLOCK	H301	F201	G201	
DATE (1993)	MAY 22	MAY 22	MAY 23	
DEPTH INTERVAL (FA)	10	10	10	
DURATION (H)	0.32	0.33	0.17	
DIRECTION (DEG. TRUE)	137	232	114	
TIME (PDT)	START 18:19	STOP 18:38	START 8:07	STOP 8:27
LAT. (DEG,MIN)	53 16.3	53 15.6	53 32.1	53 31.3
LONG. (DEG,MIN)	131 08.6	131 07.3	131 14	131 15.6
LC-5990-X	12104.4	12115.2	11967.2	11967.4
LC-5990-Z	41539.9	41538.4	41587	41582.4
DEPTH (FA)	18.8	18.8	13.3	12.2
			15.3	15.3

SPECIES CATCH(KG.)

Arrowtooth flounder	-	-	-
Butter sole	-	-	1
Curlfin sole	-	-	-
Dover sole	-	-	-
English sole	TRACE	-	4
Flatfish	-	-	-
Flathead sole	-	-	-
Pacific halibut	19	21	-
Pacific sanddab	-	-	-
Petrale sole	-	-	-
Rex sole	-	-	-
Rock sole	-	4	2
Sand sole	TRACE	1	TRACE
Slender sole	-	-	-
Speckled sanddab	-	-	-
Starry flounder	-	8	-
Bocaccio	-	-	-
Canary rockfish	-	-	-
Copper rockfish	-	-	-
Darkblotched rockfish	-	-	-
Greenstriped rockfish	-	-	-
Pacific ocean perch	-	-	-
Pygmy rockfish	-	-	-
Quillback rockfish	-	-	-
Rosethorn rockfish	-	-	-
Sharpchin rockfish	-	-	-
Silvergray rockfish	-	-	-
Yelloweye rockfish	-	-	-
Yellowtail rockfish	-	-	-
Eelpouts	-	-	-
Eulachon	-	-	-
Greenlings	-	-	-
Irish lord	-	-	-
Kelp greenling	-	-	-
Lingcod	-	-	-
Northern rockfish	-	-	-
Pacific cod	-	-	-
Pacific hake	-	-	-
Pacific herring	24	TRACE	-
Pacific tomcod	-	-	-
Poachers	-	-	-
Sablefish	-	-	-
Sandlance	-	3	TRACE
Sculpins	-	-	-
Shiner perch	-	-	-
Walleye pollock	-	-	-
Wolfieel	-	-	-
Big skate	-	-	10
Longnose skate	-	-	-
Sandpaper skate	-	-	-
Spiny dogfish	4	7	11
Spotted ratfish	-	-	-
Bivalves (scallop)	-	-	-
Crabs	-	-	-
Invertebrates	-	-	-
Octopus	-	-	-

TOTAL CATCH (KG.)

REMARKS

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USARIF

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USARIF

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USARIF

Appendix Table 1 (continued)

HAUL NO.	37	38	39
BLOCK	G301	G303	G305
DATE (1993)	MAY 23	MAY 23	MAY 23
DEPTH INTERVAL (FA)	10	30	50
DURATION (H)	0.33	0.33	0.33
DIRECTION (DEG. TRUE)	112	96	196
TIME (PDT)	10:01	10:21	11:01
LAT.(DEG,MIN)	53 26	53 25.5	53 23.2
LONG.(DEG,MIN)	131 11.6	131 09.9	131 03.6
LC-5990-X	12022.6	12031.8	12072.8
LC-5990-Z	41569.3	41569.8	41569.1
DEPTH (FA)	14.4	15.7	26.4
START			
STOP			
START			
STOP			
START			
STOP			
SPECIES CATCH(KG.)			
Arrowtooth flounder	-	-	-
Butter sole	-	-	-
Curlfin sole	-	-	-
Dover sole	-	-	TRACE
English sole	1	TRACE	24
Flatfish	-	-	-
Flathead sole	-	-	TRACE
Pacific halibut	4	60	-
Pacific sanddab	-	TRACE	9
Petrale sole	-	-	1
Rex sole	-	-	23
Rock sole	21	-	TRACE
Sand sole	6	-	-
Slender sole	-	-	TRACE
Speckled sanddab	-	-	-
Starry flounder	-	-	-
Bocaccio	-	-	-
Canary rockfish	-	-	-
Copper rockfish	-	-	-
Darkblotched rockfish	-	-	-
Greenstriped rockfish	-	-	-
Pacific ocean perch	-	-	-
Pygmy rockfish	-	-	-
Quillback rockfish	-	-	-
Rosethorn rockfish	-	-	-
Sharpchin rockfish	-	-	-
Silvergray rockfish	-	-	-
Yelloweye rockfish	-	-	-
Yellowtail rockfish	-	-	-
Eelpouts	-	-	-
Eulachon	-	-	-
Greenlings	-	-	-
Irish lord	-	-	-
Kelp greenling	-	-	-
Lingcod	-	-	-
Northern rockfish	-	-	-
Pacific cod	-	-	-
Pacific hake	-	-	-
Pacific herring	11	TRACE	4
Pacific tomcod	-	-	TRACE
Poachers	-	-	TRACE
Sablefish	-	-	TRACE
Sandlance	-	TRACE	-
Sculpins	-	-	-
Shiner perch	-	-	-
Walleye pollock	-	-	1
Wolf eel	-	-	-
Big skate	8	-	-
Longnose skate	-	-	-
Sandpaper skate	-	-	-
Spiny dogfish	8	6	21
Spotted ratfish	-	-	-
Bivalves (scallop)	-	-	-
Crabs	-	-	-
Invertebrates	-	-	-
Octopus	-	-	-
TOTAL CATCH (KG.)	59	66	83

Appendix Table 1 (continued)

HAUL NO.	40	41	42			
BLOCK	G407	G405	F405			
DATE (1993)	MAY 23	MAY 23	MAY 23			
DEPTH INTERVAL (FA)	70	50	50			
DURATION (H)	0.33	0.33	0.33			
DIRECTION (DEG. TRUE)	351	242	197			
TIME (PDT)	START 13:21	STOP 13:41	START 14:40	STOP 15:00	START 17:09	STOP 17:29
LAT.(DEG,MIN)	53 21.1	53 22.1	53 27.3	53 26.6	53 33.2	53 32.1
LONG.(DEG,MIN)	130 53.4	130 54	130 53.6	130 55.2	130 47.5	130 48
LC-5990-X	12128.4	12118.2	12080.6	12080.1	12061.4	12067.2
LC-5990-Z	41575.1	41577.3	41595.7	41591.3	41623.3	41619.1
DEPTH (FA)	69.9	69.9	57.4	57.4	53.6	53.6
SPECIES CATCH(KG.)						
Arrowtooth flounder	2		2		7	
Butter sole	-		-		-	
Curlfin sole	-		-		-	
Dover sole	1		2		10	
English sole	3		12		14	
Flatfish	-		-		-	
Flathead sole	1		-		TRACE	
Pacific halibut	-		2		-	
Pacific sanddab	-		TRACE		-	
Petrale sole	-		-		TRACE	
Rex sole	6		12		15	
Rock sole	-		-		4	
Sand sole	-		-		-	
Slender sole	TRACE		-		TRACE	
Speckled sanddab	-		-		-	
Starry flounder	-		-		-	
Bocaccio	-		-		-	
Canary rockfish	-		-		-	
Copper rockfish	-		-		-	
Darkblotched rockfish	-		-		-	
Greenstriped rockfish	-		-		-	
Pacific ocean perch	TRACE		-		-	
Pygmy rockfish	-		-		-	
Quillback rockfish	-		-		-	
Rosethorn rockfish	-		TRACE		-	
Sharpchin rockfish	-		-		-	
Silvergray rockfish	-		-		-	
Yelloweye rockfish	-		-		-	
Yellowtail rockfish	-		-		1	
Eelpouts	-		-		-	
Eulachon	2		1		-	
Greenlings	-		-		1	
Irish lord	-		-		-	
Kelp greenling	-		-		-	
Lingcod	-		-		-	
Northern rockfish	-		-		-	
Pacific cod	-		-		1	
Pacific hake	-		-		-	
Pacific herring	1		2		1	
Pacific tomcod	-		-		-	
Poachers	-		TRACE		-	
Sablefish	TRACE		2		-	
Sandlance	-		-		-	
Sculpins	-		-		-	
Shiner perch	-		-		-	
Walleye pollock	13		3		14	
Wolfie	-		-		-	
Big skate	-		-		-	
Longnose skate	-		-		-	
Sandpaper skate	-		-		-	
Spiny dogfish	2		11		8	
Spotted ratfish	6		-		1	
Bivalves (scallop)	-		-		-	
Crabs	-		-		-	
Invertebrates	-		-		-	
Octopus	-		-		-	
TOTAL CATCH (KG.)	37	49	77			
REMARKS	USABLE	USABLE	USABLE			

Appendix Table 1 (continued)

HAUL NO.	43	44	45
BLOCK	F302	F303	F403
DATE (1993)	MAY 24	MAY 24	MAY 24
DEPTH INTERVAL (FA)	20	30	30
DURATION (H)	0.33	0.20	0.33
DIRECTION (DEG. TRUE)	28	41	29
TIME (PDT)	8:15	8:35	9:27
LAT.(DEG,MIN)	53 33.0	53 33.8	53 37.8
LONG.(DEG,MIN)	131 07.3	131 06.7	131 02.3
LC-5990-X	11984.3	11980.1	11967.3
LC-5990-Z	41598.1	41601.5	41620.1
DEPTH (FA)	29.6	28.5	37
START	STOP	START	STOP

SPECIES CATCH(KG.)

Arrowtooth flounder	-	-	-
Butter sole	9	TRACE	2
Curlfin sole	-	-	2
Dover sole	-	1	-
English sole	1	3	5
Flatfish	-	-	-
Flathead sole	-	-	-
Pacific halibut	-	-	6
Pacific sanddab	TRACE	-	6
Petrale sole	-	-	-
Rex sole	-	TRACE	-
Rock sole	43	9	83
Sand sole	-	-	-
Slender sole	-	-	-
Speckled sanddab	-	-	-
Starry flounder	-	-	-
Bocaccio	-	-	-
Canary rockfish	-	-	-
Copper rockfish	-	-	-
Darkblotched rockfish	-	-	-
Greenstriped rockfish	-	-	-
Pacific ocean perch	-	-	-
Pygmy rockfish	-	-	-
Quillback rockfish	-	1	1
Rosethorn rockfish	-	-	-
Sharpchin rockfish	-	-	-
Silvergray rockfish	-	-	-
Yelloweye rockfish	-	-	-
Yellowtail rockfish	-	-	-
Eelpouts	-	-	-
Eulachon	-	-	-
Greenlings	-	14	TRACE
Irish lord	-	-	-
Kelp greenling	-	-	-
Lingcod	-	-	-
Northern rockfish	-	-	-
Pacific cod	185	31	-
Pacific hake	-	-	-
Pacific herring	4	5	-
Pacific tomcod	-	-	-
Poachers	TRACE	TRACE	TRACE
Sablefish	-	-	-
Sandlance	TRACE	-	-
Scorpions	-	TRACE	-
Shiner perch	-	-	3
Walleye pollock	-	-	-
Wolf eel	-	-	-
Big skate	52	-	89
Longnose skate	-	-	-
Sandpaper skate	-	-	-
Spiny dogfish	6	-	-
Spotted ratfish	-	-	66
Bivalves (scallop)	-	-	-
Crabs	-	-	-
Invertebrates	-	-	-
Octopus	-	-	-
TOTAL CATCH (KG.)	300	64	263

Appendix Table 1 (continued)

HAUL NO.	46	47	48
BLOCK	F404	F407	B103
DATE (1993)	MAY 24	MAY 24	MAY 26
DEPTH INTERVAL (FA)	40	70	30
DURATION (H)	0.33	0.33	0.33
DIRECTION (DEG. TRUE)	340	0	76
TIME (PDT)	12:02	12:22	13:09
LAT.(DEG,MIN)	53 36.1	53 37.4	53 35.5
LONG.(DEG,MIN)	130 47.6	130 47.2	130 46
LC-5990-X	12038	12030	12049.2
LC-5990-Z	41633.6	41638.4	41633.8
DEPTH (FA)	41.9	41.9	71.6
START	STOP	START	STOP
		13:29	8:07
		53 36.5	54 11.3
		130 45.9	131 46.8
		41637.3	41670.2
		74.9	38.1
		38.1	38.1
SPECIES CATCH(KG.)			
Arrowtooth flounder	11	52	81
Butter sole	1	TRACE	-
Curlfin sole	-	-	-
Dover sole	2	28	2
English sole	72	10	30
Flatfish	-	-	-
Flathead sole	TRACE	1	1
Pacific halibut	20	4	10
Pacific sanddab	2	-	-
Petrale sole	1	-	1
Rex sole	6	120	12
Rock sole	13	-	-
Sand sole	-	-	-
Slender sole	-	TRACE	-
Speckled sanddab	-	-	-
Starry flounder	-	-	-
Bocaccio	-	-	-
Canary rockfish	-	-	-
Copper rockfish	-	-	-
Darkblotched rockfish	-	-	-
Greenstriped rockfish	-	-	-
Pacific ocean perch	-	2	-
Pygmy rockfish	-	-	-
Quillback rockfish	-	-	-
Rosethorn rockfish	-	-	-
Sharpchin rockfish	-	-	-
Silvergray rockfish	-	-	-
Yelloweye rockfish	-	-	-
Yellowtail rockfish	-	7	-
Eelpouts	-	-	-
Eulachon	-	-	-
Greenlings	-	-	-
Irish lord	-	-	-
Kelp greenling	-	-	-
Lingcod	-	-	-
Northern rockfish	-	-	-
Pacific cod	129	13	2
Pacific hake	-	-	-
Pacific herring	1	-	-
Pacific tomcod	-	-	-
Poachers	1	-	TRACE
Sablefish	TRACE	-	-
Sandlance	-	-	-
Sculpins	-	-	-
Shiner perch	1	-	-
Walleye pollock	TRACE	531	-
Wolfieel	-	-	-
Big skate	-	-	-
Longnose skate	-	1	-
Sandpaper skate	-	-	1
Spiny dogfish	-	5	3
Spotted ratfish	10	8	-
Bivalves (scallop)	-	-	-
Crabs	-	-	-
Invertebrates	-	-	-
Octopus	-	-	-
TOTAL CATCH (KG.)	270	782	143

Appendix Table 1 (continued)

HAUL NO.	49	50	51
BLOCK	B106	B107	B105
DATE (1993)	MAY 26	MAY 26	MAY 26
DEPTH INTERVAL (FA)	60	70	50
DURATION (H)	0.33	0.33	0.50
DIRECTION (DEG. TRUE)	47	259	271
TIME (PDT)	9:15	9:35	10:25
LAT.(DEG,MIN)	54 14.6	54 15.2	54 16.6
LONG.(DEG,MIN)	131 42.2	131 40.6	131 37.6
LC-5990-X	11544.5	11544.1	11540.1
LC-5990-Z	41685.3	41688.8	41696.8
DEPTH (FA)	65	67.8	73.6
START	STOP	START	STOP
SPECIES CATCH(KG.)			
Arrowtooth flounder	27	155	96
Butter sole	-	-	-
Curlfin sole	-	-	-
Dover sole	4	47	22
English sole	2	TRACE	162
Flatfish	-	-	-
Flathead sole	TRACE	TRACE	TRACE
Pacific halibut	15	9	61
Pacific sanddab	-	-	-
Petrale sole	-	-	3
Rex sole	9	3	47
Rock sole	-	-	-
Sand sole	-	-	-
Slender sole	-	-	-
Speckled sanddab	-	-	-
Starry flounder	-	-	-
Bccaccio	9	-	-
Canary rockfish	-	-	-
Copper rockfish	-	-	-
Darkblotched rockfish	TRACE	-	-
Greenstriped rockfish	-	1	-
Pacific ocean perch	-	-	-
Pygmy rockfish	-	-	-
Quillback rockfish	-	-	-
Rosethorn rockfish	-	-	-
Sharpchin rockfish	-	-	-
Silvergray rockfish	1	29	-
Yelloweye rockfish	-	-	-
Yellowtail rockfish	1	-	72
Eelpouts	-	-	-
Eulachon	-	-	-
Greenlings	-	-	-
Irish lord	-	-	-
Kelp greenling	-	-	-
Lingcod	53	2	32
Northern rockfish	-	-	-
Pacific cod	36	5	52
Pacific hake	-	-	-
Pacific herring	-	-	-
Pacific tomcod	-	-	-
Poachers	-	-	-
Sablefish	-	-	TRACE
Sandlance	-	-	-
Sculpins	-	-	-
Shiner perch	-	-	-
Walleye pollock	-	-	13
Wolfieel	-	-	-
Big skate	-	-	-
Longnose skate	-	2	14
Sandpaper skate	-	-	-
Spiny dogfish	39	35	38
Spotted ratfish	TRACE	5	99
Bivalves (scallop)	-	-	-
Crabs	-	-	36
Invertebrates	-	-	-
Octopus	-	-	-
TOTAL CATCH (KG.)	196	293	747

Appendix Table 1 (continued)

HAUL NO.	52	53	54	
BLOCK	B204	B207	B205	
DATE (1993)	MAY 26	MAY 26	MAY 26	
DEPTH INTERVAL (FA)	40	70	50	
DURATION (H)	0.33	0.33	0.33	
DIRECTION (DEG. TRUE)	52	250	70	
TIME (PDT)	START 13:20	STOP 13:40	START 14:14	STOP 14:34
LAT.(DEG,MIN)	54 17.1	54 17.6	54 18.2	54 18.0
LONG.(DEG,MIN)	131 28.3	131 26.3	131 27.3	131 28.7
LC-5990-X	11563.2	11564.8	11557.8	11554.8
LC-5990-Z	41710	41714.1	41714.5	41712.1
DEPTH (FA)	45.9	45.9	69.8	74
SPECIES CATCH(KG.)				
Arrowtooth flounder	42	39	134	
Butter sole	15	-	1	
Curlfin sole	-	-	-	
Dover sole	-	8	TRACE	
English sole	8	49	24	
Flatfish	-	-	-	
Flathead sole	-	TRACE	-	
Pacific halibut	13	46	16	
Pacific sanddab	-	-	-	
Petrale sole	-	-	-	
Rex sole	1	21	13	
Rock sole	-	-	-	
Sand sole	-	-	-	
Slender sole	-	-	-	
Speckled sanddab	-	-	-	
Starry flounder	-	-	-	
Bocaccio	-	-	-	
Canary rockfish	-	-	-	
Copper rockfish	-	-	-	
Darkblotched rockfish	-	-	-	
Greenstriped rockfish	-	-	-	
Pacific ocean perch	-	-	-	
Pygmy rockfish	-	-	-	
Quillback rockfish	-	-	-	
Rosethorn rockfish	-	-	-	
Sharpchin rockfish	-	-	-	
Silvergray rockfish	-	2	-	
Yelloweye rockfish	-	-	-	
Yellowtail rockfish	72	-	3	
Eelpouts	-	-	-	
Eulachon	-	-	-	
Greenlings	-	-	-	
Irish lord	-	-	-	
Kelp greenling	-	-	-	
Lingcod	-	-	-	
Northern rockfish	-	-	-	
Pacific cod	80	3	18	
Pacific hake	-	-	-	
Pacific herring	-	-	-	
Pacific tomcod	-	-	-	
Poachers	-	-	-	
Sablefish	-	2	9	
Sandlance	-	-	-	
Sculpins	-	-	-	
Shiner perch	-	-	-	
Walleye pollock	11	TRACE	4	
Wolf eel	-	-	-	
Big skate	-	-	-	
Longnose skate	-	5	-	
Sandpaper skate	-	1	TRACE	
Spiny dogfish	-	131	1	
Spotted ratfish	1	12	-	
Bivalves (scallop)	-	-	-	
Crabs	10	3	10	
Invertebrates	-	-	-	
Octopus	-	-	-	
TOTAL CATCH (KG.)	253	322	233	
USARIF				

Appendix Table 1 (continued)

HAUL NO.	55	56	57	
BLOCK	B203	B202	A207	
DATE (1993)	MAY 26	MAY 26	MAY 27	
DEPTH INTERVAL (FA)	30	20	70	
DURATION (H)	0.33	0.33	0.33	
DIRECTION (DEG. TRUE)	276	273	197	
TIME (PDT)	START 15:56	STOP 16:16	START 17:06	STOP 17:26
LAT.(DEG,MIN)	54 17.9	54 18.0	54 17.8	54 17.9
LONG.(DEG,MIN)	131 18.7	131 20.5	131 17.4	131 17.2
LC-5990-X	11586.9	11580.5	11593.1	11586.7
LC-5990-Z	41725	41722.8	41726.4	41723.9
DEPTH (FA)	30.1	34.1	22.6	22.6
START 8:10	STOP 8:30	START 131 18	STOP 131 18.5	
54 21.4	54 20.5	11560	11566.8	
41737.1	41733.3	77.5	77.5	
SPECIES CATCH(KG.)				
Arrowtooth flounder	197	4	99	
Butter sole	7	484	-	
Curlfin sole	-	-	-	
Dover sole	-	-	6	
English sole	38	17	-	
Flatfish	-	-	-	
Flathead sole	-	-	-	
Pacific halibut	16	9	5	
Pacific sanddab	-	-	-	
Petrale sole	-	-	-	
Rex sole	-	-	TRACE	
Rock sole	TRACE	5	-	
Sand sole	-	-	-	
Slender sole	-	-	-	
Speckled sanddab	-	-	-	
Starry flounder	-	6	-	
Bocaccio	-	-	-	
Canary rockfish	-	-	-	
Copper rockfish	-	-	-	
Darkblotched rockfish	-	-	-	
Greenstriped rockfish	-	-	-	
Pacific ocean perch	-	-	TRACE	
Pygmy rockfish	-	-	-	
Quillback rockfish	-	-	-	
Rosethorn rockfish	-	-	-	
Sharpchin rockfish	-	-	-	
Silvergray rockfish	-	-	-	
Yelloweye rockfish	-	-	-	
Yellowtail rockfish	-	-	-	
Eelpouts	-	-	-	
Eulachon	-	-	TRACE	
Greenlings	-	-	-	
Irish lord	-	-	-	
Kelp greenling	-	-	-	
Lingcod	1	2	-	
Northern rockfish	-	-	-	
Pacific cod	21	-	-	
Pacific hake	-	-	-	
Pacific herring	2	-	-	
Pacific tomcod	-	-	-	
Poachers	-	-	-	
Sablefish	-	-	-	
Sandlance	-	-	-	
Sculpins	-	-	-	
Shiner perch	-	-	-	
Walleye pollock	-	-	-	
Wolfieel	-	-	-	
Big skate	15	92	-	
Longnose skate	-	-	TRACE	
Sandpaper skate	-	-	2	
Spiny dogfish	-	-	39	
Spotted ratfish	-	-	85	
Bivalves (scallop)	-	-	-	
Crabs	1	14	-	
Invertebrates	-	-	-	
Octopus	-	-	-	
TOTAL CATCH (KG.)	298	633	236	

Appendix Table 1 (continued)

HAUL NO.	58	59	60			
BLOCK	A206	A306	A303			
DATE (1993)	MAY 27	MAY 27	MAY 27			
DEPTH INTERVAL (FA)	60	60	30			
DURATION (H)	0.33	0.33	0.33			
DIRECTION (DEG. TRUE)	10	126	140			
TIME (PDT)	START 9:00	STOP 9:20	START 10:31	STOP 10:51	START 12:05	STOP 12:25
LAT.(DEG,MIN)	54 20.9	54 21.9	54 25.6	54 25.0	54 22.7	54 21.6
LONG.(DEG,MIN)	131 16.9	131 16.6	131 09.3	131 07.9	131 10.5	131 09.9
LC-5990-X	11568.4	11560.9	11554.4	11564.3	11575.9	11586
LC-5990-Z	41737.1	41740.5	41761.5	41761.8	41750.9	41749.1
DEPTH (FA)	65	65	68.1	63.5	37.3	37.3

SPECIES CATCH(KG.)

Arrowtooth flounder	504	220	159
Butter sole	-	-	TRACE
Curlfin sole	-	-	-
Dover sole	5	152	6
English sole	-	118	150
Flatfish	-	-	-
Flathead sole	-	4	-
Pacific halibut	-	15	30
Pacific sanddab	-	-	-
Petrale sole	-	-	TRACE
Rex sole	4	28	8
Rock sole	-	-	TRACE
Sand sole	-	-	-
Slender sole	-	-	-
Speckled sanddab	-	-	-
Starry flounder	-	-	-
Bocaccio	-	-	-
Canary rockfish	-	-	-
Copper rockfish	-	-	-
Darkblotched rockfish	-	-	-
Greenstriped rockfish	-	-	-
Pacific ocean perch	TRACE	1	-
Pygmy rockfish	-	-	-
Quillback rockfish	-	-	-
Rosethorn rockfish	-	-	-
Sharpchin rockfish	-	-	-
Silvergray rockfish	-	-	-
Yelloweye rockfish	-	-	-
Yellowtail rockfish	-	-	-
Eelpouts	-	-	-
Eulachon	-	-	-
Greenlings	-	-	-
Irish lord	-	-	-
Kelp greenling	-	-	-
Lingcod	-	2	-
Northern rockfish	-	-	-
Pacific cod	-	19	-
Pacific hake	-	-	-
Pacific herring	-	-	4
Pacific tomcod	-	-	-
Poachers	-	-	-
Sablefish	TRACE	4	TRACE
Sandlance	-	-	-
Scorpions	-	-	-
Shiner perch	-	-	-
Walleye pollock	-	2	-
Wolf eel	-	-	-
Big skate	-	10	17
Longnose skate	3	8	8
Sandpaper skate	9	2	-
Spiny dogfish	67	15	12
Spotted ratfish	24	418	157
Bivalves (scallop)	-	-	-
Crabs	-	-	-
Invertebrates	-	-	-
Octopus	-	-	-
TOTAL CATCH (KG.)	616	1018	551

Appendix Table 1 (continued)

HAUL NO.	61	62	63			
BLOCK	A304	B303	B302			
DATE (1993)	MAY 27	MAY 27	MAY 27			
DEPTH INTERVAL (FA)	40	30	20			
DURATION (H)	0.33	0.33	0.33			
DIRECTION (DEG. TRUE)	338	0	4			
TIME (PDT)	START 13:03	STOP 13:23	START 14:35	STOP 14:55	START 17:02	STOP 17:22
LAT.(DEG,MIN)	54 19.8	54 20.7	54 12.6	54 13.6	54 12.3	54 13.2
LONG.(DEG,MIN)	131 06.9	131 07.6	131 04.3	131 04.3	131 04.8	131 04.8
LC-5990-X	11613.1	11602.4	11681.6	11673.5	11681.4	11674.5
LC-5990-Z	41747.8	41749.6	41729.3	41732.3	41727.8	41730.5
DEPTH (FA)	44.4	41.9	38.6	38.6	21.9	25.5
SPECIES CATCH(KG.)						
Arrowtooth flounder	141	29	-			
Butter sole	-	17	-			
Curlfin sole	-	-	-			
Dover sole	46	249	-			
English sole	282	740	-			
Flatfish	-	-	-			
Flathead sole	6	4	-			
Pacific halibut	63	16	-			
Pacific sanddab	-	-	-			
Petrale sole	1	-	-			
Rex sole	43	22	-			
Rock sole	-	3	-			
Sand sole	-	-	-			
Slender sole	-	-	-			
Speckled sanddab	-	-	-			
Starry flounder	22	14	-			
Bocaccio	4	-	-			
Canary rockfish	-	-	-			
Copper rockfish	-	-	-			
Darkblotched rockfish	-	-	-			
Greenstriped rockfish	-	-	-			
Pacific ocean perch	-	-	-			
Pygmy rockfish	-	-	-			
Quillback rockfish	-	TRACE	-			
Rosethorn rockfish	-	-	-			
Sharpchin rockfish	-	-	-			
Silvergray rockfish	-	-	-			
Yelloweye rockfish	-	-	-			
Yellowtail rockfish	1	-	-			
Eelpouts	-	-	-			
Eulachon	-	-	-			
Greenlings	-	-	-			
Irish lord	-	-	-			
Kelp greenling	-	-	-			
Lingcod	-	-	-			
Northern rockfish	-	-	-			
Pacific cod	-	-	-			
Pacific hake	-	-	-			
Pacific herring	-	3	-			
Pacific tomcod	TRACE	24	-			
Poachers	-	-	-			
Sablefish	12	15	-			
Sandlance	-	-	-			
Scorpions	-	-	-			
Shiner perch	-	-	-			
Walleye pollock	-	-	-			
Wolf eel	-	-	-			
Big skate	30	32	-			
Longnose skate	-	-	-			
Sandpaper skate	1	-	-			
Spiny dogfish	14	-	-			
Spotted ratfish	2	1	-			
Bivalves (scallop)	-	-	-			
Crabs	-	4	-			
Invertebrates	-	-	-			
Octopus	-	-	-			
TOTAL CATCH (KG.)	668	1173	0			

Appendix Table 1 (continued)

HAUL NO.	64	65	66	
BLOCK	C201	B301	B302	
DATE (1993)	MAY 28	MAY 28	MAY 28	
DEPTH INTERVAL (FA)	10	10	20	
DURATION (H)	0.33	0.33	0.25	
DIRECTION (DEG. TRUE)	295	173	180	
TIME (PDT)	START 8:07	STOP 8:27	START 9:31	STOP 9:51
LAT.(DEG,MIN)	54 08.7	54 08.0	54 12.2	54 11.1
LONG.(DEG,MIN)	131 16.5	131 17.9	131 09.7	131 09.4
LC-5990-X	11670.8	11670.4	11666	11675.1
LC-5990-Z	41700.2	41696.2	41720.1	41717.5
DEPTH (FA)	15.6	15.6	17.7	17.4
SPECIES CATCH(KG.)				
Arrowtooth flounder	-	TRACE	7	
Butter sole	17	19	109	
Curlfin sole	-	-	TRACE	
Dover sole	-	-	29	
English sole	91	96	1936	
Flatfish	-	-	-	
Flathead sole	-	-	-	
Pacific halibut	105	162	23	
Pacific sanddab	TRACE	TRACE	5	
Petrale sole	-	-	-	
Rex sole	-	TRACE	2	
Rock sole	17	30	18	
Sand sole	14	4	34	
Slender sole	-	-	-	
Speckled sanddab	-	-	-	
Starry flounder	-	-	-	
Bocaccio	-	-	-	
Canary rockfish	-	-	-	
Copper rockfish	-	-	-	
Darkblotched rockfish	-	-	-	
Greenstriped rockfish	-	-	-	
Pacific ocean perch	-	-	-	
Pygmy rockfish	-	-	-	
Quillback rockfish	-	-	-	
Rosethorn rockfish	-	-	-	
Sharpchin rockfish	-	-	-	
Silvergray rockfish	-	-	-	
Yelloweye rockfish	-	-	-	
Yellowtail rockfish	-	-	-	
Eelpouts	-	-	-	
Eulachon	-	-	-	
Greenlings	-	-	-	
Irish lord	-	-	-	
Kelp greenling	-	-	-	
Lingcod	-	-	-	
Northern rockfish	TRACE	-	TRACE	
Pacific cod	5	-	-	
Pacific hake	-	-	-	
Pacific herring	3	2	22	
Pacific tomcod	TRACE	-	31	
Poachers	TRACE	-	-	
Sablefish	-	-	734	
Sandlance	-	-	-	
Sculpins	1	-	8	
Shiner perch	-	-	-	
Walleye pollock	-	-	-	
Wolf eel	-	-	6	
Big skate	19	14	1	
Longnose skate	-	-	-	
Sandpaper skate	-	-	-	
Spiny dogfish	26	2	-	
Spotted ratfish	-	-	-	
Bivalves (scallop)	-	-	-	
Crabs	28	12	218	
Invertebrates	-	-	-	
Octopus	-	-	-	
TOTAL CATCH (KG.)	325	341	3183	

Appendix Table 1 (continued)

HAUL NO.	67	68	69
BLOCK	B304	C302	C301
DATE (1993)	MAY 28	MAY 28	MAY 28
DEPTH INTERVAL (FA)	40	20	10
DURATION (H)	0.33	0.25	0.25
DIRECTION (DEG. TRU)	195	169	171
TIME (PDT)	14:10	14:30	15:52
LAT.(DEG,MIN)	54 11.1	54 10.1	54 08.9
LONG.(DEG,MIN)	131 04.1	131 04.3	131 04.7
LC-5990-X	11694.4	11702	11710.7
LC-5990-Z	41724.9	41721.5	41716.8
DEPTH (FA)	47.5	47	29.7
START			
STOP			
START			
STOP			
START			
STOP			
SPECIES CATCH(KG.)			
Arrowtooth flounder	13	17	2
Butter sole	-	4	2
Curlfin sole	-	-	-
Dover sole	1503	37	1
English sole	79	724	71
Flatfish	-	-	-
Flathead sole	5	-	-
Pacific halibut	3	16	22
Pacific sanddab	-	3	-
Petrale sole	-	-	-
Rex sole	17	51	1
Rock sole	2	25	5
Sand sole	-	34	18
Slender sole	-	-	-
Speckled sanddab	-	-	-
Starry flounder	-	-	-
Bocaccio	-	-	-
Canary rockfish	-	-	-
Copper rockfish	-	-	-
Darkblotched rockfish	-	-	-
Greenstriped rockfish	-	-	-
Pacific ocean perch	-	-	-
Pygmy rockfish	-	-	-
Quillback rockfish	-	-	-
Rosethorn rockfish	-	-	-
Sharpchin rockfish	-	-	-
Silvergray rockfish	-	-	-
Yelloweye rockfish	-	-	-
Yellowtail rockfish	-	-	-
Eelpouts	-	-	-
Eulachon	-	-	-
Greenlings	-	TRACE	-
Irish lord	-	-	-
Kelp greenling	-	-	-
Lingcod	6	-	-
Northern rockail	-	-	-
Pacific cod	10	TRACE	-
Pacific hake	-	-	-
Pacific herring	-	2	14
Pacific tomcod	TRACE	47	TRACE
Poachers	-	11	1
Sablefish	8	28	-
Sandlance	-	-	-
Sculpins	-	31	1
Shiner perch	-	-	-
Walleye pollock	-	1	-
Wolfieel	-	-	-
Big skate	10	20	18
Longnose skate	-	-	-
Sandpaper skate	-	-	3
Spiny dogfish	8	-	-
Spotted ratfish	-	-	-
Bivalves (scallop)	-	-	-
Crabs	-	56	9
Invertebrates	-	-	-
Octopus	-	-	-
TOTAL CATCH (KG.)	1664	1107	168

Appendix Table 1 (continued)

HAUL NO.	70	71	72	
BLOCK	C303	C305	D301	
DATE (1993)	MAY 29	MAY 29	MAY 29	
DEPTH INTERVAL (FA)	30	50	10	
DURATION (H)	0.33	0.17	0.33	
DIRECTION (DEG. TRUE)	155	160	82	
TIME (PDT)	START 8:13	STOP 8:33	START 10:35	STOP 10:45
LAT.(DEG,MIN)	54 04.3	54 03.3	54 04.0	54 03.5
LONG.(DEG,MIN)	131 04.6	131 04.9	131 03.2	131 02.9
LC-5990-X	11748.6	11755.3	11756	11761.6
LC-5990-Z	41702.2	41698.8	41703.5	41702.2
DEPTH (FA)	31.4	31.4	48.5	53.5

SPECIES CATCH(KG.)

Arrowtooth flounder	-	84	-
Butter sole	-	-	-
Curlfin sole	-	-	-
Dover sole	-	242	-
English sole	-	1064	44
Flatfish	-	-	-
Flathead sole	-	10	-
Pacific halibut	-	-	12
Pacific sanddab	-	-	TRACE
Petrale sole	-	-	-
Rex sole	-	1092	-
Rock sole	-	8	21
Sand sole	-	-	6
Slender sole	-	-	-
Speckled sanddab	-	-	-
Starry flounder	-	-	-
Bocaccio	-	-	-
Canary rockfish	-	-	-
Copper rockfish	-	-	68
Darkblotched rockfish	-	-	-
Greenstriped rockfish	-	-	-
Pacific ocean perch	-	TRACE	-
Pygmy rockfish	-	-	-
Quillback rockfish	-	-	49
Rosethorn rockfish	-	-	-
Sharpchin rockfish	-	-	-
Silvergray rockfish	-	-	-
Yelloweye rockfish	-	-	15
Yellowtail rockfish	-	-	-
Eelpouts	-	-	-
Eulachon	-	-	-
Greenlings	-	-	-
Irish lord	-	-	-
Kelp greenling	-	-	7
Lingcod	-	-	1
Northern rockfish	-	-	-
Pacific cod	-	-	TRACE
Pacific hake	-	-	-
Pacific herring	-	-	-
Pacific tomcod	-	TRACE	-
Poachers	-	TRACE	TRACE
Sablefish	-	66	12
Sandlance	-	-	-
Sculpins	-	-	TRACE
Shiner perch	-	-	-
Walleye pollock	-	14	-
Wolf eel	-	-	-
Big skate	-	-	-
Longnose skate	-	-	-
Sandpaper skate	-	-	-
Spiny dogfish	-	2	4
Spotted ratfish	-	306	8
Bivalves (scallop)	-	-	-
Crabs	-	6	6
Invertebrates	-	-	-
Octopus	-	-	-

TOTAL CATCH (KG.) 0 2894 253

Appendix Table 1 (continued)

HAUL NO.	73	74	75
BLOCK	C303	D302	D303
DATE (1993)	MAY 29	MAY 29	MAY 29
DEPTH INTERVAL (FA)	30	20	30
DURATION (H)	0.28	0.33	0.33
DIRECTION (DEG. TRUE)	180	340	353

	START	STOP	START	STOP	START	STOP
TIME (PDT)	12:52	13:09	14:15	14:35	15:37	15:57
LAT.(DEG,MIN)	54 01.4	54 00.6	53 58.3	53 59.2	53 53.9	53 54.9
LONG.(DEG,MIN)	131 05.2	131 05.2	131 07.1	131 07.6	131 03.2	131 03.6
LC-5990-X	11769.5	11776.8	11787.6	11779	11837.6	11827.8
LC-5990-Z	41693	41690	41680.4	41682.3	41671.6	41674.1
DEPTH (FA)	36	36	23.1	23.1	33.6	33.6

SPECIES CATCH(KG.)

Arrowtooth flounder	7	1	45
Butter sole	TRACE	TRACE	1
Curlfin sole	-	-	1
Dover sole	20	TRACE	26
English sole	70	112	167
Flatfish	-	-	-
Flathead sole	10	TRACE	TRACE
Pacific halibut	2	9	57
Pacific sanddab	-	TRACE	11
Petrale sole	-	-	2
Rex sole	79	TRACE	30
Rock sole	1	25	18
Sand sole	-	17	TRACE
Slender sole	-	-	-
Speckled sanddab	-	-	-
Starry flounder	-	TRACE	-
Bocaccio	-	-	-
Canary rockfish	-	-	-
Copper rockfish	-	-	-
Darkblotched rockfish	-	-	-
Greenstriped rockfish	-	-	-
Pacific ocean perch	-	-	-
Pygmy rockfish	-	-	-
Quillback rockfish	-	-	7
Rosethorn rockfish	-	-	-
Sharpchin rockfish	-	-	-
Silvergray rockfish	-	-	-
Yelloweye rockfish	-	-	-
Yellowtail rockfish	-	-	5
Eelpouts	-	-	-
Eulachon	-	-	-
Greenlings	-	-	-
Irish lord	-	-	TRACE
Kelp greenling	-	-	-
Lingcod	-	-	-
Northern rockfish	-	-	-
Pacific cod	-	-	11
Pacific hake	-	-	-
Pacific herring	3	20	3
Pacific tomcod	42	1	-
Poachers	1	1	1
Sablefish	32	46	5
Sandlance	-	-	-
Sculpins	1	-	TRACE
Shiner perch	-	-	-
Walleye pollock	TRACE	-	36
Wolfieel	-	-	-
Big skate	85	4	TRACE
Longnose skate	-	-	-
Sandpaper skate	-	2	-
Spiny dogfish	2	7	3
Spotted ratfish	83	-	165
Bivalves (scallop)	-	-	-
Crabs	74	16	5
Invertebrates	-	-	-
Octopus	-	-	5
TOTAL CATCH (KG.)	512	261	604

Appendix Table 1 (continued)

HAUL NO.	76	77	78	
BLOCK	D304	E201	E202	
DATE (1993)	MAY 29	MAY 30	MAY 30	
DEPTH INTERVAL (FA)	40	10	20	
DURATION (H)	0.33	0.33	0.33	
DIRECTION (DEG. TRUE)	148	359	175	
TIME (PDT)	START 18:03	STOP 18:23	START 8:05	STOP 8:25
LAT.(DEG,MIN)	53 56.4	53 55.6	53 41.1	53 42.1
LONG.(DEG,MIN)	131 01.7	131 00.8	131 16.8	131 16.9
LC-5990-X	11822.9	11832.3	11888.5	11880
LC-5990-Z	41681.7	41680.3	41612.9	41616
DEPTH (FA)	43.6	43.6	15.2	18.4
			22.9	22.9

SPECIES CATCH(KG.)

Arrowtooth flounder	117	-	TRACE
Butter sole	7	TRACE	-
Curlfin sole	-	-	-
Dover sole	19	-	1
English sole	119	2	12
Flatfish	-	-	-
Flathead sole	3	-	-
Pacific halibut	4	15	11
Pacific sanddab	7	1	TRACE
Petrale sole	1	-	-
Rex sole	28	-	-
Rock sole	10	32	47
Sand sole	TRACE	7	11
Slender sole	-	-	-
Speckled sanddab	-	-	-
Starry flounder	-	-	-
Bocaccio	-	-	-
Canary rockfish	-	-	-
Copper rockfish	-	-	-
Darkblotched rockfish	-	-	-
Greenstriped rockfish	-	-	-
Pacific ocean perch	-	-	-
Pygmy rockfish	-	-	-
Quillback rockfish	12	-	18
Rosethorn rockfish	-	-	-
Sharpchin rockfish	-	-	-
Silvergray rockfish	-	-	-
Yelloweye rockfish	-	-	-
Yellowtail rockfish	-	-	1
Eelpouts	-	-	-
Eulachon	-	-	-
Greenlings	-	-	TRACE
Irish lord	-	-	-
Kelp greenling	-	-	3
Lingcod	-	-	-
Northern rockfish	-	-	-
Pacific cod	12	-	4
Pacific hake	-	-	-
Pacific herring	1	-	1
Pacific tomcod	-	-	-
Poachers	-	-	TRACE
Sablefish	4	-	-
Sandlance	-	-	-
Sculpins	-	-	1
Shiner perch	-	-	-
Walleye pollock	15	-	-
Wolfeel	-	-	-
Big skate	TRACE	21	14
Longnose skate	-	-	-
Sandpaper skate	-	-	-
Spiny dogfish	5	230	14
Spotted ratfish	33	-	170
Bivalves (scallop)	-	-	-
Crabs	-	-	-
Invertebrates	-	-	-
Octopus	-	-	-
TOTAL CATCH (KG.)	397	308	308
DEMARKS	USARIF	USARIF	USARIF

Appendix Table 1 (continued)

HAUL NO.	79	80	81			
BLOCK	E302	D404	E303			
DATE (1993)	MAY 30	MAY 30	MAY 30			
DEPTH INTERVAL (FA)	20	40	30			
DURATION (H)	0.08	0.33	0.33			
DIRECTION (DEG. TRUE)	167	306	147			
TIME (PDT)	START 11:06	STOP 11:11	START 13:08	STOP 13:28	START 14:28	STOP 14:48
LAT.(DEG,MIN)	53 49.4	53 49.2	53 51.7	53 52.2	53 48.7	53 47.8
LONG.(DEG,MIN)	131 07.5	131 07.4	130 50.6	130 52.1	130 58.2	130 57.2
LC-5990-X	11857.6	11859.9	11904.2	11893.6	11897.9	11908.7
LC-5990-Z	41654.3	41650.8	41682	41681.3	41661.2	41660
DEPTH (FA)	27.3	26.9	46	46	33.1	32.4
SPECIES CATCH(KG.)						
Arrowtooth flounder	TRACE		65		4	
Butter sole	-		8		10	
Curlfin sole	1		-		1	
Dover sole	2		26		TRACE	
English sole	44		116		158	
Flatfish	-		-		-	
Flathead sole	-		8		-	
Pacific halibut	1		5		57	
Pacific sanddab	-		90		42	
Petrale sole	-		1		1	
Rex sole	TRACE		44		2	
Rock sole	4		113		42	
Sand sole	TRACE		TRACE		8	
Slender sole	-		-		-	
Speckled sanddab	-		-		-	
Starry flounder	-		-		-	
Bocaccio	-		-		-	
Canary rockfish	-		-		-	
Copper rockfish	-		-		-	
Darkblotched rockfish	-		-		-	
Greenstriped rockfish	-		-		-	
Pacific ocean perch	-		-		-	
Pygmy rockfish	-		-		-	
Quillback rockfish	-		-		9	
Rosethorn rockfish	-		-		-	
Sharpchin rockfish	-		-		-	
Silvergray rockfish	-		-		-	
Yelloweye rockfish	-		-		-	
Yellowtail rockfish	-		-		-	
Eelpouts	-		-		-	
Eulachon	-		-		-	
Greenlings	-		-		-	
Irish lord	-		-		-	
Kelp greenling	TRACE		-		-	
Lingcod	-		-		3	
Northern rockfish	-		-		-	
Pacific cod	2		73		22	
Pacific hake	-		-		-	
Pacific herring	-		-		-	
Pacific tomcod	-		-		-	
Poachers	TRACE		TRACE		TRACE	
Sablefish	-		TRACE		-	
Sandlance	-		-		-	
Sculpins	TRACE		-		-	
Shiner perch	-		-		-	
Walleye pollock	-		2		-	
Wolf eel	-		-		-	
Big skate	-		-		15	
Longnose skate	-		-		5	
Sandpaper skate	-		-		-	
Spiny dogfish	-		6		2	
Spotted ratfish	27		12		11	
Bivalves (scallop)	-		-		-	
Crabs	4		-		23	
Invertebrates	-		-		-	
Octopus	-		-		-	
TOTAL CATCH (KG.)	85		569		415	

Appendix Table 1 (continued)

HAUL NO.	82	83	84			
BLOCK	E405	E402	E505			
DATE (1993)	MAY 30	MAY 30	MAY 31			
DEPTH INTERVAL (FA)	50	20	50			
DURATION (H)	0.33	0.33	0.33			
DIRECTION (DEG. TRUE)	338	329	181			
TIME (PDT)	START 15:41	STOP 16:01	START 17:45	STOP 18:01	START 8:09	STOP 8:29
LAT.(DEG,MIN)	53 44.9	53 45.9	53 41.8	53 42.7	53 45.2	53 44.2
LONG.(DEG,MIN)	130 49.5	130 50.3	130 50.9	130 51.8	130 37.6	130 37.8
LC-5990-X	11962.2	11950.5	11980.3	11969.8	12009.1	12016.5
LC-5990-Z	41661	41663.2	41648.8	41650.3	41679.3	41675.3
DEPTH (FA)	56.6	56.6	27	27.2	55.4	55.4
SPECIES CATCH(KG.)						
Arrowtooth flounder	66		4		35	
Butter sole	TRACE		1		-	
Curlfin sole	-		2		-	
Dover sole	143		-		70	
English sole	70		5		23	
Flatfish	-		-		-	
Flathead sole	69		-		87	
Pacific halibut	-		39		6	
Pacific sanddab	1		-		-	
Petrale sole	-		-		-	
Rex sole	244		-		34	
Rock sole	-		117		TRACE	
Sand sole	TRACE		1		-	
Slender sole	8		-		TRACE	
Speckled sanddab	-		-		-	
Starry flounder	-		-		-	
Bocaccio	-		-		-	
Canary rockfish	1		-		2	
Copper rockfish	-		-		-	
Darkblotched rockfish	-		-		-	
Greenstriped rockfish	-		-		-	
Pacific ocean perch	-		-		-	
Pygmy rockfish	-		-		-	
Quillback rockfish	-		-		-	
Rosethorn rockfish	-		-		-	
Sharpchin rockfish	-		-		-	
Silvergray rockfish	-		-		-	
Yelloweye rockfish	-		-		-	
Yellowtail rockfish	-		-		17	
Eelpouts	-		-		-	
Eulachon	-		-		-	
Greenlings	-		-		-	
Irish lord	-		-		-	
Kelp greenling	-		-		-	
Lingcod	-		-		-	
Northern ronquil	-		-		-	
Pacific cod	1		13		TRACE	
Pacific hake	-		-		TRACE	
Pacific herring	-		-		-	
Pacific tomcod	-		-		TRACE	
Poachers	3		1		-	
Sablefish	2		-		3	
Sandlance	-		-		-	
Sculpins	-		-		-	
Shiner perch	-		-		-	
Walleye pollock	52		-		151	
Wolfieel	-		-		-	
Big skate	-		50		-	
Longnose skate	2		-		14	
Sandpaper skate	-		-		-	
Spiny dogfish	1		3		27	
Spotted ratfish	17		-		118	
Bivalves (scallop)	36		-		-	
Crabs	-		-		-	
Invertebrates	-		-		-	
Octopus	5		-		-	
TOTAL CATCH (KG.)	721		236		587	

Appendix Table 1 (continued)

HAUL NO.	85	86	87
BLOCK	E407	F406	F402
DATE (1993)	MAY 31	MAY 31	MAY 31
DEPTH INTERVAL (FA)	70	60	20
DURATION (H)	0.33	0.33	0.32
DIRECTION (DEG. TRUE)	0	0	205
TIME (PDT)	9:38	9:58	10:55
LAT.(DEG,MIN)	53 44.4	53 43.5	53 39.0
LONG.(DEG,MIN)	130 45	130 44.6	130 45.8
LC-5990-X	11983.9	11993.3	12022.6
LC-5990-Z	41665.5	41663	41646.4
DEPTH (FA)	74.5	73.8	65.4
START			
STOP			

SPECIES CATCH(KG.)

Arrowtooth flounder	876	254	-
Butter sole	-	-	3
Curlfin sole	-	-	2
Dover sole	175	73	1
English sole	1	73	83
Flatfish	-	-	
Flathead sole	25	6	TRACE
Pacific halibut	3	1	33
Pacific sanddab	-	-	5
Petrale sole	-	-	TRACE
Rex sole	182	71	-
Rock sole	-	-	96
Sand sole	-	-	1
Slender sole	23	14	-
Speckled sanddab	-	-	-
Starry flounder	-	-	-
Bocaccio	-	3	-
Canary rockfish	2	-	-
Copper rockfish	-	-	-
Darkblotched rockfish	-	-	-
Greenstriped rockfish	-	-	-
Pacific ocean perch	-	-	-
Pygmy rockfish	-	-	-
Quillback rockfish	-	-	-
Rosethorn rockfish	-	-	-
Sharpchin rockfish	-	-	-
Silvergray rockfish	-	-	-
Yelloweye rockfish	-	-	-
Yellowtail rockfish	2	3	-
Eelpouts	-	-	-
Eulachon	-	-	-
Greenlings	-	-	-
Irish lord	-	-	-
Kelp greenling	-	-	-
Lingcod	-	-	-
Northern rockfish	TRACE	-	-
Pacific cod	34	12	5
Pacific hake	-	TRACE	-
Pacific herring	-	-	-
Pacific tomcod	-	-	-
Poachers	TRACE	3	2
Sablefish	9	4	-
Sandlance	-	-	-
Sculpins	-	-	-
Shiner perch	-	-	-
Walleye pollock	16	129	1
Wolf eel	-	-	-
Big skate	-	-	36
Longnose skate	17	-	3
Sandpaper skate	-	-	1
Spiny dogfish	-	10	-
Spotted ratfish	48	8	102
Bivalves (scallop)	-	-	-
Crabs	-	-	-
Invertebrates	-	-	-
Octopus	-	-	-
TOTAL CATCH (KG.)	1413	664	374

Appendix Table 1 (continued)

HAUL NO.	88	89	90	
BLOCK	G302	H302	H301	
DATE (1993)	MAY 31	MAY 31	MAY 31	
DEPTH INTERVAL (FA)	20	20	10	
DURATION (H)	0.33	0.33	0.33	
DIRECTION (DEG. TRUE)	9	138	148	
TIME (PDT)	START 15:06	STOP 15:26	START 17:06	STOP 17:26
LAT.(DEG,MIN)	53 22.4	53 23.5	53 16.2	53 15.5
LONG.(DEG,MIN)	131 04.2	131 03.9	131 08.5	131 07.3
LC-5990-X	12076.3	12069.7	12106.2	12114.8
LC-5990-Z	41565.9	41569.8	41539.6	41538.7
DEPTH (FA)	28.9	28.9	19.9	23.7
			START 18:08	STOP 18:28
			53 17.5	53 16.7
			131 10.4	131 09.4
			12089	12098.7
			41542.1	41540.3
			18	18

SPECIES CATCH(KG.)

Arrowtooth flounder	-	-	-
Butter sole	TRACE	2	2
Curlfin sole	-	-	2
Dover sole	-	-	-
English sole	74	9	14
Flatfish	-	-	-
Flathead sole	-	-	-
Pacific halibut	114	4	22
Pacific sanddab	-	2	-
Petrale sole	-	-	-
Rex sole	-	-	-
Rock sole	231	54	64
Sand sole	-	16	57
Slender sole	-	-	-
Speckled sanddab	-	-	-
Starry flounder	-	-	-
Bocaccio	-	-	-
Canary rockfish	-	-	-
Copper rockfish	-	-	-
Darkblotched rockfish	-	-	-
Greenstriped rockfish	-	-	-
Pacific ocean perch	-	-	-
Pygmy rockfish	-	-	-
Quillback rockfish	-	-	-
Rosethorn rockfish	-	-	-
Sharpchin rockfish	-	-	-
Silvergray rockfish	-	-	-
Yelloweye rockfish	-	-	-
Yellowtail rockfish	-	-	-
Eelpouts	-	-	-
Eulachon	-	-	-
Greenlings	-	-	-
Irish lord	-	-	-
Kelp greenling	-	-	-
Lingcod	1	-	-
Northern rockfish	-	-	-
Pacific cod	27	TRACE	TRACE
Pacific hake	-	-	-
Pacific herring	-	-	-
Pacific tomcod	-	-	-
Poachers	-	TRACE	-
Sablefish	-	-	-
Sandlance	-	-	-
Sculpins	-	TRACE	-
Shiner perch	-	-	-
Walleye pollock	-	-	-
Wolf eel	-	-	-
Big skate	116	13	52
Longnose skate	-	-	-
Sandpaper skate	-	-	-
Spiny dogfish	101	7	26
Spotted ratfish	26	-	-
Bivalves (scallop)	-	-	-
Crabs	-	TRACE	-
Invertebrates	-	-	-
Octopus	-	-	-
TOTAL CATCH (KG.)	690	107	239
REMARKS	USABLE	USABLE	USABLE

Appendix Table 1 (continued)

HAUL NO.	91	92	93			
BLOCK	1403	1401	J202			
DATE (1993)	JUNE 01	JUNE 01	JUNE 01			
DEPTH INTERVAL (FA)	30	10	20			
DURATION (H)	0.33	0.33	0.33			
DIRECTION (DEG. TRUE)	150	151	34			
TIME (PDT)	START 8:09	STOP 8:29	START 9:06	STOP 9:26	START 11:20	STOP 11:40
LAT.(DEG,MIN)	53 01.5	53 00.7	53 01.3	53 00.6	52 55.7	52 56.5
LONG.(DEG,MIN)	130 53.1	130 52.3	130 54.1	130 53.2	131 15.4	131 14.4
LC-5990-X	12270.6	12280.1	12268.2	12277.1	12225.7	12223.7
LC-5990-Z	41505.7	41503.4	41503.6	41501.9	41461.7	41465.6
DEPTH (FA)	30	32.6	16.4	16.4	28.7	28.9

SPECIES CATCH(KG.)

Arrowtooth flounder	-	-	-
Butter sole	2	-	-
Curlfin sole	5	-	2
Dover sole	1	-	-
English sole	229	TRACE	-
Flatfish	-	-	-
Flathead sole	-	-	-
Pacific halibut	12	8	34
Pacific sanddab	30	-	-
Petrale sole	TRACE	-	-
Rex sole	TRACE	-	-
Rock sole	78	117	29
Sand sole	2	15	1
Slender sole	-	-	-
Speckled sanddab	-	-	-
Starry flounder	-	-	-
Bocaccio	-	-	-
Canary rockfish	-	-	-
Copper rockfish	-	-	-
Darkblotched rockfish	-	-	-
Greenstriped rockfish	-	-	-
Pacific ocean perch	-	-	-
Pygmy rockfish	-	-	-
Quillback rockfish	-	-	-
Rosethorn rockfish	-	-	-
Sharpchin rockfish	-	-	-
Silvergray rockfish	-	-	-
Yelloweye rockfish	-	-	-
Yellowtail rockfish	-	-	-
Eelpouts	-	-	-
Eulachon	-	-	-
Greenlings	-	-	-
Irish lord	-	-	-
Kelp greenling	-	-	-
Lingcod	-	6	-
Northern rockfish	-	-	-
Pacific cod	1	-	137
Pacific hake	-	-	-
Pacific herring	-	-	-
Pacific tomcod	-	-	-
Poachers	1	-	-
Sablefish	-	-	-
Sandlance	-	-	-
Sculpins	-	-	TRACE
Shiner perch	-	-	-
Walleye pollock	-	-	-
Wolf eel	-	-	-
Big skate	11	4	-
Longnose skate	-	-	-
Sandpaper skate	-	-	-
Spiny dogfish	194	54	-
Spotted ratfish	-	-	138
Bivalves (scallop)	-	-	-
Crabs	1	-	-
Invertebrates	-	-	-
Octopus	-	-	-
TOTAL CATCH (KG.)	567	204	341
REMARKS	USARIF	USARIF	USARIF

Appendix Table 1 (continued)

HAUL NO.	94	95	96			
BLOCK	J401	J502	J502			
DATE (1993)	JUNE 01	JUNE 01	JUNE 01			
DEPTH INTERVAL (FA)	10	20	20			
DURATION (H)	0.28	0.33	0.33			
DIRECTION (DEG. TRUE)	244	346	328			
TIME (PDT)	START 13:22	STOP 13:39	START 14:16	STOP 14:36	START 15:30	STOP 15:50
LAT.(DEG,MIN)	52 58.1	52 57.9	52 57.1	13 050.	52 56.6	52 57.4
LONG.(DEG,MIN)	130 52.2	130 53.5	525 8.08	130 50.9	130 48.8	130 49.7
LC-5990-X	12298.1	12286.5	12313.4	12304.1	12322.7	12313.2
LC-5990-Z	41494.2	41492.5	41492.8	41495.2	41492.4	41494.6
DEPTH (FA)	19.6	19.6	21.2	20.3	27.6	27.6

SPECIES CATCH(KG.)

Arrowtooth flounder	-	-	-
Butter sole	-	-	1
Curlfin sole	14	8	3
Dover sole	-	-	TRACE
English sole	TRACE	2	253
Flatfish	-	-	-
Flathead sole	-	-	-
Pacific halibut	31	16	33
Pacific sanddab	TRACE	-	-
Petrale sole	-	-	-
Rex sole	-	-	-
Rock sole	35	33	29
Sand sole	11	10	6
Slender sole	-	-	-
Speckled sanddab	-	-	-
Starry flounder	-	-	-
Bocaccio	-	-	-
Canary rockfish	-	-	-
Copper rockfish	-	-	-
Darkblotched rockfish	-	-	-
Greenstriped rockfish	-	-	-
Pacific ocean perch	-	-	-
Pygmy rockfish	-	-	-
Quillback rockfish	-	-	-
Rosethorn rockfish	-	-	-
Sharpchin rockfish	-	-	-
Silvergray rockfish	-	-	-
Yelloweye rockfish	-	-	-
Yellowtail rockfish	-	-	-
Eelpouts	-	-	-
Eulachon	-	-	-
Greenlings	-	-	-
Irish lord	-	-	-
Kelp greenling	-	-	-
Lingcod	-	-	-
Northern rockfish	-	-	-
Pacific cod	-	-	-
Pacific hake	-	-	-
Pacific herring	-	-	-
Pacific tomcod	-	-	2
Poachers	-	TRACE	-
Sablefish	-	-	-
Sandlance	-	-	-
Scorpions	-	-	-
Shiner perch	-	-	-
Walleye pollock	-	-	-
Wolf eel	-	-	-
Big skate	30	25	32
Longnose skate	-	3	7
Sandpaper skate	-	-	-
Spiny dogfish	33	40	66
Spotted ratfish	2	-	-
Bivalves (scallop)	-	-	-
Crabs	-	2	2
Invertebrates	-	-	-
Octopus	-	-	-

TOTAL CATCH (KG.)

REMARKS

156

USARIF

139

USARIF

434

USARIF

Appendix Table 1 (continued)

HAUL NO.	97	98
BLOCK	J504	J506
DATE (1993)	JUNE 01	JUNE 01
DEPTH INTERVAL (FA)	40	60
DURATION (H)	0.33	0.35
DIRECTION (DEG. TRUE)	354	123
TIME (PDT)	17:10	17:30
LAT.(DEG,MIN)	52 56.6	52 57.6
LONG.(DEG,MIN)	130 38.3	130 38.2
LC-5990-X	12366.7	12359.6
LC-5990-Z	41504.4	41508.2
DEPTH (FA)	42.7	42.7
START	18:03	18:24
STOP		

SPECIES CATCH(KG.)

Arrowtooth flounder	-	3
Butter sole	-	-
Curlfin sole	1	-
Dover sole	-	TRACE
English sole	2	1
Flatfish	-	-
Flathead sole	-	-
Pacific halibut	18	7
Pacific sanddab	-	-
Petrale sole	7	2
Rex sole	-	TRACE
Rock sole	-	-
Sand sole	-	-
Slender sole	-	-
Speckled sanddab	-	-
Starry flounder	-	-
Bocaccio	-	-
Canary rockfish	-	1
Copper rockfish	-	-
Darkblotched rockfish	-	-
Greenstriped rockfish	-	-
Pacific ocean perch	-	-
Pygmy rockfish	-	-
Quillback rockfish	-	-
Rosethorn rockfish	-	-
Sharpchin rockfish	-	-
Silvergray rockfish	-	-
Yelloweye rockfish	-	-
Yellowtail rockfish	-	1
Eelpouts	-	-
Eulachon	-	-
Greenlings	-	-
Irish lord	-	-
Kelp greenling	-	-
Lingcod	6	-
Northern rockfish	-	-
Pacific cod	2	8
Pacific hake	-	-
Pacific herring	2	-
Pacific tomcod	-	-
Poachers	-	TRACE
Sablefish	-	1
Sand lance	-	-
Sculpins	-	-
Shiner perch	-	-
Walleye pollock	-	1
Wolf eel	-	-
Big skate	50	15
Longnose skate	-	5
Sandpaper skate	-	-
Spiny dogfish	68	35
Spotted ratfish	2	3
Bivalves (scallop)	-	-
Crabs	-	-
Invertebrates	-	-
Octopus	-	-

TOTAL CATCH (KG.)

158

83

Appendix Table 2. Length-frequency (nos. measured), by haul, of male spiny dogfish collected during F/V W.E. RICKER assemblage survey, Hecate Strait, May 17-June 3, 1993.

Fork length (cm)	Haul no.																				
	1	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
35	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
36	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
37	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
38	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
39	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
40	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
41	-	-	-	-	-	0	-	-	2	-	-	-	-	-	-	-	-	-	-	-	
42	-	-	-	-	-	0	-	-	1	-	-	-	-	-	-	-	-	-	-	-	
43	-	-	-	-	-	0	-	-	3	-	-	-	-	1	0	-	-	-	-	-	
44	-	-	-	-	-	0	-	-	2	-	-	-	-	0	1	-	-	-	-	-	
45	-	-	-	-	-	0	-	-	7	-	-	-	-	0	1	-	-	-	-	-	
46	-	-	-	-	-	0	-	-	7	-	-	-	-	1	0	1	-	-	-	-	
47	-	-	-	-	-	0	-	-	11	-	-	-	-	0	0	0	-	-	-	-	
48	-	-	-	-	-	0	-	-	13	-	-	-	-	0	1	1	-	-	1	-	
49	-	-	-	-	-	0	1	1	12	-	-	-	-	0	0	1	-	-	0	-	
50	-	-	-	-	-	0	-	0	7	-	-	-	-	1	0	1	-	-	0	-	
51	-	1	-	-	-	0	-	0	11	-	-	-	-	0	0	1	-	-	0	-	
52	-	0	-	-	-	0	-	0	7	-	-	-	-	0	2	1	-	-	0	-	
53	-	0	-	-	-	0	-	0	12	1	-	-	-	1	0	0	-	-	0	-	
54	-	0	-	-	-	0	-	0	7	1	-	-	-	0	1	1	-	-	0	-	
55	-	0	-	-	-	0	-	0	10	0	-	-	-	0	0	1	-	-	0	-	
56	-	0	-	-	-	0	-	1	6	0	-	-	-	0	1	2	-	-	0	-	
57	-	0	-	-	-	0	-	0	6	0	-	-	-	0	1	0	-	-	0	-	
58	-	0	-	-	-	0	-	0	4	0	-	-	-	0	0	0	-	-	0	-	
59	-	2	-	-	-	0	-	1	4	0	-	-	-	0	1	1	-	-	0	-	
60	-	1	-	-	-	0	-	1	2	0	-	-	-	1	0	0	-	-	0	-	
61	-	1	-	-	-	0	-	1	1	0	-	-	-	0	1	1	1	-	0	-	
62	1	0	-	-	-	0	-	0	2	0	-	-	-	0	0	1	-	-	0	-	
63	0	1	-	-	-	1	-	1	5	0	-	-	-	1	0	0	-	-	0	-	
64	1	0	-	-	-	0	-	2	3	0	-	-	-	0	0	0	-	-	0	1	
65	1	2	-	-	-	0	-	1	2	0	-	-	-	0	1	0	-	-	1	0	
66	2	2	-	-	-	0	-	0	0	-	-	-	-	0	0	0	-	-	0	0	
67	2	4	-	-	-	0	-	0	1	-	-	-	-	0	1	0	-	-	0	0	
68	0	1	-	-	-	1	-	1	-	-	-	-	-	0	0	0	-	-	1	0	
69	1	2	-	-	-	-	-	0	-	-	-	-	-	0	1	0	-	-	0	0	
70	3	3	-	-	-	1	-	0	-	-	-	1	0	1	0	-	-	0	1	-	
71	0	1	-	-	-	-	0	-	-	0	0	0	0	0	0	0	-	0	1	-	
72	1	2	-	-	-	-	1	-	-	0	0	0	0	0	0	0	-	0	0	-	
73	2	1	-	-	-	-	-	-	-	0	0	0	0	0	0	0	-	0	1	-	
74	1	1	-	-	-	-	-	-	-	1	0	0	0	0	0	0	-	0	0	-	
75	0	1	-	-	-	-	-	-	-	0	0	0	0	0	0	0	-	0	0	-	
76	0	0	1	-	-	-	-	-	-	0	0	0	0	0	0	0	-	0	1	-	
77	0	2	0	-	-	-	-	-	-	0	0	0	0	0	0	0	-	0	0	-	
78	1	0	0	-	-	-	-	-	-	0	0	0	0	1	-	-	0	-	-	-	
79	-	0	0	-	-	-	-	-	-	0	0	0	0	0	0	1	0	-	-	-	

Appendix Table 2. (con't)

species: male spiny dogfish

Fork length (cm)	Haul no.																			
	1	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
80	-	1	0	-	-	-	-	-	-	-	0	0	0	1	-	0	1	-	-	
81	-	1	1	-	-	-	-	-	-	-	0	0	0	-	-	1	0	-	-	
82	-	0	-	-	-	-	-	-	-	-	0	0	0	-	-	0	0	-	1	
83	-	0	-	-	-	-	-	-	-	-	0	0	0	-	-	0	0	-	-	
84	-	0	-	-	-	-	-	-	-	-	0	0	0	-	-	0	0	-	-	
85	-	0	-	-	-	-	-	-	-	-	0	0	0	-	-	0	0	-	-	
86	-	0	-	-	-	-	-	-	-	-	0	0	0	-	-	1	0	-	-	
87	-	0	-	-	-	-	-	-	-	-	0	1	0	-	-	0	0	-	-	
88	-	1	-	-	-	-	-	-	-	-	0	-	0	-	-	0	0	-	-	
89	-	1	-	-	-	-	-	-	-	-	0	-	0	-	-	0	0	-	-	
90	-	-	-	-	-	-	-	-	-	-	0	-	0	-	-	0	0	-	-	
91	-	-	-	-	-	-	-	-	-	-	0	-	1	-	-	1	1	-	-	
92	-	-	-	-	-	-	-	-	-	-	1	0	-	0	-	0	1	-	-	
93	-	-	-	1	-	-	-	-	-	-	0	0	-	0	-	0	0	-	-	
94	-	-	-	-	-	-	-	-	-	-	0	0	-	0	-	2	0	-	-	
95	-	-	-	-	-	-	-	-	-	-	1	0	-	0	-	0	0	-	-	
96	-	-	-	-	-	-	-	-	-	-	0	0	-	0	-	0	0	-	-	
97	-	-	-	-	-	-	-	-	-	-	0	0	-	0	-	1	1	-	-	
98	-	-	-	-	-	-	-	-	-	-	0	0	-	0	-	0	0	-	-	
99	-	-	-	-	-	-	-	-	-	-	0	0	-	1	-	0	0	-	-	
100	-	-	-	-	-	-	-	-	-	-	0	0	-	1	-	0	0	-	-	
101	-	-	-	-	-	-	-	-	-	-	0	0	-	0	-	0	0	-	-	
102	-	-	-	-	-	-	-	-	-	-	0	0	-	1	-	0	0	-	-	
103	-	-	-	-	-	-	-	-	-	-	0	0	-	0	-	0	0	-	-	
104	-	-	-	-	-	-	-	-	-	-	0	0	-	0	-	1	0	-	-	
105	-	-	-	-	-	-	-	-	-	-	0	0	-	0	-	-	0	-	-	
106	-	-	-	-	-	-	-	-	-	-	0	0	-	0	-	-	0	-	-	
107	-	-	-	-	-	-	-	-	-	-	1	1	-	0	-	-	1	-	-	
108	-	-	-	-	-	-	-	-	-	-	0	0	-	1	-	-	1	-	-	
109	-	-	-	-	-	-	-	-	-	-	1	0	-	-	-	-	-	-	-	
110	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	
111	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
113	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
114	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total	16	32	2	1	1	5	1	11	147	3	4	4	6	18	18	1	8	9	5	1

Appendix Table 2 (cont'd)

Species : male spiny dogfish

Fork length (cm)	Haul no.																		
	23	26	27	28	29	30	31	32	33	35	36	37	38	39	40	41	42	43	47
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-
27	-	-	-	-	-	-	-	1	-	-	-	-	-	-	0	-	-	-	-
28	-	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-
29	-	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-
30	-	-	-	-	-	-	-	2	-	-	-	-	-	-	0	-	-	-	-
31	-	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-
32	-	-	-	-	-	-	-	1	-	-	-	-	-	-	0	-	-	-	-
33	-	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-
34	-	-	-	-	-	-	-	1	-	-	-	-	-	-	0	-	-	-	-
35	-	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-
36	-	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-
37	-	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-
38	-	-	-	-	-	-	-	1	-	-	-	-	-	-	0	-	-	-	-
39	-	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-
40	-	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-
41	-	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-
42	-	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-
43	-	-	-	-	-	-	-	2	-	-	-	-	-	-	0	-	-	-	-
44	-	-	-	-	-	-	-	1	-	-	-	-	-	-	0	-	-	-	-
45	-	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-
46	-	-	-	-	-	-	-	2	-	-	-	-	-	-	0	-	-	-	-
47	-	-	-	-	-	-	-	1	-	-	-	-	-	-	0	-	-	-	-
48	-	-	-	-	-	-	-	1	-	-	-	-	-	-	0	-	-	-	-
49	-	-	-	-	-	-	-	0	1	-	-	-	-	-	0	-	-	-	-
50	-	-	-	-	-	-	-	1	0	-	-	-	-	-	0	-	-	-	-
51	-	-	-	-	-	-	-	3	1	-	-	-	-	-	0	-	-	-	-
52	-	-	-	-	-	-	-	2	0	-	-	-	-	-	0	-	-	-	-
53	-	-	-	-	-	-	-	2	0	1	-	-	-	-	0	-	-	-	-
54	-	-	-	-	-	-	-	0	0	0	-	-	-	-	0	-	-	-	-
55	1	-	-	-	-	-	-	2	0	0	-	-	-	-	0	-	-	-	-
56	-	-	-	-	-	-	-	1	0	0	-	-	-	-	0	-	-	-	-
57	-	-	-	-	-	-	-	0	3	0	-	-	-	-	0	-	-	-	-
58	-	-	-	-	-	-	-	1	0	0	-	-	-	1	0	-	-	-	-
59	-	-	-	-	-	-	-	3	2	0	-	-	-	0	-	-	-	-	-
60	-	-	-	-	-	-	-	5	6	0	-	-	-	0	-	-	-	-	-
61	-	-	-	-	-	-	-	6	2	0	-	-	-	0	-	-	-	-	-
62	-	-	-	-	-	-	-	2	5	2	-	-	-	0	-	-	-	-	-
63	-	-	-	-	-	-	-	7	3	1	-	-	-	0	-	-	1	0	-
64	-	-	-	-	-	-	-	1	4	6	1	-	-	0	-	-	0	0	-
65	-	-	-	-	-	-	-	6	1	4	-	-	-	0	1	-	0	0	-
66	-	-	-	-	-	-	-	9	2	1	-	-	-	0	0	-	0	0	-
67	-	1	-	-	-	-	-	7	9	3	-	-	-	0	0	-	0	0	-
68	-	0	-	-	-	-	-	6	9	3	-	-	-	1	0	-	0	0	-
69	-	0	-	-	-	-	-	5	6	3	-	-	-	0	0	-	0	1	-
70	-	0	-	-	-	-	-	8	6	4	-	-	-	0	0	-	0	0	-
71	-	0	-	-	-	-	-	6	2	0	-	-	-	0	0	-	0	0	-
72	-	1	-	-	-	-	-	9	3	2	-	-	-	0	0	-	0	0	-
73	-	0	-	-	-	-	-	9	3	2	-	-	-	0	0	-	0	1	-
74	-	0	-	-	-	-	-	2	7	2	-	-	-	0	0	1	0	0	-
75	-	0	-	-	-	-	-	4	6	1	-	-	-	0	0	-	0	0	-
76	-	0	-	-	-	-	-	6	1	1	-	-	-	0	0	-	0	0	-
77	-	0	-	-	-	-	-	4	2	2	-	-	-	0	0	0	0	0	-

Appendix Table 2 (cont'd)

Species : male spiny dogfish

Fork length (cm)	Haul no.																						
	23	26	27	28	29	30	31	32	33	35	36	37	38	39	40	41	42	43	47	48			
78	-	0	-	0	2	1	-	-	0	0	0	-	0	0	0	0	0	-	0	-	-		
79	-	1	-	5	1	1	-	-	0	0	0	-	0	0	0	0	0	-	0	1	-		
80	-	0	-	1	1	1	-	-	0	0	0	-	0	0	0	0	0	-	0	0	-		
81	-	0	-	3	1	1	-	-	0	0	0	-	0	1	0	-	1	0	-	1	0	-	
82	-	0	-	1	4	2	-	-	0	1	0	-	0	-	0	-	0	-	0	0	-		
83	-	1	-	1	4	1	-	-	0	0	0	-	0	-	0	-	0	-	0	0	-		
84	-	0	-	1	0	0	-	1	-	0	0	0	-	0	-	0	-	0	-	0	0	-	
85	-	1	-	0	0	0	-	0	-	0	0	0	-	0	-	0	-	0	-	0	0	-	
86	-	0	-	1	3	0	-	0	-	0	0	0	-	0	-	0	-	0	-	0	0	-	
87	-	0	-	1	0	1	-	0	-	0	0	0	-	0	-	0	-	0	-	0	1	-	
88	-	0	-	-	1	0	-	0	-	0	0	0	-	0	-	0	-	1	-	-	-		
89	-	0	-	-	1	0	-	0	-	0	0	0	-	0	-	0	-	-	-	-	-		
90	-	0	-	-	1	0	-	0	-	1	0	0	-	1	-	0	-	-	-	-	-		
91	-	0	-	-	0	1	-	0	-	0	0	0	-	0	-	1	-	-	-	-	-		
92	-	0	-	-	0	0	-	0	-	0	0	0	-	1	-	0	-	-	-	-	-		
93	-	0	-	-	0	0	-	0	-	0	0	0	-	0	-	0	-	-	-	-	-		
94	-	0	-	-	0	0	-	0	-	0	0	0	-	0	-	0	-	-	-	-	-		
95	-	0	-	-	1	0	-	0	-	0	0	0	-	0	-	0	-	-	-	-	-		
96	-	0	-	-	0	0	-	0	-	0	1	0	-	0	-	1	-	-	-	-	-		
97	-	0	-	-	1	0	-	0	1	-	-	0	1	0	-	-	-	-	-	-	-		
98	-	0	-	-	0	0	-	0	-	-	0	0	-	0	-	-	-	-	-	-	-		
99	-	0	-	-	0	0	-	0	-	-	0	0	-	0	-	-	-	-	-	-	-		
100	-	0	-	-	0	0	-	1	-	-	0	-	0	-	-	-	-	-	-	-	-		
101	-	0	-	-	0	0	-	-	-	-	0	-	0	-	-	-	-	-	-	-	-		
102	-	1	-	-	0	0	-	-	-	-	1	-	1	-	-	1	-	-	1	-	-		
103	-	0	-	-	0	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-		
104	-	0	-	-	0	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-		
105	-	1	-	-	0	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-		
106	-	-	-	-	0	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-		
107	-	-	-	-	1	1	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-		
108	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-		
109	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-		
110	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-		
111	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-		
112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
113	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
114	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Total	1	7	1	139	108	43	10	2	1	3	3	2	1	5	2	3	1	3	2	1			

Appendix Table 2 (cont'd)

Species : male spiny dogfish

Fork length (cm)	Haul no.																		
	49	50	51	53	57	58	59	61	64	67	71	72	74	75	77	78	80	83	84
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-
29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-
30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-
31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-
32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-
33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-
34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-
35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-
36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-
37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-
38	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	0	-	-	-
39	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-
40	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-
41	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-
42	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-
43	-	-	-	-	1	-	-	-	0	-	-	-	-	-	-	0	-	-	-
44	-	-	-	-	1	-	-	-	0	-	-	-	-	-	-	0	-	-	-
45	-	1	-	-	1	-	-	-	0	-	-	-	-	-	-	0	-	-	-
46	-	0	-	-	0	-	-	-	0	-	-	-	-	-	-	0	-	-	-
47	-	0	-	-	2	-	-	-	0	-	-	-	-	-	-	0	-	-	-
48	-	0	-	-	0	-	-	-	0	-	-	-	-	-	-	0	-	-	-
49	-	0	-	-	0	-	-	-	0	-	-	-	-	-	-	0	-	-	-
50	-	0	-	-	0	-	-	-	0	-	-	-	-	-	-	0	-	-	-
51	-	0	-	-	0	-	-	-	0	-	-	-	-	-	-	0	-	-	-
52	-	0	-	-	0	-	-	-	0	-	-	-	-	-	-	0	-	-	-
53	-	0	-	-	0	-	-	-	0	-	-	-	-	-	-	0	-	-	-
54	-	0	-	-	2	0	-	-	0	-	-	-	-	-	-	0	-	-	-
55	-	1	-	0	0	-	-	-	0	-	-	-	-	-	-	0	-	-	-
56	1	0	-	0	0	-	-	-	0	-	-	-	-	-	-	0	-	-	-
57	1	0	-	0	0	-	-	-	0	-	-	-	-	-	-	0	-	-	-
58	0	0	-	0	0	-	1	0	-	-	-	-	-	-	-	0	-	-	-
59	0	0	-	0	0	-	0	0	-	-	-	-	-	-	-	0	-	1	-
60	1	2	-	0	1	-	0	0	-	-	-	-	-	-	-	0	-	0	-
61	0	1	-	1	2	-	0	0	-	-	-	-	-	-	-	2	0	-	0
62	1	0	-	0	0	-	0	0	-	-	-	-	1	-	0	0	-	0	-
63	2	0	-	3	0	-	0	0	-	-	-	-	0	-	3	0	-	0	-
64	0	0	-	2	1	-	0	0	-	-	-	-	0	-	0	0	-	0	-
65	1	0	-	2	1	-	0	0	-	-	-	-	0	-	3	0	-	1	-
66	2	0	-	0	4	-	0	0	-	1	-	0	-	3	0	-	0	-	0
67	0	2	-	0	0	-	1	0	-	-	-	0	-	2	0	-	0	-	0
68	1	1	-	1	2	1	1	0	-	-	-	0	-	1	0	-	1	-	1
69	0	3	-	0	0	0	0	0	-	-	-	0	-	4	0	1	1	-	1
70	2	1	-	3	1	1	0	0	-	-	-	0	-	4	0	0	2	-	1
71	2	0	1	1	0	0	0	0	-	-	-	0	-	2	0	0	0	-	0
72	1	0	0	0	1	0	1	0	-	-	-	0	-	4	0	0	0	-	0
73	0	0	0	1	1	0	0	0	-	-	-	0	-	2	0	0	0	-	0
74	1	1	0	3	0	0	1	0	-	-	-	0	-	4	0	1	1	-	1
75	1	0	0	2	3	1	0	0	-	-	-	0	-	2	1	1	0	-	0
76	0	1	0	0	0	1	0	0	-	-	-	0	-	6	0	-	0	-	0
77	0	0	0	2	0	1	0	0	-	-	-	0	-	5	0	-	0	-	0

Appendix Table 2 (cont'd)

Species : male spiny dogfish

Fork length (cm)	Haul no.																			
	49	50	51	53	57	58	59	61	64	67	71	72	74	75	77	78	80	83	84	86
78	1	0	0	0	0	0	0	0	1	-	-	-	0	-	4	1	-	-	1	-
79	0	0	0	1	0	0	0	0	0	-	-	-	0	-	5	0	-	-	3	-
80	0	0	0	1	1	0	0	1	0	-	-	-	1	-	3	0	-	-	0	-
81	0	0	0	1	0	1	0	1	1	-	-	-	0	-	5	0	-	-	0	-
82	1	0	0	1	1	1	0	0	0	-	-	-	0	-	9	1	-	1	0	-
83	0	0	0	0	0	2	1	0	0	-	-	-	0	-	3	0	-	-	0	-
84	0	0	2	1	0	0	1	0	0	-	-	-	0	-	2	1	-	-	1	-
85	1	1	0	1	4	2	-	0	0	-	-	-	0	-	0	0	-	-	0	-
86	0	0	1	1	1	2	-	0	0	-	-	-	0	-	3	0	-	-	1	-
87	1	0	0	0	0	0	-	1	0	-	-	-	0	1	3	0	-	-	-	-
88	-	0	2	0	0	0	-	1	0	-	-	-	1	0	-	2	0	-	-	-
89	-	0	1	2	0	0	-	1	1	-	-	-	1	-	2	1	-	-	-	-
90	-	1	1	1	1	0	-	-	-	-	-	-	-	2	-	-	-	-	-	-
91	-	1	0	1	0	0	-	-	-	-	-	-	-	3	-	-	-	-	-	-
92	-	1	0	0	1	1	-	-	-	-	-	-	-	0	-	-	-	-	-	-
93	-	-	1	1	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-
94	-	-	0	0	-	0	-	-	-	-	-	-	-	1	-	-	-	-	-	-
95	-	-	0	1	-	2	-	-	-	-	-	-	-	1	-	-	-	-	-	-
96	-	-	1	0	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
97	-	-	0	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
98	-	-	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
99	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
101	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
102	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
103	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
104	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
105	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
106	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
107	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
108	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
109	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
110	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
111	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
112	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
113	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
114	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Total	21	18	11	46	31	17	7	6	3	1	1	1	3	1	95	6	3	1	13	1

Appendix Table 2 (cont'd)

Species : male spiny dogfish

Fork length (cm)	Haul no.								
	88	89	91	92	94	95	96	97	
17	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-
31	-	-	-	-	-	-	-	-	-
32	-	-	-	-	-	-	-	-	-
33	-	-	-	-	-	-	-	-	-
34	-	-	-	-	-	-	-	-	-
35	-	-	-	-	-	-	-	-	-
36	-	-	-	-	-	-	-	-	-
37	-	-	-	-	-	-	-	-	-
38	-	-	-	-	-	-	-	-	-
39	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-
41	-	-	-	-	-	-	-	-	-
42	-	-	-	-	-	-	-	-	-
43	-	-	-	-	-	-	-	-	-
44	-	-	-	-	-	-	-	-	-
45	-	-	-	-	-	-	-	-	-
46	-	-	-	-	-	-	-	-	-
47	-	-	-	-	-	-	-	-	-
48	-	-	-	-	-	-	-	-	-
49	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-
51	-	-	-	-	-	-	-	-	-
52	-	-	-	-	-	1	-	-	-
53	-	-	-	-	-	0	-	-	-
54	-	-	-	-	-	0	-	-	-
55	-	-	-	-	-	1	1	-	-
56	-	-	-	-	-	0	0	-	-
57	-	-	-	-	-	0	0	-	-
58	-	-	-	-	-	0	0	1	-
59	-	-	1	-	-	1	0	1	-
60	-	-	0	-	-	0	0	1	-
61	-	-	0	-	-	0	0	0	-
62	-	-	0	1	-	0	0	0	-
63	-	-	0	0	-	0	0	0	-
64	-	-	0	0	-	0	0	0	-
65	-	-	0	1	-	0	0	0	-
66	-	-	2	0	-	0	0	1	-
67	1	-	4	0	-	0	0	0	-
68	2	-	3	0	-	0	0	2	-
69	0	-	3	1	-	0	0	0	-
70	0	-	3	0	-	0	0	2	-
71	1	-	2	2	-	0	0	3	-
72	1	-	5	0	1	2	0	1	-
73	0	-	3	0	1	0	1	1	-
74	2	-	1	0	0	0	0	4	-
75	1	-	1	2	0	1	1	0	-
76	0	1	3	0	0	1	0	0	-
77	0	0	4	0	0	0	0	1	-

Appendix Table 2 (cont'd)

Species : male spiny dogfish

Fork length (cm)	Haul no.								
	88	89	91	92	94	95	96	97	
78	0	0	2	0	0	0	1	1	
79	2	1	2	0	0	0	0	0	
80	1	0	3	0	0	1	1	0	
81	3	0	3	1	1	0	0	1	
82	1	0	2	0	1	0	0	-	
83	1	0	2	0	-	0	0	-	
84	0	0	1	1	-	0	0	-	
85	3	0	3	0	-	0	0	-	
86	4	0	3	0	-	0	0	-	
87	0	0	1	2	-	0	0	-	
88	1	1	1	-	-	0	0	-	
89	3	-	1	-	-	0	1	-	
90	0	-	0	-	-	0	-	-	
91	1	-	1	-	-	0	-	-	
92	0	-	-	-	-	0	-	-	
93	1	-	-	-	-	0	-	-	
94	0	-	-	-	-	0	-	-	
95	0	-	-	-	-	0	-	-	
96	0	-	-	-	-	0	-	-	
97	0	-	-	-	-	0	-	-	
98	0	-	-	-	-	0	-	-	
99	1	-	-	-	-	0	-	-	
100	0	-	-	-	-	0	-	-	
101	0	-	-	-	-	0	-	-	
102	0	-	-	-	-	0	-	-	
103	0	-	-	-	-	-	-	-	
104	0	-	-	-	-	-	-	-	
105	1	-	-	-	-	-	-	-	
106	0	-	-	-	-	-	-	-	
107	0	-	-	-	-	-	-	-	
108	0	-	-	-	-	-	-	-	
109	0	-	-	-	-	-	-	-	
110	0	-	-	-	-	-	-	-	
111	1	-	-	-	-	-	-	-	
112	-	-	-	-	-	-	-	-	
113	-	-	-	-	-	-	-	-	
114	-	-	-	-	-	-	-	-	
Total	32	3	60	11	4	8	6	20	

Appendix Table 3. Length-frequency (nos. measured), by haul, of female spiny dogfish collected during F/V W.E. RICKER assemblage survey, Hecate Strait, May 17-June 3, 1993.

Fork length (cm)	Haul no.																					
	1	2	3	4	5	7	8	9	10	11	12	14	15	16	18	19	20	21	26	27	28	29
26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
43	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-
44	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-
45	-	-	-	-	-	-	-	-	-	2	-	-	0	-	1	1	-	-	-	-	-	-
46	1	-	-	-	-	-	1	-	3	-	-	0	-	0	-	-	-	-	-	-	-	-
47	0	-	-	-	-	-	0	-	2	-	-	0	-	1	-	-	-	-	-	-	-	-
48	0	-	-	-	-	-	0	-	2	-	-	1	-	1	-	-	-	-	-	-	-	-
49	0	-	-	-	-	-	0	-	10	-	-	2	-	1	-	-	-	-	-	-	-	-
50	0	-	-	-	-	-	0	-	6	-	-	0	-	0	-	-	-	-	-	-	-	-
51	0	-	-	-	-	-	0	-	8	-	-	1	-	1	-	-	-	-	-	-	-	-
52	0	-	-	-	-	-	0	-	8	-	-	0	-	0	1	-	-	-	-	-	-	-
53	0	-	-	-	-	-	0	-	9	-	-	0	-	0	3	-	-	-	-	-	-	-
54	1	-	-	-	-	-	0	-	6	-	-	0	-	0	0	-	-	-	-	-	-	-
55	0	-	1	-	-	-	0	-	12	-	-	0	-	0	1	-	-	-	-	-	-	-
56	0	-	0	-	-	-	0	-	8	-	-	1	1	0	-	1	-	-	-	-	-	-
57	1	-	0	-	-	-	0	-	8	-	-	0	0	0	-	0	-	-	-	-	-	-
58	0	-	0	-	-	-	0	-	4	-	-	1	0	0	-	0	-	-	-	-	-	-
59	0	-	0	-	-	-	0	-	4	-	-	0	0	0	-	0	-	-	-	-	-	-
60	1	-	0	-	-	-	0	1	4	-	-	0	0	0	-	0	-	-	-	-	-	-
61	0	-	0	-	-	-	0	0	7	-	-	0	1	0	-	0	-	-	-	-	-	-
62	0	-	1	-	-	-	0	1	1	-	-	0	0	0	-	0	-	-	-	-	-	-
63	0	-	0	-	-	-	0	0	1	-	-	0	0	0	-	0	-	-	-	-	-	-
64	2	-	0	-	-	-	0	0	2	-	-	0	2	0	-	0	-	-	-	-	-	-
65	0	-	1	-	-	-	0	0	1	-	-	0	0	0	-	0	-	-	-	-	-	-
66	2	-	1	-	-	-	0	0	1	-	-	0	0	0	-	0	-	-	-	-	-	-
67	2	-	0	-	-	-	0	0	0	-	-	0	0	0	-	0	-	-	-	-	-	-
68	1	-	1	-	-	-	0	0	0	-	-	0	0	0	-	0	-	-	-	-	-	-
69	1	-	1	-	-	-	0	0	1	-	-	0	0	0	-	1	-	-	-	-	-	-
70	2	-	2	-	-	-	0	0	0	-	-	0	0	0	-	1	0	-	-	-	-	-
71	9	-	3	1	-	-	0	0	0	-	-	0	0	0	-	0	0	-	-	-	-	-
72	5	-	0	-	-	-	0	0	0	1	-	1	0	1	-	0	0	-	1	-	-	-
73	2	-	1	-	-	-	0	1	1	-	-	0	0	0	-	0	0	-	0	-	-	-
74	2	-	1	-	-	-	0	0	-	-	-	0	1	1	-	0	0	-	0	-	-	-
75	2	-	0	-	-	-	0	0	-	-	1	0	0	-	0	0	-	1	-	-	-	-
76	7	-	2	-	-	-	0	0	-	-	-	0	0	-	-	0	0	-	0	-	-	-
77	6	-	1	-	-	-	0	0	-	-	-	0	0	-	-	0	0	-	0	-	-	-
78	3	-	3	-	-	-	0	0	-	-	-	0	0	-	-	0	0	-	1	1	-	-
79	8	-	0	-	-	-	0	1	-	-	-	0	0	-	-	1	0	-	1	0	-	-
80	7	-	1	1	-	-	0	-	-	-	0	1	-	-	-	0	0	-	0	-	-	-
81	7	-	0	-	-	-	0	-	-	-	1	1	-	-	-	0	0	-	0	-	-	-
82	8	-	2	-	-	1	0	-	-	-	-	1	-	-	-	0	-	0	-	0	-	-
83	5	-	0	-	-	0	-	-	-	-	-	1	-	-	-	0	-	0	-	0	-	-
84	6	-	0	-	-	0	-	-	-	-	-	0	-	-	-	0	-	0	-	0	-	-
85	5	-	0	-	1	-	0	-	-	-	-	0	-	-	-	0	-	0	-	0	1	-
86	1	-	0	-	0	-	0	-	-	-	-	1	-	-	-	0	-	0	-	0	-	-
87	90	-	0	-	0	-	1	-	-	-	-	1	-	-	-	0	-	0	-	0	-	-

Appendix Table 3. (con't)

species: female spiny dogfish

Fork length (cm)	Haul no.																			
	1	2	3	4	5	7	8	9	10	11	12	14	15	16	18	19	20	21	26	27
88	0	-	1	-	1	-	-	-	-	-	-	-	-	-	-	0	-	0	-	-
89	4	-	0	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	-	-
90	2	-	2	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	-	-
91	0	-	0	-	-	-	-	-	-	-	-	-	-	-	-	0	-	1	-	-
92	0	-	0	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
93	0	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
94	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
95	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
96	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
101	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
104	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	194	1	26	1	2	1	2	4	115	1	1	9	12	13	1	3	2	2	4	1

Appendix Table 3 (cont'd)

Species : female spiny dogfish

Fork length (cm)	Haul no.																		
	28	29	30	31	35	36	38	47	50	51	53	54	57	58	59	64	73	76	77
26	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
39	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
41	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-
42	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-
43	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-
44	1	-	-	-	-	-	-	-	1	-	-	-	0	-	-	-	-	-	-
45	0	-	-	-	-	-	-	-	0	-	-	-	0	-	-	-	-	-	-
46	0	-	-	-	-	-	-	-	0	-	-	-	0	-	-	-	-	-	-
47	0	-	-	-	-	-	-	-	0	-	-	-	0	-	-	-	-	-	-
48	2	-	-	-	-	-	-	-	0	-	-	-	0	-	-	-	-	-	-
49	0	-	-	-	-	-	-	-	0	-	-	-	0	-	-	-	-	-	-
50	0	1	-	-	-	-	-	-	0	-	-	-	1	-	-	-	-	-	-
51	0	0	-	-	-	-	-	-	1	-	-	-	0	-	-	-	-	-	-
52	0	0	-	-	-	-	-	-	0	-	1	-	0	-	-	-	-	1	-
53	1	0	-	-	-	-	-	-	0	-	1	-	0	-	-	-	0	-	-
54	2	0	-	-	-	-	-	-	0	-	0	-	0	-	-	-	0	-	-
55	2	0	-	-	-	-	-	-	0	-	0	-	0	-	-	-	0	-	-
56	1	1	-	-	-	-	-	-	0	-	0	-	1	-	-	-	0	-	-
57	0	0	-	-	-	-	-	-	1	-	0	-	1	-	-	-	0	-	-
58	1	0	-	-	-	-	-	-	0	-	0	-	0	-	-	-	0	-	-
59	0	0	2	-	-	-	-	-	0	-	0	-	0	-	-	-	0	-	-
60	0	0	1	-	-	-	-	-	0	-	0	-	0	-	-	-	0	-	-
61	1	1	0	-	-	-	-	-	1	-	0	-	1	-	-	-	0	-	-
62	1	0	0	-	-	-	-	-	0	-	0	-	1	-	-	-	1	-	-
63	3	1	0	-	-	-	-	-	0	-	0	-	0	-	-	-	1	-	-
64	0	0	0	-	-	-	-	1	0	-	0	-	0	-	-	-	0	-	-
65	2	0	2	-	-	-	-	0	-	0	-	0	-	-	-	-	0	-	-
66	1	1	1	-	-	-	-	0	-	1	-	0	-	-	-	-	1	-	-
67	1	7	0	-	-	-	-	0	-	1	-	2	-	1	-	-	0	-	-
68	4	1	1	-	-	-	-	2	-	0	1	0	2	0	-	-	1	-	-
69	2	0	1	-	-	-	-	1	-	0	-	0	1	0	-	-	1	-	-
70	3	2	0	-	-	-	-	0	-	0	-	1	1	0	-	-	1	-	-
71	4	0	2	-	-	-	-	0	-	0	-	0	0	0	-	-	1	-	-
72	0	1	0	-	-	-	-	0	-	0	-	0	1	0	-	-	0	-	-
73	2	0	1	-	-	-	-	2	-	0	1	0	-	-	-	-	0	-	-
74	3	0	0	-	-	-	-	1	2	-	0	0	1	-	-	-	0	-	-
75	0	2	0	-	-	-	-	0	1	-	2	0	-	1	-	-	2	-	-
76	0	0	1	-	-	-	-	1	-	0	0	-	1	0	-	-	2	-	-
77	0	0	0	-	-	-	-	0	0	-	0	-	1	0	-	1	1	-	-
78	1	1	1	-	-	-	-	0	0	-	-	0	-	0	-	-	1	-	-
79	0	1	0	-	-	-	1	-	0	1	-	0	0	-	0	1	1	-	-
80	0	0	0	-	1	0	-	0	1	-	0	0	-	1	-	0	1	-	-
81	0	1	0	-	-	0	-	0	3	-	-	0	-	0	-	0	0	-	-
82	1	0	1	-	-	1	-	-	1	1	-	0	-	0	-	0	0	-	-
83	0	0	1	-	-	-	-	-	-	-	-	0	-	1	-	0	0	-	-
84	2	3	1	-	-	-	-	-	-	-	-	0	-	2	-	1	1	-	1
85	0	0	-	-	-	-	-	-	-	-	-	1	-	1	-	-	2	0	-
86	1	2	-	-	-	-	-	-	-	-	-	0	-	0	-	-	1	0	-
87	1	-	-	-	-	-	-	-	-	-	-	3	-	0	-	-	-	0	-

Appendix Table 3 (cont'd)

Species : female spiny dogfish

Fork length (cm)	Haul no.																			
	28	29	30	31	35	36	38	47	50	51	53	54	57	58	59	64	73	76	77	78
88	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	1	-	-	0	
89	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	-	-	0	
90	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	0	
91	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
96	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
101	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
104	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total	43	26	16	3	1	2	1	1	7	2	15	1	14	13	2	8	1	2	20	2

Appendix Table 3 (cont'd)

Species : female spiny dogfish

Fork length (cm)	Haul no.												
	80	81	82	84	86	88	91	92	94	95	96	97	98
26	-	-	-	-	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-	-	-	-
31	-	-	-	-	-	-	-	-	-	-	-	-	-
32	-	-	-	-	-	-	-	-	-	-	-	-	-
33	-	-	-	-	-	-	-	-	-	-	-	-	-
34	-	-	-	-	-	-	-	-	-	-	-	-	-
35	-	-	-	-	-	-	-	-	-	-	-	-	-
36	-	-	-	-	-	-	-	-	-	-	-	-	-
37	-	-	-	-	-	-	-	-	-	-	-	-	-
38	-	-	-	-	-	-	-	-	-	-	-	-	-
39	-	-	-	-	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-	-	-	-
41	-	-	-	-	-	-	-	-	-	-	-	-	-
42	-	-	-	-	-	-	-	-	-	-	-	-	-
43	-	-	-	-	-	-	-	-	-	-	-	-	-
44	-	-	-	-	-	-	-	-	-	-	-	-	-
45	-	-	-	-	-	-	-	-	-	-	-	-	-
46	-	-	1	-	-	-	-	-	-	-	-	-	-
47	-	-	0	-	-	-	-	-	-	-	-	-	-
48	-	-	0	-	-	-	-	-	-	-	-	-	-
49	-	-	0	-	-	-	-	-	-	-	-	-	-
50	-	-	0	-	-	-	-	-	-	-	-	-	-
51	-	-	0	-	-	-	-	-	-	-	-	-	-
52	-	-	0	-	-	-	-	-	-	-	-	1	-
53	-	-	0	-	-	-	-	-	-	-	-	0	-
54	-	-	0	-	-	-	-	-	-	-	1	0	-
55	-	-	0	-	-	-	-	-	-	-	0	0	-
56	-	-	0	-	-	-	-	-	-	1	0	0	-
57	-	-	0	-	-	-	-	-	-	1	0	0	-
58	-	-	0	-	-	-	-	-	-	0	0	2	-
59	-	1	0	-	-	-	1	-	-	0	0	0	-
60	-	-	0	-	-	1	0	-	-	1	0	0	-
61	-	-	0	-	-	0	0	-	-	0	0	0	-
62	-	-	0	-	-	0	0	2	-	0	0	1	-
63	-	-	0	-	1	1	0	0	-	0	0	1	-
64	-	-	0	-	1	0	0	1	1	0	0	0	-
65	-	-	0	-	0	0	0	0	0	0	0	2	-
66	-	-	0	-	1	1	0	1	0	0	0	1	0
67	-	-	0	1	0	0	0	1	0	0	0	1	0
68	-	-	0	0	1	2	0	0	1	2	1	1	-
69	-	-	0	0	0	1	0	0	2	0	2	0	-
70	-	-	0	0	0	0	0	0	1	0	0	0	-
71	-	-	0	0	0	2	2	1	0	1	0	0	-
72	-	-	0	0	0	1	1	0	0	0	0	0	-
73	-	-	0	0	0	1	1	0	0	2	0	0	-
74	-	-	0	0	0	0	0	0	2	2	3	0	-
75	-	-	0	0	0	0	0	0	2	1	1	0	-
76	-	-	0	1	1	2	0	0	1	1	0	0	-
77	1	-	0	0	1	0	0	0	1	1	2	0	-
78	-	-	1	0	0	2	0	0	2	2	0	1	-
79	-	-	-	0	2	2	3	1	1	0	2	0	-
80	-	-	-	0	0	3	1	2	1	2	2	1	-
81	-	-	-	0	0	2	3	0	1	2	2	0	-
82	-	-	-	0	1	5	5	0	0	1	1	0	-
83	-	-	-	0	1	5	2	0	0	1	4	1	-
84	-	-	-	-	1	0	3	0	0	0	3	2	0
85	-	-	-	-	0	0	6	1	2	0	2	0	1
86	1	-	-	-	0	0	2	1	2	1	1	1	-

Appendix Table 3 (cont'd)

Species : female spiny dogfish

Fork length (cm)	Haul no.												
	80	81	82	84	86	88	91	92	94	95	96	97	98
87	-	-	-	-	0	1	2	3	3	-	0	1	-
88	-	-	-	-	0	-	1	-	-	-	0	0	-
89	-	-	-	-	0	-	2	-	-	-	1	1	-
90	-	-	-	-	0	-	2	-	-	-	-	-	-
91	-	-	-	-	0	-	0	-	-	-	-	-	-
92	-	-	-	-	0	-	3	-	-	-	-	-	-
93	-	-	-	-	0	-	1	-	-	-	-	-	-
94	-	-	-	-	0	-	-	-	-	-	-	-	-
95	-	-	-	-	0	-	-	-	-	-	-	-	-
96	-	-	-	-	0	-	-	-	-	-	-	-	-
97	-	-	-	-	0	-	-	-	-	-	-	-	-
98	-	-	-	-	0	-	-	-	-	-	-	-	-
99	-	-	-	-	0	-	-	-	-	-	-	-	-
100	-	-	-	-	0	-	-	-	-	-	-	-	-
101	-	-	-	-	0	-	-	-	-	-	-	-	-
102	-	-	-	-	0	-	-	-	-	-	-	-	-
103	-	-	-	-	0	-	-	-	-	-	-	-	-
104	-	-	-	-	0	-	-	-	-	-	-	-	-
105	-	-	-	-	0	-	-	-	-	-	-	-	-
106	-	-	-	-	0	-	-	-	-	-	-	-	-
107	-	-	-	-	0	-	-	-	-	-	-	-	-
108	-	-	-	-	1	-	-	-	-	-	-	-	-
Total	1	1	1	2	4	11	53	24	17	16	28	28	13

Appendix Table 4. Length-frequency (nos. measured), by haul, of unsexed dogfish collected during F/V W.E.  
RICKER assemblage survey, Hecate Strait, May 17 - June 3, 1993.

Haul no.	
Fork	
length	
(cm)	90

63	1
64	0
65	0
66	0
67	1
68	0
69	0
70	1
71	1
72	0
73	0
74	0
75	0
76	0
77	0
78	0
79	0
80	0
81	1
82	0
83	0
84	0
85	0
86	0
87	0
88	0
89	1
90	0
91	1
92	0
93	2
94	0
95	0
96	0
97	0
98	0
99	0
100	0
101	0
102	0
103	0
104	0
105	0
106	0
107	0
108	0
109	0
110	0
111	0
112	0
113	0
114	0
115	0
116	0
117	0
118	1

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Total	10
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Appendix Table 5. Length-frequency (nos. measured), by haul, of longnose skate collected during F/V W.E. RICKER assemblage survey, Hecate Strait, May 17-June 3, 1993.

Fork length (cm)	Haul no.														
	1	6	47	53	57	58	59	60	81	82	84	85	87	95	96
22	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
26	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
31	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-
32	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
33	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-
34	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-
35	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-
36	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
37	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-
38	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-
39	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-
41	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-
42	-	-	-	-	-	-	-	-	-	1	0	-	-	-	-
43	-	-	-	-	-	-	-	-	-	0	0	-	-	-	-
44	-	-	-	-	-	-	-	-	-	0	0	-	-	-	-
45	-	-	-	-	-	-	-	-	-	0	0	-	-	-	-
46	-	-	-	-	-	-	-	-	-	0	0	-	-	-	-
47	-	-	-	-	-	-	-	-	-	0	0	-	-	-	-
48	-	-	-	-	-	-	-	-	-	1	0	-	-	-	-
49	-	-	-	-	1	-	-	-	-	1	0	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-
51	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-
52	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-
53	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-
55	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-
56	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-
57	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-
58	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-
59	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-
61	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
62	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
63	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-
64	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-
65	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-
66	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-
67	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-
68	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
69	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-
71	-	-	-	-	-	-	-	-	-	-	0	1	-	-	-
72	-	-	-	-	-	-	-	-	-	-	0	0	-	-	-
73	-	-	-	-	-	-	-	-	-	-	0	0	-	-	-
74	-	-	1	-	-	-	-	-	-	-	0	0	-	-	-
75	-	-	-	-	-	-	-	-	-	-	0	0	-	-	-
76	-	-	-	-	-	-	-	-	-	-	0	0	-	-	-
77	-	-	-	-	-	-	-	-	-	-	0	0	-	-	-
78	-	-	-	-	-	-	-	-	-	-	0	0	-	-	-
79	-	-	-	-	-	-	1	-	-	-	0	1	1	-	-
80	-	-	-	-	-	-	-	-	-	-	0	0	-	-	-
81	-	-	-	-	-	-	-	1	-	-	0	0	-	-	-
82	-	-	-	-	-	-	-	0	-	-	0	0	-	-	-
83	-	-	-	-	-	-	-	0	-	-	0	1	-	-	-

Appendix Table 5. (con't)

Species: longnose skate

Fork length (cm)	Haul no.															
	1	6	47	53	57	58	59	60	81	82	84	85	87	95	96	98
84	-	-	-	-	-	1	0	-	-	-	0	0	-	-	-	-
85	-	-	-	-	-	-	0	-	-	-	0	0	-	-	-	-
86	-	-	-	-	-	-	0	-	-	-	0	0	-	-	-	-
87	-	-	-	-	-	-	0	-	-	-	0	0	-	-	-	-
88	-	-	-	-	-	-	0	-	-	-	0	0	-	-	-	-
89	-	-	-	-	-	-	0	-	-	-	0	0	-	-	1	-
90	-	-	-	-	-	-	0	-	-	-	0	0	-	1	0	-
91	-	-	-	-	-	-	1	-	-	-	0	0	-	-	1	-
92	-	1	-	-	-	-	-	-	-	-	0	0	-	-	-	-
93	-	-	-	1	-	-	-	1	-	0	0	-	-	-	-	-
94	-	-	-	-	-	-	-	-	-	0	0	-	-	-	-	-
95	-	-	-	-	-	-	-	-	-	0	0	-	-	-	-	-
96	-	-	-	-	-	-	-	-	1	-	0	1	-	-	1	-
97	-	-	-	-	-	-	-	-	-	0	0	-	-	-	-	-
98	-	-	-	-	-	-	-	-	-	0	1	-	-	-	-	-
99	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-
101	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-
102	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-
103	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-
104	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-
105	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Total	1	1	1	1	1	1	2	1	1	3	8	5	1	1	2	1

Appendix Table 6. Length-frequency (nos. measured), by haul, of spotted ratfish collected during F/V W.E. RICKER assemblage survey, Hecate Strait, May 17 - June 3, 1993.

Fork length (cm)	Haul no.																				
	1	2	3	4	5	6	8	10	11	13	15	16	18	23	24	25	26	27	28	29	
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
9	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
10	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	1	-	-	-	-	
11	-	1	-	-	-	-	-	-	-	11	-	-	-	-	0	-	-	-	-	-	
12	-	2	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	
13	-	14	-	-	-	-	-	-	-	-	2	-	-	-	0	-	-	-	-	-	
14	-	34	-	-	-	-	-	-	-	-	1	3	-	-	4	-	-	-	-	-	
15	-	40	1	-	-	-	-	-	-	-	1	3	-	-	4	1	1	-	-	-	
16	-	30	0	-	-	-	1	-	-	-	1	3	-	-	8	0	0	-	-	-	
17	-	10	0	-	-	-	0	-	-	-	1	1	-	10	8	0	0	-	-	-	
18	-	10	1	-	-	-	1	3	-	-	0	3	-	21	4	0	0	-	-	-	
19	-	4	0	-	-	-	0	-	4	-	0	8	-	24	10	0	0	-	-	-	
20	-	1	3	-	-	-	0	-	6	-	0	3	-	41	16	1	1	-	-	-	
21	-	3	0	-	-	1	2	-	15	-	1	1	-	38	21	1	0	-	-	-	
22	-	5	7	-	-	0	0	-	7	-	1	2	-	31	21	0	0	-	-	-	
23	-	1	4	-	-	0	0	-	4	-	0	3	-	24	17	0	0	-	-	-	
24	1	3	5	-	-	0	0	-	3	-	0	1	-	18	15	1	0	-	-	-	
25	1	2	8	-	-	0	2	-	2	-	1	1	-	20	13	1	0	-	2	-	
26	0	0	2	-	-	0	0	-	2	-	0	2	-	16	14	0	0	-	0	-	
27	2	0	7	-	-	0	0	-	1	-	1	0	-	14	11	0	0	-	2	-	
28	1	0	3	-	-	0	0	-	1	1	-	0	0	-	5	8	1	0	-	3	-
29	1	1	7	-	-	0	0	-	2	-	-	0	0	-	9	7	0	0	-	1	-
30	1	-	2	1	-	1	0	6	-	-	0	1	-	6	4	0	0	-	1	-	
31	1	-	1	0	-	1	0	2	-	-	1	0	-	0	2	0	0	-	2	-	
32	4	-	1	0	-	1	0	3	-	-	0	0	-	4	5	0	0	-	0	1	
33	4	-	2	0	-	1	0	4	-	1	1	2	-	3	2	0	0	-	0	-	
34	2	-	4	0	-	1	1	6	-	1	2	1	-	3	4	0	0	3	0	-	
35	3	-	6	1	-	4	0	1	-	3	0	1	1	2	0	1	0	2	0	-	
36	2	-	0	0	-	0	0	0	-	5	2	1	-	0	2	1	0	1	0	-	
37	2	-	2	1	3	2	1	1	-	6	2	1	-	1	3	3	0	1	1	-	
38	3	-	1	0	0	0	0	-	-	8	1	-	-	1	0	3	0	-	0	-	
39	1	-	0	1	0	1	-	-	-	10	1	-	-	1	0	2	1	-	0	-	
40	1	-	0	0	0	0	1	-	-	12	0	-	-	0	0	1	-	-	0	-	
41	0	-	0	2	0	0	-	-	-	9	1	-	-	0	0	0	-	-	0	-	
42	1	-	1	1	0	0	-	-	-	5	0	-	-	0	1	0	-	-	0	-	
43	1	-	1	0	1	1	-	-	-	11	1	-	-	0	1	0	-	-	0	-	
44	0	-	1	0	0	2	-	-	-	8	2	-	-	0	-	0	-	1	-	-	
45	0	-	2	0	0	1	-	-	-	17	1	-	-	0	-	0	-	-	-	-	
46	1	-	2	2	2	0	-	-	-	14	0	-	-	1	-	1	-	-	-	-	
47	-	-	2	0	0	0	-	-	-	16	1	-	-	0	-	2	-	-	-	-	
48	-	-	0	1	0	-	-	-	-	7	-	-	-	1	-	-	-	-	-	-	
49	-	-	2	-	1	-	-	-	-	15	-	-	-	-	-	-	-	-	-	-	
50	-	-	0	-	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	
51	-	-	0	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	
52	-	-	0	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	
53	-	-	0	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	
54	-	-	0	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	
55	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	
56	-	-	1	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	
57	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	
58	-	-	0	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
59	-	-	0	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	
60	-	-	0	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
61	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	
62	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	
63	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	
Total	33	161	74	15	7	19	8	26	48	188	41	41	1	294	207	20	3	7	13	1	

Appendix Table 6 (cont'd)

Species : ratfish

Fork length (cm)	Haul no.																				
	40	42	45	46	47	49	50	51	52	53	57	58	59	60	61	62	71	72	73	75	
8	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	
9	-	-	-	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	
10	-	-	-	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	
11	1	-	-	-	-	-	-	5	4	-	-	-	-	0	-	-	-	-	-	-	
12	0	-	-	-	-	-	-	7	3	1	-	-	-	0	-	-	-	-	-	-	
13	0	-	-	-	2	-	-	10	8	1	-	-	-	0	-	-	-	-	-	-	
14	0	-	-	-	3	-	-	52	12	6	-	-	-	0	-	-	-	-	-	-	
15	2	-	-	-	12	2	-	65	11	0	-	-	-	0	-	-	-	-	-	-	
16	2	-	-	-	6	2	-	45	3	0	-	-	-	0	-	-	-	-	-	-	
17	7	-	-	0	0	-	15	2	2	-	-	-	-	0	-	1	-	-	-	-	
18	12	-	-	4	0	-	8	5	2	-	-	1	1	0	-	4	-	-	-	-	
19	2	-	-	3	1	-	16	2	3	-	-	0	0	0	-	4	-	1	2	2	
20	1	-	-	4	-	1	9	-	1	1	-	2	1	0	-	13	-	2	2	2	
21	4	2	-	-	0	-	0	6	-	4	0	-	6	1	0	-	9	-	2	4	
22	2	3	-	-	4	-	0	2	-	11	0	-	5	3	0	-	21	-	6	6	
23	1	1	-	-	0	-	0	1	-	9	0	-	1	20	3	0	-	27	-	16	10
24	1	0	-	-	4	-	0	1	-	5	0	-	3	27	4	0	-	40	-	17	19
25	2	0	3	-	2	-	0	2	-	8	1	2	26	8	0	-	35	1	13	21	
26	1	0	1	-	2	-	1	1	-	3	5	2	22	10	0	-	34	0	27	21	
27	1	1	2	1	0	-	0	0	-	4	8	6	24	5	0	-	37	0	23	21	
28	1	0	11	0	1	-	1	0	-	1	5	3	22	10	0	-	15	2	14	15	
29	1	0	16	0	1	-	0	1	-	2	7	9	15	8	0	-	17	0	21	15	
30	-	0	15	0	2	-	1	0	-	1	10	4	20	13	0	-	8	0	12	6	
31	-	0	21	0	0	-	1	0	-	1	8	6	9	21	0	-	9	0	8	6	
32	-	0	17	0	0	-	1	0	-	0	11	6	13	13	0	-	6	0	5	3	
33	-	0	18	0	0	-	0	0	-	0	19	6	8	20	0	1	5	0	3	5	
34	-	0	15	3	0	-	4	0	-	0	11	1	11	23	1	1	2	0	4	4	
35	-	0	16	4	0	-	0	1	-	1	13	3	10	25	0	1	2	1	2	2	
36	-	0	10	0	1	-	1	0	-	0	7	1	12	12	1	-	0	1	2	5	
37	-	0	8	1	0	-	1	0	-	0	8	3	8	14	1	-	2	0	1	2	
38	-	0	3	2	1	-	0	0	-	0	7	0	5	13	1	-	2	1	1	1	
39	-	0	2	3	1	-	0	0	-	1	7	0	9	12	-	-	0	1	1	1	
40	-	0	1	1	1	-	0	1	-	0	3	0	8	6	-	-	0	0	1	1	
41	-	0	1	-	1	-	0	-	-	1	4	2	10	3	-	-	0	1	0	1	
42	-	0	1	-	-	-	0	-	-	1	3	1	4	4	-	-	0	0	0	0	
43	-	1	0	-	-	-	0	-	-	2	0	3	1	-	-	0	0	1	0	0	
44	-	-	0	-	-	-	0	-	-	2	0	3	3	-	-	0	1	0	0	0	
45	-	-	1	-	-	-	0	-	-	6	2	1	2	-	-	0	0	1	1	1	
46	-	-	0	-	-	-	0	-	-	5	1	1	3	-	-	1	1	1	1	1	
47	-	-	1	-	-	-	1	-	-	4	-	2	1	-	-	0	0	-	-	-	
48	-	-	-	-	-	-	-	-	-	5	-	2	4	-	-	0	1	-	-	-	
49	-	-	-	-	-	-	-	-	-	6	-	9	3	-	-	1	-	-	-	-	
50	-	-	-	-	-	-	-	-	-	4	-	0	-	-	-	-	-	-	-	-	
51	-	-	-	-	-	-	-	-	-	0	-	3	-	-	-	-	-	-	-	-	
52	-	-	-	-	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-	
53	-	-	-	-	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-	
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Total 41 8 163 15 55 5 13 248 52 69 176 62 323 250 5 3 295 11 185 175

Appendix Table 6 (cont'd)

Species : ratfish

Fork length (cm)	Haul no.												
	76	78	81	82	84	85	86	87	88	93	94	97	98
8	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	2	-	-	-	-	-	-	-	-	-
12	-	-	-	2	-	-	-	-	-	-	-	-	-
13	-	-	-	4	1	-	-	-	-	-	-	-	-
14	-	-	-	1	0	-	3	-	-	-	-	-	-
15	-	-	-	0	2	-	0	-	-	-	-	-	-
16	-	-	-	0	2	-	5	-	-	-	-	-	-
17	-	-	-	0	3	-	8	-	-	-	-	-	-
18	-	-	-	0	3	-	13	-	-	-	-	-	-
19	-	-	-	2	6	1	8	-	-	-	-	-	-
20	-	-	-	0	8	4	10	-	-	-	-	-	-
21	-	-	-	9	7	4	10	2	-	-	-	-	-
22	3	-	-	8	11	3	8	3	-	-	-	-	-
23	1	-	-	10	22	5	6	5	1	-	-	-	-
24	5	-	3	8	20	4	2	5	1	-	-	-	-
25	4	-	1	8	19	2	3	8	3	4	-	-	-
26	5	-	3	6	28	3	1	11	7	2	-	-	-
27	13	-	8	2	8	7	1	8	6	4	-	-	-
28	8	-	4	4	17	8	1	16	5	10	-	-	-
29	11	2	2	3	5	6	1	9	4	16	1	1	-
30	10	4	2	3	4	1	0	3	2	21	0	0	1
31	8	4	2	1	5	5	3	3	2	18	0	1	0
32	2	5	15	3	5	10	4	6	5	23	0	0	0
33	5	13	5	2	1	5	0	3	2	15	0	0	0
34	0	15	2	3	5	9	2	7	3	14	1	1	0
35	4	19	1	2	2	5	3	8	10	13	0	0	1
36	2	20	1	1	2	4	-	7	2	11	2	0	0
37	1	21	3	1	4	8	-	5	9	9	1	0	0
38	3	20	-	0	4	2	-	4	5	6	-	0	1
39	2	20	-	1	2	4	-	2	3	8	-	0	2
40	3	8	-	0	0	1	-	1	1	4	-	0	-
41	0	6	-	1	1	0	-	2	2	0	-	0	-
42	0	4	-	0	0	0	-	0	2	1	-	1	-
43	0	4	-	0	0	0	-	0	-	1	-	0	-
44	0	8	-	1	0	1	-	1	-	0	-	1	-
45	2	8	-	0	0	0	-	1	-	1	-	-	-
46	1	6	-	0	0	3	-	0	-	1	-	-	-
47	1	3	-	0	2	1	-	2	-	1	-	-	-
48	-	4	-	2	-	0	-	0	-	1	-	-	-
49	-	2	-	0	-	2	-	0	-	-	-	-	-
50	-	1	-	0	-	1	-	0	-	-	-	-	-
51	-	-	-	0	-	-	-	1	-	-	-	-	-
52	-	-	-	0	-	-	-	-	-	-	-	-	-
53	-	-	-	0	-	-	-	-	-	-	-	-	-
54	-	-	-	0	-	-	-	-	-	-	-	-	-
55	-	-	-	0	-	-	-	-	-	-	-	-	-
56	-	-	-	0	-	-	-	-	-	-	-	-	-
57	-	-	-	0	-	-	-	-	-	-	-	-	-
58	-	-	-	1	-	-	-	-	-	-	-	-	-
59	-	-	-	0	-	-	-	-	-	-	-	-	-
60	-	-	-	1	-	-	-	-	-	-	-	-	-
61	-	-	-	1	-	-	-	-	-	-	-	-	-
62	-	-	-	-	-	-	-	-	-	-	-	-	-
63	-	-	-	-	-	-	-	-	-	-	-	-	-

Total 94 197 52 93 199 109 92 123 75 184 5 5 5

Appendix Table 7. Length-frequency (nos. measured), by haul, of big skate collected during F/V W.E. RICKER assemblage survey, Hecate Strait, May 17 - June 3, 1993.

Fork length (cm)	Haul no.																		
	9	10	18	19	20	33	36	37	43	45	48	51	55	56	59	60	61	62	64
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1	-
42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	-
43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	-
44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	0
45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	-
47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	-
48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	-
49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	-
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1	0
51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	-
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	-
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1	0
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	0
57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	-
59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	-
60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	-
61	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	1
62	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
63	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
64	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	1
65	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1	0
66	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
67	-	-	0	1	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
68	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
69	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-	0	0	1
70	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
71	-	-	1	0	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
72	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
73	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
74	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
75	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
76	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
77	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1	0
78	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
79	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
80	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0

Appendix Table 7. (con't)

Species: big skate

Fork length (cm)	Haul no.																			
	9	10	18	19	20	33	36	37	43	45	48	51	55	56	59	60	61	62	64	65
81	-	-	-	0	-	-	-	0	0	-	-	-	0	1	-	-	0	1	0	0
82	-	-	-	0	-	-	-	0	0	-	-	-	0	0	-	-	0	0	0	0
83	-	-	-	0	-	-	-	1	0	-	-	-	0	0	-	-	0	0	0	0
84	-	-	-	0	-	-	-	0	-	-	-	-	0	0	-	-	0	0	0	0
85	-	-	-	0	-	-	-	0	-	-	-	-	0	0	-	-	0	0	0	0
86	-	-	-	0	-	-	-	0	-	-	-	-	0	1	-	-	0	0	0	0
87	-	-	-	0	-	-	-	0	-	-	-	-	0	0	-	-	0	0	0	0
88	-	-	-	0	-	-	-	0	-	-	-	-	0	0	-	-	0	0	1	0
89	-	-	-	0	-	-	-	0	-	-	-	-	0	0	-	-	0	0	0	0
90	-	-	-	0	-	-	-	0	-	-	-	-	0	0	-	-	0	1	0	0
91	-	-	-	0	-	-	-	0	-	-	-	1	0	0	-	-	0	0	0	0
92	-	-	-	0	-	-	-	0	-	-	1	0	1	-	-	0	0	0	0	0
93	-	-	-	0	-	-	-	0	-	-	0	0	0	-	-	0	0	0	0	0
94	-	-	-	0	-	-	-	0	1	-	0	0	0	-	-	0	0	0	0	0
95	-	-	-	0	-	-	-	0	0	-	0	0	0	-	-	0	0	0	0	0
96	-	-	-	0	-	-	-	0	0	-	0	1	0	-	-	0	0	0	0	0
97	-	-	-	0	-	-	-	0	0	-	0	0	0	-	-	0	0	0	0	0
98	-	-	-	0	-	-	-	0	0	-	0	1	0	-	-	0	0	0	0	0
99	-	-	-	0	-	-	-	0	0	-	0	0	-	-	-	0	0	0	0	0
100	-	-	-	0	-	-	-	0	0	-	1	-	0	-	-	0	0	0	0	1
101	-	-	-	0	-	-	-	0	0	-	-	-	0	-	-	0	0	0	0	-
102	-	-	-	0	-	-	-	0	0	-	-	-	0	-	-	0	0	0	0	-
103	-	-	-	0	-	-	-	0	0	-	-	-	0	-	-	0	0	0	0	-
104	-	-	-	0	-	-	-	0	0	-	-	-	0	-	-	0	0	0	0	-
105	-	-	-	0	-	-	-	0	0	-	-	-	0	-	-	0	1	0	-	-
106	1	-	-	0	-	-	-	0	0	-	-	-	0	-	-	0	-	0	-	-
107	-	-	-	0	-	-	-	0	0	-	-	-	0	-	-	0	-	0	-	-
108	-	-	-	0	-	-	-	0	0	-	-	-	0	-	-	0	-	0	-	-
109	-	-	-	0	-	-	-	1	0	-	-	-	0	-	-	0	-	0	-	-
110	-	-	-	0	-	-	-	0	0	-	-	-	0	-	-	0	-	0	-	-
111	-	-	-	1	-	-	-	0	0	-	-	-	0	-	-	0	-	0	-	-
112	-	-	-	0	-	-	-	0	0	-	-	-	0	-	-	0	-	1	-	-
113	-	-	-	0	-	-	-	0	0	-	-	-	0	1	-	0	-	-	-	-
114	-	-	-	0	-	-	-	0	1	-	-	-	0	-	-	0	-	-	-	-
115	-	-	-	0	-	-	-	0	0	-	-	-	0	-	-	0	-	-	-	-
116	-	-	-	0	-	-	-	0	0	-	-	-	0	-	-	0	-	-	-	-
117	-	-	-	0	-	-	1	-	0	0	-	-	0	-	-	0	-	-	-	-
118	-	-	-	0	-	-	-	0	0	-	-	-	0	-	-	0	-	-	-	-
119	-	-	0	-	1	-	-	0	2	-	-	-	0	-	-	0	-	-	-	-
120	-	-	-	0	-	-	-	0	0	-	-	-	0	-	-	0	-	-	-	-
121	-	-	-	0	1	-	-	0	0	-	-	-	0	-	-	0	-	-	-	-
122	-	-	-	1	-	-	-	0	1	-	-	-	1	-	-	0	-	-	-	-
123	-	-	-	-	-	-	-	0	0	-	-	-	1	-	-	1	-	-	-	-
124	-	-	-	-	-	-	-	0	0	-	-	-	0	-	-	0	-	-	-	-
125	-	1	-	-	-	-	-	0	0	-	-	-	0	-	-	0	-	-	-	-
126	-	-	-	-	-	-	-	0	0	-	-	-	0	-	-	0	-	-	-	-
127	-	-	-	-	-	-	-	0	1	-	-	-	0	-	-	0	-	-	-	-
128	-	-	-	-	-	-	-	0	0	-	-	-	0	-	-	1	-	-	-	-
129	-	-	-	-	-	-	-	1	0	-	-	-	0	-	-	1	-	-	-	-
130	-	-	-	-	-	-	-	1	1	-	-	-	0	-	-	-	-	-	-	-
131	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-
132	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-
133	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
134	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-
135	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-
136	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-
137	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-
138	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-
139	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Total	1	1	2	3	1	1	1	2	5	7	1	3	3	15	1	1	4	7	4	4

Appendix Table 7 (cont'd)

Species : big skate

Fork length (cm)	Haul no.																			
	66	67	69	73	74	76	77	78	81	83	87	88	89	90	91	92	94	95	96	97
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	-	-	0	0	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	-	1	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	-	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	-	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	-	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	-	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	-	0	0	0	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
45	-	0	0	0	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-
46	-	0	0	0	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-
47	-	0	0	0	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-
48	-	0	0	0	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-
49	-	0	0	0	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-
50	-	0	0	0	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-
51	-	0	0	0	-	-	0	-	-	-	-	-	-	-	-	2	-	-	-	-
52	-	0	0	0	-	-	0	-	-	-	-	-	-	-	-	0	-	-	-	-
53	-	0	0	0	-	-	0	-	-	-	-	-	-	1	-	0	-	-	-	-
54	-	0	0	0	-	-	0	-	-	-	-	-	-	0	-	0	-	-	-	-
55	-	0	0	0	-	-	0	-	-	-	-	-	-	0	-	0	-	-	-	-
56	-	0	0	0	-	-	0	-	-	-	-	-	-	0	-	0	-	-	-	-
57	-	0	0	0	-	-	0	-	-	-	-	-	-	1	-	0	-	-	-	-
58	-	0	0	0	-	-	0	-	-	-	-	-	-	0	-	0	-	-	-	-
59	-	0	0	0	-	-	0	-	-	-	-	-	-	1	0	-	0	-	-	-
60	-	0	0	0	-	-	0	-	-	-	-	-	-	0	0	-	0	-	-	-
61	-	0	0	0	-	-	0	-	-	-	-	-	-	1	0	-	0	-	-	-
62	-	0	0	1	-	-	1	-	-	1	-	-	-	0	0	-	0	1	-	-
63	1	0	1	0	-	-	0	-	-	0	1	-	0	1	-	1	1	-	-	-
64	-	0	0	0	-	-	0	-	-	0	0	-	0	0	-	0	0	-	-	-
65	-	0	0	0	-	-	0	-	-	0	0	-	0	1	-	0	0	-	-	-
66	-	0	1	0	-	-	1	-	-	0	0	-	1	2	-	1	0	-	-	-
67	-	0	1	0	-	-	1	-	-	0	0	-	0	0	-	1	1	-	-	-
68	-	0	0	0	2	-	0	-	-	0	0	-	0	0	-	0	0	1	-	-
69	-	0	0	0	-	-	0	-	-	0	0	-	0	1	-	0	0	0	-	-
70	-	0	1	0	-	-	0	-	-	0	0	-	0	0	-	0	0	0	-	-
71	-	0	0	0	-	-	0	-	-	0	0	-	0	0	-	1	0	0	-	-
72	-	0	0	0	-	-	0	-	-	1	0	-	0	1	-	0	0	0	-	-
73	-	0	0	0	-	-	0	-	-	1	0	-	0	1	-	1	0	0	-	-
74	-	0	1	0	-	-	0	-	-	0	0	-	0	0	-	0	1	0	-	-
75	-	0	0	0	-	-	1	-	-	0	0	-	1	0	-	1	0	0	-	-
76	-	0	0	0	-	-	0	-	-	0	0	-	0	0	-	0	0	0	-	-
77	-	0	1	1	-	-	1	-	-	1	0	-	0	1	-	0	0	0	-	-
78	-	0	-	0	-	-	0	-	-	0	0	-	0	0	-	0	0	0	-	-
79	-	0	-	0	-	-	0	-	-	0	1	1	0	2	-	0	0	0	-	-

Appendix Table 7 (cont'd)

Species : big skate

Fork length (cm)	Haul no.																				
	66	67	69	73	74	76	77	78	81	83	87	88	89	90	91	92	94	95	96	97	98
80	-	0	-	1	-	-	0	-	-	0	0	0	0	0	0	-	-	0	0	1	-
81	-	0	-	0	-	-	0	-	-	0	0	0	0	0	0	-	-	0	0	0	-
82	-	0	-	0	-	-	0	-	-	0	0	1	0	1	-	-	0	0	0	-	-
83	-	0	-	0	-	-	0	-	-	1	0	0	0	-	-	-	0	0	0	0	-
84	-	0	-	0	-	-	1	-	-	0	0	0	0	-	-	-	0	0	0	0	-
85	-	0	-	0	-	-	-	-	-	0	0	0	0	-	-	-	0	0	0	0	-
86	-	0	-	0	-	-	-	-	-	0	0	0	0	-	-	-	0	0	0	0	-
87	-	0	-	0	-	-	-	-	-	1	0	0	0	-	-	-	0	0	0	0	-
88	-	0	-	0	-	-	-	-	-	1	0	0	0	-	-	-	0	0	0	0	-
89	-	0	-	0	-	-	-	-	-	0	0	0	0	-	-	-	0	0	0	0	-
90	-	0	-	0	-	-	-	-	-	0	0	0	0	-	-	-	0	0	0	0	-
91	-	0	-	0	-	-	-	-	-	0	0	0	0	-	-	-	0	0	0	0	-
92	-	0	-	0	-	-	-	-	-	1	0	0	0	-	-	-	0	0	0	0	-
93	-	0	-	1	-	-	-	-	-	0	0	0	0	-	-	-	0	0	0	0	-
94	-	0	-	0	-	-	-	-	-	0	0	0	0	-	-	-	0	0	0	0	-
95	-	0	-	0	-	-	-	-	-	1	0	0	0	-	-	-	0	0	0	0	-
96	-	0	-	0	-	-	-	-	-	0	0	0	0	-	-	-	0	0	0	0	-
97	-	0	-	0	-	-	-	-	-	0	0	0	0	-	-	-	0	0	0	0	-
98	-	0	-	1	-	-	-	-	-	0	0	1	0	-	-	-	0	0	0	0	-
99	-	0	-	0	-	-	-	-	-	0	0	0	0	-	-	-	0	0	0	0	-
100	-	0	-	1	-	-	-	-	-	0	0	0	0	-	-	-	0	0	2	-	-
101	-	0	-	0	-	-	-	-	-	0	0	0	0	-	-	-	0	0	0	0	-
102	-	1	-	0	-	-	-	-	-	0	0	0	0	-	-	-	0	0	0	0	-
103	-	-	-	0	-	-	-	-	-	1	0	0	0	-	-	-	0	0	0	0	-
104	-	-	-	0	-	-	-	-	-	0	0	0	0	-	-	-	0	0	0	0	-
105	-	-	-	0	-	-	-	-	-	0	0	0	0	-	-	-	0	0	0	0	-
106	-	-	-	0	-	-	-	-	-	0	1	0	0	-	-	-	0	0	0	0	-
107	-	-	-	0	-	-	-	-	-	0	0	0	0	1	-	-	0	0	0	0	-
108	-	-	-	0	-	-	-	-	-	0	0	0	0	-	-	-	0	0	0	0	-
109	-	-	-	0	-	-	-	-	-	0	0	0	0	-	-	-	0	0	0	1	-
110	-	-	-	1	-	-	-	-	-	1	0	1	-	-	-	-	0	0	0	1	-
111	-	-	-	0	-	-	-	-	-	0	1	0	-	-	-	-	0	0	0	0	-
112	-	-	-	0	-	-	-	-	-	0	0	0	-	-	-	-	0	0	0	0	-
113	-	-	-	0	-	-	-	-	-	0	0	0	-	-	-	-	0	0	0	0	-
114	-	-	-	0	-	-	-	-	-	0	0	0	-	-	-	-	0	0	1	0	-
115	-	-	-	0	-	-	-	-	-	0	0	0	-	-	-	-	0	0	0	0	1
116	-	-	-	0	-	-	-	-	-	0	1	0	-	-	-	-	0	0	0	0	1
117	-	-	-	0	-	-	-	-	-	0	0	3	-	-	-	-	0	0	1	0	-
118	-	-	-	0	-	-	-	-	-	0	0	1	-	-	1	-	0	0	0	1	-
119	-	-	-	0	-	-	-	-	-	0	1	0	-	-	-	-	0	0	0	0	-
120	-	-	-	0	-	-	-	-	-	0	0	2	-	-	-	-	0	0	0	1	-
121	-	-	-	0	-	-	-	-	-	0	0	0	-	-	-	-	0	0	0	0	-
122	-	-	-	1	-	-	-	-	-	1	0	0	-	-	-	-	0	0	0	0	-
123	-	-	-	0	-	-	-	-	-	0	0	0	-	-	-	-	1	0	-	-	-
124	-	-	-	0	-	-	-	-	-	0	0	1	-	-	-	-	0	-	-	-	-
125	-	-	-	0	-	-	-	-	-	0	0	1	-	-	-	-	0	-	-	-	-
126	-	-	-	0	-	-	-	-	-	0	0	-	-	-	-	-	0	-	-	-	-
127	-	-	-	0	-	-	-	-	-	0	0	0	-	-	-	-	1	-	-	-	-
128	-	-	-	0	-	-	-	1	1	0	0	-	-	-	-	-	-	-	-	-	-
129	-	-	-	1	-	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-
130	-	-	-	0	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-
131	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
132	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
133	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
134	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
135	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
136	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
137	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
138	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
139	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-

Total 1 2 7 11 2 1 7 1 1 13 8 12 5 13 1 1 8 5 6 5 1

Appendix Table 8. Length-frequency (nos. measured), by haul, of black skate collected during F/V W.E. RICKER assemblage survey, Hecate Strait, May 17 - June 3, 1993.

Fork length (cm)	Haul no.								
	53	54	57	58	59	60	61	74	87
24	-	-	-	-	-	1	-	-	-
25	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-
31	-	-	-	-	-	-	-	-	-
32	-	-	-	-	-	-	-	-	-
33	-	-	-	-	-	-	-	-	-
34	-	-	-	-	-	-	-	-	-
35	-	-	-	-	-	-	-	-	-
36	-	-	1	-	-	-	-	-	-
37	-	-	0	-	-	-	-	-	-
38	-	-	0	-	-	-	-	-	-
39	-	-	0	-	-	-	-	-	-
40	-	-	0	-	-	-	-	-	-
41	-	-	0	-	-	-	-	-	-
42	-	1	0	-	-	-	-	-	-
43	-	-	0	-	-	-	-	-	-
44	-	-	0	-	-	-	-	-	-
45	-	-	0	-	-	-	-	-	-
46	-	-	0	-	-	-	-	-	-
47	-	-	0	-	-	-	-	-	-
48	-	-	0	-	-	-	-	-	-
49	-	-	0	-	-	-	-	-	-
50	-	-	0	-	-	-	-	-	-
51	-	-	0	-	-	-	-	-	1
52	-	-	0	1	-	-	-	-	-
53	-	-	0	0	-	-	-	-	-
54	-	-	0	0	-	-	-	-	-
55	-	-	0	0	-	-	-	-	-
56	-	-	0	1	-	-	-	-	-
57	-	-	0	0	-	-	-	-	-
58	-	-	0	0	-	-	-	-	-
59	-	-	1	0	-	-	-	-	-
60	-	-	1	0	-	-	-	-	-
61	-	-	-	0	-	-	-	-	-
62	-	-	-	0	-	-	-	-	-
63	-	-	-	0	-	-	-	-	-
64	-	-	-	1	-	-	1	-	-
65	-	-	-	2	1	-	-	1	-
66	-	-	-	0	-	-	-	-	-
67	1	-	-	1	-	-	-	-	-
Total	1	1	3	6	1	1	1	1	1

Appendix Table 9. Length-frequency (nos. measured), by haul, of Pacific herring collected during F/V W.E. RICKER assemblage survey, Hecate Strait, May 17 - June 3, 1993.

Fork length (cm)	Haul no.																			
	1	2	11	14	23	25	28	29	30	34	35	37	38	39	40	41	42	43	44	45
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
16	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	
17	-	-	-	-	-	2	-	-	-	-	6	-	1	-	-	-	1	-	-	
18	-	-	-	-	-	2	-	-	-	-	25	-	1	-	-	-	0	-	-	
19	-	-	-	-	2	3	-	-	1	-	9	-	4	-	-	1	1	-	-	
20	-	-	-	-	4	6	3	2	1	5	-	14	-	11	2	1	0	0	1	1
21	4	-	-	1	24	8	9	10	4	18	1	17	-	11	3	5	7	1	1	1
22	14	1	1	2	36	5	10	29	8	25	2	10	1	15	3	7	2	0	6	1
23	12	-	0	1	19	1	3	23	4	22	1	6	1	5	2	1	3	3	8	-
24	1	-	1	0	9	1	-	24	1	13	-	6	1	2	-	1	-	5	5	-
25	1	-	-	0	63	1	-	5	-	13	-	4	1	-	-	-	-	4	4	-
26	-	-	-	1	-	1	-	-	-	8	-	2	-	-	-	-	-	5	10	-
27	-	-	-	-	-	-	-	-	-	6	-	3	-	-	-	-	8	7	-	
28	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	2	0	-	
29	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	1	-	
30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	
31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total	32	1	2	5	157	30	25	93	18	113	4	103	4	50	10	15	13	32	43	3

Appendix Table 9 (cont'd)

Species : Pacific herring

Fork length (cm)	Haul no.											
	46	55	60	62	65	66	68	69	73	78	79	80
15	-	-	-	-	-	-	-	1	-	-	-	-
16	-	-	-	-	3	-	-	1	-	-	-	-
17	-	-	-	-	6	-	-	22	1	-	-	-
18	-	1	-	-	9	7	1	38	1	1	-	-
19	-	0	6	6	4	13	2	34	2	2	-	-
20	1	5	10	10	9	29	8	28	3	1	-	1
21	8	11	12	9	8	43	3	22	8	0	-	0
22	4	2	5	1	0	56	6	8	9	1	-	0
23	0	2	1	3	1	52	6	1	1	0	-	1
24	1	0	-	-	2	28	1	3	2	0	-	0
25	0	1	-	-	9	0	0	1	3	2	1	-
26	1	0	-	-	6	-	0	-	1	1	2	-
27	-	0	-	-	4	-	0	-	2	0	0	-
28	-	0	-	-	0	-	1	-	0	5	2	-
29	-	1	-	-	4	-	-	-	1	5	5	-
30	-	-	-	-	1	-	-	-	-	3	1	-
31	-	-	-	-	0	-	-	-	-	7	1	-
32	-	-	-	-	1	-	-	-	-	0	1	-
33	-	-	-	-	1	-	-	-	-	8	3	-
34	-	-	-	-	-	-	-	-	-	8	1	-
35	-	-	-	-	-	-	-	-	-	5	2	-
36	-	-	-	-	-	-	-	-	-	8	2	-
37	-	-	-	-	-	-	-	-	-	5	4	-
38	-	-	-	-	-	-	-	-	-	3	0	-
39	-	-	-	-	-	-	-	-	-	6	2	-
40	-	-	-	-	-	-	-	-	-	1	2	-
41	-	-	-	-	-	-	-	-	-	1	0	-
42	-	-	-	-	-	-	-	-	-	0	0	-
43	-	-	-	-	-	-	-	-	-	1	0	-
44	-	-	-	-	-	-	-	-	-	0	0	-
45	-	-	-	-	-	-	-	-	-	2	0	-
46	-	-	-	-	-	-	-	-	-	-	1	-
Total	15	23	34	29	42	254	27	159	28	12	71	32

Appendix Table 10. Length-frequency (nos. measured), by haul, of Pacific cod collected during F/V W.E. RICKER assemblage survey, Hecate Strait, May 17 - June 3, 1993.

Fork length (cm)	Haul no.																			
	1	3	8	11	13	16	18	28	29	30	42	43	44	46	47	48	49	50	51	52
16	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	0	-	-	-	-	-	-	2	-	-	-	-	-	-	-
25	-	-	-	-	-	0	-	-	-	-	-	-	2	-	-	-	-	-	-	-
26	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	-
27	-	-	-	-	-	0	-	-	-	-	-	-	4	-	-	-	-	-	-	-
28	-	-	-	-	-	0	-	-	-	-	-	-	4	-	-	-	-	-	-	-
29	-	-	1	-	-	0	-	-	-	-	-	-	13	-	-	-	-	-	-	-
30	-	-	0	-	-	0	1	-	-	-	-	-	7	-	-	-	-	-	-	-
31	-	-	0	-	-	0	-	-	-	-	-	-	8	-	-	-	-	-	-	-
32	-	-	0	-	-	1	-	-	-	-	-	-	8	-	-	-	-	-	-	-
33	-	-	0	-	-	0	-	-	-	-	-	-	1	-	-	-	-	-	-	-
34	-	-	1	-	-	0	-	-	-	-	-	-	2	0	-	-	-	-	-	-
35	-	1	0	-	-	0	-	-	-	-	-	-	1	0	-	-	-	-	-	-
36	1	0	0	-	-	1	-	-	-	-	-	-	0	0	-	-	-	-	-	-
37	0	0	0	-	-	0	-	-	-	-	-	-	1	0	-	-	-	-	-	-
38	0	0	0	-	-	0	-	-	-	-	-	-	1	0	-	-	-	-	-	-
39	0	0	0	-	-	0	-	-	-	-	-	-	1	0	1	-	-	-	-	-
40	0	1	0	-	-	0	-	-	-	-	-	-	0	0	-	-	-	-	-	-
41	0	1	0	-	-	1	-	1	-	-	-	-	2	2	-	-	-	-	-	-
42	0	1	3	-	-	1	-	2	-	-	-	-	1	2	-	-	-	-	-	-
43	1	1	1	-	-	1	-	1	-	-	-	-	6	2	-	-	-	-	-	-
44	0	1	4	-	-	1	-	0	-	-	-	-	7	1	-	-	-	-	-	-
45	1	0	3	-	-	1	-	0	-	-	-	-	11	2	-	-	-	-	1	-
46	-	0	2	-	-	1	-	1	-	-	-	-	17	0	-	-	-	-	0	-
47	-	1	3	-	-	2	-	0	-	-	-	-	8	3	-	-	-	-	1	-
48	-	0	2	-	-	1	-	1	1	-	-	-	14	0	-	1	-	-	0	-
49	-	1	2	-	-	2	-	0	0	-	-	-	7	3	-	0	-	-	0	-
50	-	0	2	-	-	1	-	0	0	-	-	-	3	0	-	0	-	-	0	-
51	-	1	1	-	-	2	-	0	0	-	-	-	8	0	-	0	-	1	0	-
52	-	2	1	-	-	0	-	0	0	-	-	-	2	0	1	0	-	0	0	-
53	-	0	0	-	-	0	-	0	0	-	-	-	5	0	1	0	-	0	0	-
54	-	1	0	-	-	1	-	1	0	1	-	-	1	1	0	0	-	0	0	-
55	-	0	0	-	-	0	-	0	0	0	-	-	3	0	0	0	-	0	1	-
56	-	0	0	-	-	1	-	0	0	0	-	-	4	0	0	0	-	1	0	-
57	-	0	0	-	-	0	-	0	0	0	-	-	1	1	0	0	-	0	0	-
58	-	0	0	-	1	0	-	0	0	0	-	-	3	-	0	0	-	0	0	1
59	-	2	0	-	-	2	-	0	0	0	-	-	2	-	0	0	-	0	0	0
60	-	0	0	-	-	0	-	0	0	1	-	-	5	-	1	0	-	0	0	0
61	-	1	0	-	-	0	-	1	0	-	-	-	2	-	2	0	-	0	0	1
62	-	0	1	-	-	0	-	0	0	-	-	-	0	-	1	1	-	1	0	1
63	-	0	1	-	-	1	-	2	0	-	-	-	1	-	1	2	-	0	0	1
64	-	1	-	-	-	0	-	0	0	-	-	-	0	-	1	0	-	0	0	2
65	-	0	-	-	-	1	-	0	0	-	-	-	3	-	5	0	1	0	0	1
66	-	0	-	-	-	0	-	0	0	-	-	-	1	-	7	0	-	0	0	1
67	-	0	-	-	-	2	-	0	0	-	-	-	1	-	2	0	-	1	0	0
68	-	0	-	-	-	0	-	0	0	-	-	-	1	-	4	0	-	0	0	1
69	-	0	-	-	-	1	0	-	-	-	-	-	3	0	-	0	0	0	0	4
70	-	1	-	-	-	0	0	-	-	-	-	-	2	1	-	0	0	2	2	-
71	-	1	-	1	-	0	1	-	-	-	-	-	2	-	-	1	0	1	0	0
72	-	0	-	-	-	1	-	-	-	-	-	-	2	-	-	0	1	0	2	-
73	-	0	-	-	-	1	-	-	-	-	-	-	1	-	-	0	-	0	0	0
74	-	0	-	-	-	1	-	-	-	-	-	-	2	-	-	0	-	0	0	2
75	-	1	-	-	-	0	-	-	-	-	-	-	0	-	-	1	-	0	1	0
76	-	1	-	-	-	1	-	-	-	-	-	-	0	-	-	-	-	0	1	-

Appendix Table 10. (con't)

Species: Pacific cod

Fork length (cm)	Haul no.																			
	1	3	8	11	13	16	18	28	29	30	42	43	44	46	47	48	49	50	51	52
77	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	1	0	
78	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	0	1	
79	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	1	-	
80	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	0	-	
81	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	
82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
83	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total	3	20	28	1	1	25	1	15	2	2	1	124	67	42	5	1	5	2	15	20

Appendix Table 10 (cont'd)

Species : Pacific cod

Appendix Table 10 (cont'd)

Species : Pacific cod

Fork length (cm)	Haul no.																			
	53	54	55	59	64	68	72	75	76	78	79	80	81	82	83	84	85	86	87	88
81	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
83	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
Total	2	6	5	5	1	1	2	13	11	7	8	66	21	1	23	1	11	6	5	34

Appendix Table 10 (cont'd)

Species : Pacific cod

Fork length (cm)	Haul no.				
	90	91	93	97	98
16	-	-	-	-	-
17	-	-	-	-	-
18	-	-	-	-	-
19	-	-	-	-	-
20	-	-	-	-	-
21	-	-	-	-	-
22	-	-	-	-	-
23	-	-	3	-	-
24	-	-	3	1	-
25	-	-	10	0	-
26	-	-	16	0	-
27	-	-	30	1	-
28	-	-	43	3	-
29	-	2	43	1	-
30	1	0	49	1	-
31	-	2	44	2	-
32	-	-	33	-	-
33	-	-	22	-	-
34	-	-	12	-	-
35	-	-	4	-	-
36	-	-	1	-	-
37	-	-	0	-	-
38	-	-	1	-	-
39	-	-	0	-	-
40	-	-	1	-	-
41	-	-	0	-	-
42	-	-	1	-	-
43	-	-	1	-	-
44	-	-	0	-	-
45	-	-	2	-	-
46	-	-	-	-	-
47	-	-	-	-	-
48	-	-	-	-	-
49	-	-	-	-	-
50	-	-	-	-	-
51	-	-	-	-	-
52	-	-	-	-	-
53	-	-	-	-	1
54	-	-	-	-	0
55	-	-	-	-	0
56	-	-	-	-	0
57	-	-	-	-	0
58	-	-	-	-	0
59	-	-	-	-	0
60	-	-	-	-	0
61	-	-	-	-	0
62	-	-	-	-	0
63	-	-	-	-	0
64	-	-	-	-	0
65	-	-	-	-	0
66	-	-	-	-	1
67	-	-	-	-	0
68	-	-	-	-	0
69	-	-	-	-	0
70	-	-	-	-	0
71	-	-	-	-	0
72	-	-	-	-	0
73	-	-	-	-	0
74	-	-	-	-	1
75	-	-	-	-	-
76	-	-	-	-	-
77	-	-	-	-	-
78	-	-	-	-	-
79	-	-	-	-	-
80	-	-	-	-	-

Appendix Table 10 (cont'd)

Species : Pacific cod

Fork length (cm)	Haul no.				
	90	91	93	97	98
81	-	-	-	-	-
82	-	-	-	-	-
83	-	-	-	-	-
84	-	-	-	-	-
Total	1	4	319	9	3

Appendix Table 11. Length-frequency (nos. measured), by haul, of walleye pollock collected during F/V W.E. RICKER assemblage survey, Heceta Strait, May 17 - June 3, 1993.

Fork length (cm)	Haul no.																			
	1	3	11	13	14	23	24	27	28	29	30	31	33	39	40	41	42	46	47	49
14	-	-	-	1	-	-	-	1	-	-	1	-	1	-	3	-	-	-	-	-
15	-	-	-	2	-	-	-	3	0	-	2	-	1	7	3	7	3	-	-	-
16	-	-	3	-	-	-	6	0	1	2	-	1	7	17	12	17	-	-	-	-
17	2	-	-	5	-	4	1	28	2	1	10	-	-	4	56	20	43	-	-	-
18	2	-	1	2	-	2	0	17	2	0	5	-	-	9	73	16	33	2	-	-
19	1	-	1	-	-	6	0	10	5	0	5	-	-	5	67	7	30	0	-	-
20	-	-	-	-	-	4	0	-	0	1	1	-	-	-	24	4	14	1	-	-
21	-	-	-	-	-	5	0	-	1	0	-	-	-	-	4	0	4	-	-	-
22	-	-	-	-	-	0	0	-	4	0	-	-	-	-	0	0	0	-	-	-
23	-	-	-	-	-	1	0	-	0	0	-	-	-	-	0	0	0	-	-	-
24	-	-	-	-	-	6	3	-	0	0	-	-	-	-	3	0	0	-	-	-
25	-	-	-	-	-	10	0	-	0	0	-	-	-	-	0	0	0	-	-	-
26	-	1	-	-	-	5	1	-	2	0	-	-	-	-	0	0	1	-	-	-
27	-	0	-	-	-	8	7	-	10	0	-	-	-	-	0	0	0	-	1	-
28	-	0	-	-	-	6	10	-	7	0	-	-	-	-	0	0	0	-	1	-
29	-	0	-	-	-	6	3	-	14	0	-	-	-	-	0	1	2	-	0	-
30	-	0	-	-	-	0	6	-	8	0	-	-	-	-	1	-	0	-	8	-
31	-	1	-	-	-	1	6	-	13	1	-	-	-	-	-	1	-	2	-	-
32	-	-	-	-	-	3	7	-	18	0	-	-	-	-	-	-	6	-	-	-
33	-	-	-	-	-	1	2	2	-	5	1	-	-	-	-	-	5	-	-	-
34	-	-	-	-	-	2	2	-	4	-	-	-	-	-	-	-	11	-	-	-
35	-	-	-	-	-	2	1	-	2	-	-	-	-	-	-	-	6	-	-	-
36	-	-	-	-	-	2	4	-	2	-	-	-	-	-	-	-	7	-	-	-
37	-	-	-	-	-	2	2	-	0	-	-	-	-	-	-	-	3	-	-	-
38	-	-	-	-	-	2	0	-	0	-	-	-	-	-	-	-	4	-	-	-
39	-	-	-	-	-	0	-	0	-	-	-	-	-	-	-	-	1	-	-	-
40	-	-	-	-	-	0	-	0	-	-	-	-	-	-	-	-	5	-	-	-
41	-	-	-	-	-	1	-	0	-	-	-	-	-	-	-	-	4	-	-	-
42	-	-	-	-	-	0	-	0	-	-	-	-	-	-	-	-	11	-	-	-
43	-	-	-	-	-	0	-	0	-	-	-	-	-	-	-	-	14	-	-	-
44	-	-	-	-	-	0	-	0	-	-	-	-	-	-	-	-	26	-	-	-
45	-	-	-	-	-	0	-	0	-	-	-	-	-	-	-	-	27	-	-	-
46	-	-	-	-	-	0	-	0	-	-	-	-	-	-	-	-	23	-	-	-
47	-	-	-	-	-	1	-	0	-	-	-	-	-	-	-	-	32	-	-	-
48	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	27	-	-	-
49	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	25	-	-	-
50	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	19	-	-	-
51	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	12	-	-	-
52	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	11	-	-	-
53	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	6	-	-	-
54	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	6	-	-	-
55	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	7	-	-	-
56	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	4	1	-	-
57	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	0	0	-	-
58	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	2	1	-	-
59	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	1	0	-	-
60	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	1	0	-	-
61	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	2	0	-	-
62	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	0	1	-	-
63	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	1	2	-	-
64	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	1	1	-	-
65	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	1	-	-	-
66	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	1	-	-	-
67	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	1	-	-	-
68	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	1	-	-	-
69	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	1	-	-	-
70	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-
71	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	5	2	2	13	1	79	57	64	102	5	25	1	1	27	248	70	148	3	322	11

Appendix Table 11 (cont'd)

Species : walleye pollock

Fork length (cm)	Haul no.																
	51	52	53	59	68	71	73	75	76	78	80	82	84	85	86	87	98
14	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
15	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	1	-	-	-	-	-	-	1	1	-	-	-	1	-	-	-	-
17	1	-	-	-	-	-	-	3	3	-	-	-	1	-	-	-	1
18	1	1	3	-	1	-	-	13	4	-	1	-	1	-	-	-	2
19	2	2	-	-	1	-	-	26	15	-	1	-	3	-	-	-	2
20	3	1	-	-	3	-	-	35	34	1	0	-	0	-	-	-	3
21	1	0	-	-	3	-	-	42	25	-	0	-	0	-	-	-	2
22	1	0	-	-	1	-	-	24	17	-	0	-	3	-	-	-	1
23	0	0	-	-	0	-	-	8	11	-	0	-	0	-	-	-	-
24	0	0	-	-	0	-	-	3	5	-	0	-	0	-	-	-	-
25	1	0	-	-	1	-	-	1	0	-	0	-	1	-	-	-	-
26	0	0	-	-	-	-	-	1	2	-	0	-	1	-	-	-	-
27	0	0	-	-	-	-	-	0	0	-	0	-	0	-	-	-	-
28	0	0	-	-	-	-	-	2	1	-	2	1	2	-	-	-	-
29	0	0	-	-	-	-	-	3	3	-	1	1	3	-	-	-	-
30	0	0	-	-	-	-	-	0	3	-	1	0	0	-	-	-	-
31	0	0	-	-	-	-	-	1	6	-	0	1	3	-	-	-	-
32	0	0	-	-	-	-	-	2	3	-	3	0	4	-	-	-	-
33	0	0	-	1	-	-	-	0	-	-	0	3	-	1	-	-	-
34	0	0	-	0	-	-	-	0	-	-	3	4	1	0	-	-	-
35	0	0	-	0	-	-	-	0	-	-	3	0	0	1	-	-	-
36	0	0	-	0	-	-	-	1	-	-	0	0	1	0	-	-	-
37	0	0	-	0	-	1	-	0	-	-	3	2	0	0	-	-	-
38	0	0	-	0	-	1	-	1	-	-	1	0	0	1	-	-	-
39	0	0	-	0	-	0	-	0	-	-	1	0	1	3	-	-	-
40	0	0	-	0	-	0	-	0	-	-	0	6	0	1	-	-	-
41	0	0	-	0	-	1	-	0	-	-	3	6	0	5	-	-	-
42	0	0	-	0	-	0	-	0	-	-	2	5	0	3	-	-	-
43	0	0	-	0	-	0	-	0	-	-	3	10	1	14	-	-	-
44	0	0	-	0	-	0	-	0	-	-	3	16	0	10	-	-	-
45	0	0	-	0	-	0	-	0	-	-	11	17	0	12	-	-	-
46	0	0	-	0	-	0	-	0	-	-	9	14	2	15	-	-	-
47	0	0	-	0	-	0	-	0	-	-	6	18	0	13	-	-	-
48	0	0	-	0	-	0	-	0	-	-	6	17	1	14	1	-	-
49	0	0	-	0	-	0	-	0	-	-	5	27	1	11	-	-	-
50	0	0	-	0	-	0	-	0	-	-	4	12	0	9	-	-	-
51	0	0	-	0	-	0	-	0	-	-	5	12	1	8	-	-	-
52	0	0	-	0	-	0	-	0	-	-	1	8	2	8	-	-	-
53	0	0	-	0	-	1	-	0	-	-	4	7	1	8	-	-	-
54	0	0	-	0	-	1	-	0	-	-	1	3	0	8	-	-	-
55	0	0	-	0	-	0	-	0	-	-	2	4	0	4	-	-	-
56	0	0	-	0	-	0	-	0	-	-	0	1	2	6	-	-	-
57	0	0	-	0	-	0	-	0	-	-	0	5	2	3	-	-	-
58	0	0	-	0	-	0	-	0	-	-	3	1	0	5	-	-	-
59	0	0	-	0	-	1	-	0	-	-	0	0	1	-	-	-	-
60	0	0	-	0	-	-	-	0	-	-	3	0	2	-	-	-	-
61	0	0	-	0	-	-	-	0	-	-	1	0	0	-	-	-	-
62	1	0	-	0	-	-	-	0	-	-	0	2	1	-	-	-	-
63	1	0	-	0	-	-	-	0	-	-	2	-	1	-	-	-	-
64	0	1	-	0	-	-	-	0	-	-	0	-	0	-	-	-	-
65	0	0	-	0	-	-	-	1	-	-	1	-	0	-	-	-	-
66	1	1	-	1	-	-	-	-	-	-	-	-	0	-	-	-	-
67	0	2	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
68	0	0	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-
69	1	0	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-
70	0	0	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-
71	1	0	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
72	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
74	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Total 17 9 3 2 10 6 1 165 136 1 9 82 228 18 170 1 11

Appendix Table 12. Length-frequency (nos. measured), by haul, of lingcod collected during F/V W.E. RICKER assemblage survey, Heceta Strait, May 17 - June 3, 1993.

Appendix Table 12. (cont'd.)

Fork length (cm)	Haul no.																		
	1	3	6	7	8	18	21	32	49	50	51	55	56	59	67	72	81	88	92
106	1	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-
107	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-
108	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-
109	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-
111	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-
Total	1	2	6	1	3	1	1	1	6	1	7	1	1	1	1	2	2	1	2

Appendix Table 13. Length-frequency (nos. measured), by haul, of shiner perch collected during F/V W.E. RICKER assemblage survey, Hecate Strait, May 17 - June 3, 1993.

Fork length (cm)	Haul no.				
	5	6	38	45	46
8	-	-	2	3	2
9	-	-	0	32	0
10	-	-	0	19	0
11	-	-	2	5	7
12	-	-	3	3	5
13	2	1	-	1	10
14	-	-	-	1	1
Total	2	1	7	64	25

Appendix Table 14. Length-frequency (nos. measured), by haul, of Pacific tomcod collected during F/V W.E. RICKER assemblage survey, Hecate Strait, May 17 - June 3, 1993.

Fork length (cm)	Haul no.															
	11	13	17	18	61	62	64	66	67	68	69	71	73	74	84	96
14	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	
15	-	-	-	-	-	-	-	-	-	7	-	-	-	-	-	
16	-	-	-	-	-	-	-	1	-	33	-	-	-	-	-	
17	-	-	-	-	-	-	-	2	-	60	-	-	3	-	-	
18	-	1	-	-	-	-	-	8	-	62	-	-	10	1	-	3
19	-	1	-	-	-	3	-	37	-	35	1	-	34	2	-	0
20	-	0	-	-	-	16	1	55	1	8	-	-	55	2	-	0
21	-	0	-	-	-	36	-	49	0	0	-	-	50	2	-	0
22	-	0	-	-	-	32	-	18	0	0	-	-	9	-	-	1
23	-	0	-	-	-	6	-	6	0	4	-	-	0	-	2	0
24	-	2	1	-	-	1	-	2	0	3	-	-	1	-	0	1
25	-	2	-	2	-	2	-	7	0	2	-	-	1	-	1	6
26	1	1	-	1	-	12	-	8	0	1	-	-	2	-	-	4
27	-	0	-	-	-	18	-	6	1	-	-	2	4	-	-	0
28	-	1	-	-	-	21	-	6	-	-	-	1	-	-	-	1
29	-	-	-	-	-	9	-	1	-	-	-	-	-	-	-	-
30	-	-	-	-	-	2	-	0	-	-	-	-	-	-	-	-
31	-	-	-	-	-	0	-	1	-	-	-	-	-	-	-	-
32	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-
33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Total	1	8	1	3	1	160	1	207	2	220	1	3	169	7	3	16

Appendix Table 15. Length-frequency (nos. measured), by haul, of sablefish collected during F/V W.E. RICKER assemblage survey, Heceta Strait, May 17 - June 3, 1993.

Fork length (cm)	Haul no.																			
	16	24	30	39	40	41	46	51	53	54	58	59	60	61	62	66	67	68	69	71
25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	-	2	-	-
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36	-	5	-	-
29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	49	1	11	-
30	-	-	-	-	-	3	1	-	-	-	-	-	-	-	-	7	51	0	15	2
31	-	-	-	1	-	0	-	-	-	-	-	-	-	-	-	6	47	0	18	2
32	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	7	32	0	24	0
33	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	8	23	0	9	0
34	-	1	1	-	-	1	-	-	-	-	-	-	-	-	-	5	7	0	11	0
35	-	0	-	-	1	1	-	-	0	-	-	-	-	-	-	3	6	1	3	1
36	-	1	-	-	-	-	-	-	0	-	-	-	-	-	-	4	1	1	1	0
37	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	0	1	1	1	0
38	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	0	-	0	-	0
39	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	0	-	0
40	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	0	-	-	1
41	-	-	-	-	-	-	-	-	1	2	-	2	-	1	-	-	1	-	-	0
42	-	-	-	-	-	-	-	-	1	0	0	-	0	-	2	-	-	0	-	0
43	-	-	-	-	-	-	-	-	0	0	1	1	1	4	-	-	1	-	-	3
44	2	-	-	-	-	-	-	-	0	1	-	0	-	0	-	-	1	-	-	8
45	-	-	-	-	-	-	-	-	0	2	-	1	-	4	-	-	1	-	-	9
46	-	-	-	-	-	-	-	-	0	1	-	0	-	0	-	-	0	-	-	7
47	-	-	-	-	-	-	-	-	0	1	-	0	-	1	-	-	0	-	-	7
48	-	-	-	-	-	-	-	-	0	-	-	0	-	1	-	-	2	-	-	2
49	-	-	-	-	-	-	-	-	2	-	-	2	-	1	-	-	-	-	-	3
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total	2	2	2	1	1	6	1	1	3	11	1	6	1	14	42	283	10	100	5	46

Appendix Table 15 (cont'd)

Species : sablefish

Fork length (cm)	Haul no.										
	72	73	74	75	76	80	82	84	85	86	98
25	-	-	1	2	-	-	-	-	-	-	-
26	1	-	9	0	-	-	-	-	-	-	-
27	3	4	14	4	-	-	-	-	-	-	-
28	4	2	20	3	3	-	-	-	-	-	-
29	5	4	24	3	3	1	-	-	-	-	-
30	4	7	33	4	2	-	-	-	-	-	-
31	8	8	30	3	2	-	-	1	-	1	-
32	4	10	28	2	1	-	-	0	-	0	-
33	6	10	10	2	0	-	-	0	-	1	-
34	1	16	10	2	0	-	-	0	-	0	-
35	1	11	4	1	0	-	-	0	-	1	-
36	0	7	2	0	0	-	-	0	-	0	-
37	0	8	-	1	1	-	-	0	-	0	1
38	0	4	-	0	-	-	-	0	-	0	0
39	0	3	-	0	-	-	-	1	-	0	1
40	0	0	-	1	-	-	-	0	-	0	-
41	0	0	-	-	-	-	-	0	-	0	-
42	0	0	-	-	-	-	-	2	1	4	-
43	0	0	-	-	-	-	1	1	1	1	-
44	0	1	-	-	-	-	2	-	5	2	-
45	1	1	-	-	-	-	0	-	4	-	-
46	1	-	-	-	-	-	1	-	1	-	-
47	-	-	-	-	-	-	0	-	1	-	-
48	-	-	-	-	-	-	1	-	0	-	-
49	-	-	-	-	-	-	-	-	1	-	-
50	-	-	-	-	-	-	-	-	-	-	-
51	-	-	-	-	-	-	-	-	-	-	-
52	-	-	-	-	-	-	-	-	-	-	-
53	-	-	-	-	-	-	-	-	-	-	-
Total	39	96	185	28	12	1	5	5	14	10	2

Appendix Table 16. Length-frequency (nos. measured), by haul, of eulachon collected during F/V W.E. RICKER assemblage survey, Hecate Strait, May 17 - June 3, 1993.

Fork length (cm)	Haul no.		
	30	40	41
12	-	-	1
13	-	6	6
14	1	30	23
15	4	21	25
16	4	23	10
17	2	5	2
18	1	2	-
Total	12	87	67

Appendix Table 17. Length-frequency (nos. measured), by haul, of sandlance collected during F/V W.E. RICKER assemblage survey, Heceta Strait, May 17 - June 3, 1993.

Fork length (cm)	Haul no.			
	34	35	36	38
12	-	2	-	-
13	1	21	-	-
14	-	37	5	2
15	-	20	6	5
16	-	-	-	2
17	-	-	-	2
18	-	-	-	0
19	-	-	-	1
Total	1	80	11	12

Appendix Table 18. Length-frequency (nos. measured), by haul, of kelp greenling collected during F/V W.E. RICKER assemblage survey, Hecate Strait, May 17 - June 3, 1993.

Fork length (cm)	Haul no.					
	42	44	45	72	78	79
17	-	1	-	-	-	-
18	-	0	-	-	-	-
19	-	0	-	-	-	-
20	-	1	-	-	1	-
21	-	0	-	-	0	-
22	-	0	-	-	2	-
23	-	0	-	-	0	-
24	-	2	-	-	0	-
25	-	3	-	-	1	-
26	-	1	-	-	0	-
27	-	4	-	-	1	1
28	-	3	-	-	0	-
29	-	3	2	-	1	-
30	-	2	-	-	0	-
31	-	8	-	-	0	-
32	-	0	-	-	1	-
33	1	0	-	-	0	-
34	-	3	-	-	0	-
35	-	2	-	-	0	-
36	-	3	-	1	0	-
37	-	1	-	3	1	-
38	-	0	-	1	1	-
39	-	2	-	1	0	-
40	-	2	-	0	0	-
41	-	-	-	0	1	-
42	-	-	-	1	-	-
43	-	-	-	0	-	-
44	-	-	-	0	-	-
45	-	-	-	2	-	-
Total	1	41	2	9	10	1

Appendix Table 19. Length-frequency (nos. measured), by haul, of Pacific staghorn sculpin collected during F/V W.E. RICKER assemblage survey, Hecate Strait, May 17 - June 3, 1993.

Fork length (cm)	Haul no.		
	64	66	73
20	-	1	-
21	-	1	-
22	-	1	-
23	-	3	-
24	-	1	-
25	-	2	-
26	-	4	-
27	-	1	-
28	-	1	-
29	1	3	-
30	0	1	-
31	0	0	-
32	0	2	-
33	0	0	1
34	1	0	1
35	0	1	-
36	0	0	-
37	0	0	-
38	0	0	-
39	0	1	-
40	1	-	-
Total	3	23	2

Appendix Table 20. Length-frequency (nos. measured), by haul, of arrowtooth flounder collected during F/V W.E. RICKER assemblage survey, Hecate Strait, May 17 - June 3, 1993.

Appendix Table 20. (con't)

Species: arrowtooth flounder

Fork length (cm)	Haul no.																			
	1	2	3	4	5	6	8	9	10	11	12	13	14	15	16	17	24	27	28	29
76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
81	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
83	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
87	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
89	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
91	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total	26	18	4	3	3	3	13	6	340	259	20	2	136	43	295	46	3	10	3	2

Appendix Table 20 (cont'd)

Species : arrowtooth flounder

Fork length (cm)	Haul no.																			
	30	31	33	40	41	42	46	47	48	49	50	51	52	53	54	55	56	57	58	59
11	1	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-
12	1	-	-	-	-	-	2	-	5	-	2	-	-	-	-	-	-	-	-	-
13	3	-	3	1	2	3	5	-	23	1	3	2	-	-	-	3	-	-	-	-
14	5	1	-	0	1	5	1	-	32	1	1	2	-	-	-	1	-	-	-	-
15	0	0	-	0	0	2	0	-	16	0	1	0	-	-	-	2	-	-	-	-
16	0	0	-	0	1	0	1	-	7	0	0	1	-	-	-	0	-	-	-	-
17	0	0	-	0	0	0	0	-	2	0	0	0	-	-	-	0	-	-	-	-
18	0	0	-	1	0	1	0	-	1	0	0	0	-	-	-	0	-	-	-	-
19	1	0	-	0	2	0	1	-	4	1	1	5	-	-	-	3	-	-	-	-
20	0	0	-	2	0	2	1	2	13	4	1	3	1	-	-	1	-	-	-	-
21	2	1	-	2	0	7	8	0	21	2	2	5	0	-	-	1	-	-	-	-
22	2	1	-	0	1	5	10	1	27	3	1	10	0	-	-	1	3	-	-	-
23	0	-	-	1	0	7	6	0	19	6	1	2	1	-	0	3	-	1	-	-
24	2	-	-	0	0	2	5	0	20	3	4	3	1	-	1	0	-	0	-	-
25	0	-	-	0	0	0	0	1	13	1	1	6	1	-	2	5	-	1	-	-
26	0	-	-	0	0	0	1	0	12	3	2	3	2	1	0	4	-	0	-	-
27	0	-	-	0	0	0	6	0	4	1	0	6	2	0	0	3	-	0	-	1
28	0	-	-	0	0	1	2	0	3	3	2	4	0	1	1	3	-	1	-	0
29	1	-	-	0	1	1	1	0	5	0	3	2	1	0	0	4	-	1	1	0
30	-	-	-	1	0	0	1	2	3	0	1	3	2	0	0	8	-	1	0	0
31	-	-	-	0	0	1	4	2	4	2	0	5	1	0	4	11	-	0	0	0
32	-	-	-	0	0	0	0	0	2	1	0	2	4	1	1	5	-	2	0	0
33	-	-	-	1	0	1	0	1	1	0	1	3	3	1	3	4	-	1	0	1
34	-	-	-	0	0	1	1	0	0	1	0	1	2	0	2	7	-	2	0	1
35	-	-	-	1	0	1	1	1	0	0	1	0	0	3	0	4	3	-	1	1
36	-	-	-	0	0	2	0	2	1	0	3	4	1	0	2	7	-	4	0	2
37	-	-	-	0	0	0	1	1	0	1	1	1	0	3	0	2	-	1	4	4
38	-	-	-	0	0	0	0	4	0	0	2	2	2	2	1	3	3	-	6	5
39	-	-	-	0	1	0	1	2	1	0	0	0	0	0	0	2	0	-	1	4
40	-	-	-	0	0	2	0	1	0	0	0	2	0	0	0	0	1	-	3	3
41	-	-	-	0	0	0	1	0	1	0	0	0	3	0	3	4	-	2	7	3
42	-	-	-	0	0	1	0	3	2	1	3	1	1	0	2	4	-	2	6	3
43	-	-	-	0	0	0	2	3	4	1	2	3	2	2	3	3	-	3	6	5
44	-	-	-	0	1	0	0	1	3	1	3	0	1	0	5	2	-	2	5	5
45	-	-	-	1	1	0	1	2	1	0	7	2	2	2	0	2	4	-	3	2
46	-	-	-	0	1	1	1	2	1	5	1	0	0	0	2	6	-	2	6	4
47	-	-	-	0	0	1	0	1	0	1	6	1	1	0	2	5	-	4	5	9
48	-	-	-	0	0	0	0	2	0	2	0	4	2	0	0	0	2	-	4	3
49	-	-	-	1	1	1	1	3	0	5	1	1	1	0	1	1	-	1	1	7
50	-	-	-	-	-	-	0	3	0	8	3	0	0	0	1	5	-	2	7	6
51	-	-	-	-	-	-	1	6	0	4	3	0	1	8	10	-	5	9	8	
52	-	-	-	-	-	-	1	8	2	5	2	3	0	7	6	-	9	11	4	
53	-	-	-	-	-	-	1	4	3	6	2	0	4	4	8	-	12	9	7	
54	-	-	-	-	-	-	1	4	1	9	4	0	2	8	6	-	4	10	10	
55	-	-	-	-	-	-	2	9	2	11	2	1	3	4	13	-	1	9	5	
56	-	-	-	-	-	-	1	3	1	11	2	0	7	8	1	4	3	4	4	
57	-	-	-	-	-	-	2	4	0	6	9	4	1	7	8	1	4	3	4	
58	-	-	-	-	-	-	2	5	2	8	5	2	0	62	5	0	2	3	2	
59	-	-	-	-	-	-	0	0	0	5	4	1	2	3	8	0	2	6	9	
60	-	-	-	-	-	-	1	0	0	4	0	0	1	2	4	0	0	5	1	
61	-	-	-	-	-	-	3	0	1	1	4	1	1	1	2	0	0	4	3	
62	-	-	-	-	-	-	1	0	-	0	1	0	0	1	2	0	0	1	0	
63	-	-	-	-	-	-	1	0	-	0	0	0	0	2	1	0	1	2	1	
64	-	-	-	-	-	-	2	0	-	0	3	0	0	4	0	0	0	0	3	
65	-	-	-	-	-	-	0	-	0	0	0	0	0	0	0	1	1	1	0	
66	-	-	-	-	-	-	0	-	0	0	0	0	1	0	0	-	0	-	0	
67	-	-	-	-	-	-	0	-	0	0	0	1	-	1	0	-	1	-	0	
68	-	-	-	-	-	-	0	-	0	1	0	-	-	0	-	-	-	-	0	
69	-	-	-	-	-	-	2	-	0	0	0	-	-	0	-	-	-	-	1	
70	-	-	-	-	-	-	0	-	0	0	0	-	-	0	-	-	-	-	-	
71	-	-	-	-	-	-	0	-	0	0	0	-	-	0	-	-	-	-	-	
72	-	-	-	-	-	-	0	-	1	0	0	-	-	0	-	-	-	-	-	
73	-	-	-	-	-	-	0	-	1	0	0	-	-	0	-	-	-	-	-	
74	-	-	-	-	-	-	1	-	1	0	-	-	0	-	-	-	-	-	-	

Appendix Table 20 (cont'd)

Species : arrowtooth flounder

Fork length (cm)	Haul no.																			
	30	31	33	40	41	42	46	47	48	49	50	51	52	53	54	55	56	57	58	59
75	-	-	-	-	-	-	-	-	2	-	-	-	0	-	-	0	-	-	-	-
76	-	-	-	-	-	-	-	-	1	-	-	-	0	-	-	0	-	-	-	-
77	-	-	-	-	-	-	-	-	0	-	-	-	0	-	-	1	-	-	-	-
78	-	-	-	-	-	-	-	-	0	-	-	-	1	-	-	-	-	-	-	-
79	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
81	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
82	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-
83	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-
84	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-
85	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-
86	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-
87	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-
88	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
89	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
91	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Total	18	3	3	11	11	47	64	54	328	52	148	137	51	32	166	212	2	97	145	135

Appendix Table 20 (cont'd)

Species : arrowtooth flounder

Fork length (cm)	Haul no.																				
	60	61	62	66	67	68	69	71	73	74	75	76	78	79	80	81	82	83	84	85	
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
12	-	-	-	-	-	1	1	-	1	2	5	2	-	-	-	-	-	-	-	-	
13	-	-	1	3	-	9	1	2	5	10	8	6	-	-	2	-	2	-	-	-	
14	2	4	0	3	1	18	4	3	6	6	20	9	1	-	3	-	0	-	-	-	
15	0	0	0	3	1	23	1	3	7	6	23	12	0	2	4	3	0	-	-	-	
16	0	0	1	3	0	16	0	3	1	3	19	8	0	3	2	1	0	-	-	-	
17	0	0	0	0	0	16	0	6	1	1	12	5	0	2	1	0	0	-	1	-	
18	0	0	2	0	0	9	1	1	0	1	8	3	0	0	1	0	1	-	1	-	
19	0	0	0	0	0	6	0	0	0	0	9	6	0	0	0	0	1	-	0	-	
20	1	0	0	1	0	2	1	4	0	0	8	9	0	0	0	0	1	-	1	-	
21	1	0	1	0	0	0	4	3	1	2	17	19	0	0	2	1	3	-	1	1	
22	5	3	3	0	1	2	3	7	0	1	32	12	0	0	6	2	2	3	-	3	0
23	9	1	2	0	2	0	0	11	1	-	18	22	0	0	6	0	3	-	4	0	
24	11	3	2	0	1	2	0	5	0	-	14	17	0	1	10	0	3	-	0	1	
25	13	2	4	0	0	2	1	12	0	-	12	8	0	-	3	3	0	-	1	1	
26	9	1	2	0	2	1	-	6	0	-	11	5	0	-	5	1	2	-	1	0	
27	12	4	2	0	1	0	-	10	0	-	4	5	0	-	5	0	3	-	1	0	
28	7	7	2	0	1	0	-	6	1	-	3	8	0	-	5	2	2	-	0	0	
29	8	8	2	0	1	3	-	4	0	-	2	10	0	-	5	0	2	-	0	2	
30	15	12	3	0	2	1	-	5	0	-	1	5	0	-	12	1	4	-	0	2	
31	14	9	1	0	0	0	-	4	0	-	5	3	0	-	5	0	3	-	2	2	
32	8	7	1	0	0	1	2	-	3	0	-	0	1	1	-	2	0	2	1	0	
33	10	9	2	1	0	1	-	4	0	-	0	2	-	-	3	0	3	0	5	0	
34	9	6	0	0	0	0	-	8	1	-	2	0	-	-	2	0	0	0	1	2	
35	11	3	0	0	0	1	1	-	5	0	-	3	8	-	-	4	0	3	0	0	
36	15	5	0	0	0	0	1	-	1	1	-	1	1	-	-	6	0	3	0	2	
37	15	2	0	0	1	1	-	3	0	-	0	1	-	-	2	0	1	0	2	0	
38	12	4	0	0	0	0	-	1	1	-	1	5	-	-	2	0	3	0	2	5	
39	7	2	0	0	2	0	-	2	0	-	3	1	-	-	0	1	3	0	0	2	
40	6	1	1	0	0	1	-	1	0	-	1	5	-	-	0	0	5	0	1	6	
41	4	2	0	0	1	0	-	0	0	-	1	5	-	-	1	0	2	1	2	3	
42	10	3	0	0	0	1	0	-	1	0	-	2	4	-	-	2	0	2	0	3	
43	2	3	0	0	0	0	-	1	0	-	0	7	-	-	0	1	4	0	2	4	
44	2	0	0	0	1	0	-	0	0	-	0	6	-	-	0	-	5	0	1	5	
45	4	1	0	0	0	2	-	2	0	-	0	4	-	-	0	-	5	0	1	9	
46	5	5	0	0	0	0	-	0	0	-	0	4	-	-	1	-	2	0	1	7	
47	5	2	0	0	0	0	-	2	0	-	1	7	-	-	3	-	2	0	1	9	
48	4	1	0	0	0	0	-	1	0	-	0	1	-	-	1	-	0	0	0	10	
49	3	1	0	0	0	2	-	1	0	-	0	2	-	-	3	-	1	0	1	3	
50	6	4	0	0	0	0	-	0	0	-	1	1	-	-	3	-	0	0	0	2	
51	4	6	1	0	0	0	-	1	0	-	1	2	-	-	3	-	1	0	0	5	
52	4	1	0	1	0	0	-	0	0	-	0	0	-	-	1	-	0	0	1	1	
53	6	3	0	0	0	0	-	0	0	-	0	1	-	-	5	-	1	0	0	2	
54	12	2	0	1	0	0	-	0	0	-	0	2	-	-	4	-	1	0	1	1	
55	4	5	0	0	0	0	-	0	0	-	0	2	-	-	5	-	5	0	2	6	
56	2	2	0	0	1	0	-	1	1	-	0	0	-	-	2	-	3	0	3	7	
57	4	3	0	0	0	0	-	1	1	-	0	1	-	-	2	-	3	0	1	4	
58	4	4	0	1	0	1	-	-	-	-	4	0	-	-	2	-	0	0	0	4	
59	2	3	0	0	0	0	-	-	-	-	0	0	-	-	2	-	1	0	1	4	
60	3	5	2	0	0	0	0	-	-	-	0	4	-	-	3	-	1	0	1	7	
61	2	3	1	0	0	1	-	-	-	-	0	0	-	-	0	-	3	0	1	2	
62	1	3	1	0	0	-	-	-	-	-	0	1	-	-	0	-	0	0	0	3	
63	0	4	1	1	1	-	-	-	-	-	1	0	-	-	0	-	1	0	0	4	
64	2	1	0	-	0	-	-	-	-	-	0	1	-	-	0	-	1	0	0	2	
65	0	0	0	-	0	-	-	-	-	-	0	1	-	-	1	-	1	0	0	0	
66	2	0	1	-	0	-	-	-	-	-	0	0	-	-	0	-	0	0	1	0	
67	-	0	0	-	1	-	-	-	-	-	0	0	-	-	-	-	1	0	0	0	
68	-	3	1	-	-	-	-	-	-	-	0	0	-	-	-	-	1	0	0	0	
69	-	0	1	-	-	-	-	-	-	-	0	1	-	-	-	-	0	1	0	1	
70	-	0	1	-	-	-	-	-	-	-	1	-	-	-	-	-	0	-	1	0	
71	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	

Appendix Table 20 (cont'd)

Species : arrowtooth flounder

Fork length (cm)	Haul no.																			
	60	61	62	66	67	68	69	71	73	74	75	76	78	79	80	81	82	83	84	85
72	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
73	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
74	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
75	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total	297	166	42	18	24	124	17	134	29	32	254	255	2	8	142	16	104	3	56	146

Appendix Table 20 (cont'd)

Species : arrowtooth flounder

Fork length (cm)	Haul no.	
	86	98

11	-	-
12	-	-
13	-	-
14	-	-
15	-	-
16	-	-
17	-	-
18	-	-
19	-	-
20	-	-
21	-	-
22	-	-
23	1	-
24	0	-
25	1	-
26	0	-
27	1	-
28	7	-
29	6	1
30	2	0
31	5	2
32	6	0
33	3	0
34	4	0
35	5	1
36	0	0
37	3	1
38	4	0
39	9	1
40	8	0
41	8	0
42	11	0
43	6	0
44	12	1
45	12	-
46	3	-
47	8	-
48	2	-
49	7	-
50	2	-
51	2	-
52	4	-
53	6	-
54	3	-
55	5	-
56	3	-
57	5	-
58	5	-
59	1	-
60	4	-
61	3	-
62	0	-
63	1	-
64	1	-
65	1	-
66	-	-
67	-	-
68	-	-
69	-	-
70	-	-
71	-	-

Appendix Table 20 (cont'd)

Species : arrowtooth flounder

	Haul no.	
Fork length (cm)	86	98
72	-	-
73	-	-
Total	180	7

Appendix Table 21. Length-frequency (nos. measured), by haul, of petrale sole collected during F/V W.E. RICKER assemblage survey, Hecate Strait, May 17 - June 3, 1993.

Fork length (cm)	Haul no.																		
	1	2	3	4	5	6	7	8	9	10	11	13	16	23	24	31	39	42	46
12	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	1	0	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	0	1	-	-	-	-	2	-	-	-	-	-	-	-
23	-	1	-	-	0	0	-	-	-	-	0	-	-	-	-	1	1	-	-
24	-	0	-	-	0	1	-	-	-	-	2	-	-	-	-	0	0	-	-
25	-	2	-	1	0	0	1	-	-	-	0	-	-	-	-	0	0	-	-
26	-	1	-	1	2	1	-	-	-	-	1	-	-	-	-	1	0	0	-
27	-	0	-	1	0	0	-	-	-	-	0	-	-	-	1	0	0	0	-
28	-	0	-	0	0	0	-	-	-	-	1	-	1	-	0	0	0	0	-
29	-	1	-	0	0	0	-	1	-	-	1	-	-	-	0	0	0	0	1
30	-	0	-	0	0	0	-	0	-	-	2	-	-	-	0	0	1	0	0
31	-	1	-	0	0	0	-	0	-	-	1	1	-	-	1	0	0	-	0
32	-	1	-	0	0	0	-	0	-	-	0	-	-	0	0	0	-	0	0
33	-	0	-	0	0	0	-	0	-	-	1	-	-	0	0	0	-	0	0
34	-	1	-	0	0	0	-	0	-	-	-	-	-	0	0	0	-	0	0
35	-	0	-	0	0	0	-	0	-	-	-	-	-	0	0	0	-	0	0
36	-	0	-	1	1	1	-	1	-	-	-	1	-	0	0	0	-	0	0
37	-	0	-	-	0	0	-	0	-	-	-	0	-	0	0	0	-	0	1
38	-	0	-	-	0	0	-	0	2	-	-	0	-	0	0	0	-	0	-
39	1	0	-	-	0	0	-	0	0	-	-	0	-	0	0	0	-	0	-
40	-	0	-	-	0	0	-	0	0	-	-	0	-	0	0	0	-	0	-
41	-	0	-	-	0	0	-	0	0	-	-	0	-	0	0	0	-	0	-
42	-	0	-	-	0	0	-	0	0	-	2	-	0	0	0	-	0	-	-
43	-	0	-	-	0	0	-	0	0	-	-	0	-	0	0	-	0	-	-
44	-	0	1	-	-	0	-	0	0	-	-	-	-	0	0	0	-	0	-
45	-	0	-	-	0	-	1	0	-	-	-	-	-	0	0	0	-	1	-
46	-	0	-	-	0	-	0	0	-	-	-	-	-	0	0	0	-	-	-
47	-	1	-	-	1	-	0	1	-	-	-	-	-	0	0	0	-	-	-
48	-	0	-	-	-	-	0	0	-	-	-	-	-	1	0	0	-	-	-
49	-	0	-	-	-	-	-	1	1	-	-	-	-	0	0	-	-	-	-
50	-	0	-	-	-	-	-	0	1	-	-	-	-	-	0	1	-	-	-
51	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-
52	-	0	-	-	-	-	2	-	1	-	-	-	-	0	-	-	-	-	-
53	-	0	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-
54	-	1	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Total	1	10	1	4	4	6	1	6	5	1	1	11	3	1	2	2	2	2	2

Appendix Table 21 (cont'd)

Species : petrale sole

Fork length (cm)	Haul no.									
	51	60	61	75	76	80	81	87	91	97
12	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	1	-	-	-
18	-	-	-	-	-	-	0	-	-	-
19	-	-	-	-	-	-	0	-	-	-
20	-	-	-	-	-	-	1	-	-	-
21	-	-	-	-	-	-	2	-	-	-
22	-	-	-	-	-	-	2	-	-	-
23	-	-	-	-	-	-	0	-	-	-
24	-	-	-	-	-	-	0	1	-	-
25	-	-	-	-	-	-	0	0	1	-
26	-	-	-	-	-	-	0	0	-	-
27	-	-	-	1	-	-	0	0	-	-
28	-	-	-	0	-	-	0	0	-	-
29	-	-	-	0	-	-	1	0	-	-
30	-	1	-	0	-	1	0	0	-	-
31	-	-	-	1	-	1	0	1	-	-
32	-	-	-	0	-	0	0	-	-	-
33	-	-	-	0	-	0	0	-	-	-
34	-	-	-	0	-	0	1	-	-	-
35	-	-	-	0	-	0	-	-	-	-
36	-	-	-	0	-	0	-	-	-	-
37	-	-	-	0	-	1	-	-	-	-
38	-	-	-	0	-	-	-	-	-	-
39	-	-	-	0	-	-	-	-	-	-
40	-	-	1	0	-	-	-	-	-	-
41	-	-	-	0	-	-	-	-	-	-
42	2	-	-	1	1	-	-	-	-	-
43	0	-	-	-	-	-	-	-	1	-
44	0	-	-	-	-	-	-	-	0	-
45	0	-	-	-	-	-	-	-	0	-
46	0	-	-	-	-	-	-	-	0	-
47	0	-	-	-	-	-	-	-	0	-
48	1	-	-	-	-	-	-	-	1	-
49	-	-	-	-	-	-	-	-	0	-
50	-	-	-	-	-	-	-	-	0	-
51	-	-	-	-	-	-	-	-	1	-
52	-	-	-	-	-	-	-	-	1	-
53	-	-	-	-	-	-	-	-	0	-
54	-	-	-	-	-	-	-	-	0	-
55	-	-	-	-	-	-	-	-	1	-
Total	3	1	1	3	1	3	8	2	1	5

Appendix Table 22. Length-frequency (nos. measured), by haul, of rex sole collected during F/V W.E. RICKER assemblage survey, Hecate Strait, May 17 - June 3, 1993.

Fork length (cm)	Haul no.																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	23	24	25	27	
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
13	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	
14	0	-	-	-	-	-	-	-	-	-	-	-	0	-	2	-	1	-	-	-	
15	0	-	-	-	-	-	-	1	-	-	-	-	0	-	0	-	0	-	-	-	
16	1	-	-	-	-	-	1	0	-	-	-	-	1	-	1	-	1	-	-	-	
17	0	-	-	-	-	-	0	0	-	-	-	-	2	-	0	-	0	-	-	-	
18	2	-	-	-	-	0	-	1	-	-	-	-	3	-	0	-	3	-	-	1	
19	0	-	-	-	-	1	-	4	-	-	-	-	7	-	1	-	1	-	-	3	
20	1	-	-	-	-	0	1	1	1	1	2	-	7	-	4	-	4	-	-	1	
21	1	-	2	1	-	2	0	9	0	2	2	-	4	3	6	2	3	-	-	0	
22	2	1	1	5	1	0	0	6	1	12	18	-	3	9	7	5	1	-	-	0	
23	3	8	2	1	2	4	1	7	1	22	25	2	7	26	6	9	2	-	-	1	
24	1	1	1	1	3	2	0	5	2	12	33	1	20	27	17	9	1	-	-	3	
25	1	2	1	1	0	5	1	10	0	8	11	0	31	26	14	7	2	-	-	2	
26	3	0	0	1	0	6	0	29	2	6	3	0	33	30	18	6	3	1	-	1	
27	2	1	2	0	1	2	0	31	0	7	0	1	19	29	11	11	2	1	-	2	
28	4	0	5	0	1	1	1	33	0	10	6	1	20	22	16	8	3	2	1	2	
29	1	1	6	1	-	1	0	35	0	9	9	-	10	19	10	16	5	1	-	0	
30	2	0	4	1	-	1	0	19	0	11	4	-	13	12	13	13	5	-	-	2	
31	1	2	3	-	-	0	0	24	0	6	4	-	12	12	12	21	4	-	-	3	
32	-	1	1	-	-	11	1	13	0	12	3	-	7	3	7	11	0	-	-	0	
33	-	0	4	-	-	-	-	5	1	5	2	-	6	6	9	8	1	-	-	2	
34	-	1	1	-	-	-	-	2	-	3	1	-	7	0	4	1	-	-	-	1	
35	-	-	0	-	-	-	-	1	-	-	0	-	2	0	4	-	-	-	-	-	
36	-	-	0	-	-	-	-	0	-	-	0	-	1	0	0	-	-	-	-	-	
37	-	-	0	-	-	-	-	1	-	-	1	-	1	1	1	-	-	-	-	-	
38	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	
39	-	-	0	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
40	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Total	26	18	34	12	8	37	5	238	8	126	124	5	206	235	155	135	44	5	1	24
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Appendix Table 22 (cont'd)

Species : rex sole

Fork length (cm)	Haul no.																			
	28	30	31	32	33	39	40	41	42	44	46	47	48	49	50	51	52	53	54	57
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
15	-	-	-	-	-	2	-	-	1	-	5	-	4	-	-	1	-	-	-	
16	-	-	-	-	-	3	-	1	2	-	7	-	4	-	-	3	-	-	-	
17	-	-	-	-	-	6	-	1	8	-	11	-	2	-	-	2	1	-	-	
18	-	-	-	-	-	1	5	-	0	6	-	5	-	1	-	1	6	0	-	
19	-	-	-	-	-	2	-	0	2	-	1	-	1	-	0	2	1	-	-	
20	-	-	-	-	-	0	-	1	1	-	0	1	2	1	0	13	1	1	-	
21	1	-	-	-	-	4	-	2	2	-	0	1	9	0	0	0	5	1	0	
22	0	2	-	-	-	15	1	3	14	-	8	7	18	0	0	4	0	0	-	
23	0	0	1	-	-	27	0	12	17	2	12	35	21	2	0	1	0	0	1	
24	0	0	2	1	-	35	3	14	31	-	14	31	16	0	0	7	0	0	0	
25	0	1	4	-	-	33	1	9	24	-	8	22	13	0	0	1	0	0	0	
26	0	0	1	-	-	15	2	8	5	-	6	11	5	0	0	4	0	2	0	
27	1	0	2	-	-	9	3	5	8	-	16	3	1	1	3	1	1	1	-	
28	0	1	0	-	-	9	2	9	3	-	26	2	0	0	0	5	0	1	1	
29	0	0	0	-	-	9	0	4	3	-	25	2	0	0	6	0	2	1	-	
30	4	1	2	-	-	3	3	5	7	-	36	2	1	0	4	0	1	2	-	
31	2	0	1	-	-	5	5	5	5	-	39	4	1	0	7	1	1	1	-	
32	1	2	1	-	-	11	5	7	4	-	22	1	5	0	6	1	3	1	-	
33	-	0	0	-	-	8	0	3	2	-	6	3	4	2	7	1	4	3	-	
34	-	0	1	-	-	3	1	-	0	-	1	2	3	0	5	0	2	3	1	
35	-	0	-	-	-	1	-	1	-	-	3	0	3	3	10	1	10	4	0	
36	-	2	-	-	-	1	-	-	-	-	2	0	3	2	8	0	0	8	0	
37	-	-	-	-	-	1	-	-	-	-	0	0	0	9	0	3	3	0	-	
38	-	-	-	-	-	-	-	-	-	-	2	1	0	9	1	3	1	0	-	
39	-	-	-	-	-	-	-	-	-	-	0	0	1	9	-	4	3	0	-	
40	-	-	-	-	-	-	-	-	-	-	1	1	0	5	-	2	0	0	-	
41	-	-	-	-	-	-	-	-	-	-	0	2	0	6	-	6	1	0	-	
42	-	-	-	-	-	-	-	-	-	-	0	0	0	7	-	4	0	1	-	
43	-	-	-	-	-	-	-	-	-	-	0	0	1	3	-	0	0	0	-	
44	-	-	-	-	-	-	-	-	-	-	0	3	1	4	-	2	0	0	-	
45	-	-	-	-	-	-	-	-	-	-	1	-	4	-	2	0	0	0	-	
46	-	-	-	-	-	-	-	-	-	-	-	-	3	-	0	0	1	-	-	
47	-	-	-	-	-	-	-	-	-	-	-	-	2	-	0	0	0	0	-	
48	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1	-	-	-	
49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	
51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total	9	9	15	1	1	204	29	89	146	2	77	284	119	31	12	172	10	55	36	3

Appendix Table 22 (cont'd)

Species : rex sole

Fork length (cm)	Haul no.																		
	58	59	60	61	62	66	67	68	69	71	73	74	75	76	79	80	81	82	84
7	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	2	-	3	-	-	1	-	-	-	-	-	-	-	-
11	-	-	-	-	-	1	-	0	-	-	1	-	-	-	-	-	-	-	-
12	-	-	-	-	-	0	-	0	-	-	0	-	-	-	-	-	-	-	-
13	-	-	-	-	-	0	-	0	-	-	0	-	2	1	-	-	-	-	-
14	-	1	-	-	-	0	-	0	-	-	3	-	3	1	-	-	-	-	-
15	-	0	-	1	0	-	1	-	-	-	8	-	10	1	-	1	-	-	-
16	-	1	-	1	1	-	0	5	-	-	36	-	23	7	-	2	0	-	1
17	-	1	1	1	1	-	1	10	1	-	41	-	25	6	-	3	7	6	0
18	-	1	1	0	3	-	1	36	0	1	45	-	43	19	-	6	4	5	2
19	-	2	0	2	2	-	1	36	0	0	35	-	28	16	-	5	1	4	8
20	-	0	0	2	3	1	3	27	0	1	15	1	7	8	-	0	1	1	45
21	-	0	0	1	1	0	1	13	1	3	6	0	8	1	-	2	0	8	77
22	-	0	2	0	15	4	3	39	1	2	4	0	11	10	-	4	1	31	65
23	-	0	0	5	26	2	7	55	1	12	11	0	11	21	-	17	8	73	19
24	-	2	1	11	37	2	12	50	1	33	11	0	23	40	-	39	4	64	11
25	-	4	4	5	21	1	16	39	0	44	9	1	7	31	-	32	2	33	9
26	-	5	1	8	10	0	12	31	1	27	2	-	2	11	1	22	1	22	8
27	-	4	4	11	18	2	9	22	1	14	0	-	2	1	-	15	0	25	10
28	-	4	1	19	9	0	8	7	0	11	1	-	1	4	-	12	0	27	23
29	-	6	7	17	13	0	11	7	0	11	0	-	1	2	-	14	1	11	22
30	-	11	1	28	9	1	9	4	0	5	0	-	5	-	9	1	21	8	31
31	-	14	3	26	3	1	4	3	0	5	1	-	3	-	13	0	14	11	36
32	-	13	1	28	4	-	4	2	0	2	2	-	-	1	-	10	1	8	2
33	2	14	2	14	4	-	12	3	1	0	1	-	-	1	-	7	-	6	2
34	0	17	2	23	1	-	4	0	-	0	-	-	-	-	-	4	-	2	1
35	0	11	2	16	1	-	0	0	-	1	-	-	-	-	-	1	-	4	0
36	0	4	1	9	2	-	0	1	-	-	-	-	-	-	-	2	-	0	0
37	0	4	0	3	-	-	0	-	-	-	-	-	-	-	-	1	-	1	1
38	1	0	4	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	0
39	0	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
40	0	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
41	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
42	2	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
43	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
44	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Total 10 123 38 234 200 14 123 390 8 172 233 2 207 190 1 220 33 366 325 209

Appendix Table 22 (cont'd)

Species : rex sole

Fork length (cm)	Haul no.		
	86	91	98
7	-	-	-
8	-	-	-
9	-	-	-
10	-	-	-
11	-	-	-
12	-	-	-
13	-	-	-
14	-	-	-
15	-	-	-
16	-	-	-
17	-	-	-
18	-	-	-
19	-	-	-
20	-	-	-
21	2	-	-
22	16	-	-
23	16	-	-
24	48	-	-
25	33	1	-
26	20	-	-
27	28	-	-
28	26	-	-
29	24	-	-
30	34	-	-
31	25	-	-
32	17	-	1
33	4	-	1
34	5	-	-
35	1	-	-
36	5	-	-
37	2	-	-
38	1	-	-
39	-	-	-
40	-	-	-
41	-	-	-
42	-	-	-
43	-	-	-
44	-	-	-
45	-	-	-
46	-	-	-
47	-	-	-
48	-	-	-
49	-	-	-
50	-	-	-
51	-	-	-
52	-	-	-
53	-	-	-
54	-	-	-
55	-	-	-
56	-	-	-
57	-	-	-
58	-	-	-
Total	307	1	2

**Appendix Table 23.** Length-frequency (nos. measured), by haul, of flathead sole collected during F/V W.E. RICKER assemblage survey, Hecate Strait, May 17 - June 3, 1993.

Appendix Table 23. (Cont'd.)

Fork length (cm)	Haul no.																			
	1	3	4	7	8	11	14	15	16	23	28	39	40	42	46	47	48	49	50	51
72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total	10	30	1	1	4	7	36	122	44	21	24	1	10	2	1	4	29	8	2	4

Appendix Table 23 (cont'd)

Species : flathead sole

Appendix Table 23 (cont'd)

Species : flathead sole

Fork length (cm)	Haul no.															
	53	59	61	62	67	71	73	74	75	76	80	82	84	85	86	87
71	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	
72	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	
73	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	
74	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	
75	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	
76	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	
77	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
Total	2	8	14	15	32	29	265	2	2	9	38	327	150	143	42	3

Appendix Table 24. Length-frequency (nos. measured), by haul, of slender sole collected during F/V W.E. RICKER assemblage survey, Hecate Strait, May 17 - June 3, 1993.

Fork length (cm)	Haul no.														
	1	3	7	8	14	15	28	39	40	47	57	82	84	85	86
14	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
15	-	-	-	0	-	-	-	-	-	-	-	1	-	-	
16	1	-	-	0	-	-	-	-	-	-	-	1	-	-	
17	0	-	-	0	-	-	-	1	-	-	-	2	2	-	
18	0	-	-	0	-	-	-	-	-	-	0	1	-	-	
19	0	-	-	0	-	-	-	-	-	-	1	1	-	-	
20	0	-	-	1	-	-	-	-	-	-	0	0	-	1	
21	0	-	-	2	-	-	-	-	-	-	0	1	-	0	
22	0	-	-	0	-	-	-	-	-	-	0	0	1	0	
23	0	1	-	0	-	1	-	-	-	1	0	1	4	1	
24	0	0	1	1	-	2	-	-	-	-	4	1	7	10	
25	0	0	1	1	-	3	1	-	-	-	15	1	12	18	
26	1	0	-	2	-	3	1	-	1	-	7	2	17	20	
27	-	0	-	3	-	3	-	-	1	-	14	-	23	16	
28	-	0	-	3	1	0	-	-	0	1	-	13	-	34	
29	-	1	-	0	-	3	-	-	0	-	3	-	17	17	
30	-	-	-	0	-	0	-	-	0	-	4	-	19	10	
31	-	-	-	1	-	2	-	-	0	-	7	-	14	5	
32	-	-	-	-	-	1	-	-	0	-	1	-	0	2	
33	-	-	-	-	-	1	-	-	1	-	2	-	1	-	
Total	2	2	2	15	1	19	2	1	3	1	1	73	12	149	117

Appendix Table 25. Length-frequency (nos. measured), by haul, of Dover sole collected during F/V W.E. RICKER assemblage survey, Hecate Strait, May 17 - June 3, 1993.

Fork length (cm)	Haul no.																			
	1	3	4	6	8	9	10	11	13	14	15	17	20	23	24	30	39	40	41	42
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	2	3	1	1	54	6	63	155	77	116	113	6	2	106	7	1	3	7	8	53

Appendix Table 25. (con't)

Species : Dover sole

Fork length (cm)	Haul no.																					
	44	46	47	48	49	50	51	53	54	57	58	59	60	61	62	66	67	68	69	71		
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-		
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	3	1	-		
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	13	0	-		
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	16	0	-		
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	-	21	1	2		
18	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	-	20	1	0		
19	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	13	0	0		
20	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	6	0	2		
21	0	-	-	-	-	-	1	-	-	-	-	-	-	-	-	2	10	-	16	2	3	
22	1	4	-	-	1	-	0	-	-	-	-	-	-	-	-	7	26	-	18	1	6	
23	0	6	-	-	0	-	0	-	-	-	-	-	-	-	-	1	8	37	2	22	1	8
24	0	0	1	-	0	-	0	-	-	-	1	-	-	2	26	23	2	20	0	27		
25	0	1	5	-	0	-	0	-	-	0	-	1	1	35	27	6	26	0	34			
26	0	0	11	-	0	1	3	-	-	0	-	0	9	41	24	18	20	0	35			
27	2	1	19	-	0	0	3	-	-	0	1	0	9	37	14	20	14	1	46			
28	2	0	25	2	0	0	1	-	-	1	1	8	12	45	19	29	19	-	36			
29	-	0	23	3	0	0	2	2	-	-	1	3	4	18	28	4	37	24	-	13		
30	-	0	25	0	0	0	3	1	-	-	0	5	1	34	17	5	29	7	-	9		
31	-	0	13	1	0	0	1	0	-	3	2	8	2	31	8	3	27	4	-	5		
32	-	1	5	1	1	0	1	2	1	1	0	12	2	21	3	2	7	2	-	2		
33	-	-	2	2	0	0	1	1	0	0	2	8	2	20	5	0	5	4	-	-		
34	-	-	0	-	0	0	1	0	0	3	5	8	0	5	1	1	2	1	-	-		
35	-	-	0	-	0	0	2	1	0	0	0	13	1	3	1	-	0	-	-	-		
36	-	-	1	-	0	0	1	0	0	2	1	9	0	0	1	-	0	-	-	-		
37	-	-	-	0	0	0	0	0	0	0	0	11	0	0	2	-	2	-	-	-		
38	-	-	-	0	0	0	0	0	0	0	0	5	0	1	-	-	-	-	-	-		
39	-	-	-	0	0	0	0	0	0	1	0	2	1	-	-	-	-	-	-	-		
40	-	-	-	0	2	0	0	0	0	0	0	0	4	-	-	-	-	-	-	-		
41	-	-	-	0	1	0	1	0	0	0	0	0	6	-	-	-	-	-	-	-		
42	-	-	-	0	3	1	1	0	1	0	0	0	3	-	-	-	-	-	-	-		
43	-	-	-	0	4	2	1	0	0	1	5	-	-	-	-	-	-	-	-	-		
44	-	-	-	1	1	1	1	0	0	0	0	6	-	-	-	-	-	-	-	-		
45	-	-	-	1	2	0	0	0	1	0	8	-	-	-	-	-	-	-	-	-		
46	-	-	-	0	3	3	0	0	1	0	6	-	-	-	-	-	-	-	-	-		
47	-	-	-	0	1	1	0	0	-	0	3	-	-	-	-	-	-	-	-	-		
48	-	-	-	0	2	0	1	0	-	0	8	-	-	-	-	-	-	-	-	-		
49	-	-	-	0	1	3	0	0	-	0	3	-	-	-	-	-	-	-	-	-		
50	-	-	-	1	1	1	0	0	-	0	7	-	-	-	-	-	-	-	-	-		
51	-	-	-	1	3	3	1	0	-	1	5	-	-	-	-	-	-	-	-	-		
52	-	-	-	-	1	0	-	0	-	0	5	-	-	-	-	-	-	-	-	-		
53	-	-	-	-	1	1	-	0	-	0	3	-	-	-	-	-	-	-	-	-		
54	-	-	-	-	3	0	-	0	-	0	3	-	-	-	-	-	-	-	-	-		
55	-	-	-	-	0	0	-	0	-	0	4	-	-	-	-	-	-	-	-	-		
56	-	-	-	-	1	0	-	0	-	0	3	-	-	-	-	-	-	-	-	-		
57	-	-	-	-	0	0	-	0	-	1	3	-	-	-	-	-	-	-	-	-		
58	-	-	-	-	2	0	-	0	-	-	1	-	-	-	-	-	-	-	-	-		
59	-	-	-	-	1	0	-	0	-	-	1	-	-	-	-	-	-	-	-	-		
60	-	-	-	-	0	0	-	0	-	-	1	-	-	-	-	-	-	-	-	-		
61	-	-	-	-	1	0	-	0	-	-	1	-	-	-	-	-	-	-	-	-		
62	-	-	-	-	-	0	-	0	-	-	1	-	-	-	-	-	-	-	-	-		
63	-	-	-	-	-	0	-	0	-	-	1	-	-	-	-	-	-	-	-	-		
64	-	-	-	-	-	0	-	1	-	-	0	-	-	-	-	-	-	-	-	-		
65	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-		
66	-	-	-	-	-	0	-	-	-	-	1	-	-	-	-	-	-	-	-	-		
67	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-		

Total	6	13	130	9	6	35	37	13	2	13	16	178	22	167	267	255	186	290	8	228
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Appendix Table 25. (con't)

Species : Dover sole

Fork length (cm)	Haul no.													
	73	74	75	76	79	80	82	84	85	86	87	91	96	98
10	1	-	-	-	-	-	-	-	-	-	-	-	-	-
11	3	-	-	-	-	-	-	-	-	-	-	-	-	-
12	9	-	-	-	-	-	-	-	-	-	-	-	-	-
13	26	-	-	-	-	-	-	-	-	-	-	-	-	-
14	44	1	4	1	-	-	-	-	-	-	-	-	-	-
15	38	0	6	0	-	-	-	-	-	-	-	-	-	-
16	35	0	18	0	-	-	-	-	-	-	-	-	-	-
17	25	1	19	4	4	1	-	-	-	-	-	-	-	-
18	22	-	18	7	2	0	-	-	-	-	-	-	-	-
19	17	-	16	11	1	0	-	-	-	-	-	-	-	-
20	14	-	23	17	0	0	-	1	-	-	-	-	-	-
21	19	-	33	16	2	3	-	1	-	-	-	1	-	-
22	16	-	27	18	0	8	-	3	-	-	-	1	-	-
23	18	-	18	13	1	6	-	5	-	1	-	1	-	-
24	16	-	21	13	1	20	3	9	-	1	-	0	-	-
25	9	-	18	22	2	25	12	17	-	6	-	0	-	-
26	7	-	9	12	3	22	20	27	4	23	-	0	-	-
27	1	-	9	8	1	26	34	34	18	30	1	1	-	2
28	2	-	3	9	1	22	39	35	36	29	2	1	1	-
29	2	-	7	2	0	11	35	18	31	24	1	0	-	-
30	3	-	5	2	0	4	18	27	35	10	-	1	-	-
31	-	-	3	1	1	1	11	8	32	9	-	0	-	-
32	-	-	1	1	-	1	8	8	24	4	-	0	-	-
33	-	-	-	0	-	2	2	2	15	5	-	1	-	-
34	-	-	-	0	-	1	2	2	9	1	-	-	-	-
35	-	-	-	0	-	-	0	0	10	0	-	-	-	-
36	-	-	-	0	-	-	0	2	8	0	-	-	-	-
37	-	-	-	0	-	-	2	0	3	1	-	-	-	-
38	-	-	-	1	-	-	1	0	5	0	-	-	-	-
39	-	-	-	0	-	-	0	0	7	0	-	-	-	-
40	-	-	-	0	-	-	0	1	4	0	-	-	-	-
41	-	-	-	0	-	-	1	-	4	0	-	-	-	-
42	-	-	-	0	-	-	-	-	0	1	-	-	-	-
43	-	-	-	0	-	-	-	-	3	1	-	-	-	-
44	-	-	-	0	-	-	-	-	1	-	-	-	-	-
45	-	-	-	0	-	-	-	-	0	-	-	-	-	-
46	-	-	-	1	-	-	-	-	0	-	-	-	-	-
47	-	-	-	-	-	-	-	-	0	-	-	-	-	-
48	-	-	-	-	-	-	-	-	0	-	-	-	-	-
49	-	-	-	-	-	-	-	-	0	-	-	-	-	-
50	-	-	-	-	-	-	-	-	1	-	-	-	-	-
51	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-	-	-	-	-	-
66	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Total 327 2 258 159 19 153 188 200 250 146 4 7 1 2

Appendix Table 26. Length-frequency (nos. measured), by haul, of English sole collected during F/V W.E. RICKER assemblage survey, Hecate Strait, May 17 - June 3, 1993.

Fork Length (cm)	Haul no.																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
11	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	3	-	-	-
12	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	2	-	-	-
13	-	-	-	2	-	6	-	-	-	-	-	-	-	-	-	-	6	-	-	-
14	-	-	-	0	-	5	-	-	-	-	-	1	-	-	-	-	4	4	-	-
15	-	3	-	1	-	7	-	-	-	-	-	4	-	-	-	-	1	0	-	-
16	-	6	-	7	1	8	-	-	-	-	-	4	-	-	-	-	9	4	-	2
17	-	11	-	3	2	13	-	-	3	-	-	18	-	-	-	-	12	3	-	3
18	-	16	-	13	2	23	-	-	16	-	-	13	-	-	-	-	13	2	2	8
19	-	32	1	21	5	19	-	1	13	2	-	1	22	1	-	-	16	3	1	11
20	1	39	0	27	2	18	1	7	19	0	1	0	29	0	1	-	19	5	1	14
21	7	59	2	12	7	14	0	7	19	5	0	0	28	2	0	-	9	7	0	20
22	4	59	4	22	5	21	0	6	8	2	3	0	28	2	2	-	5	10	1	37
23	9	60	3	11	13	19	2	9	13	6	14	2	23	5	2	-	6	9	0	32
24	3	41	2	6	8	9	0	12	10	8	12	0	28	4	4	-	5	12	0	33
25	3	24	4	1	2	8	0	5	6	5	17	1	21	11	4	-	7	8	2	17
26	7	26	3	4	2	2	1	9	6	10	16	3	23	10	9	-	4	6	0	22
27	5	24	6	2	7	3	1	10	5	7	14	0	22	10	5	3	4	9	0	18
28	3	16	9	1	0	1	1	9	2	4	22	1	12	9	11	1	3	12	0	7
29	6	14	9	0	4	3	0	12	3	5	17	0	15	18	5	3	4	5	1	2
30	3	19	9	1	3	3	0	7	0	5	13	0	12	18	13	4	5	8	1	6
31	1	7	11	1	1	1	0	5	3	4	11	0	17	9	10	8	1	14	0	1
32	0	8	3	1	1	0	0	1	0	4	16	0	13	11	10	6	4	7	0	0
33	0	9	1	0	2	0	0	3	1	4	5	0	9	10	2	9	2	7	0	0
34	0	8	3	1	1	0	0	1	1	2	6	1	8	14	1	4	2	5	0	1
35	0	10	1	0	0	2	0	1	0	1	2	1	8	9	1	3	2	8	0	2
36	1	5	2	0	1	2	0	0	0	2	1	-	4	7	0	7	4	4	1	1
37	0	3	2	2	3	3	0	0	0	2	2	-	6	8	1	3	3	2	1	1
38	1	11	2	1	2	2	0	0	0	-	2	-	3	4	-	2	3	0	0	-
39	-	0	1	0	0	3	1	1	0	-	1	-	2	1	-	2	1	2	0	-
40	-	3	-	3	0	1	-	-	0	-	1	-	3	1	-	1	2	1	0	-
41	-	3	-	2	3	1	-	-	1	-	0	-	0	1	-	-	2	2	0	-
42	-	2	-	0	-	1	-	-	0	-	0	-	0	1	-	-	-	0	1	-
43	-	-	-	1	-	-	-	-	1	-	0	-	1	-	-	-	1	-	-	-
44	-	-	-	-	-	-	-	0	-	0	-	0	-	-	-	-	0	-	-	-
45	-	-	-	-	-	-	-	0	-	0	-	1	-	-	-	-	2	-	-	-
46	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-
47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	54	518	78	146	77	204	7	106	131	78	177	10	378	166	81	56	163	162	12	238

Appendix Table 26 (cont'd)

Species : English sole

Fork length (cm)	Haul no.																			
	21	23	24	25	26	27	28	29	30	31	32	33	34	36	38	39	40	41	42	43
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	2
13	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1
14	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	2
15	-	-	-	-	-	-	-	-	-	1	0	-	2	-	-	-	-	-	-	1
16	-	1	-	-	-	-	-	-	-	2	0	-	0	-	1	-	-	-	-	0
17	-	3	-	-	1	-	-	-	-	1	1	-	1	-	0	-	-	-	-	0
18	-	1	-	4	4	-	-	-	2	2	1	-	2	-	2	-	1	4	0	
19	1	12	-	8	10	-	-	-	5	5	1	-	3	1	3	-	2	3	0	
20	1	21	-	10	12	-	-	-	5	2	0	-	3	0	10	1	2	6	0	
21	0	34	3	-	5	8	1	-	19	1	1	-	2	0	4	0	3	5	1	
22	0	34	4	-	8	10	0	-	1	20	1	1	1	2	0	6	0	3	6	1
23	0	30	2	1	7	7	0	1	0	30	1	1	-	1	0	7	0	2	17	-
24	3	28	2	1	8	6	0	2	1	37	0	1	-	1	0	12	1	9	18	-
25	0	33	4	0	9	5	0	8	2	41	1	1	-	1	0	20	3	8	5	-
26	0	25	3	2	2	4	3	8	0	20	0	1	-	0	0	17	1	8	11	-
27	1	17	3	0	2	5	3	8	3	16	0	1	-	1	0	16	1	3	8	-
28	0	16	4	0	2	1	5	7	1	17	0	1	-	2	0	15	5	2	5	-
29	0	19	5	2	2	3	6	14	1	22	0	1	-	0	0	6	0	6	4	-
30	0	11	7	0	3	3	8	8	3	17	0	1	-	1	0	8	4	1	2	-
31	1	8	6	0	1	1	7	3	1	7	4	0	-	1	0	8	2	0	1	-
32	0	9	2	0	2	0	4	5	1	6	1	0	-	0	0	4	0	0	0	-
33	1	2	2	1	1	1	1	1	9	-	0	-	0	0	0	1	1	0	0	-
34	0	2	1	-	-	1	6	3	0	1	-	0	-	0	1	1	1	0	0	-
35	0	3	2	-	-	0	0	5	3	6	-	0	-	0	-	2	-	0	2	-
36	0	0	2	-	-	1	2	2	2	4	-	0	-	0	-	1	-	1	0	-
37	1	2	1	-	-	0	-	2	2	3	-	0	-	0	-	2	-	0	0	-
38	0	1	2	-	-	1	-	2	-	4	-	0	-	2	-	1	-	1	0	-
39	0	-	0	-	-	0	-	0	-	5	-	1	-	0	-	1	-	1	0	-
40	0	-	1	-	-	1	-	0	-	4	-	0	-	0	-	-	-	0	0	-
41	0	-	1	-	-	1	-	1	-	3	-	0	-	0	-	-	1	1	-	
42	1	-	-	-	-	-	-	-	2	-	0	-	1	-	-	-	-	-	-	
43	-	-	-	-	-	-	-	-	1	-	0	-	-	-	-	-	-	-	-	
44	-	-	-	-	-	-	-	-	1	-	0	-	-	-	-	-	-	-	-	
45	-	-	-	-	-	-	-	-	1	-	0	-	-	-	-	-	-	-	-	
46	-	-	-	-	-	-	-	-	2	-	0	-	-	-	-	-	-	-	-	
47	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total	10	312	57	7	75	85	46	80	22	310	22	17	1	26	2	147	20	54	98	8

Appendix Table 26 (cont'd)

Species : English sole

Fork length (cm)	Haul no.																				
	44	45	46	47	48	49	50	51	52	53	54	55	56	59	60	61	62	64	65	66	
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	1	-	
13	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	4	-	
14	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	8	-	
15	-	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36	12	-	
16	2	0	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	12	2	
17	0	0	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	16	2	
18	2	1	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29	19	8	
19	3	3	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34	32	17	
20	2	3	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	22	24	
21	1	0	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	29	20	
22	1	1	34	-	-	-	-	-	-	-	-	1	-	-	-	-	-	4	34	14	
23	0	3	40	3	-	-	-	1	-	-	-	0	-	-	-	-	-	7	22	25	
24	2	1	40	2	-	-	-	0	-	-	-	0	1	-	1	1	17	23	27	46	
25	2	0	40	4	-	-	-	0	-	-	-	1	0	-	7	1	31	27	46	44	
26	1	0	24	6	-	-	-	0	-	-	-	1	0	-	8	5	47	29	37	50	
27	2	0	27	4	-	-	-	0	-	-	-	3	0	1	22	6	40	34	37	40	
28	1	1	13	4	-	-	-	2	-	-	-	3	0	0	25	17	37	50	32	20	
29	1	0	9	5	-	-	-	2	1	-	2	3	0	0	33	23	39	55	27	15	
30	1	0	10	0	1	-	-	1	3	1	1	5	0	2	37	44	28	52	24	10	
31	-	1	5	5	3	-	-	4	1	1	2	7	3	5	29	46	31	36	18	5	
32	-	1	3	3	5	1	-	8	0	4	6	4	0	7	29	55	15	40	19	5	
33	-	1	3	1	9	0	-	14	2	4	6	7	5	12	23	46	20	25	12	3	
34	-	0	5	2	5	1	1	19	2	12	9	11	5	12	17	34	8	20	16	3	
35	-	1	1	1	10	1	-	21	2	9	6	9	4	24	8	41	7	20	6	1	
36	-	0	2	1	7	0	-	20	1	10	9	8	2	26	4	20	4	3	11	2	
37	-	1	1	2	9	0	-	21	1	8	5	8	2	23	5	16	0	11	4	0	
38	-	0	0	-	5	1	-	30	1	11	2	5	4	16	1	7	0	6	6	0	
39	-	1	1	-	4	0	-	19	1	6	5	4	4	20	2	6	0	0	4	1	
40	-	0	-	-	0	0	-	14	1	6	2	2	1	19	-	3	1	1	0	-	
41	-	1	-	-	0	0	-	10	0	3	3	4	2	21	-	3	-	0	1	-	
42	-	0	-	-	1	0	-	9	0	5	-	2	1	10	-	1	-	2	0	-	
43	-	1	-	-	2	0	-	9	0	0	-	1	0	10	-	-	0	0	0	-	
44	-	-	-	-	0	0	-	12	0	3	-	3	0	5	-	-	0	0	0	-	
45	-	-	-	-	0	1	-	5	0	3	-	-	0	2	-	-	-	1	0	-	
46	-	-	-	-	2	-	-	5	0	3	-	-	1	-	-	-	-	-	1	-	
47	-	-	-	-	2	-	-	5	0	2	-	-	-	-	-	-	-	-	-	-	
48	-	-	-	-	-	-	-	3	1	1	-	-	-	-	-	-	-	-	-	-	
49	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	
50	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
Total	21	22	356	43	65	5	1	235	17	92	58	92	35	215	251	375	339	740	515	369	

Appendix Table 26 (cont'd)

Species : English sole

Fork length (cm)	Haul no.																			
	67	68	69	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	1	-	-	-	5	2	-	-	-	-	-	-	-	-	-	-
13	-	-	2	-	3	-	1	-	15	11	1	-	1	-	-	-	-	-	-	-
14	-	1	2	-	11	-	2	-	7	12	6	-	0	-	-	-	-	-	-	-
15	-	0	6	-	9	-	4	-	2	7	2	-	0	-	-	-	-	-	-	-
16	-	0	12	-	7	-	3	-	2	1	4	-	2	-	-	-	-	-	-	-
17	-	4	10	-	10	-	9	1	-	0	1	0	-	2	-	1	-	-	-	2
18	1	12	19	-	18	1	20	2	-	0	4	10	2	5	2	1	-	-	-	2
19	0	11	20	-	20	2	28	2	5	1	2	12	5	9	1	6	-	-	1	7
20	1	26	20	-	25	5	19	2	9	0	5	13	5	12	0	10	-	-	0	11
21	0	29	22	1	18	7	29	5	7	0	3	17	14	13	0	10	-	-	0	11
22	3	39	28	0	23	20	32	9	21	0	5	25	12	21	1	1	-	-	1	22
23	2	44	24	11	29	24	27	16	15	0	4	30	17	30	1	1	-	1	0	27
24	6	56	23	16	38	41	39	25	16	0	5	35	31	36	5	2	-	0	0	24
25	8	62	24	24	34	38	44	17	26	0	3	50	33	39	4	1	-	0	2	33
26	18	57	28	50	24	30	27	28	34	0	6	39	33	39	11	2	5	0	4	25
27	19	50	19	44	20	21	22	24	29	0	4	37	29	19	10	1	3	0	10	16
28	24	30	14	36	18	18	10	28	21	0	2	32	35	14	18	2	7	0	9	14
29	24	15	12	36	11	14	12	23	23	0	4	8	21	13	15	3	13	0	16	11
30	31	26	7	30	6	6	13	18	15	0	1	6	26	6	25	1	7	0	19	5
31	24	21	6	37	3	7	6	19	18	0	7	5	16	6	33	0	4	1	21	8
32	29	7	7	19	2	5	2	15	13	0	4	6	15	6	24	1	10	1	12	10
33	17	6	4	15	2	4	2	17	8	0	0	3	7	1	24	-	6	1	13	5
34	14	2	0	15	-	1	13	17	0	2	3	6	2	20	-	7	-	10	9	
35	9	4	1	6	-	0	13	10	0	1	-	4	2	23	-	5	-	12	3	
36	4	1	2	1	-	0	8	6	0	0	-	7	2	10	-	1	-	6	2	
37	4	1	2	2	-	1	6	6	1	0	-	5	2	7	-	2	-	5	4	
38	5	4	0	3	-	-	1	1	0	0	-	5	3	10	-	2	-	2	2	
39	0	0	0	1	-	-	2	1	0	0	-	3	1	11	-	0	-	2	3	
40	2	0	1	1	-	-	1	1	0	1	-	3	1	1	-	3	-	1	1	
41	0	0	-	-	-	-	2	1	0	-	-	3	0	5	-	0	-	3	2	
42	0	1	-	-	-	-	-	0	0	-	-	2	0	1	-	1	-	-	1	
43	0	-	-	-	-	-	-	2	1	-	-	0	0	-	-	-	-	-	-	
44	1	-	-	-	-	-	-	-	-	-	-	0	0	-	-	-	-	-	-	
45	-	-	-	-	-	-	-	-	-	-	-	0	1	-	-	-	-	-	-	
46	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	
47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Total 246 509 315 348 332 243 353 297 305 34 97 344 340 288 262 43 76 4 149 260

Appendix Table 26 (cont'd)

Species : English sole

Fork length (cm)	Haul no.									
	88	89	90	91	92	94	95	96	97	98
11	-	-	-	-	-	-	-	-	-	-
12	-	1	2	-	-	-	1	1	-	-
13	-	1	3	1	-	7	3	1	-	-
14	-	4	2	5	1	1	2	3	-	-
15	-	1	0	1	3	4	0	4	-	-
16	-	1	1	6	0	2	0	0	-	-
17	1	5	3	5	0	0	1	4	-	-
18	0	7	7	26	0	0	1	10	3	-
19	1	8	8	24	1	0	0	18	3	-
20	1	2	6	31	-	0	0	18	1	-
21	3	5	7	30	-	0	1	16	1	-
22	6	6	6	42	-	0	0	22	0	-
23	6	3	6	42	-	0	0	33	5	-
24	23	9	6	40	-	1	0	37	1	-
25	28	4	9	41	-	-	0	40	0	1
26	29	9	8	28	-	-	1	30	0	0
27	16	7	6	22	-	-	0	27	3	2
28	13	4	6	19	-	-	1	12	1	1
29	5	2	6	11	-	-	0	16	0	1
30	9	1	3	8	-	-	0	2	0	0
31	9	3	1	6	-	-	0	6	0	0
32	6	0	3	12	-	-	0	3	0	0
33	8	2	2	4	-	-	1	3	0	1
34	6	1	1	9	-	-	-	1	0	-
35	3	0	1	3	-	-	-	3	0	-
36	4	1	3	2	-	-	-	3	0	-
37	5	1	1	2	-	-	-	1	0	-
38	4	2	1	0	-	-	-	1	0	-
39	2	1	1	2	-	-	-	0	1	-
40	2	-	0	1	-	-	-	0	-	-
41	2	-	0	-	-	-	-	0	-	-
42	1	-	0	-	-	-	-	0	-	-
43	1	-	0	-	-	-	-	1	-	-
44	1	-	1	-	-	-	-	-	-	-
45	-	-	-	-	-	-	-	-	-	-
46	-	-	-	-	-	-	-	-	-	-
47	-	-	-	-	-	-	-	-	-	-
48	-	-	-	-	-	-	-	-	-	-
49	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
Total	195	91	110	423	5	15	12	316	19	6

**Appendix Table 27.** Length-frequency (nos. measured), by haul, of Pacific sanddab collected during F/V W.E. RICKER assemblage survey, Heceta Strait, May 17 - June 3, 1993.

Fork length (cm)	Haul no.																			
	2	4	5	6	8	9	12	13	14	17	18	23	26	27	31	32	33	38	39	41
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	2	4	-	-	5	1	-	-	-	1	-	-	1	-	-	-	-	-
13	-	-	2	17	-	-	3	0	-	2	-	3	-	-	0	3	-	-	-	-
14	-	-	0	10	-	-	2	3	-	2	-	0	-	-	2	1	-	-	-	-
15	-	-	0	3	-	-	3	0	-	0	1	-	2	-	0	2	-	1	-	-
16	-	-	0	0	-	-	0	-	0	0	-	-	-	-	0	2	1	0	-	-
17	-	-	0	0	-	-	0	-	0	0	1	-	-	-	0	0	-	0	-	-
18	-	-	0	1	-	-	0	-	1	0	0	-	1	-	0	0	-	0	-	-
19	-	-	0	2	-	-	1	-	0	1	0	-	1	-	0	0	-	0	-	-
20	-	-	0	8	-	-	9	-	0	0	0	-	1	-	4	1	-	0	-	-
21	2	1	0	10	-	-	6	2	1	1	1	-	3	-	0	1	-	0	-	-
22	6	-	1	27	-	-	1	0	5	0	0	-	6	1	1	0	-	0	-	-
23	4	-	-	14	-	-	8	1	2	0	4	-	22	0	0	0	-	0	-	-
24	4	-	-	11	-	-	13	0	5	0	2	-	28	1	0	0	-	2	-	-
25	3	-	-	12	-	-	17	2	1	2	4	-	32	1	0	0	-	4	-	-
26	2	-	-	6	-	-	9	0	3	1	7	-	19	1	2	0	-	5	-	-
27	1	-	-	4	1	-	11	1	3	2	2	-	30	0	1	0	-	5	-	-
28	1	-	-	2	0	-	6	1	1	1	3	-	18	3	-	1	-	5	-	-
29	2	-	-	6	0	-	5	-	3	4	2	-	16	0	-	0	-	7	-	-
30	1	-	-	2	0	-	2	-	1	1	4	-	8	1	-	0	-	2	-	-
31	0	-	-	2	0	-	2	-	2	1	1	-	5	1	-	1	-	6	1	-
32	0	-	-	-	0	1	-	1	-	-	0	-	2	-	-	-	-	1	-	-
33	2	-	-	-	1	-	-	-	-	-	0	-	0	-	-	-	-	-	-	-
34	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-
35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	28	1	5	142	2	1	13	95	7	32	15	32	6	190	12	11	12	1	38	1

Appendix Table 27 (cont'd)

Species : Pacific sanddab

Fork length (cm)	Haul no.																				
	43	45	46	64	65	66	68	72	74	75	76	77	78	79	80	81	82	87	89	91	94
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	7	
13	-	2	-	1	-	2	-	-	1	-	-	2	1	-	-	-	-	2	1	3	
14	-	3	-	0	-	1	1	1	7	-	-	3	1	-	-	-	-	0	4	5	
15	-	1	-	0	-	1	0	0	4	-	-	1	0	-	-	-	-	1	4	1	
16	-	0	-	1	1	0	0	1	0	-	-	2	1	-	-	-	0	3	2	-	
17	-	0	-	1	-	0	0	-	1	-	-	1	1	-	-	-	0	1	0	-	
18	-	0	-	-	-	0	0	-	0	-	-	1	1	0	1	-	0	0	0	-	
19	-	1	-	-	-	0	1	-	0	-	0	-	0	-	-	-	0	1	1	-	
20	-	1	-	-	-	3	1	-	0	1	0	-	0	-	-	1	-	1	1	5	
21	-	3	-	-	-	1	5	-	0	0	2	-	0	-	-	2	-	2	2	9	
22	-	3	-	-	-	5	3	-	0	4	0	-	0	-	-	5	-	0	4	17	
23	-	0	-	-	-	5	1	-	0	0	0	-	0	-	-	1	4	-	0	1	
24	-	1	1	-	-	2	0	-	0	1	0	-	0	-	-	0	8	1	3	2	
25	-	0	0	-	-	3	0	-	1	3	4	-	0	-	-	3	15	3	1	0	
26	-	1	2	-	-	0	0	-	-	4	3	-	0	-	-	6	31	2	5	0	
27	-	1	1	-	-	2	1	-	-	2	3	-	0	-	-	8	19	0	2	0	
28	-	0	2	-	-	0	0	-	-	6	0	-	0	-	-	19	20	0	7	3	
29	-	2	2	-	-	1	1	-	-	2	3	-	1	-	-	32	13	0	3	1	
30	-	2	2	-	-	0	0	-	-	3	2	-	1	-	-	34	24	1	2	-	
31	-	3	2	-	-	0	1	-	-	1	2	-	-	-	-	34	14	-	5	-	
32	1	2	-	-	-	1	-	-	-	3	2	-	-	-	-	27	11	-	3	-	
33	-	0	-	-	-	1	-	-	-	4	2	-	-	-	-	25	6	-	2	-	
34	-	0	-	-	-	1	-	-	-	0	-	-	-	-	-	12	4	-	-	-	
35	-	1	-	-	-	-	-	-	-	0	-	-	-	-	-	3	1	-	-	-	
36	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	
37	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	
38	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	
39	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	
40	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	
41	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
Total	1	27	12	3	1	29	15	2	14	34	25	10	6	1	204	178	7	37	27	195	21

Appendix Table 28. Length-frequency (nos. measured), by haul, of rock sole collected during F/V W.E. RICKER assemblage survey, Heceta Strait, May 17 - June 3, 1993.

Fork length (cm)	Haul no.																			
	2	5	6	9	10	12	13	14	17	18	19	20	21	23	24	25	26	35	36	37
0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
12	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	
13	-	-	-	-	-	1	3	-	-	-	-	-	-	-	-	-	-	-	-	
14	-	1	2	-	-	0	4	-	-	-	-	1	-	-	-	-	-	-	-	
15	-	0	0	-	-	0	0	-	-	-	-	1	1	-	-	-	-	1	-	
16	-	0	1	-	-	1	0	-	-	-	-	0	2	-	-	-	-	0	-	
17	-	0	1	-	-	2	1	-	-	-	1	2	0	1	-	-	-	0	-	
18	-	3	2	-	-	2	0	-	-	-	0	0	1	1	-	-	-	0	-	
19	-	3	3	-	-	10	2	-	1	-	0	2	0	5	-	-	-	1	-	
20	-	7	7	-	-	8	2	-	0	1	0	0	0	8	-	-	-	2	-	
21	-	3	11	-	-	7	3	-	3	0	0	0	1	0	5	-	-	0	-	
22	-	6	16	-	-	10	3	-	0	0	0	0	0	1	14	1	-	0	-	
23	-	4	13	-	-	13	1	-	1	0	0	0	0	0	16	0	-	2	-	
24	-	1	15	-	-	13	5	-	2	3	2	1	2	18	0	-	-	1	2	
25	1	6	11	1	1	14	1	-	0	3	1	1	0	6	1	-	-	0	2	
26	0	2	6	0	-	10	2	-	0	1	0	2	0	2	-	-	-	1	6	
27	0	2	8	0	-	7	1	-	2	1	0	2	1	0	-	-	-	1	0	
28	1	1	2	0	-	7	0	-	0	0	0	2	0	1	-	-	-	1	0	
29	0	2	3	0	-	1	0	-	2	0	0	5	2	1	-	-	-	1	0	
30	0	1	0	0	-	3	0	-	0	0	3	4	0	-	-	-	-	1	0	
31	1	0	0	0	-	3	0	-	1	0	3	3	0	-	-	-	2	1	12	
32	3	0	2	0	-	0	0	-	0	0	2	1	3	-	-	1	-	1	1	
33	0	1	1	0	-	0	0	-	0	0	3	3	5	-	2	-	0	0	2	
34	0	2	1	0	-	1	0	-	0	0	1	4	5	-	1	-	0	0	2	
35	0	1	1	0	-	1	0	-	0	1	5	4	1	-	0	-	0	0	2	
36	0	2	2	0	-	1	0	-	1	-	0	4	5	-	0	-	0	0	3	
37	0	1	0	0	-	1	0	-	0	-	3	3	1	-	0	-	1	0	0	
38	2	1	4	0	-	1	0	-	0	-	3	0	1	-	1	-	0	0	2	
39	-	2	7	0	-	0	0	-	1	-	3	2	3	-	0	-	0	0	1	
40	-	1	3	1	-	0	0	-	-	-	3	4	3	-	0	-	0	1	-	
41	-	2	5	0	-	0	1	-	-	-	0	1	1	-	0	1	0	-	-	
42	-	0	3	1	-	2	0	1	-	-	0	2	1	-	0	-	0	-	-	
43	-	0	3	1	-	2	0	-	-	-	0	1	0	-	1	-	1	-	-	
44	-	0	2	1	-	1	2	-	-	-	1	0	2	-	0	-	-	-	-	
45	-	0	0	0	-	1	1	-	-	-	0	0	3	-	0	-	-	-	-	
46	-	0	0	1	-	2	2	-	-	-	0	1	-	-	1	-	-	-	-	
47	-	0	0	2	-	11	0	-	-	-	3	3	-	-	-	-	-	-	-	
48	-	1	-	2	-	-	0	-	-	-	1	-	-	-	-	-	-	-	-	
49	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total	8	56	135	10	1	137	37	1	14	10	38	60	44	78	2	7	1	9	5	63

Appendix Table 20 (cont'd)

Species : rock sole

Fork length (cm)	Haul no.																		
	39	42	43	44	45	46	55	56	60	62	64	65	66	67	68	69	71	72	73
0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	1
10	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	0
11	-	-	-	-	-	-	-	-	-	-	3	-	1	-	-	1	-	-	11
12	-	-	1	-	2	-	-	-	-	-	1	-	0	-	-	0	-	-	9
13	-	-	2	5	2	-	-	-	-	-	1	-	0	-	-	0	-	1	4
14	-	-	1	0	3	-	-	-	-	-	1	-	0	-	-	1	-	1	7
15	-	-	4	0	6	-	-	-	-	-	0	-	1	-	-	1	-	2	14
16	-	2	3	1	11	3	-	-	-	-	2	1	0	-	-	2	-	4	25
17	-	2	4	0	11	1	-	-	-	-	6	0	2	-	-	0	-	3	20
18	-	2	12	3	10	5	-	-	-	-	6	1	1	-	-	0	-	5	20
19	-	4	15	3	24	17	-	-	1	-	4	5	11	1	2	3	-	7	24
20	-	5	19	2	36	15	-	1	0	-	3	4	14	0	3	1	-	8	18
21	-	6	38	8	42	13	-	0	0	-	2	0	12	1	4	0	1	5	14
22	-	4	24	2	38	17	-	0	0	-	3	4	10	0	5	1	0	10	17
23	-	4	17	4	38	7	-	0	0	-	5	3	5	0	2	1	0	8	11
24	-	2	20	7	23	7	-	0	0	-	4	7	5	0	1	0	0	6	0
25	-	3	14	4	12	2	-	0	0	-	4	7	3	0	1	2	0	5	3
26	1	-	8	5	8	4	-	0	0	-	7	7	1	0	2	1	0	3	0
27	-	-	5	3	2	0	-	0	0	-	6	7	1	0	0	0	1	0	0
28	-	-	1	0	1	1	-	0	0	-	11	5	3	1	4	1	0	4	0
29	-	-	1	0	1	0	-	0	0	-	9	7	3	2	13	0	1	2	1
30	-	-	4	2	0	0	-	0	0	-	6	4	2	0	4	0	0	5	2
31	-	-	2	0	0	0	-	0	0	-	7	11	7	0	7	2	1	3	2
32	-	-	5	0	0	0	-	1	0	-	4	11	3	0	10	1	1	2	0
33	-	-	1	0	0	0	-	0	-	1	1	8	2	0	6	0	0	1	1
34	-	-	1	0	0	0	-	1	-	0	3	6	2	0	2	1	1	7	0
35	-	-	6	0	0	0	-	1	-	0	2	1	0	0	1	1	1	3	1
36	-	-	2	1	0	0	-	0	-	0	2	0	1	0	1	-	2	3	2
37	-	-	2	0	0	1	-	0	-	0	1	1	1	0	1	-	0	1	1
38	-	-	0	0	3	0	-	0	-	0	0	0	0	0	4	-	0	-	0
39	-	3	1	1	0	-	1	-	1	-	0	0	0	0	0	-	-	0	-
40	-	-	1	0	1	0	-	0	-	0	0	0	0	1	0	-	0	-	2
41	-	-	0	0	2	0	-	0	-	1	-	0	1	-	0	-	0	-	1
42	-	-	1	0	4	0	-	0	-	-	0	-	-	1	-	1	-	-	0
43	-	-	0	1	7	1	-	0	-	-	0	-	-	0	-	-	-	-	0
44	-	-	0	-	51	0	-	1	-	-	1	-	-	1	-	-	-	-	1
45	-	-	0	-	5	1	-	0	-	-	-	-	-	-	-	-	-	-	-
46	-	-	0	-	10	-	-	0	-	-	-	-	-	-	-	-	-	-	-
47	-	-	0	-	2	-	-	0	-	-	-	-	-	-	-	-	-	-	-
48	-	-	0	-	0	-	0	-	-	-	-	-	-	-	-	-	-	-	-
49	-	-	0	-	0	-	0	-	-	-	-	-	-	-	-	-	-	-	-
50	-	-	2	-	0	-	1	-	-	-	-	-	-	-	-	-	-	-	-
51	-	-	1	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Total 1 34 220 52 357 95 1 6 2 3 113 101 92 7 75 20 9 100 3 225

Appendix Table 28 (cont'd)

Species : rock sole

Appendix Table 28 (cont'd)

Species : rock sole

Fork length (cm)	Haul no.																			
	75	76	77	78	79	80	81	83	84	87	88	89	90	91	92	93	94	95	96	97
61	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-
62	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-
63	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-
64	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-
66	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-
67	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-
68	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-
69	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-
71	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
72	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-
73	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-
74	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
75	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-
76	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
77	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
78	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
79	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-
81	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Total	117	71	92	212	42	166	202	409	3	340	360	226	206	171	199	152	153	131	136	13

Appendix Table 29. Length-frequency (nos. measured), by haul, of curlfin sole collected during F/V W.E. RICKER assemblage survey, Hecate Strait, May 17 - June 3, 1993.

Fork length (cm)	Haul no.																			
	2	4	5	6	9	12	13	14	17	18	19	20	21	23	24	45	66	75	79	81
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
21	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	
22	-	-	-	-	-	0	-	-	-	-	-	0	-	1	-	-	-	-	-	
23	-	-	-	-	-	0	1	-	-	-	-	0	-	1	-	-	-	-	-	
24	-	-	-	1	-	0	5	-	1	-	-	0	1	1	-	1	-	-	-	
25	-	-	-	0	-	0	2	-	1	-	-	0	0	1	-	0	-	-	-	
26	-	-	1	0	-	0	2	-	0	-	-	0	0	0	-	1	-	-	-	
27	-	-	1	0	1	1	2	-	0	-	-	0	0	0	1	1	-	-	-	
28	1	-	-	0	2	1	2	-	2	1	-	0	0	0	-	0	-	-	-	
29	-	-	-	1	1	-	5	1	1	-	-	0	1	0	-	0	-	1	-	
30	-	-	-	-	-	4	-	0	-	-	-	0	1	1	-	0	1	1	-	
31	-	-	-	-	-	1	-	0	-	-	-	0	-	-	0	-	-	1	-	
32	-	-	-	-	-	-	1	-	0	-	-	0	-	-	0	-	-	1	-	
33	-	-	-	-	-	-	1	-	1	-	-	0	-	-	0	-	-	-	-	
34	-	1	-	-	-	-	1	-	-	-	1	0	-	-	2	-	-	-	-	
35	-	-	-	-	-	-	1	-	-	-	-	1	-	-	1	-	-	-	-	
36	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	
37	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total	1	1	2	2	4	3	29	1	6	1	1	2	3	5	1	6	1	2	1	1

Fork length (cm)	Haul no.								
	83	87	90	91	93	94	95	96	97
20	-	-	-	1	-	-	-	-	-
21	-	-	-	0	-	-	-	-	-
22	1	-	1	0	-	-	-	1	-
23	0	-	0	1	1	1	1	0	-
24	0	-	0	2	1	3	0	0	-
25	0	1	0	1	1	0	1	1	-
26	1	2	1	0	1	3	0	1	-
27	0	2	0	2	0	3	1	0	-
28	1	-	0	0	1	2	4	0	-
29	0	-	0	0	0	1	1	1	1
30	1	-	0	4	2	2	0	1	0
31	1	-	0	1	-	1	0	0	0
32	-	-	0	2	-	1	0	2	1
33	-	-	0	1	-	3	2	0	-
34	-	-	0	0	-	3	2	0	-
35	-	-	0	0	-	3	1	0	-
36	-	-	0	0	-	2	0	0	-
37	-	-	0	1	-	0	0	1	-
38	-	-	0	-	-	0	1	1	-
39	-	-	0	-	-	0	1	-	-
40	-	-	0	-	-	0	-	-	-
41	-	-	1	-	-	0	-	-	-
42	-	-	-	-	-	0	-	-	-
43	-	-	-	-	-	1	-	-	-
Total	5	5	3	16	7	29	15	9	2

Appendix Table 30. Length-frequency (nos. measured), by haul, of butter sole collected during F/V W.E. RICKER assemblage survey, Hecate Strait, May 17 - June 3, 1993.

Fork length (cm)	Haul no.																				
	17	18	23	36	43	44	45	46	47	52	54	55	56	60	62	64	65	66	68	69	
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
13	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-		
14	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-		
15	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-		
16	4	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	6	2	-	
17	2	0	1	-	1	-	-	-	-	-	-	-	-	-	-	2	1	10	4	1	
18	0	0	0	-	0	-	-	0	-	-	-	1	-	-	1	0	19	2	0		
19	0	0	1	1	1	-	1	0	-	-	-	4	-	5	0	1	17	7	1		
20	1	0	2	0	1	1	1	0	-	1	-	2	3	-	7	3	4	23	6	0	
21	4	1	2	0	1	-	0	0	-	3	-	2	8	-	16	0	1	21	6	0	
22	4	0	2	0	1	-	1	1	-	3	-	3	6	-	21	4	1	32	5	0	
23	1	0	2	0	2	-	0	2	-	10	-	3	9	-	20	3	0	31	3	0	
24	3	0	-	0	2	-	0	0	-	12	-	3	10	-	13	7	0	23	2	2	
25	2	0	-	0	2	-	0	0	-	14	-	2	5	15	-	19	4	0	32	5	0
26	2	0	-	1	2	-	1	0	-	16	-	4	1	9	1	8	4	0	8	1	0
27	3	0	-	1	2	-	1	1	-	5	-	0	4	19	0	1	6	1	6	1	2
28	0	0	-	0	5	-	0	-	-	3	-	2	5	10	0	0	4	1	1	0	1
29	1	1	-	0	5	-	1	-	-	3	-	0	2	9	0	-	3	0	2	1	-
30	-	-	-	0	5	-	0	-	-	2	-	0	1	8	0	-	7	1	1	0	-
31	-	-	-	0	1	-	1	-	-	4	-	0	0	16	0	-	3	2	0	0	-
32	-	-	-	1	2	-	1	-	1	2	-	2	1	16	0	-	7	1	0	0	-
33	-	-	-	1	1	-	2	-	-	3	-	0	25	0	-	5	0	1	0	-	
34	-	-	-	-	2	-	0	-	-	0	-	0	28	0	-	3	1	0	0	-	
35	-	-	-	-	1	-	0	-	-	0	-	0	17	1	-	4	0	0	1	-	
36	-	-	-	-	1	-	0	-	-	1	-	0	20	-	-	1	1	0	-	-	
37	-	-	-	-	-	-	1	-	-	-	-	0	20	-	-	4	-	0	-	-	
38	-	-	-	-	-	-	-	-	-	-	-	0	22	-	-	1	-	1	-	-	
39	-	-	-	-	-	-	-	-	-	-	-	0	14	-	-	5	-	-	-	-	
40	-	-	-	-	-	-	-	-	-	-	-	1	15	-	-	2	-	-	-	-	
41	-	-	-	-	-	-	-	-	-	-	-	15	-	-	1	-	-	-	-	-	
42	-	-	-	-	-	-	-	-	-	-	-	7	-	-	2	-	-	-	-	-	
43	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	
44	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	
45	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	
46	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
47	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	
48	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
Total	29	3	10	5	38	1	11	4	1	82	10	33	331	2	114	83	17	241	46	7	

Appendix Table 30 (cont'd)

Species : butter sole

Fork length (cm)	Haul no.															
	73	74	75	76	77	80	81	82	83	87	88	89	90	91	92	96
12	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	0	0	-	-	-	-	1	-	-	-	-	-	-	-	-	-
17	0	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-
18	0	0	-	2	-	-	2	-	-	-	1	-	-	-	-	-
19	0	3	2	3	-	-	0	-	-	-	0	-	-	-	-	-
20	0	0	0	6	-	2	0	-	-	1	1	0	-	-	-	-
21	0	0	0	5	-	2	6	-	-	4	1	1	1	-	-	1
22	0	1	2	2	-	4	5	-	-	6	0	2	0	3	-	1
23	1	1	0	6	-	5	7	-	-	4	0	3	3	3	-	3
24	-	-	0	7	-	8	6	-	-	5	0	0	2	0	-	4
25	-	-	0	11	-	5	5	-	2	5	1	2	0	1	-	0
26	-	-	0	4	-	7	7	1	0	5	0	2	0	1	-	1
27	-	-	0	2	-	8	8	-	0	2	0	2	4	0	-	0
28	-	-	0	1	-	1	4	-	0	4	1	0	3	1	-	1
29	-	-	0	0	1	5	2	-	0	2	0	0	-	0	-	-
30	-	-	0	0	-	2	0	-	0	1	0	0	-	0	1	-
31	-	-	0	1	-	0	1	-	1	-	1	0	-	1	1	-
32	-	-	1	0	-	0	0	-	-	-	0	-	1	2	-	-
33	-	-	0	0	-	1	1	-	-	-	0	-	-	1	-	-
34	-	-	0	0	-	-	-	-	-	-	0	-	-	1	-	-
35	-	-	0	0	-	-	-	-	-	-	0	-	-	3	-	-
36	-	-	0	0	-	-	-	-	-	-	0	-	-	3	-	-
37	-	-	1	0	-	-	-	-	-	-	0	-	-	1	-	-
38	-	-	0	0	-	-	-	-	-	-	1	-	-	1	-	-
39	-	-	0	0	-	-	-	-	-	-	-	-	-	2	-	-
40	-	-	0	0	-	-	-	-	-	-	-	-	-	2	-	-
41	-	-	0	0	-	-	-	-	-	-	-	-	-	3	-	-
42	-	-	0	0	-	-	-	-	-	-	-	-	-	1	-	-
43	-	-	0	0	-	-	-	-	-	-	-	-	-	2	-	-
44	-	-	0	0	-	-	-	-	-	-	-	-	-	1	-	-
45	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
46	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
47	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
48	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
Total	2	7	5	51	1	50	55	1	3	39	5	14	13	11	25	11

Appendix Table 31. Length-frequency (nos. measured), by haul, of sand sole collected during F/V W.E. RICKER assemblage survey, Heceta Strait, May 17 - June 3, 1993.

Fork length (cm)	Haul no.																			
	19	20	21	25	34	35	36	37	64	65	66	68	69	72	74	75	76	77	78	79
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
11	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-
12	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	1	-	-
13	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	1	-	-
14	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	0	-	2	1	-
15	1	-	1	-	-	-	-	1	2	-	-	1	2	-	1	-	-	2	0	-
16	2	1	1	-	-	-	-	1	5	1	4	5	3	-	1	-	-	1	1	-
17	1	2	0	-	-	-	1	1	9	1	5	2	1	1	3	-	-	1	1	-
18	0	2	1	-	-	-	-	2	9	1	4	8	5	2	8	-	-	2	1	-
19	3	1	0	-	-	-	-	3	10	0	20	7	5	2	12	-	1	2	3	-
20	2	2	0	-	-	-	-	2	6	1	10	14	13	2	9	1	-	0	2	-
21	4	1	0	-	-	-	-	0	4	2	21	19	16	1	14	0	-	0	0	-
22	3	0	0	-	-	-	-	1	2	4	25	20	5	2	9	1	-	1	4	1
23	1	1	1	-	-	-	-	1	3	3	24	16	6	5	11	0	-	0	2	-
24	1	0	1	-	-	-	-	0	3	5	27	24	5	3	3	0	-	0	1	-
25	1	0	0	-	-	-	-	0	1	3	20	20	3	2	4	0	-	0	2	-
26	0	0	2	-	-	-	-	0	1	4	19	9	3	4	3	0	-	0	4	-
27	0	0	0	-	-	-	-	0	0	4	14	11	2	1	4	0	-	0	0	-
28	1	0	1	-	-	-	-	0	1	3	9	3	2	0	2	1	-	0	2	-
29	0	2	1	-	-	-	-	2	0	2	6	4	5	2	1	-	-	0	1	-
30	0	1	0	-	-	-	-	0	1	0	3	3	2	0	0	-	-	0	0	-
31	1	2	2	-	-	-	-	2	5	3	0	1	2	1	0	-	-	0	4	-
32	3	1	0	-	1	-	-	1	0	4	0	2	3	2	4	-	-	1	2	-
33	3	0	2	-	-	-	-	1	2	3	0	1	2	2	4	-	-	2	2	-
34	2	1	1	-	-	-	-	3	1	2	0	2	1	1	0	-	-	1	1	-
35	2	2	3	-	-	-	-	0	2	0	0	0	0	-	1	-	-	0	2	-
36	5	0	2	-	-	-	-	0	2	0	0	0	0	-	0	-	-	0	4	-
37	1	2	2	-	-	-	-	0	1	1	0	1	1	-	3	-	-	1	0	-
38	3	1	3	-	-	-	-	1	1	2	0	1	0	-	0	-	-	0	0	-
39	2	1	3	-	-	-	-	0	0	0	0	1	0	-	1	-	-	0	2	-
40	0	-	0	-	-	-	-	0	0	3	0	0	0	-	0	-	-	0	1	-
41	0	-	1	-	-	1	-	0	0	1	0	2	0	-	1	-	-	0	0	-
42	0	-	-	1	-	-	-	0	2	1	0	1	0	-	-	-	-	1	0	-
43	1	-	-	-	-	-	-	1	-	2	0	0	0	-	-	-	-	0	1	-
44	0	-	-	-	-	-	-	-	1	0	3	1	-	-	-	-	-	1	1	-
45	0	-	-	-	-	-	-	-	-	0	1	0	-	-	-	-	-	0	-	-
46	1	-	-	-	-	-	-	-	-	0	0	1	-	-	-	-	-	0	-	-
47	0	-	-	-	-	-	-	-	-	0	2	-	-	-	-	-	-	0	-	-
48	0	-	-	-	-	-	-	-	-	1	0	-	-	-	-	-	-	0	-	-
49	1	-	-	-	-	-	-	-	-	-	0	1	-	-	-	-	-	1	-	-
50	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	-	-	-	-
Total	45	23	28	1	1	1	1	23	80	57	214	186	89	33	100	3	1	23	45	1

Appendix Table 31 (cont'd)

Species : sand sole

Fork length (cm)	Haul no.											
	80	81	82	83	87	89	90	91	93	94	95	96
10	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	1	1	-	-	-	-	-
17	-	-	-	-	-	0	1	-	-	1	-	-
18	-	-	-	-	-	0	1	-	-	0	-	-
19	-	-	-	-	-	0	0	-	-	0	-	-
20	-	1	-	-	-	3	3	-	-	0	-	-
21	-	0	-	-	-	3	1	-	-	0	-	-
22	-	2	1	-	-	2	1	-	-	0	-	-
23	-	1	-	-	-	2	7	-	-	0	-	-
24	-	1	-	-	-	2	6	-	-	1	-	-
25	1	3	-	1	1	1	2	-	-	4	-	-
26	-	2	-	0	0	2	4	-	-	1	1	-
27	-	0	-	0	0	2	5	-	-	1	0	-
28	-	2	-	0	0	1	6	-	-	2	0	-
29	-	4	-	1	0	0	7	-	-	3	0	-
30	-	3	-	1	1	2	10	-	-	0	3	1
31	-	3	-	-	1	2	11	1	-	1	0	1
32	-	3	-	-	0	3	12	0	-	1	0	0
33	-	1	-	-	1	1	9	0	-	1	1	1
34	-	1	-	-	0	3	11	2	-	1	2	2
35	-	0	-	-	0	5	15	0	1	-	0	1
36	-	0	-	-	0	3	13	0	0	-	5	1
37	-	0	-	-	0	2	6	0	1	-	2	1
38	-	1	-	-	0	4	11	0	-	-	1	1
39	-	1	-	-	0	5	4	1	-	-	1	1
40	-	1	-	-	1	1	2	-	-	1	0	-
41	-	-	-	-	-	0	0	-	-	-	1	2
42	-	-	-	-	-	0	1	-	-	-	1	-
43	-	-	-	-	-	1	0	-	-	-	-	-
44	-	-	-	-	-	-	1	-	-	-	-	-
45	-	-	-	-	-	-	-	-	-	-	-	-
46	-	-	-	-	-	-	-	-	-	-	-	-
47	-	-	-	-	-	-	-	-	-	-	-	-
48	-	-	-	-	-	-	-	-	-	-	-	-
49	-	-	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-	-	-
Total	1	30	1	3	5	51	151	4	2	17	19	12

Appendix Table 32. Length-frequency (nos. measured), by haul, of starry flounder collected during F/V W.E. RICKER assemblage survey, Hecate Strait, May 17 - June 3, 1993.

Fork length (cm)	Haul no.				
	35	56	61	62	74
34	-	-	-	-	1
35	-	-	-	-	-
36	-	-	-	-	-
37	-	-	-	-	-
38	-	-	-	-	-
39	-	-	-	-	-
40	-	-	-	-	-
41	-	-	-	-	-
42	-	-	-	1	-
43	-	-	-	0	-
44	-	-	-	0	-
45	-	-	-	0	-
46	-	-	-	0	-
47	-	-	-	0	-
48	-	-	-	0	-
49	-	-	-	0	-
50	-	-	-	0	-
51	-	-	-	0	-
52	-	-	-	0	-
53	1	-	-	1	-
54	1	-	-	0	-
55	1	-	-	0	-
56	-	-	-	0	-
57	-	-	-	0	-
58	-	-	-	0	-
59	-	-	-	0	-
60	-	-	-	0	-
61	-	-	1	0	-
62	-	-	0	0	-
63	-	-	1	0	-
64	-	-	1	0	-
65	-	-	0	1	-
66	-	-	0	0	-
67	-	-	0	0	-
68	-	-	0	0	-
69	-	-	0	1	-
70	-	-	0	-	-
71	-	1	1	-	-
72	-	-	0	-	-
73	-	-	1	-	-
Total	3	1	5	4	1

Appendix Table 33. Length-frequency (nos. measured), by haul, of Pacific halibut collected during F/V W.E. RICKER assemblage survey, Hecate Strait, May 17 - June 3, 1993.

Fork length (cm)	Haul no.																		
	6	8	12	13	14	15	16	17	18	19	20	28	35	38	41	46	47	48	49
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	1	-	-
39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	-	-
40	-	-	-	-	-	-	-	-	-	-	1	-	-	-	0	-	0	-	-
41	-	-	-	-	-	-	-	-	-	-	1	-	-	-	0	-	0	-	-
42	-	-	-	-	-	-	-	-	-	-	1	-	-	-	0	-	0	-	-
43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	-	-
44	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	0	-	-
45	-	-	-	-	-	-	-	-	-	-	0	-	-	-	0	-	0	-	-
46	-	-	-	-	-	-	-	-	-	-	0	-	-	-	0	-	0	-	-
47	-	-	-	-	-	-	-	-	-	-	0	-	-	-	1	0	-	0	-
48	-	-	-	-	-	-	-	-	-	-	1	-	-	-	0	-	0	-	-
49	-	-	-	-	-	-	-	-	-	-	0	-	-	-	0	-	0	-	-
50	-	1	1	-	-	-	-	-	-	-	0	-	-	-	0	-	0	-	-
51	-	-	0	1	-	-	-	-	-	-	0	-	-	-	0	-	0	-	-
52	-	-	0	0	-	-	-	-	-	-	0	-	-	-	0	-	1	-	-
53	-	-	0	1	-	-	-	-	-	-	0	-	-	-	0	-	0	-	-
54	-	-	0	0	-	-	-	-	-	-	0	-	-	-	0	-	1	0	-
55	-	-	0	0	-	-	-	-	-	-	0	-	-	-	0	-	0	-	-
56	-	-	0	0	-	-	-	-	-	-	1	-	-	-	0	-	2	-	0
57	-	-	0	0	-	-	-	-	-	-	0	-	-	-	0	-	1	-	0
58	-	-	0	0	-	-	-	-	-	-	0	-	-	-	0	-	0	-	-
59	-	-	0	0	-	-	-	-	-	-	0	-	-	-	0	-	0	-	-
60	-	-	0	1	-	-	-	-	-	-	0	-	-	-	1	-	0	-	-
61	1	-	0	0	-	-	-	-	-	-	0	-	-	-	0	-	0	-	-
62	0	-	0	0	1	-	-	-	-	-	0	-	-	-	0	-	0	-	-
63	0	-	1	0	-	-	-	-	-	-	1	-	-	-	0	-	0	-	-
64	0	-	0	0	-	-	-	-	-	-	0	-	-	-	0	-	0	-	-
65	0	-	0	1	-	-	-	-	-	-	0	-	-	-	0	-	0	-	-
66	0	-	0	1	-	-	-	-	-	-	0	-	-	-	0	-	1	-	-
67	1	-	0	-	-	-	-	-	-	-	1	-	-	-	0	-	0	-	-
68	1	-	0	-	-	-	-	-	-	-	0	-	-	-	0	-	0	-	-
69	0	-	0	-	-	1	0	-	-	-	0	-	-	-	0	-	0	-	-
70	0	-	0	-	-	0	0	-	1	-	0	-	-	-	-	-	0	-	-
71	0	-	0	-	-	0	0	-	0	-	0	1	0	-	-	-	0	1	-
72	0	-	0	-	-	0	0	-	0	-	0	-	0	-	-	-	0	0	-
73	0	-	0	-	-	1	0	-	0	-	0	-	0	-	-	-	0	0	-
74	0	-	0	-	-	0	0	-	0	-	0	-	0	-	-	-	0	0	-
75	0	-	0	-	-	0	0	-	0	-	0	-	0	-	-	-	0	0	-

Appendix Table 33. (con't)

Species: Pacific halibut

Fork length (cm)	Haul no.																			
	6	8	12	13	14	15	16	17	18	19	20	28	35	38	41	46	47	48	49	50
76	0	-	0	-	-	-	1	-	0	-	0	-	0	-	-	-	-	0	0	-
77	0	-	0	-	-	-	-	-	0	-	0	-	0	-	-	-	-	0	0	-
78	1	-	0	-	-	-	-	-	0	-	0	-	0	-	-	-	-	0	0	-
79	1	-	0	-	-	-	-	-	0	-	0	-	0	-	-	-	-	0	0	-
80	1	-	0	-	-	-	-	-	0	-	0	-	0	-	-	-	-	0	0	-
81	-	-	0	-	-	-	-	-	1	-	0	-	0	-	-	-	-	0	0	-
82	-	-	0	-	-	-	-	-	1	-	0	-	0	-	-	-	-	0	0	-
83	-	-	1	-	-	-	-	-	0	-	0	-	0	-	-	-	-	1	0	-
84	-	-	0	-	-	-	-	-	0	-	0	-	0	-	-	-	-	0	0	-
85	-	-	0	-	-	-	-	-	0	-	0	-	0	-	-	-	-	0	0	-
86	-	-	0	-	-	-	-	-	0	-	0	-	0	-	-	-	-	0	0	-
87	-	-	0	-	-	-	-	-	0	-	0	-	1	-	-	-	-	0	0	-
88	-	-	0	-	-	-	-	1	0	-	0	-	-	-	-	-	-	0	0	-
89	-	-	0	-	-	-	-	-	0	-	0	-	-	-	-	-	-	0	0	-
90	-	-	0	-	-	-	-	-	0	-	0	-	-	-	-	-	-	0	0	-
91	-	-	0	-	-	-	-	-	0	-	1	-	-	-	-	-	-	0	0	-
92	-	-	0	-	-	-	-	-	0	-	0	-	-	-	-	-	-	0	0	-
93	-	-	0	-	-	-	-	-	0	-	0	-	-	-	-	-	-	0	0	-
94	-	-	0	-	-	-	-	-	0	-	0	-	-	-	-	-	-	0	0	-
95	-	-	0	-	-	-	-	-	0	-	0	-	-	-	-	-	-	1	0	-
96	-	-	0	-	-	-	-	-	0	-	0	-	-	-	-	-	-	0	1	-
97	-	-	1	-	-	-	-	-	1	-	0	-	-	-	-	-	-	-	-	-
98	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-
99	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-
101	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
102	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
103	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
104	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
105	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
106	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
107	-	-	-	-	-	-	-	-	-	-	0	-	-	1	-	-	-	-	-	-
108	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
109	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
111	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
112	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
113	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
114	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
115	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
116	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
117	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
118	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
119	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
121	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
122	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
123	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
124	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
125	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
126	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
127	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
128	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
129	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
131	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
132	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Total	6	1	4	5	1	2	2	1	8	3	6	1	2	1	1	5	1	3	2	1

Appendix Table 33 (cont'd)

Species : Pacific halibut

Fork length (cm)	Haul no.																		
	51	52	53	54	55	56	57	60	61	62	64	65	66	67	69	72	73	74	75
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-
31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-
32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-
33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-
34	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-
35	-	-	-	-	-	-	-	-	-	-	-	1	1	-	1	-	-	-	-
36	-	-	-	-	-	-	-	-	-	-	-	2	1	0	-	0	-	1	-
37	-	-	-	-	-	-	-	-	-	-	-	2	0	0	-	0	-	0	-
38	-	-	-	-	-	-	-	-	-	-	-	4	1	0	-	1	-	1	-
39	-	-	-	-	-	-	-	-	-	-	-	2	0	0	-	0	-	0	-
40	-	-	-	-	-	-	-	-	-	-	-	3	0	0	-	1	0	-	0
41	-	-	-	-	-	-	-	-	-	-	-	1	3	0	-	0	1	-	0
42	-	-	-	-	-	-	-	-	-	-	-	1	0	0	-	0	0	0	1
43	-	-	-	-	-	-	-	-	-	-	-	2	0	0	-	0	0	0	0
44	-	-	-	-	-	-	-	-	-	-	-	1	0	0	-	0	0	0	0
45	-	-	-	-	-	-	-	-	-	-	-	0	1	0	-	0	0	0	0
46	-	-	-	-	-	-	-	-	-	-	-	2	0	0	-	0	0	0	0
47	-	-	-	-	-	-	-	-	-	-	-	0	0	0	-	0	0	0	0
48	-	1	-	-	-	-	-	-	-	-	-	0	0	0	-	0	0	0	0
49	-	1	-	-	-	-	-	-	-	-	-	2	0	0	-	0	0	-	0
50	-	0	-	-	-	-	-	-	-	-	-	1	0	0	0	-	1	0	-
51	-	0	-	-	-	-	-	-	-	-	-	0	2	0	0	-	0	0	-
52	-	1	-	-	-	-	-	-	-	-	-	1	0	1	0	-	1	0	-
53	1	0	-	1	-	-	-	-	-	-	-	0	0	1	0	-	0	0	-
54	0	0	-	0	-	-	-	-	-	-	-	0	0	0	0	-	0	0	-
55	0	0	-	1	1	-	-	-	-	-	-	0	1	1	0	-	0	0	-
56	1	2	-	0	0	-	-	-	-	-	-	0	0	0	0	-	0	0	-
57	0	1	0	-	0	1	-	-	-	-	-	0	1	1	0	-	0	1	-
58	0	0	0	-	0	0	-	-	-	-	-	0	0	0	1	-	0	0	-
59	2	0	0	-	0	0	-	-	-	-	-	1	1	1	0	-	0	0	-
60	0	0	1	-	0	1	1	-	-	-	-	0	0	2	1	-	0	0	-
61	0	0	1	-	0	0	0	1	-	-	-	0	0	1	0	-	1	0	-
62	1	0	0	-	0	0	0	0	0	-	-	0	0	1	1	-	0	0	-
63	1	0	0	1	0	0	1	0	-	-	-	0	0	0	0	1	1	0	0
64	1	0	0	0	1	0	-	0	-	-	-	0	0	0	0	-	0	0	1
65	1	0	1	1	0	0	-	0	-	-	-	0	1	0	0	-	0	0	-
66	3	0	0	0	0	0	-	0	-	-	-	0	0	1	0	-	0	0	2
67	0	0	0	0	0	0	-	1	-	-	-	0	1	2	0	-	0	0	-
68	0	0	0	0	0	0	-	0	-	-	-	0	0	1	0	-	0	0	-
69	1	1	0	0	0	0	-	0	-	-	-	0	0	0	0	-	0	0	-
70	0	0	0	0	0	1	-	0	-	-	-	0	0	1	0	-	0	0	1
71	0	0	2	0	0	-	-	0	-	-	-	0	0	0	0	-	0	0	-
72	0	0	0	0	0	-	-	0	-	-	-	0	1	2	0	-	0	0	-
73	1	0	1	0	1	-	-	0	-	-	-	0	0	0	0	-	0	0	-
74	0	0	-	1	0	-	-	1	1	0	0	1	1	-	1	0	-	0	0

Appendix Table 33 (cont'd)

Species : Pacific halibut

Fork length (cm)	Haul no.																			
	51	52	53	54	55	56	57	60	61	62	64	65	66	67	69	72	73	74	75	76
75	1	0	-	0	0	-	-	1	1	0	0	0	0	-	1	0	-	0	0	-
76	0	0	-	0	0	-	-	1	2	0	0	2	0	-	0	0	-	0	0	-
77	0	0	-	0	1	-	-	1	1	0	0	1	1	-	1	0	-	0	0	-
78	0	0	-	0	-	-	-	0	3	0	0	1	1	-	0	-	0	0	-	
79	1	0	-	0	-	-	-	1	1	0	0	1	1	-	0	-	0	0	-	
80	0	0	-	0	-	-	-	0	0	0	0	1	-	-	0	-	1	0	-	
81	0	0	-	1	-	-	-	0	0	0	0	0	-	-	0	-	-	0	-	
82	1	1	-	-	-	-	-	0	0	0	0	-	-	-	0	-	-	0	-	
83	-	-	-	-	-	-	-	0	0	0	0	1	-	-	0	-	-	1	-	
84	-	-	-	-	-	-	-	1	0	1	0	-	-	-	0	-	-	0	-	
85	-	-	-	-	-	-	-	0	0	1	2	-	-	-	0	-	-	0	-	
86	-	-	-	-	-	-	-	0	0	1	2	-	-	-	1	-	-	1	-	
87	-	-	-	-	-	-	-	0	0	0	1	-	-	-	-	-	0	-	-	
88	-	-	-	-	-	-	-	1	0	1	-	-	-	-	-	-	0	-	-	
89	-	-	-	-	-	-	-	1	0	1	-	-	-	-	-	-	0	-	-	
90	-	-	-	-	-	-	-	-	0	0	-	-	-	-	-	-	0	-	-	
91	-	-	-	-	-	-	-	-	0	0	-	-	-	-	-	-	0	-	-	
92	-	-	-	-	-	-	-	-	0	1	-	-	-	-	-	-	0	-	-	
93	-	-	-	-	-	-	-	-	0	0	-	-	-	-	-	-	0	-	-	
94	-	-	-	-	-	-	-	-	0	0	-	-	-	-	-	-	0	-	-	
95	-	-	-	-	-	-	-	-	1	0	-	-	-	-	-	-	0	-	-	
96	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-	
97	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	1	-	-	
98	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-	
99	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	0	-	-	
100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	
101	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	
102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	
103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	
104	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	
105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	
106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	
107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	
108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	
109	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
111	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
113	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
114	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
115	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
116	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
117	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
118	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
119	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
121	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
122	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
123	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
124	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
125	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
127	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
128	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
129	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
131	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
132	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total	16	3	11	4	5	4	2	7	12	4	37	37	7	1	7	8	1	2	9	2

Appendix Table 33 (cont'd)

Species : Pacific halibut

Fork length (cm)	Haul no.																		
	77	78	79	80	81	83	84	85	86	87	88	89	90	91	92	93	94	95	96
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	
21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	
24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	
25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	
26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	
27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	
29	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	0	-	
30	-	-	-	-	-	1	-	-	-	-	0	-	-	-	-	-	0	-	
31	-	-	-	-	-	2	-	-	-	-	0	-	-	-	-	-	0	-	
32	-	-	-	-	-	1	-	-	-	-	0	-	-	-	-	-	0	-	
33	-	2	-	1	-	2	-	-	-	1	-	-	-	-	-	-	1	-	
34	-	1	-	0	-	0	-	-	-	1	-	-	-	-	-	-	0	-	
35	-	0	-	1	-	1	-	-	-	0	-	-	-	-	-	-	0	-	
36	-	0	-	0	-	4	-	-	-	0	1	1	-	-	-	-	1	-	
37	-	0	-	0	-	3	-	-	-	3	0	0	-	-	-	-	0	-	
38	-	2	-	2	3	0	-	-	-	0	1	0	-	-	-	-	0	-	
39	-	1	-	0	0	2	-	-	-	1	1	0	-	-	-	-	0	-	
40	-	0	-	1	0	1	-	-	-	0	4	0	-	-	-	-	1	-	
41	-	0	-	0	0	1	-	-	-	1	1	0	-	-	-	-	0	-	1
42	1	1	-	3	0	0	-	-	-	0	2	0	-	1	-	0	-	0	0
43	0	1	-	0	0	1	-	-	-	1	2	2	-	0	-	0	1	1	0
44	0	0	1	1	1	0	-	-	-	0	1	0	-	0	-	0	1	0	1
45	0	0	-	0	0	1	-	-	-	0	4	0	-	0	1	1	0	0	1
46	0	0	-	0	0	0	-	-	-	1	1	2	0	-	1	0	0	0	1
47	0	0	-	0	1	0	-	-	-	2	0	1	-	0	0	0	0	0	1
48	0	0	-	1	1	1	-	-	-	1	2	0	-	0	0	0	1	0	0
49	0	0	-	-	1	0	-	-	-	1	1	0	-	0	0	0	2	1	2
50	0	1	-	-	1	0	-	-	-	2	1	0	-	0	1	0	0	2	3
51	0	0	-	-	1	0	-	-	-	1	0	0	-	0	0	0	1	0	0
52	0	0	-	-	0	1	-	-	-	1	1	1	-	0	0	0	1	0	1
53	0	0	-	-	0	1	-	-	-	0	1	-	-	0	0	0	0	0	0
54	0	0	-	-	0	1	-	-	-	1	1	-	-	0	0	0	0	0	0
55	0	0	-	-	0	0	-	-	-	0	3	-	-	0	0	0	0	0	1
56	0	0	-	-	1	0	-	-	-	0	3	-	-	0	0	0	0	0	0
57	0	0	-	-	0	0	-	-	-	0	1	-	-	1	1	0	0	0	0
58	0	0	-	-	0	0	-	-	-	0	2	-	-	0	0	0	0	0	1
59	0	0	-	-	0	0	-	-	-	1	2	-	-	0	0	0	0	0	0
60	0	0	-	-	0	1	-	-	-	0	1	-	-	0	0	0	0	0	-
61	0	0	-	-	0	0	-	-	-	0	1	-	-	0	0	0	0	0	-
62	0	0	-	-	0	0	-	-	-	1	2	-	-	0	0	0	0	0	-
63	0	0	-	-	0	1	-	-	-	0	0	-	-	0	0	0	0	0	-
64	0	0	-	-	0	1	-	-	-	0	2	-	1	0	0	0	0	0	-
65	1	0	-	-	0	0	-	2	-	0	0	-	0	1	0	0	1	0	-
66	0	0	-	-	0	0	-	2	-	0	1	-	0	0	0	0	0	0	-
67	0	0	-	-	0	0	-	-	-	0	0	-	0	1	0	0	0	0	-
68	0	0	-	-	0	0	-	-	-	0	1	-	0	0	0	0	0	0	-
69	0	0	-	-	0	0	-	-	-	0	0	-	1	0	0	0	0	1	-
70	0	0	-	-	0	0	-	-	-	0	0	-	0	1	0	0	0	0	-
71	1	0	-	-	0	0	-	-	-	0	0	-	0	-	0	0	0	0	-
72	0	0	-	-	0	0	-	-	-	0	1	-	0	-	1	0	0	0	-
73	0	0	-	-	0	0	-	-	-	0	2	-	0	-	0	0	0	0	-
74	1	0	-	-	0	0	-	-	-	0	0	-	0	-	0	0	0	0	-

Appendix Table 33 (cont'd)

Species : Pacific halibut

Fork length (cm)	Haul no.																			
	77	78	79	80	81	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97
75	-	0	-	-	0	1	-	-	0	0	-	0	-	-	0	0	0	0	-	-
76	-	0	-	-	0	0	-	-	0	0	-	0	-	-	0	0	0	0	-	-
77	-	0	-	-	0	0	-	-	0	1	-	0	-	-	0	0	0	0	-	-
78	-	0	-	-	0	0	-	-	1	0	-	0	-	-	0	0	0	0	-	-
79	-	1	-	-	0	0	-	-	-	0	-	0	-	-	0	0	0	0	-	-
80	-	-	-	-	0	0	-	-	-	1	-	0	-	-	0	0	0	0	-	-
81	-	-	-	-	0	0	-	-	-	0	-	0	-	-	0	1	0	-	-	-
82	-	-	-	-	0	0	-	-	-	1	-	0	-	-	0	0	0	0	-	-
83	-	-	-	-	0	0	-	-	-	0	-	0	-	-	0	0	0	0	-	-
84	-	-	-	-	0	0	-	-	-	0	-	0	-	-	0	0	0	0	-	-
85	-	-	-	-	0	1	-	-	-	0	-	0	-	-	0	0	0	0	-	-
86	-	-	-	-	0	-	-	-	-	0	-	0	-	-	0	0	0	0	-	-
87	-	-	-	-	0	-	-	-	-	1	-	0	-	-	0	0	0	0	-	-
88	-	-	-	-	0	-	-	-	-	-	-	0	-	-	0	0	0	0	-	-
89	-	-	-	-	0	-	-	-	-	-	-	0	-	-	0	0	1	-	-	-
90	-	-	-	-	0	-	-	-	-	-	-	0	-	-	0	0	-	-	-	-
91	-	-	-	-	0	-	-	-	-	-	-	0	-	-	1	0	-	-	-	-
92	-	-	-	-	0	-	-	-	-	-	-	0	-	-	0	0	-	-	-	-
93	-	-	-	-	0	-	-	-	-	-	-	0	-	-	0	0	-	-	-	-
94	-	-	-	-	0	-	-	-	-	-	-	0	-	-	0	0	-	-	-	-
95	-	-	-	-	0	-	-	-	-	-	-	0	-	-	0	0	-	-	-	-
96	-	-	-	-	0	-	-	-	-	-	-	0	-	-	0	0	-	-	-	-
97	-	-	-	-	0	-	-	-	-	-	-	0	-	-	0	0	-	-	-	-
98	-	-	-	-	0	-	-	-	-	-	-	0	-	-	0	0	-	-	-	-
99	-	-	-	-	0	-	-	-	-	-	-	0	-	-	0	0	-	-	-	-
100	-	-	-	-	0	-	-	-	-	-	-	0	-	-	0	0	-	-	-	-
101	-	-	-	-	0	-	-	-	-	-	-	0	-	-	0	0	-	-	-	-
102	-	-	-	-	0	-	-	-	-	-	-	0	-	-	0	0	-	-	-	-
103	-	-	-	-	0	-	-	-	-	-	-	0	-	-	0	0	-	-	-	-
104	-	-	-	-	1	-	-	-	-	-	-	0	-	-	0	0	-	-	-	-
105	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0	1	-	-	-	-
106	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0	0	-	-	-	-
107	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0	-	-	-	-	-
108	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0	-	-	-	-	-
109	-	-	-	-	-	-	-	-	-	-	-	1	-	-	0	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-
111	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
113	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
114	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
115	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
116	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
117	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
118	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
119	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
121	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
122	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
123	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
124	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
125	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
127	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
128	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
129	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
131	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
132	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	4	10	1	10	11	29	2	2	1	22	52	5	3	6	4	5	9	7	12	13

Appendix Table 33 (cont'd)

Species : Pacific halibut

Fork length (cm)	Haul no.
14	-
15	-
16	-
17	-
18	-
19	-
20	-
21	-
22	-
23	-
24	-
25	-
26	-
27	-
28	-
29	-
30	-
31	-
32	-
33	-
34	-
35	-
36	-
37	-
38	-
39	-
40	-
41	-
42	-
43	-
44	-
45	-
46	-
47	-
48	-
49	-
50	-
51	-
52	-
53	-
54	-
55	-
56	-
57	-
58	-
59	-
60	-
61	-
62	2
63	0
64	1
65	-
66	-
67	-
68	-
69	-
70	-
71	-
72	-
73	-

14	-
15	-
16	-
17	-
18	-
19	-
20	-
21	-
22	-
23	-
24	-
25	-
26	-
27	-
28	-
29	-
30	-
31	-
32	-
33	-
34	-
35	-
36	-
37	-
38	-
39	-
40	-
41	-
42	-
43	-
44	-
45	-
46	-
47	-
48	-
49	-
50	-
51	-
52	-
53	-
54	-
55	-
56	-
57	-
58	-
59	-
60	-
61	-
62	2
63	0
64	1
65	-
66	-
67	-
68	-
69	-
70	-
71	-
72	-
73	-

Appendix Table 33 (cont'd)

Species : Pacific halibut

Fork length (cm)	Haul no.
74	-
75	-
76	-
77	-
78	-
79	-
Total	3

Appendix Table 34. Length-frequency (nos. measured), by haul, of Pacific ocean perch collected during F/V W.E. RICKER assemblage survey, Hecate Strait, May 17 - June 3, 1993.

Fork length (cm)	Haul no.						
	16	28	47	57	58	59	71
14	2	-	1	-	-	-	-
15	3	2	0	-	-	-	-
16	0	0	1	1	-	-	-
17	3	1	0	0	-	-	-
18	4	0	1	0	-	-	-
19	9	1	1	0	-	-	-
20	8	4	3	0	1	-	-
21	25	2	2	0	0	-	-
22	41	3	2	0	0	-	-
23	28	3	3	1	0	-	-
24	12	3	0	0	0	-	-
25	2	-	0	0	0	-	-
26	1	-	1	0	1	-	-
27	-	-	1	1	-	-	-
28	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-
30	-	-	-	-	-	-	1
31	-	-	-	-	-	2	-
32	-	-	-	-	-	0	-
33	-	-	-	-	-	1	-
Total	138	19	16	3	2	3	1

**Appendix Table 35.** Length-frequency (nos. measured), by haul, of silvergrey rockfish collected during F/V W.E. RICKER assemblage survey, Hecate Strait, May 17 - June 3, 1993.

Fork length (cm)	Haul no.							
	1	3	16	28	29	49	50	53
34	-	-	-	-	-	-	1	-
35	-	-	-	-	-	-	0	-
36	-	-	-	-	-	-	0	-
37	-	-	-	-	-	-	1	-
38	-	-	-	-	-	-	0	-
39	-	-	-	-	-	-	0	-
40	-	-	-	-	-	1	1	-
41	-	-	-	1	-	-	2	-
42	1	1	-	0	-	-	1	-
43	0	0	-	0	-	-	1	-
44	0	2	-	0	1	-	1	-
45	0	1	-	0	0	-	4	-
46	0	4	-	0	0	-	2	1
47	0	2	-	0	0	-	3	-
48	0	4	-	0	0	-	3	-
49	0	11	1	0	0	-	0	-
50	0	11	-	0	1	-	0	-
51	0	9	-	0	0	-	1	-
52	0	13	-	0	0	-	1	-
53	0	22	-	0	0	-	0	-
54	0	23	-	0	1	-	0	-
55	3	18	-	0	1	-	0	-
56	0	13	-	0	1	-	0	-
57	1	11	-	0	1	-	0	-
58	-	8	-	0	1	-	1	-
59	-	6	-	1	-	-	0	-
60	-	-	-	-	-	-	0	-
61	-	-	-	-	-	-	1	-
Total	5	159	1	2	7	1	24	1

Appendix Table 36. Length-frequency (nos. measured), by haul, of copper rockfish collected during F/V W.E. RICKER assemblage survey, Hecate Strait, May 17 - June 3, 1993.

	Haul no.	
Fork length (cm)		
	13	72
27	-	1
28	-	0
29	-	0
30	-	1
31	-	0
32	-	1
33	-	1
34	-	1
35	-	1
36	-	0
37	-	1
38	-	3
39	-	4
40	-	8
41	-	3
42	-	5
43	-	3
44	1	3
45	0	4
46	0	4
47	1	1
48	-	1
49	-	3
50	-	0
51	-	1
52	-	0
53	-	1
Total	2	51

**Appendix Table 37.** Length-frequency (nos. measured), by haul, of yellowtail rockfish collected during F/V W.E. RICKER assemblage survey, Heceta Strait, May 17 - June 3, 1993.

Fork length (cm)	Haul no.															
	3	13	29	42	47	49	51	52	54	61	75	78	84	85	86	98
19	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
20	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	
21	-	-	-	-	-	-	-	-	-	1	2	-	-	-	-	
22	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	
23	-	-	-	-	-	-	-	-	-	6	0	-	-	-	-	
24	-	-	-	-	-	-	-	-	-	2	0	-	-	-	-	
25	-	-	-	-	-	-	-	-	-	0	1	-	-	-	-	
26	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	
27	-	-	-	-	-	-	-	-	-	0	-	1	-	-	-	
28	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	
29	-	-	-	-	-	-	-	-	-	0	-	4	-	-	-	
30	-	1	1	-	-	-	-	-	-	0	-	4	-	-	-	
31	-	-	-	-	-	-	-	-	-	0	-	7	-	-	-	
32	-	-	-	1	-	-	-	-	-	2	-	7	-	-	-	
33	1	-	-	0	-	-	-	-	-	1	-	6	2	-	-	
34	-	-	-	0	-	-	-	-	-	1	-	2	0	-	-	
35	-	-	-	0	2	-	-	-	-	-	-	2	1	-	-	
36	-	-	-	0	0	-	1	-	-	-	-	1	1	1	-	
37	-	-	-	1	0	-	2	-	-	-	-	0	0	1	-	
38	-	-	-	-	0	-	2	-	-	-	-	0	0	1	-	
39	-	-	-	-	1	-	4	-	-	-	-	0	1	0	-	
40	-	-	-	-	1	-	3	-	-	-	-	1	-	0	-	
41	-	-	-	-	2	-	3	1	-	-	-	0	-	1	-	
42	-	-	-	-	1	-	6	3	-	-	-	1	-	0	-	
43	-	-	-	-	-	-	2	1	-	-	-	1	-	1	-	
44	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	
45	-	-	-	-	-	-	3	3	-	-	-	-	-	-	1	
46	-	-	-	-	-	-	4	3	-	-	-	-	-	-	-	
47	-	-	-	-	-	-	4	3	-	1	-	-	-	-	-	
48	-	-	-	-	-	-	4	5	-	-	-	-	-	-	-	
49	-	-	-	-	-	-	5	7	1	-	-	-	-	-	-	
50	-	-	-	-	-	-	2	4	0	-	-	-	-	-	-	
51	-	-	-	-	-	-	2	7	0	-	-	-	-	-	-	
52	-	-	-	-	-	-	0	0	0	-	-	-	-	-	-	
53	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	
54	-	-	-	-	-	-	0	2	-	-	-	-	-	-	-	
55	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
Total	1	1	1	2	7	1	50	41	2	1	17	5	37	5	5	1

Appendix Table 38. Length-frequency (nos. measured), by haul, of quillback rockfish collected during F/V W.E. RICKER assemblage survey, Heceta Strait, May 17 - June 3, 1993.

Fork length (cm)	Haul no.									
	8	13	44	45	62	72	75	76	78	81
18	-	-	-	-	-	-	1	-	-	-
19	1	-	-	-	-	-	0	-	-	-
20	0	-	-	-	-	-	0	-	-	-
21	1	-	-	-	-	-	0	-	-	-
22	0	-	-	-	-	-	0	-	-	-
23	0	-	-	-	-	-	0	1	-	-
24	0	-	-	-	-	-	0	0	-	1
25	0	-	-	-	1	-	0	0	-	0
26	0	-	-	-	-	-	1	0	-	0
27	0	-	-	-	-	-	0	0	-	0
28	0	-	-	-	-	-	0	0	-	0
29	0	-	-	-	-	-	0	0	-	1
30	4	-	-	-	-	-	1	1	-	0
31	3	-	-	-	-	1	0	2	-	1
32	4	1	-	-	-	0	0	0	-	0
33	5	2	-	-	-	1	1	0	1	1
34	1	0	-	-	-	1	1	1	0	0
35	2	0	-	-	-	1	0	1	0	0
36	3	1	-	-	-	3	0	1	0	0
37	5	1	-	-	-	3	0	1	0	0
38	4	1	1	-	-	4	1	2	0	2
39	3	2	-	1	-	2	0	1	0	1
40	1	-	-	-	-	2	1	0	1	1
41	2	-	-	-	-	5	0	1	1	1
42	1	-	-	-	-	6	0	1	3	-
43	-	-	-	-	-	2	1	-	2	-
44	-	-	-	-	-	4	-	-	0	-
45	-	-	-	-	-	1	-	-	1	-
46	-	-	-	-	-	2	-	-	3	-
47	-	-	-	-	-	-	-	-	1	-
Total	40	8	1	1	1	38	8	13	13	9

Appendix Table 39. Length-frequency (nos. measured), by haul, of bocaccio collected during F/V W.E. RICKER assemblage survey, Heceta Strait, May 17 - June 3, 1993.

Fork length (cm)	Haul no.				
	3	29	49	61	86
61	1	-	-	-	-
62	0	-	-	-	-
63	0	-	-	-	-
64	0	-	-	-	-
65	0	-	-	-	-
66	1	-	1	-	-
67	0	-	0	-	-
68	3	-	0	-	-
69	0	2	0	-	-
70	0	-	0	-	1
71	0	-	0	-	-
72	0	-	0	-	-
73	1	-	0	1	-
74	-	-	0	-	-
75	-	-	1	-	-
Total	6	2	2	1	1

Appendix Table 40. Length-frequency (nos. measured), by haul, of canary rockfish collected during F/V W.E. RICKER assemblage survey, Hecate Strait, May 17 - June 3, 1993.

Fork length (cm)	Haul no.									
	3	4	8	13	28	29	82	84	85	98
32	-	-	-	3	-	-	-	-	-	-
33	-	-	2	4	-	-	-	-	-	-
34	-	-	2	1	-	-	-	-	-	-
35	-	-	3	1	-	-	1	-	-	-
36	-	-	6	3	-	-	-	-	-	-
37	-	-	5	2	-	-	-	-	-	-
38	-	-	3	1	-	-	-	-	-	-
39	1	-	3	2	-	-	-	-	-	-
40	0	-	0	2	-	-	-	-	-	-
41	1	-	1	2	-	-	-	-	-	1
42	1	-	2	1	1	-	-	1	-	-
43	0	1	0	0	-	1	-	-	-	-
44	0	-	1	1	-	-	-	-	-	-
45	0	-	-	1	-	-	-	-	-	-
46	0	-	-	-	-	-	-	-	-	-
47	1	-	-	-	-	-	-	-	-	-
48	1	-	-	-	-	-	-	-	-	-
49	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
51	-	-	-	-	-	-	-	-	-	-
52	-	-	-	-	-	-	-	-	-	-
53	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-	-
56	-	-	-	-	-	-	-	-	-	-
57	-	-	-	-	-	-	-	1	-	-
Total	5	1	28	24	1	1	1	1	1	1

Appendix Table 41. Length-frequency (nos. measured), by haul, of yelloweye rockfish collected during F/V W.E. RICKER assemblage survey, Hecate Strait, May 17 - June 3, 1993.

Fork length (cm)	Haul no.			
	3	8	28	72
30	-	1	-	-
31	-	0	-	-
32	-	0	-	-
33	-	0	-	-
34	-	0	-	-
35	-	0	-	-
36	-	0	-	-
37	-	1	-	-
38	-	1	-	-
39	-	0	-	-
40	-	1	-	-
41	-	0	-	-
42	-	0	-	-
43	-	1	-	-
44	-	-	-	1
45	-	-	-	0
46	-	-	-	0
47	-	-	-	0
48	-	-	-	0
49	-	-	-	0
50	-	-	-	0
51	-	-	-	0
52	-	-	-	0
53	-	-	-	0
54	-	-	-	0
55	-	-	-	0
56	-	-	-	0
57	-	-	-	0
58	-	-	1	0
59	1	-	-	1
60	-	-	-	1
61	-	-	-	0
62	-	-	-	1
Total	1	5	1	4

Appendix Table 42. Length-frequency (nos. measured), by haul, of sharpchin rockfish collected during F/V W.E. RICKER assemblage survey, Hecate Strait, May 17 - June 3, 1993.

Haul no.

Fork

length

(cm) 8

13	1
14	0
15	1
16	2
17	2
18	0
19	1
20	0
21	1
22	2
23	0
24	2
25	0
26	1

Total 13

Appendix Table 43. Length frequencies, by haul, of incidental species collected on the W.E. Ricker assemblage survey of Hecate Strait, May 17 - June 3, 1993.

Species	Haul no.	Length (cm)
Bigfin eelpout	1	14
	11	23
Buffalo sculpin	64	7, 12
Cabezon	72	33
Northern rockfish	8	18, 21
	64	20
	66	18, 18
Pacific hake	84	52
	85	55
	86	53
Pacific sandfish	19	21
Dark blotched rockfish	40	15
	41	15
	49	16
Green striped rockfish	3	37, 37, 37
	50	34
Pygmy rockfish	8	15, 17
Speckled sanddab	19	14
	20	14, 14
	21	15, 15
Spotfin sculpin	8	20
White spotted greenling	68	37

